aws

API Reference

Amazon Simple Storage Service

API Version 2006-03-01

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Amazon Simple Storage Service: API Reference

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Amazon S3 REST API Introduction

Welcome to the *Amazon Simple Storage Service API Reference*. This guide explains the Amazon Simple Storage Service (Amazon S3) application programming interface (API). It describes various API operations, related request and response structures, and error codes. The current version of the Amazon S3 API is 2006-03-01.

Amazon S3 supports the REST API.

> **Note**
>
> Support for SOAP over HTTP is deprecated, but it is still available over HTTPS. However, new Amazon S3 features will not be supported for SOAP. We recommend that you use either the REST API or the AWS SDKs.

Read the following about authentication and access control before going to specific API topics.

Requests to Amazon S3 can be authenticated or anonymous. Authenticated access requires credentials that AWS can use to authenticate your requests. When making REST API calls directly from your code, you create a signature using valid credentials and include the signature in your request. For information about various authentication methods and signature calculations, see Authenticating Requests (AWS Signature Version 4).

Making REST API calls directly from your code can be cumbersome. It requires you to write the necessary code to calculate a valid signature to authenticate your requests. We recommend the following alternatives instead:

- Use the AWS SDKs to send your requests (see Sample Code and Libraries). With this option, you don't need to write code to calculate a signature for request authentication because the SDK clients authenticate your requests by using access keys that you provide. Unless you have a good reason not to, you should always use the AWS SDKs.
- Use the AWS CLI to make Amazon S3 API calls. For information about setting up the AWS CLI and example Amazon S3 commands see the following topics:

  Set Up the AWS CLI in the *Amazon Simple Storage Service User Guide*.

Using Amazon S3 with the AWS Command Line Interface in the *AWS Command Line Interface User Guide*.

If you'd like to make your own REST API calls instead of using one of the above alternatives, there are some things to keep in mind. The REST API uses standard HTTP headers and status codes, so standard browsers and toolkits work as expected. In some areas, we have added functionality to HTTP (for example, we added headers to support access control). In these cases, we have done our best to add the new functionality in a way that matches the style of standard HTTP usage. For more information about making requests, see Making requests in the *Amazon Simple Storage Service User Guide*. For additional details about developing using REST APIs, see Developing with Amazon S3 using the REST API in the *Amazon Simple Storage Service User Guide*.

You can have valid credentials to authenticate your requests, but unless you have permissions you cannot create or access Amazon S3 resources. For example, you must have permissions to create an S3 bucket or get an object from your bucket. If you use the root user credentials of your AWS account, you have all the permissions. However, using root user credentials is not recommended. Instead, we recommend that you create IAM roles in your account and manage user permissions. For more information, see Managing Access Permissions to Your Amazon S3 Resources in the *Amazon Simple Storage Service User Guide*.

Amazon S3 API Reference

This section contains the Amazon S3 API Reference documentation. The Amazon S3 APIs are grouped into three sets: Amazon Simple Storage Service, AWS S3 Control, and Amazon S3 on Outposts. There is no functional distinction between the three sets.

In general, APIs that apply bucket- and object-level actions are in the Amazon Simple Storage Service set, and APIs that apply account-level actions are in the AWS S3 Control set. With Amazon S3 on Outposts, you can create S3 buckets on AWS Outposts and easily store and retrieve objects on premises. You communicate with your Outposts bucket using an access point and endpoint connection over a virtual private cloud (VPC). If you don't find an API that you're looking for in one set, check one of the other sets.

Actions

The following actions are supported by Amazon S3:

- AbortMultipartUpload
- CompleteMultipartUpload
- CopyObject
- CreateBucket
- CreateMultipartUpload
- CreateSession
- DeleteBucket
- DeleteBucketAnalyticsConfiguration
- DeleteBucketCors
- DeleteBucketEncryption
- DeleteBucketIntelligentTieringConfiguration
- DeleteBucketInventoryConfiguration
- DeleteBucketLifecycle
- DeleteBucketMetricsConfiguration
- DeleteBucketOwnershipControls
- DeleteBucketPolicy

- DeleteBucketReplication
- DeleteBucketTagging
- DeleteBucketWebsite
- DeleteObject
- DeleteObjects
- DeleteObjectTagging
- DeletePublicAccessBlock
- GetBucketAccelerateConfiguration
- GetBucketAcl
- GetBucketAnalyticsConfiguration
- GetBucketCors
- GetBucketEncryption
- GetBucketIntelligentTieringConfiguration
- GetBucketInventoryConfiguration
- GetBucketLifecycle
- GetBucketLifecycleConfiguration
- GetBucketLocation
- GetBucketLogging
- GetBucketMetricsConfiguration
- GetBucketNotification
- GetBucketNotificationConfiguration
- GetBucketOwnershipControls
- GetBucketPolicy
- GetBucketPolicyStatus
- GetBucketReplication
- GetBucketRequestPayment
- GetBucketTagging
- GetBucketVersioning
- GetBucketWebsite
- GetObject

- GetObjectAcl
- GetObjectAttributes
- GetObjectLegalHold
- GetObjectLockConfiguration
- GetObjectRetention
- GetObjectTagging
- GetObjectTorrent
- GetPublicAccessBlock
- HeadBucket
- HeadObject
- ListBucketAnalyticsConfigurations
- ListBucketIntelligentTieringConfigurations
- ListBucketInventoryConfigurations
- ListBucketMetricsConfigurations
- ListBuckets
- ListDirectoryBuckets
- ListMultipartUploads
- ListObjects
- ListObjectsV2
- ListObjectVersions
- ListParts
- PutBucketAccelerateConfiguration
- PutBucketAcl
- PutBucketAnalyticsConfiguration
- PutBucketCors
- PutBucketEncryption
- PutBucketIntelligentTieringConfiguration
- PutBucketInventoryConfiguration
- PutBucketLifecycle
- PutBucketLifecycleConfiguration

- PutBucketLogging
- PutBucketMetricsConfiguration
- PutBucketNotification
- PutBucketNotificationConfiguration
- PutBucketOwnershipControls
- PutBucketPolicy
- PutBucketReplication
- PutBucketRequestPayment
- PutBucketTagging
- PutBucketVersioning
- PutBucketWebsite
- PutObject
- PutObjectAcl
- PutObjectLegalHold
- PutObjectLockConfiguration
- PutObjectRetention
- PutObjectTagging
- PutPublicAccessBlock
- RestoreObject
- SelectObjectContent
- UploadPart
- UploadPartCopy
- WriteGetObjectResponse

The following actions are supported by Amazon S3 Control:

- AssociateAccessGrantsIdentityCenter
- CreateAccessGrant
- CreateAccessGrantsInstance
- CreateAccessGrantsLocation
- CreateAccessPoint

- CreateAccessPointForObjectLambda
- CreateBucket
- CreateJob
- CreateMultiRegionAccessPoint
- CreateStorageLensGroup
- DeleteAccessGrant
- DeleteAccessGrantsInstance
- DeleteAccessGrantsInstanceResourcePolicy
- DeleteAccessGrantsLocation
- DeleteAccessPoint
- DeleteAccessPointForObjectLambda
- DeleteAccessPointPolicy
- DeleteAccessPointPolicyForObjectLambda
- DeleteBucket
- DeleteBucketLifecycleConfiguration
- DeleteBucketPolicy
- DeleteBucketReplication
- DeleteBucketTagging
- DeleteJobTagging
- DeleteMultiRegionAccessPoint
- DeletePublicAccessBlock
- DeleteStorageLensConfiguration
- DeleteStorageLensConfigurationTagging
- DeleteStorageLensGroup
- DescribeJob
- DescribeMultiRegionAccessPointOperation
- DissociateAccessGrantsIdentityCenter
- GetAccessGrant
- GetAccessGrantsInstance
- GetAccessGrantsInstanceForPrefix

- GetAccessGrantsInstanceResourcePolicy
- GetAccessGrantsLocation
- GetAccessPoint
- GetAccessPointConfigurationForObjectLambda
- GetAccessPointForObjectLambda
- GetAccessPointPolicy
- GetAccessPointPolicyForObjectLambda
- GetAccessPointPolicyStatus
- GetAccessPointPolicyStatusForObjectLambda
- GetBucket
- GetBucketLifecycleConfiguration
- GetBucketPolicy
- GetBucketReplication
- GetBucketTagging
- GetBucketVersioning
- GetDataAccess
- GetJobTagging
- GetMultiRegionAccessPoint
- GetMultiRegionAccessPointPolicy
- GetMultiRegionAccessPointPolicyStatus
- GetMultiRegionAccessPointRoutes
- GetPublicAccessBlock
- GetStorageLensConfiguration
- GetStorageLensConfigurationTagging
- GetStorageLensGroup
- ListAccessGrants
- ListAccessGrantsInstances
- ListAccessGrantsLocations
- ListAccessPoints
- ListAccessPointsForObjectLambda

- ListJobs
- ListMultiRegionAccessPoints
- ListRegionalBuckets
- ListStorageLensConfigurations
- ListStorageLensGroups
- ListTagsForResource
- PutAccessGrantsInstanceResourcePolicy
- PutAccessPointConfigurationForObjectLambda
- PutAccessPointPolicy
- PutAccessPointPolicyForObjectLambda
- PutBucketLifecycleConfiguration
- PutBucketPolicy
- PutBucketReplication
- PutBucketTagging
- PutBucketVersioning
- PutJobTagging
- PutMultiRegionAccessPointPolicy
- PutPublicAccessBlock
- PutStorageLensConfiguration
- PutStorageLensConfigurationTagging
- SubmitMultiRegionAccessPointRoutes
- TagResource
- UntagResource
- UpdateAccessGrantsLocation
- UpdateJobPriority
- UpdateJobStatus
- UpdateStorageLensGroup

The following actions are supported by Amazon S3 on Outposts:

- CreateEndpoint

- DeleteEndpoint
- ListEndpoints
- ListOutpostsWithS3
- ListSharedEndpoints

Amazon S3

The following actions are supported by Amazon S3:

- AbortMultipartUpload
- CompleteMultipartUpload
- CopyObject
- CreateBucket
- CreateMultipartUpload
- CreateSession
- DeleteBucket
- DeleteBucketAnalyticsConfiguration
- DeleteBucketCors
- DeleteBucketEncryption
- DeleteBucketIntelligentTieringConfiguration
- DeleteBucketInventoryConfiguration
- DeleteBucketLifecycle
- DeleteBucketMetricsConfiguration
- DeleteBucketOwnershipControls
- DeleteBucketPolicy
- DeleteBucketReplication
- DeleteBucketTagging
- DeleteBucketWebsite
- DeleteObject
- DeleteObjects
- DeleteObjectTagging
- DeletePublicAccessBlock

- GetBucketAccelerateConfiguration
- GetBucketAcl
- GetBucketAnalyticsConfiguration
- GetBucketCors
- GetBucketEncryption
- GetBucketIntelligentTieringConfiguration
- GetBucketInventoryConfiguration
- GetBucketLifecycle
- GetBucketLifecycleConfiguration
- GetBucketLocation
- GetBucketLogging
- GetBucketMetricsConfiguration
- GetBucketNotification
- GetBucketNotificationConfiguration
- GetBucketOwnershipControls
- GetBucketPolicy
- GetBucketPolicyStatus
- GetBucketReplication
- GetBucketRequestPayment
- GetBucketTagging
- GetBucketVersioning
- GetBucketWebsite
- GetObject
- GetObjectAcl
- GetObjectAttributes
- GetObjectLegalHold
- GetObjectLockConfiguration
- GetObjectRetention
- GetObjectTagging
- GetObjectTorrent

- GetPublicAccessBlock
- HeadBucket
- HeadObject
- ListBucketAnalyticsConfigurations
- ListBucketIntelligentTieringConfigurations
- ListBucketInventoryConfigurations
- ListBucketMetricsConfigurations
- ListBuckets
- ListDirectoryBuckets
- ListMultipartUploads
- ListObjects
- ListObjectsV2
- ListObjectVersions
- ListParts
- PutBucketAccelerateConfiguration
- PutBucketAcl
- PutBucketAnalyticsConfiguration
- PutBucketCors
- PutBucketEncryption
- PutBucketIntelligentTieringConfiguration
- PutBucketInventoryConfiguration
- PutBucketLifecycle
- PutBucketLifecycleConfiguration
- PutBucketLogging
- PutBucketMetricsConfiguration
- PutBucketNotification
- PutBucketNotificationConfiguration
- PutBucketOwnershipControls
- PutBucketPolicy
- PutBucketReplication

- PutBucketRequestPayment
- PutBucketTagging
- PutBucketVersioning
- PutBucketWebsite
- PutObject
- PutObjectAcl
- PutObjectLegalHold
- PutObjectLockConfiguration
- PutObjectRetention
- PutObjectTagging
- PutPublicAccessBlock
- RestoreObject
- SelectObjectContent
- UploadPart
- UploadPartCopy
- WriteGetObjectResponse

AbortMultipartUpload

Service: Amazon S3

This operation aborts a multipart upload. After a multipart upload is aborted, no additional parts can be uploaded using that upload ID. The storage consumed by any previously uploaded parts will be freed. However, if any part uploads are currently in progress, those part uploads might or might not succeed. As a result, it might be necessary to abort a given multipart upload multiple times in order to completely free all storage consumed by all parts.

To verify that all parts have been removed and prevent getting charged for the part storage, you should call the ListParts API operation and ensure that the parts list is empty.

Note

- **Directory buckets** - If multipart uploads in a directory bucket are in progress, you can't delete the bucket until all the in-progress multipart uploads are aborted or completed. To delete these in-progress multipart uploads, use the `ListMultipartUploads` operation to list the in-progress multipart uploads in the bucket and use the `AbortMultupartUpload` operation to abort all the in-progress multipart uploads.
- **Directory buckets** - For directory buckets, you must make requests for this API operation to the Zonal endpoint. These endpoints support virtual-hosted-style requests in the format `https://bucket_name.s3express-az_id.region.amazonaws.com/key-name` . Path-style requests are not supported. For more information, see Regional and Zonal endpoints in the *Amazon S3 User Guide*.

Permissions

- **General purpose bucket permissions** - For information about permissions required to use the multipart upload, see Multipart Upload and Permissions in the *Amazon S3 User Guide*.
- **Directory bucket permissions** - To grant access to this API operation on a directory bucket, we recommend that you use the `CreateSession` API operation for session-based authorization. Specifically, you grant the `s3express:CreateSession` permission to the directory bucket in a bucket policy or an IAM identity-based policy. Then, you make the `CreateSession` API call on the bucket to obtain a session token. With the session token in your request header, you can make API requests to this operation. After the session token expires, you make another `CreateSession` API call to generate a new session token for use. AWS CLI or SDKs create session and refresh the session token automatically to avoid

service interruptions when a session expires. For more information about authorization, see `CreateSession`.

HTTP Host header syntax

Directory buckets - The HTTP Host header syntax is *Bucket_name*.s3express-*az_id*.*region*.amazonaws.com.

The following operations are related to `AbortMultipartUpload`:

- CreateMultipartUpload
- UploadPart
- CompleteMultipartUpload
- ListParts
- ListMultipartUploads

Request Syntax

```
DELETE /Key+?uploadId=UploadId HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-request-payer: RequestPayer
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name to which the upload was taking place.

Directory buckets - When you use this operation with a directory bucket, you must use virtual-hosted-style requests in the format *Bucket_name*.s3express-*az_id*.*region*.amazonaws.com. Path-style requests are not supported. Directory bucket names must be unique in the chosen Availability Zone. Bucket names must follow the format *bucket_base_name*--*az-id*--x-s3 (for example, *DOC-EXAMPLE-BUCKET*--*usw2-az1*--x-s3). For information about bucket naming restrictions, see Directory bucket naming rules in the *Amazon S3 User Guide*.

Access points - When you use this action with an access point, you must provide the alias of the access point in place of the bucket name or specify the access point ARN. When using the access point ARN, you must direct requests to the access point hostname. The access point hostname takes the form *AccessPointName-AccountId*.s3-accesspoint.*Region*.amazonaws.com. When using this action with an access point through the AWS SDKs, you provide the access point ARN in place of the bucket name. For more information about access point ARNs, see Using access points in the *Amazon S3 User Guide*.

> **Note**
>
> Access points and Object Lambda access points are not supported by directory buckets.

S3 on Outposts - When you use this action with Amazon S3 on Outposts, you must direct requests to the S3 on Outposts hostname. The S3 on Outposts hostname takes the form *`AccessPointName-AccountId.outpostID`*`.s3-outposts.`*`Region`*`.amazonaws.com`. When you use this action with S3 on Outposts through the AWS SDKs, you provide the Outposts access point ARN in place of the bucket name. For more information about S3 on Outposts ARNs, see What is S3 on Outposts? in the *Amazon S3 User Guide*.

Required: Yes

Key

Key of the object for which the multipart upload was initiated.

Length Constraints: Minimum length of 1.

Required: Yes

uploadId

Upload ID that identifies the multipart upload.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-request-payer

Confirms that the requester knows that they will be charged for the request. Bucket owners need not specify this parameter in their requests. If either the source or destination S3 bucket has Requester Pays enabled, the requester will pay for corresponding charges to copy the object. For information about downloading objects from Requester Pays buckets, see Downloading Objects in Requester Pays Buckets in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
x-amz-request-charged: RequestCharged
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response.

The response returns the following HTTP headers.

x-amz-request-charged

If present, indicates that the requester was successfully charged for the request.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

Errors

NoSuchUpload

The specified multipart upload does not exist.

HTTP Status Code: 404

Examples

Sample Request for general purpose buckets

The following request aborts a multipart upload identified by its upload ID.

```
               DELETE /example-object?
uploadId=VXBsb2FkIElEIGZvciBlbHZpbmcncyBteS1tb3ZpZS5tMnRzIHVwbG9hZ HTTP/1.1
               Host: example-bucket.s3.<Region>.amazonaws.com
               Date:  Mon, 1 Nov 2010 20:34:56 GMT
               Authorization: authorization string
```

Sample Response for general purpose buckets

This example illustrates one usage of AbortMultipartUpload.

```
               HTTP/1.1 204 OK
               x-amz-id-2: Weag1LuByRx9e6j5Onimru9pO4ZVKnJ2Qz7/C1NPcfTWAtRPfTaOFg==
               x-amz-request-id: 996c76696e6727732072657175657374
               Date:  Mon, 1 Nov 2010 20:34:56 GMT
               Content-Length: 0
               Connection: keep-alive
               Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface

- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CompleteMultipartUpload

Service: Amazon S3

Completes a multipart upload by assembling previously uploaded parts.

You first initiate the multipart upload and then upload all parts using the UploadPart operation or the UploadPartCopy operation. After successfully uploading all relevant parts of an upload, you call this `CompleteMultipartUpload` operation to complete the upload. Upon receiving this request, Amazon S3 concatenates all the parts in ascending order by part number to create a new object. In the CompleteMultipartUpload request, you must provide the parts list and ensure that the parts list is complete. The CompleteMultipartUpload API operation concatenates the parts that you provide in the list. For each part in the list, you must provide the `PartNumber` value and the `ETag` value that are returned after that part was uploaded.

The processing of a CompleteMultipartUpload request could take several minutes to finalize. After Amazon S3 begins processing the request, it sends an HTTP response header that specifies a `200 OK` response. While processing is in progress, Amazon S3 periodically sends white space characters to keep the connection from timing out. A request could fail after the initial `200 OK` response has been sent. This means that a `200 OK` response can contain either a success or an error. The error response might be embedded in the `200 OK` response. If you call this API operation directly, make sure to design your application to parse the contents of the response and handle it appropriately. If you use AWS SDKs, SDKs handle this condition. The SDKs detect the embedded error and apply error handling per your configuration settings (including automatically retrying the request as appropriate). If the condition persists, the SDKs throw an exception (or, for the SDKs that don't use exceptions, they return an error).

Note that if `CompleteMultipartUpload` fails, applications should be prepared to retry any failed requests (including 500 error responses). For more information, see Amazon S3 Error Best Practices.

> **Important**
>
> You can't use `Content-Type: application/x-www-form-urlencoded` for the CompleteMultipartUpload requests. Also, if you don't provide a `Content-Type` header, `CompleteMultipartUpload` can still return a `200 OK` response.

For more information about multipart uploads, see Uploading Objects Using Multipart Upload in the *Amazon S3 User Guide*.

> **Note**
>
> **Directory buckets** - For directory buckets, you must make requests for this API operation to the Zonal endpoint. These endpoints support virtual-hosted-style requests in the format `https://bucket_name.s3express-az_id.region.amazonaws.com/key-name`. Path-style requests are not supported. For more information, see Regional and Zonal endpoints in the *Amazon S3 User Guide*.

Permissions

- **General purpose bucket permissions** - For information about permissions required to use the multipart upload API, see Multipart Upload and Permissions in the *Amazon S3 User Guide*.
- **Directory bucket permissions** - To grant access to this API operation on a directory bucket, we recommend that you use the `CreateSession` API operation for session-based authorization. Specifically, you grant the `s3express:CreateSession` permission to the directory bucket in a bucket policy or an IAM identity-based policy. Then, you make the `CreateSession` API call on the bucket to obtain a session token. With the session token in your request header, you can make API requests to this operation. After the session token expires, you make another `CreateSession` API call to generate a new session token for use. AWS CLI or SDKs create session and refresh the session token automatically to avoid service interruptions when a session expires. For more information about authorization, see `CreateSession`.

Special errors

- Error Code: `EntityTooSmall`
  - Description: Your proposed upload is smaller than the minimum allowed object size. Each part must be at least 5 MB in size, except the last part.
  - HTTP Status Code: 400 Bad Request
- Error Code: `InvalidPart`
  - Description: One or more of the specified parts could not be found. The part might not have been uploaded, or the specified ETag might not have matched the uploaded part's ETag.
  - HTTP Status Code: 400 Bad Request
- Error Code: `InvalidPartOrder`

  - Description: The list of parts was not in ascending order. The parts list must be specified in order by part number.
  - HTTP Status Code: 400 Bad Request
- Error Code: `NoSuchUpload`
  - Description: The specified multipart upload does not exist. The upload ID might be invalid, or the multipart upload might have been aborted or completed.
  - HTTP Status Code: 404 Not Found

HTTP Host header syntax

Directory buckets - The HTTP Host header syntax is *Bucket_name*`.s3express-`*az_id*`.`*region*`.amazonaws.com`.

The following operations are related to `CompleteMultipartUpload`:

- CreateMultipartUpload
- UploadPart
- AbortMultipartUpload
- ListParts
- ListMultipartUploads

Request Syntax

```
POST /Key+?uploadId=UploadId HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-checksum-crc32: ChecksumCRC32
x-amz-checksum-crc32c: ChecksumCRC32C
x-amz-checksum-sha1: ChecksumSHA1
x-amz-checksum-sha256: ChecksumSHA256
x-amz-request-payer: RequestPayer
x-amz-expected-bucket-owner: ExpectedBucketOwner
x-amz-server-side-encryption-customer-algorithm: SSECustomerAlgorithm
x-amz-server-side-encryption-customer-key: SSECustomerKey
x-amz-server-side-encryption-customer-key-MD5: SSECustomerKeyMD5
<?xml version="1.0" encoding="UTF-8"?>
<CompleteMultipartUpload xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <Part>
      <ChecksumCRC32>string</ChecksumCRC32>
```

```
      <ChecksumCRC32C>string</ChecksumCRC32C>
      <ChecksumSHA1>string</ChecksumSHA1>
      <ChecksumSHA256>string</ChecksumSHA256>
      <ETag>string</ETag>
      <PartNumber>integer</PartNumber>
   </Part>
   ...
</CompleteMultipartUpload>
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

Name of the bucket to which the multipart upload was initiated.

Directory buckets - When you use this operation with a directory bucket, you must use virtual-hosted-style requests in the format *Bucket_name*.s3express-*az_id*.*region*.amazonaws.com. Path-style requests are not supported. Directory bucket names must be unique in the chosen Availability Zone. Bucket names must follow the format *bucket_base_name*--*az-id*--x-s3 (for example, *DOC-EXAMPLE-BUCKET*--*usw2-az1*--x-s3). For information about bucket naming restrictions, see Directory bucket naming rules in the *Amazon S3 User Guide*.

Access points - When you use this action with an access point, you must provide the alias of the access point in place of the bucket name or specify the access point ARN. When using the access point ARN, you must direct requests to the access point hostname. The access point hostname takes the form *AccessPointName-AccountId*.s3-accesspoint.*Region*.amazonaws.com. When using this action with an access point through the AWS SDKs, you provide the access point ARN in place of the bucket name. For more information about access point ARNs, see Using access points in the *Amazon S3 User Guide*.

> **Note**
>
> Access points and Object Lambda access points are not supported by directory buckets.

S3 on Outposts - When you use this action with Amazon S3 on Outposts, you must direct requests to the S3 on Outposts hostname. The S3 on Outposts hostname takes the form

AccessPointName-*AccountId*.*outpostID*.s3-outposts.*Region*.amazonaws.com. When you use this action with S3 on Outposts through the AWS SDKs, you provide the Outposts access point ARN in place of the bucket name. For more information about S3 on Outposts ARNs, see What is S3 on Outposts? in the *Amazon S3 User Guide*.

Required: Yes

Key

Object key for which the multipart upload was initiated.

Length Constraints: Minimum length of 1.

Required: Yes

uploadId

ID for the initiated multipart upload.

Required: Yes

x-amz-checksum-crc32

This header can be used as a data integrity check to verify that the data received is the same data that was originally sent. This header specifies the base64-encoded, 32-bit CRC32 checksum of the object. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

x-amz-checksum-crc32c

This header can be used as a data integrity check to verify that the data received is the same data that was originally sent. This header specifies the base64-encoded, 32-bit CRC32C checksum of the object. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

x-amz-checksum-sha1

This header can be used as a data integrity check to verify that the data received is the same data that was originally sent. This header specifies the base64-encoded, 160-bit SHA-1 digest of the object. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

x-amz-checksum-sha256

This header can be used as a data integrity check to verify that the data received is the same data that was originally sent. This header specifies the base64-encoded, 256-bit SHA-256 digest of the object. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-request-payer

Confirms that the requester knows that they will be charged for the request. Bucket owners need not specify this parameter in their requests. If either the source or destination S3 bucket has Requester Pays enabled, the requester will pay for corresponding charges to copy the object. For information about downloading objects from Requester Pays buckets, see Downloading Objects in Requester Pays Buckets in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

x-amz-server-side-encryption-customer-algorithm

The server-side encryption (SSE) algorithm used to encrypt the object. This parameter is required only when the object was created using a checksum algorithm or if your bucket policy requires the use of SSE-C. For more information, see Protecting data using SSE-C keys in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-key

The server-side encryption (SSE) customer managed key. This parameter is needed only when the object was created using a checksum algorithm. For more information, see Protecting data using SSE-C keys in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-key-MD5

The MD5 server-side encryption (SSE) customer managed key. This parameter is needed only when the object was created using a checksum algorithm. For more information, see Protecting data using SSE-C keys in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Request Body

The request accepts the following data in XML format.

CompleteMultipartUpload

Root level tag for the CompleteMultipartUpload parameters.

Required: Yes

Part

Array of CompletedPart data types.

If you do not supply a valid `Part` with your request, the service sends back an HTTP 400 response.

Type: Array of CompletedPart data types

Required: No

Response Syntax

```
HTTP/1.1 200
x-amz-expiration: Expiration
x-amz-server-side-encryption: ServerSideEncryption
```

```
x-amz-version-id: VersionId
x-amz-server-side-encryption-aws-kms-key-id: SSEKMSKeyId
x-amz-server-side-encryption-bucket-key-enabled: BucketKeyEnabled
x-amz-request-charged: RequestCharged
<?xml version="1.0" encoding="UTF-8"?>
<CompleteMultipartUploadResult>
   <Location>string</Location>
   <Bucket>string</Bucket>
   <Key>string</Key>
   <ETag>string</ETag>
   <ChecksumCRC32>string</ChecksumCRC32>
   <ChecksumCRC32C>string</ChecksumCRC32C>
   <ChecksumSHA1>string</ChecksumSHA1>
   <ChecksumSHA256>string</ChecksumSHA256>
</CompleteMultipartUploadResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The response returns the following HTTP headers.

x-amz-expiration

If the object expiration is configured, this will contain the expiration date (`expiry-date`) and rule ID (`rule-id`). The value of `rule-id` is URL-encoded.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-request-charged

If present, indicates that the requester was successfully charged for the request.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

x-amz-server-side-encryption

The server-side encryption algorithm used when storing this object in Amazon S3 (for example, AES256, aws:kms).

> **Note**
>
> For directory buckets, only server-side encryption with Amazon S3 managed keys (SSE-S3) (AES256) is supported.

Valid Values: AES256 | aws:kms | aws:kms:dsse

x-amz-server-side-encryption-aws-kms-key-id

If present, indicates the ID of the AWS Key Management Service (AWS KMS) symmetric encryption customer managed key that was used for the object.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-bucket-key-enabled

Indicates whether the multipart upload uses an S3 Bucket Key for server-side encryption with AWS Key Management Service (AWS KMS) keys (SSE-KMS).

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-version-id

Version ID of the newly created object, in case the bucket has versioning turned on.

> **Note**
>
> This functionality is not supported for directory buckets.

The following data is returned in XML format by the service.

CompleteMultipartUploadResult

Root level tag for the CompleteMultipartUploadResult parameters.

Required: Yes

Bucket

The name of the bucket that contains the newly created object. Does not return the access point ARN or access point alias if used.

> **Note**
>
> Access points are not supported by directory buckets.

Type: String

ChecksumCRC32

The base64-encoded, 32-bit CRC32 checksum of the object. This will only be present if it was uploaded with the object. When you use an API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

ChecksumCRC32C

The base64-encoded, 32-bit CRC32C checksum of the object. This will only be present if it was uploaded with the object. When you use an API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

ChecksumSHA1

The base64-encoded, 160-bit SHA-1 digest of the object. This will only be present if it was uploaded with the object. When you use the API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

ChecksumSHA256

The base64-encoded, 256-bit SHA-256 digest of the object. This will only be present if it was uploaded with the object. When you use an API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

ETag

Entity tag that identifies the newly created object's data. Objects with different object data will have different entity tags. The entity tag is an opaque string. The entity tag may or may not be an MD5 digest of the object data. If the entity tag is not an MD5 digest of the object data, it will contain one or more nonhexadecimal characters and/or will consist of less than 32 or more than 32 hexadecimal digits. For more information about how the entity tag is calculated, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

Key

The object key of the newly created object.

Type: String

Length Constraints: Minimum length of 1.

Location

The URI that identifies the newly created object.

Type: String

Examples

Sample Request for general purpose buckets

The following Complete Multipart Upload request specifies three parts in the `CompleteMultipartUpload` element.

```
            POST /example-object?
uploadId=AAAsb2FkIElEIGZvciBlbHZpbmcncyWeeS1tb3ZpZS5tMnRzIRRwbG9hZA HTTP/1.1
            Host: example-bucket.s3.<Region>.amazonaws.com
            Date:  Mon, 1 Nov 2010 20:34:56 GMT
            Content-Length: 391
            Authorization: authorization string

            <CompleteMultipartUpload>
             <Part>
                <PartNumber>1</PartNumber>
               <ETag>"a54357aff0632cce46d942af68356b38"</ETag>
             </Part>
             <Part>
                <PartNumber>2</PartNumber>
               <ETag>"0c78aef83f66abc1fa1e8477f296d394"</ETag>
             </Part>
             <Part>
               <PartNumber>3</PartNumber>
               <ETag>"acbd18db4cc2f85cedef654fccc4a4d8"</ETag>
             </Part>
            </CompleteMultipartUpload>
```

Sample Response for general purpose buckets

The following response indicates that an object was successfully assembled.

```
            HTTP/1.1 200 OK
            x-amz-id-2: Uuag1LuByRx9e6j5Onimru9pO4ZVKnJ2Qz7/C1NPcfTWAtRPfTaOFg==
            x-amz-request-id: 656c76696e6727732072657175657374
            Date: Mon, 1 Nov 2010 20:34:56 GMT
```

```
            Connection: close
            Server: AmazonS3

            <?xml version="1.0" encoding="UTF-8"?>
            <CompleteMultipartUploadResult xmlns="http://s3.amazonaws.com/
doc/2006-03-01/">
             <Location>http://Example-Bucket.s3.<Region>.amazonaws.com/Example-Object</
Location>
             <Bucket>Example-Bucket</Bucket>
             <Key>Example-Object</Key>
             <ETag>"3858f62230ac3c915f300c664312c11f-9"</ETag>
            </CompleteMultipartUploadResult>
```

Sample Response for general purpose buckets: Error specified in header

The following response indicates that an error occurred before the HTTP response header was sent.

```
            HTTP/1.1 403 Forbidden
            x-amz-id-2: Uuag1LuByRx9e6j5Onimru9pO4ZVKnJ2Qz7/C1NPcfTWAtRPfTaOFg==
            x-amz-request-id: 656c76696e6727732072657175657374
            Date:  Mon, 1 Nov 2010 20:34:56 GMT
            Content-Length: 237
            Connection: keep-alive
            Server: AmazonS3

            <?xml version="1.0" encoding="UTF-8"?>
            <Error>
              <Code>AccessDenied</Code>
             <Message>Access Denied</Message>
             <RequestId>656c76696e6727732072657175657374</RequestId>
             <HostId>Uuag1LuByRx9e6j5Onimru9pO4ZVKnJ2Qz7/C1NPcfTWAtRPfTaOFg==</HostId>
            </Error>
```

Sample Response for general purpose buckets: Error specified in body

The following response indicates that an error occurred after the HTTP response header was sent. Note that while the HTTP status code is 200 OK, the request actually failed as described in the `Error` element.

```
HTTP/1.1 200 OK
x-amz-id-2: Uuag1LuByRx9e6j5Onimru9pO4ZVKnJ2Qz7/C1NPcfTWAtRPfTaOFg==
x-amz-request-id: 656c76696e672773207265717565737 4
Date:  Mon, 1 Nov 2010 20:34:56 GMT
Connection: close
Server: AmazonS3

<?xml version="1.0" encoding="UTF-8"?>

<Error>
 <Code>InternalError</Code>
 <Message>We encountered an internal error. Please try again.</Message>
 <RequestId>656c76696e672773207265717565737 4</RequestId>
 <HostId>Uuag1LuByRx9e6j5Onimru9pO4ZVKnJ2Qz7/C1NPcfTWAtRPfTaOFg==</HostId>
</Error>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CopyObject

Service: Amazon S3

Creates a copy of an object that is already stored in Amazon S3.

> **Note**
>
> You can store individual objects of up to 5 TB in Amazon S3. You create a copy of your object up to 5 GB in size in a single atomic action using this API. However, to copy an object greater than 5 GB, you must use the multipart upload Upload Part - Copy (UploadPartCopy) API. For more information, see Copy Object Using the REST Multipart Upload API.

You can copy individual objects between general purpose buckets, between directory buckets, and between general purpose buckets and directory buckets.

> **Note**
>
> - Amazon S3 supports copy operations using Multi-Region Access Points only as a destination when using the Multi-Region Access Point ARN.
> - **Directory buckets** - For directory buckets, you must make requests for this API operation to the Zonal endpoint. These endpoints support virtual-hosted-style requests in the format `https://bucket_name.s3express-az_id.region.amazonaws.com/key-name`. Path-style requests are not supported. For more information, see Regional and Zonal endpoints in the *Amazon S3 User Guide*.

Both the Region that you want to copy the object from and the Region that you want to copy the object to must be enabled for your account. For more information about how to enable a Region for your account, see Enable or disable a Region for standalone accounts in the *AWS Account Management Guide*.

Important

Amazon S3 transfer acceleration does not support cross-Region copies. If you request a cross-Region copy using a transfer acceleration endpoint, you get a `400 Bad Request` error. For more information, see Transfer Acceleration.

Authentication and authorization

All `CopyObject` requests must be authenticated and signed by using IAM credentials (access key ID and secret access key for the IAM identities). All headers with the `x-amz-` prefix, including `x-amz-copy-source`, must be signed. For more information, see REST Authentication.

Directory buckets - You must use the IAM credentials to authenticate and authorize your access to the `CopyObject` API operation, instead of using the temporary security credentials through the `CreateSession` API operation.

AWS CLI or SDKs handles authentication and authorization on your behalf.

Permissions

You must have *read* access to the source object and *write* access to the destination bucket.

- **General purpose bucket permissions** - You must have permissions in an IAM policy based on the source and destination bucket types in a `CopyObject` operation.
  - If the source object is in a general purpose bucket, you must have **`s3:GetObject`** permission to read the source object that is being copied.
  - If the destination bucket is a general purpose bucket, you must have **`s3:PutObject`** permission to write the object copy to the destination bucket.
- **Directory bucket permissions** - You must have permissions in a bucket policy or an IAM identity-based policy based on the source and destination bucket types in a `CopyObject` operation.
  - If the source object that you want to copy is in a directory bucket, you must have the **`s3express:CreateSession`** permission in the `Action` element of a policy to read the object. By default, the session is in the `ReadWrite` mode. If you want to restrict the access, you can explicitly set the `s3express:SessionMode` condition key to `ReadOnly` on the copy source bucket.

- If the copy destination is a directory bucket, you must have the **`s3express:CreateSession`** permission in the `Action` element of a policy to write the object to the destination. The `s3express:SessionMode` condition key can't be set to `ReadOnly` on the copy destination bucket.

For example policies, see Example bucket policies for S3 Express One Zone and AWS Identity and Access Management (IAM) identity-based policies for S3 Express One Zone in the *Amazon S3 User Guide*.

Response and special errors

When the request is an HTTP 1.1 request, the response is chunk encoded. When the request is not an HTTP 1.1 request, the response would not contain the `Content-Length`. You always need to read the entire response body to check if the copy succeeds.

- If the copy is successful, you receive a response with information about the copied object.
- A copy request might return an error when Amazon S3 receives the copy request or while Amazon S3 is copying the files. A `200 OK` response can contain either a success or an error.
  - If the error occurs before the copy action starts, you receive a standard Amazon S3 error.
  - If the error occurs during the copy operation, the error response is embedded in the `200 OK` response. For example, in a cross-region copy, you may encounter throttling and receive a `200 OK` response. For more information, see Resolve the Error 200 response when copying objects to Amazon S3. The `200 OK` status code means the copy was accepted, but it doesn't mean the copy is complete. Another example is when you disconnect from Amazon S3 before the copy is complete, Amazon S3 might cancel the copy and you may receive a `200 OK` response. You must stay connected to Amazon S3 until the entire response is successfully received and processed.

    If you call this API operation directly, make sure to design your application to parse the content of the response and handle it appropriately. If you use AWS SDKs, SDKs handle this condition. The SDKs detect the embedded error and apply error handling per your configuration settings (including automatically retrying the request as appropriate). If the condition persists, the SDKs throw an exception (or, for the SDKs that don't use exceptions, they return an error).

Charge

The copy request charge is based on the storage class and Region that you specify for the destination object. The request can also result in a data retrieval charge for the source if the

source storage class bills for data retrieval. If the copy source is in a different region, the data transfer is billed to the copy source account. For pricing information, see Amazon S3 pricing.

HTTP Host header syntax

Directory buckets - The HTTP Host header syntax is *Bucket_name*.s3express-*az_id*.*region*.amazonaws.com.

The following operations are related to `CopyObject`:

- PutObject
- GetObject

Request Syntax

```
PUT /Key+ HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-acl: ACL
Cache-Control: CacheControl
x-amz-checksum-algorithm: ChecksumAlgorithm
Content-Disposition: ContentDisposition
Content-Encoding: ContentEncoding
Content-Language: ContentLanguage
Content-Type: ContentType
x-amz-copy-source: CopySource
x-amz-copy-source-if-match: CopySourceIfMatch
x-amz-copy-source-if-modified-since: CopySourceIfModifiedSince
x-amz-copy-source-if-none-match: CopySourceIfNoneMatch
x-amz-copy-source-if-unmodified-since: CopySourceIfUnmodifiedSince
Expires: Expires
x-amz-grant-full-control: GrantFullControl
x-amz-grant-read: GrantRead
x-amz-grant-read-acp: GrantReadACP
x-amz-grant-write-acp: GrantWriteACP
x-amz-metadata-directive: MetadataDirective
x-amz-tagging-directive: TaggingDirective
x-amz-server-side-encryption: ServerSideEncryption
x-amz-storage-class: StorageClass
x-amz-website-redirect-location: WebsiteRedirectLocation
x-amz-server-side-encryption-customer-algorithm: SSECustomerAlgorithm
x-amz-server-side-encryption-customer-key: SSECustomerKey
x-amz-server-side-encryption-customer-key-MD5: SSECustomerKeyMD5
```

```
x-amz-server-side-encryption-aws-kms-key-id: SSEKMSKeyId
x-amz-server-side-encryption-context: SSEKMSEncryptionContext
x-amz-server-side-encryption-bucket-key-enabled: BucketKeyEnabled
x-amz-copy-source-server-side-encryption-customer-
algorithm: CopySourceSSECustomerAlgorithm
x-amz-copy-source-server-side-encryption-customer-key: CopySourceSSECustomerKey
x-amz-copy-source-server-side-encryption-customer-key-MD5: CopySourceSSECustomerKeyMD5
x-amz-request-payer: RequestPayer
x-amz-tagging: Tagging
x-amz-object-lock-mode: ObjectLockMode
x-amz-object-lock-retain-until-date: ObjectLockRetainUntilDate
x-amz-object-lock-legal-hold: ObjectLockLegalHoldStatus
x-amz-expected-bucket-owner: ExpectedBucketOwner
x-amz-source-expected-bucket-owner: ExpectedSourceBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the destination bucket.

Directory buckets - When you use this operation with a directory bucket, you must use virtual-hosted-style requests in the format *Bucket_name*.s3express-*az_id*.*region*.amazonaws.com. Path-style requests are not supported. Directory bucket names must be unique in the chosen Availability Zone. Bucket names must follow the format *bucket_base_name*--*az-id*--x-s3 (for example, *DOC-EXAMPLE-BUCKET*--*usw2-az1*--x-s3). For information about bucket naming restrictions, see Directory bucket naming rules in the *Amazon S3 User Guide*.

Access points - When you use this action with an access point, you must provide the alias of the access point in place of the bucket name or specify the access point ARN. When using the access point ARN, you must direct requests to the access point hostname. The access point hostname takes the form *AccessPointName-AccountId*.s3-accesspoint.*Region*.amazonaws.com. When using this action with an access point through the AWS SDKs, you provide the access point ARN in place of the bucket name. For more information about access point ARNs, see Using access points in the *Amazon S3 User Guide*.

> **Note**
>
> Access points and Object Lambda access points are not supported by directory buckets.

S3 on Outposts - When you use this action with Amazon S3 on Outposts, you must direct requests to the S3 on Outposts hostname. The S3 on Outposts hostname takes the form *AccessPointName*-*AccountId*.*outpostID*.s3-outposts.*Region*.amazonaws.com. When you use this action with S3 on Outposts through the AWS SDKs, you provide the Outposts access point ARN in place of the bucket name. For more information about S3 on Outposts ARNs, see What is S3 on Outposts? in the *Amazon S3 User Guide*.

Required: Yes

Cache-Control

Specifies the caching behavior along the request/reply chain.

Content-Disposition

Specifies presentational information for the object. Indicates whether an object should be displayed in a web browser or downloaded as a file. It allows specifying the desired filename for the downloaded file.

Content-Encoding

Specifies what content encodings have been applied to the object and thus what decoding mechanisms must be applied to obtain the media-type referenced by the Content-Type header field.

> **Note**
>
> For directory buckets, only the `aws-chunked` value is supported in this header field.

Content-Language

The language the content is in.

Content-Type

A standard MIME type that describes the format of the object data.

Expires

The date and time at which the object is no longer cacheable.

Key

The key of the destination object.

Length Constraints: Minimum length of 1.

Required: Yes

x-amz-acl

The canned access control list (ACL) to apply to the object.

When you copy an object, the ACL metadata is not preserved and is set to `private` by default. Only the owner has full access control. To override the default ACL setting, specify a new ACL when you generate a copy request. For more information, see Using ACLs.

If the destination bucket that you're copying objects to uses the bucket owner enforced setting for S3 Object Ownership, ACLs are disabled and no longer affect permissions. Buckets that use this setting only accept PUT requests that don't specify an ACL or PUT requests that specify bucket owner full control ACLs, such as the `bucket-owner-full-control` canned ACL or an equivalent form of this ACL expressed in the XML format. For more information, see Controlling ownership of objects and disabling ACLs in the *Amazon S3 User Guide*.

> **Note**
>
> - If your destination bucket uses the bucket owner enforced setting for Object Ownership, all objects written to the bucket by any account will be owned by the bucket owner.
> - This functionality is not supported for directory buckets.
> - This functionality is not supported for Amazon S3 on Outposts.

Valid Values: `private | public-read | public-read-write | authenticated-read | aws-exec-read | bucket-owner-read | bucket-owner-full-control`

x-amz-checksum-algorithm

Indicates the algorithm that you want Amazon S3 to use to create the checksum for the object. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

When you copy an object, if the source object has a checksum, that checksum value will be copied to the new object by default. If the `CopyObject` request does not include this `x-amz-checksum-algorithm` header, the checksum algorithm will be copied from the source object to the destination object (if it's present on the source object). You can optionally specify a different checksum algorithm to use with the `x-amz-checksum-algorithm` header. Unrecognized or unsupported values will respond with the HTTP status code `400 Bad Request`.

> **Note**
>
> For directory buckets, when you use AWS SDKs, `CRC32` is the default checksum algorithm that's used for performance.

Valid Values: `CRC32` | `CRC32C` | `SHA1` | `SHA256`

x-amz-copy-source

Specifies the source object for the copy operation. The source object can be up to 5 GB. If the source object is an object that was uploaded by using a multipart upload, the object copy will be a single part object after the source object is copied to the destination bucket.

You specify the value of the copy source in one of two formats, depending on whether you want to access the source object through an access point:

- For objects not accessed through an access point, specify the name of the source bucket and the key of the source object, separated by a slash (/). For example, to copy the object `reports/january.pdf` from the general purpose bucket `awsexamplebucket`, use `awsexamplebucket/reports/january.pdf`. The value must be URL-encoded. To copy the object `reports/january.pdf` from the directory bucket `awsexamplebucket--use1-az5--x-s3`, use `awsexamplebucket--use1-az5--x-s3/reports/january.pdf`. The value must be URL-encoded.
- For objects accessed through access points, specify the Amazon Resource Name (ARN) of the object as accessed through the access point, in the format `arn:aws:s3:<Region>:<account-id>:accesspoint/<access-point-name>/object/<key>`. For example, to copy the object `reports/january.pdf` through access point `my-access-point` owned by account `123456789012` in Region `us-west-2`, use the URL encoding of `arn:aws:s3:us-west-2:123456789012:accesspoint/my-access-point/object/reports/january.pdf`. The value must be URL encoded.

> **Note**
>
> - Amazon S3 supports copy operations using Access points only when the source and destination buckets are in the same AWS Region.
> - Access points are not supported by directory buckets.

Alternatively, for objects accessed through Amazon S3 on Outposts, specify the ARN of the object as accessed in the format `arn:aws:s3-outposts:<Region>:<account-id>:outpost/<outpost-id>/object/<key>`. For example, to copy the object `reports/january.pdf` through outpost `my-outpost` owned by account `123456789012` in Region `us-west-2`, use the URL encoding of `arn:aws:s3-outposts:us-west-2:123456789012:outpost/my-outpost/object/reports/january.pdf`. The value must be URL-encoded.

If your source bucket versioning is enabled, the `x-amz-copy-source` header by default identifies the current version of an object to copy. If the current version is a delete marker, Amazon S3 behaves as if the object was deleted. To copy a different version, use the `versionId` query parameter. Specifically, append `?versionId=<version-id>` to the value (for example, `awsexamplebucket/reports/january.pdf?versionId=QUpfdndhfd8438MNFDN93jdnJFkdmqnh893`). If you don't specify a version ID, Amazon S3 copies the latest version of the source object.

If you enable versioning on the destination bucket, Amazon S3 generates a unique version ID for the copied object. This version ID is different from the version ID of the source object. Amazon S3 returns the version ID of the copied object in the `x-amz-version-id` response header in the response.

If you do not enable versioning or suspend it on the destination bucket, the version ID that Amazon S3 generates in the `x-amz-version-id` response header is always null.

> **Note**
>
> **Directory buckets** - S3 Versioning isn't enabled and supported for directory buckets.

Pattern: `\/.+\/.+`

Required: Yes

x-amz-copy-source-if-match

Copies the object if its entity tag (ETag) matches the specified tag.

If both the `x-amz-copy-source-if-match` and `x-amz-copy-source-if-unmodified-since` headers are present in the request and evaluate as follows, Amazon S3 returns `200 OK` and copies the data:

- `x-amz-copy-source-if-match` condition evaluates to true
- `x-amz-copy-source-if-unmodified-since` condition evaluates to false

x-amz-copy-source-if-modified-since

Copies the object if it has been modified since the specified time.

If both the `x-amz-copy-source-if-none-match` and `x-amz-copy-source-if-modified-since` headers are present in the request and evaluate as follows, Amazon S3 returns the `412 Precondition Failed` response code:

- `x-amz-copy-source-if-none-match` condition evaluates to false
- `x-amz-copy-source-if-modified-since` condition evaluates to true

x-amz-copy-source-if-none-match

Copies the object if its entity tag (ETag) is different than the specified ETag.

If both the `x-amz-copy-source-if-none-match` and `x-amz-copy-source-if-modified-since` headers are present in the request and evaluate as follows, Amazon S3 returns the `412 Precondition Failed` response code:

- `x-amz-copy-source-if-none-match` condition evaluates to false
- `x-amz-copy-source-if-modified-since` condition evaluates to true

x-amz-copy-source-if-unmodified-since

Copies the object if it hasn't been modified since the specified time.

If both the `x-amz-copy-source-if-match` and `x-amz-copy-source-if-unmodified-since` headers are present in the request and evaluate as follows, Amazon S3 returns `200 OK` and copies the data:

- `x-amz-copy-source-if-match` condition evaluates to true

- `x-amz-copy-source-if-unmodified-since` condition evaluates to false

x-amz-copy-source-server-side-encryption-customer-algorithm

Specifies the algorithm to use when decrypting the source object (for example, AES256).

If the source object for the copy is stored in Amazon S3 using SSE-C, you must provide the necessary encryption information in your request so that Amazon S3 can decrypt the object for copying.

> **Note**
>
> This functionality is not supported when the source object is in a directory bucket.

x-amz-copy-source-server-side-encryption-customer-key

Specifies the customer-provided encryption key for Amazon S3 to use to decrypt the source object. The encryption key provided in this header must be the same one that was used when the source object was created.

If the source object for the copy is stored in Amazon S3 using SSE-C, you must provide the necessary encryption information in your request so that Amazon S3 can decrypt the object for copying.

> **Note**
>
> This functionality is not supported when the source object is in a directory bucket.

x-amz-copy-source-server-side-encryption-customer-key-MD5

Specifies the 128-bit MD5 digest of the encryption key according to RFC 1321. Amazon S3 uses this header for a message integrity check to ensure that the encryption key was transmitted without error.

If the source object for the copy is stored in Amazon S3 using SSE-C, you must provide the necessary encryption information in your request so that Amazon S3 can decrypt the object for copying.

> **Note**
>
> This functionality is not supported when the source object is in a directory bucket.

x-amz-expected-bucket-owner

The account ID of the expected destination bucket owner. If the account ID that you provide does not match the actual owner of the destination bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-grant-full-control

Gives the grantee READ, READ_ACP, and WRITE_ACP permissions on the object.

> **Note**
>
> - This functionality is not supported for directory buckets.
> - This functionality is not supported for Amazon S3 on Outposts.

x-amz-grant-read

Allows grantee to read the object data and its metadata.

> **Note**
>
> - This functionality is not supported for directory buckets.
> - This functionality is not supported for Amazon S3 on Outposts.

x-amz-grant-read-acp

Allows grantee to read the object ACL.

> **Note**
>
> - This functionality is not supported for directory buckets.
> - This functionality is not supported for Amazon S3 on Outposts.

x-amz-grant-write-acp

Allows grantee to write the ACL for the applicable object.

> **Note**
>
> - This functionality is not supported for directory buckets.
> - This functionality is not supported for Amazon S3 on Outposts.

x-amz-metadata-directive

Specifies whether the metadata is copied from the source object or replaced with metadata that's provided in the request. When copying an object, you can preserve all metadata (the default) or specify new metadata. If this header isn't specified, `COPY` is the default behavior.

General purpose bucket - For general purpose buckets, when you grant permissions, you can use the `s3:x-amz-metadata-directive` condition key to enforce certain metadata behavior when objects are uploaded. For more information, see Amazon S3 condition key examples in the *Amazon S3 User Guide*.

> **Note**
>
> `x-amz-website-redirect-location` is unique to each object and is not copied when using the `x-amz-metadata-directive` header. To copy the value, you must specify `x-amz-website-redirect-location` in the request header.

Valid Values: `COPY` | `REPLACE`

x-amz-object-lock-legal-hold

Specifies whether you want to apply a legal hold to the object copy.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `ON` | `OFF`

x-amz-object-lock-mode

The Object Lock mode that you want to apply to the object copy.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `GOVERNANCE | COMPLIANCE`

x-amz-object-lock-retain-until-date

The date and time when you want the Object Lock of the object copy to expire.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-request-payer

Confirms that the requester knows that they will be charged for the request. Bucket owners need not specify this parameter in their requests. If either the source or destination S3 bucket has Requester Pays enabled, the requester will pay for corresponding charges to copy the object. For information about downloading objects from Requester Pays buckets, see Downloading Objects in Requester Pays Buckets in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

x-amz-server-side-encryption

The server-side encryption algorithm used when storing this object in Amazon S3 (for example, `AES256`, `aws:kms`, `aws:kms:dsse`). Unrecognized or unsupported values won't write a destination object and will receive a `400 Bad Request` response.

Amazon S3 automatically encrypts all new objects that are copied to an S3 bucket. When copying an object, if you don't specify encryption information in your copy request, the encryption setting of the target object is set to the default encryption configuration of the destination bucket. By default, all buckets have a base level of encryption configuration that uses server-side encryption with Amazon S3 managed keys (SSE-S3). If the destination bucket has a default encryption configuration that uses server-side encryption with AWS Key Management Service (AWS KMS) keys (SSE-KMS), dual-layer server-side encryption with AWS KMS keys (DSSE-KMS), or server-side encryption with customer-provided encryption keys (SSE-C), Amazon S3 uses the corresponding KMS key, or a customer-provided key to encrypt the target object copy.

When you perform a `CopyObject` operation, if you want to use a different type of encryption setting for the target object, you can specify appropriate encryption-related headers to encrypt the target object with an Amazon S3 managed key, a KMS key, or a customer-provided key. If the encryption setting in your request is different from the default encryption configuration of the destination bucket, the encryption setting in your request takes precedence.

With server-side encryption, Amazon S3 encrypts your data as it writes your data to disks in its data centers and decrypts the data when you access it. For more information about server-side encryption, see Using Server-Side Encryption in the *Amazon S3 User Guide*.

> **Note**
>
> For directory buckets, only server-side encryption with Amazon S3 managed keys (SSE-S3) (`AES256`) is supported.

Valid Values: `AES256` | `aws:kms` | `aws:kms:dsse`

x-amz-server-side-encryption-aws-kms-key-id

Specifies the AWS KMS ID (Key ID, Key ARN, or Key Alias) to use for object encryption. All GET and PUT requests for an object protected by AWS KMS will fail if they're not made via SSL or using SigV4. For information about configuring any of the officially supported AWS SDKs and AWS CLI, see Specifying the Signature Version in Request Authentication in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported when the destination bucket is a directory bucket.

x-amz-server-side-encryption-bucket-key-enabled

Specifies whether Amazon S3 should use an S3 Bucket Key for object encryption with server-side encryption using AWS Key Management Service (AWS KMS) keys (SSE-KMS). If a target object uses SSE-KMS, you can enable an S3 Bucket Key for the object.

Setting this header to `true` causes Amazon S3 to use an S3 Bucket Key for object encryption with SSE-KMS. Specifying this header with a COPY action doesn't affect bucket-level settings for S3 Bucket Key.

For more information, see Amazon S3 Bucket Keys in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported when the destination bucket is a directory bucket.

x-amz-server-side-encryption-context

Specifies the AWS KMS Encryption Context to use for object encryption. The value of this header is a base64-encoded UTF-8 string holding JSON with the encryption context key-value pairs. This value must be explicitly added to specify encryption context for `CopyObject` requests.

> **Note**
>
> This functionality is not supported when the destination bucket is a directory bucket.

x-amz-server-side-encryption-customer-algorithm

Specifies the algorithm to use when encrypting the object (for example, `AES256`).

When you perform a `CopyObject` operation, if you want to use a different type of encryption setting for the target object, you can specify appropriate encryption-related headers to encrypt

the target object with an Amazon S3 managed key, a KMS key, or a customer-provided key. If the encryption setting in your request is different from the default encryption configuration of the destination bucket, the encryption setting in your request takes precedence.

> **Note**
>
> This functionality is not supported when the destination bucket is a directory bucket.

x-amz-server-side-encryption-customer-key

Specifies the customer-provided encryption key for Amazon S3 to use in encrypting data. This value is used to store the object and then it is discarded. Amazon S3 does not store the encryption key. The key must be appropriate for use with the algorithm specified in the `x-amz-server-side-encryption-customer-algorithm` header.

> **Note**
>
> This functionality is not supported when the destination bucket is a directory bucket.

x-amz-server-side-encryption-customer-key-MD5

Specifies the 128-bit MD5 digest of the encryption key according to RFC 1321. Amazon S3 uses this header for a message integrity check to ensure that the encryption key was transmitted without error.

> **Note**
>
> This functionality is not supported when the destination bucket is a directory bucket.

x-amz-source-expected-bucket-owner

The account ID of the expected source bucket owner. If the account ID that you provide does not match the actual owner of the source bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-storage-class

If the `x-amz-storage-class` header is not used, the copied object will be stored in the `STANDARD` Storage Class by default. The `STANDARD` storage class provides high durability and high availability. Depending on performance needs, you can specify a different Storage Class.

> **Note**
>
> - **Directory buckets** - For directory buckets, only the S3 Express One Zone storage class is supported to store newly created objects. Unsupported storage class values won't write a destination object and will respond with the HTTP status code `400 Bad Request`.
> - **Amazon S3 on Outposts** - S3 on Outposts only uses the `OUTPOSTS` Storage Class.

You can use the `CopyObject` action to change the storage class of an object that is already stored in Amazon S3 by using the `x-amz-storage-class` header. For more information, see Storage Classes in the *Amazon S3 User Guide*.

Before using an object as a source object for the copy operation, you must restore a copy of it if it meets any of the following conditions:

- The storage class of the source object is `GLACIER` or `DEEP_ARCHIVE`.
- The storage class of the source object is `INTELLIGENT_TIERING` and it's S3 Intelligent-Tiering access tier is `Archive Access` or `Deep Archive Access`.

For more information, see RestoreObject and Copying Objects in the *Amazon S3 User Guide*.

Valid Values: `STANDARD | REDUCED_REDUNDANCY | STANDARD_IA | ONEZONE_IA | INTELLIGENT_TIERING | GLACIER | DEEP_ARCHIVE | OUTPOSTS | GLACIER_IR | SNOW | EXPRESS_ONEZONE`

x-amz-tagging

The tag-set for the object copy in the destination bucket. This value must be used in conjunction with the `x-amz-tagging-directive` if you choose `REPLACE` for the `x-amz-tagging-directive`. If you choose `COPY` for the `x-amz-tagging-directive`, you don't need to set the `x-amz-tagging` header, because the tag-set will be copied from the source object directly. The tag-set must be encoded as URL Query parameters.

The default value is the empty value.

Note

Directory buckets - For directory buckets in a `CopyObject` operation, only the empty tag-set is supported. Any requests that attempt to write non-empty tags into directory buckets will receive a `501 Not Implemented` status code. When the destination bucket is a directory bucket, you will receive a `501 Not Implemented` response in any of the following situations:

- When you attempt to `COPY` the tag-set from an S3 source object that has non-empty tags.
- When you attempt to `REPLACE` the tag-set of a source object and set a non-empty value to `x-amz-tagging`.
- When you don't set the `x-amz-tagging-directive` header and the source object has non-empty tags. This is because the default value of `x-amz-tagging-directive` is `COPY`.

Because only the empty tag-set is supported for directory buckets in a `CopyObject` operation, the following situations are allowed:

- When you attempt to `COPY` the tag-set from a directory bucket source object that has no tags to a general purpose bucket. It copies an empty tag-set to the destination object.
- When you attempt to `REPLACE` the tag-set of a directory bucket source object and set the `x-amz-tagging` value of the directory bucket destination object to empty.
- When you attempt to `REPLACE` the tag-set of a general purpose bucket source object that has non-empty tags and set the `x-amz-tagging` value of the directory bucket destination object to empty.
- When you attempt to `REPLACE` the tag-set of a directory bucket source object and don't set the `x-amz-tagging` value of the directory bucket destination object. This is because the default value of `x-amz-tagging` is the empty value.

x-amz-tagging-directive

Specifies whether the object tag-set is copied from the source object or replaced with the tag-set that's provided in the request.

The default value is `COPY`.

Note

Directory buckets - For directory buckets in a `CopyObject` operation, only the empty tag-set is supported. Any requests that attempt to write non-empty tags into directory buckets will receive a `501 Not Implemented` status code. When the destination bucket is a directory bucket, you will receive a `501 Not Implemented` response in any of the following situations:

- When you attempt to `COPY` the tag-set from an S3 source object that has non-empty tags.
- When you attempt to `REPLACE` the tag-set of a source object and set a non-empty value to `x-amz-tagging`.
- When you don't set the `x-amz-tagging-directive` header and the source object has non-empty tags. This is because the default value of `x-amz-tagging-directive` is `COPY`.

Because only the empty tag-set is supported for directory buckets in a `CopyObject` operation, the following situations are allowed:

- When you attempt to `COPY` the tag-set from a directory bucket source object that has no tags to a general purpose bucket. It copies an empty tag-set to the destination object.
- When you attempt to `REPLACE` the tag-set of a directory bucket source object and set the `x-amz-tagging` value of the directory bucket destination object to empty.
- When you attempt to `REPLACE` the tag-set of a general purpose bucket source object that has non-empty tags and set the `x-amz-tagging` value of the directory bucket destination object to empty.
- When you attempt to `REPLACE` the tag-set of a directory bucket source object and don't set the `x-amz-tagging` value of the directory bucket destination object. This is because the default value of `x-amz-tagging` is the empty value.

Valid Values: `COPY` | `REPLACE`

x-amz-website-redirect-location

If the destination bucket is configured as a website, redirects requests for this object copy to another object in the same bucket or to an external URL. Amazon S3 stores the value of this header in the object metadata. This value is unique to each object and is not copied when using

the `x-amz-metadata-directive` header. Instead, you may opt to provide this header in combination with the `x-amz-metadata-directive` header.

> **Note**
>
> This functionality is not supported for directory buckets.

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
x-amz-expiration: Expiration
x-amz-copy-source-version-id: CopySourceVersionId
x-amz-version-id: VersionId
x-amz-server-side-encryption: ServerSideEncryption
x-amz-server-side-encryption-customer-algorithm: SSECustomerAlgorithm
x-amz-server-side-encryption-customer-key-MD5: SSECustomerKeyMD5
x-amz-server-side-encryption-aws-kms-key-id: SSEKMSKeyId
x-amz-server-side-encryption-context: SSEKMSEncryptionContext
x-amz-server-side-encryption-bucket-key-enabled: BucketKeyEnabled
x-amz-request-charged: RequestCharged
<?xml version="1.0" encoding="UTF-8"?>
<CopyObjectResult>
   <ETag>string</ETag>
   <LastModified>timestamp</LastModified>
   <ChecksumCRC32>string</ChecksumCRC32>
   <ChecksumCRC32C>string</ChecksumCRC32C>
   <ChecksumSHA1>string</ChecksumSHA1>
   <ChecksumSHA256>string</ChecksumSHA256>
</CopyObjectResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The response returns the following HTTP headers.

x-amz-copy-source-version-id

Version ID of the source object that was copied.

> **Note**
>
> This functionality is not supported when the source object is in a directory bucket.

x-amz-expiration

If the object expiration is configured, the response includes this header.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-request-charged

If present, indicates that the requester was successfully charged for the request.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

x-amz-server-side-encryption

The server-side encryption algorithm used when you store this object in Amazon S3 (for example, `AES256`, `aws:kms`, `aws:kms:dsse`).

> **Note**
>
> For directory buckets, only server-side encryption with Amazon S3 managed keys (SSE-S3) (`AES256`) is supported.

Valid Values: `AES256` | `aws:kms` | `aws:kms:dsse`

x-amz-server-side-encryption-aws-kms-key-id

If present, indicates the ID of the AWS Key Management Service (AWS KMS) symmetric encryption customer managed key that was used for the object.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-bucket-key-enabled

Indicates whether the copied object uses an S3 Bucket Key for server-side encryption with AWS Key Management Service (AWS KMS) keys (SSE-KMS).

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-context

If present, indicates the AWS KMS Encryption Context to use for object encryption. The value of this header is a base64-encoded UTF-8 string holding JSON with the encryption context key-value pairs.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-algorithm

If server-side encryption with a customer-provided encryption key was requested, the response will include this header to confirm the encryption algorithm that's used.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-key-MD5

If server-side encryption with a customer-provided encryption key was requested, the response will include this header to provide the round-trip message integrity verification of the customer-provided encryption key.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-version-id

Version ID of the newly created copy.

> **Note**
>
> This functionality is not supported for directory buckets.

The following data is returned in XML format by the service.

CopyObjectResult

Root level tag for the CopyObjectResult parameters.

Required: Yes

ChecksumCRC32

The base64-encoded, 32-bit CRC32 checksum of the object. This will only be present if it was uploaded with the object. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

ChecksumCRC32C

The base64-encoded, 32-bit CRC32C checksum of the object. This will only be present if it was uploaded with the object. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

ChecksumSHA1

The base64-encoded, 160-bit SHA-1 digest of the object. This will only be present if it was uploaded with the object. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

ChecksumSHA256

The base64-encoded, 256-bit SHA-256 digest of the object. This will only be present if it was uploaded with the object. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

ETag

Returns the ETag of the new object. The ETag reflects only changes to the contents of an object, not its metadata.

Type: String

LastModified

Creation date of the object.

Type: Timestamp

Errors

ObjectNotInActiveTierError

The source object of the COPY action is not in the active tier and is only stored in Amazon S3 Glacier.

HTTP Status Code: 403

Examples

Sample Request for general purpose buckets

This example copies `my-image.jpg` into the `bucket` bucket, with the key name `my-second-image.jpg`.

```
                PUT /my-second-image.jpg HTTP/1.1
                Host: bucket.s3.<Region>.amazonaws.com
                Date: Wed, 28 Oct 2009 22:32:00 GMT
                x-amz-copy-source: /bucket/my-image.jpg
                Authorization: authorization string
```

Sample Response for general purpose buckets

This example illustrates one usage of CopyObject.

```
               HTTP/1.1 200 OK
               x-amz-id-2:
 eftixk72aD6Ap51TnqcoF8eFidJG9Z/2mkiDFu8yU9AS1ed4OpIszj7UDNEHGran
               x-amz-request-id: 318BC8BC148832E5
               x-amz-copy-source-version-id: 3/L4kqtJlcpXroDTDmJ+rmSpXd3dIbrHY
+MTRCxf3vjVBH40Nr8X8gdRQBpUMLUo
               x-amz-version-id: QUpfdndhfd8438MNFDN93jdnJFkdmqnh893
               Date: Wed, 28 Oct 2009 22:32:00 GMT
               Connection: close
               Server: AmazonS3

               <CopyObjectResult>
                  <LastModified>2009-10-12T17:50:30.000Z</LastModified>
                  <ETag>"9b2cf535f27731c974343645a3985328"</ETag>
               </CopyObjectResult>
```

Sample Request for general purpose buckets: Copying a specified version of an object

The following request copies the `my-image.jpg` key with the specified version ID, copies it into the `bucket` bucket, and gives it the `my-second-image.jpg` key.

```
                PUT /my-second-image.jpg HTTP/1.1
                Host: bucket.s3.<Region>.amazonaws.com
                Date: Wed, 28 Oct 2009 22:32:00 GMT
                x-amz-copy-source: /bucket/my-image.jpg?versionId=3/L4kqtJlcpXroDTDmJ
+rmSpXd3dIbrHY+MTRCxf3vjVBH40Nr8X8gdRQBpUMLUo
                Authorization: authorization string
```

Success Response for general purpose buckets: Copying a versioned object into a version-enabled bucket

The following response shows that an object was copied into a target bucket where versioning is enabled.

```
               HTTP/1.1 200 OK
               x-amz-id-2:
eftixk72aD6Ap51TnqcoF8eFidJG9Z/2mkiDFu8yU9AS1ed4OpIszj7UDNEHGran
               x-amz-request-id: 318BC8BC148832E5
               x-amz-version-id: QUpfdndhfd8438MNFDN93jdnJFkdmqnh893
               x-amz-copy-source-version-id: 09df8234529fjs0dfi0w52935029wefdj
               Date: Wed, 28 Oct 2009 22:32:00 GMT
               Connection: close
               Server: AmazonS3

               <?xml version="1.0" encoding="UTF-8"?>
               <CopyObjectResult>
                 <LastModified>2009-10-12T17:50:30.000Z</LastModified>
                 <ETag>"9b2cf535f27731c974343645a3985328"</ETag>
               </CopyObjectResult>
```

Success Response for general purpose buckets: Copying a versioned object into a version-suspended bucket

The following response shows that an object was copied into a target bucket where versioning is suspended. The parameter `VersionId` does not appear.

```
              HTTP/1.1 200 OK
              x-amz-id-2:
 eftixk72aD6Ap51TnqcoF8eFidJG9Z/2mkiDFu8yU9AS1ed4OpIszj7UDNEHGran
              x-amz-request-id: 318BC8BC148832E5
              x-amz-copy-source-version-id: 3/L4kqtJlcpXroDTDmJ+rmSpXd3dIbrHY
+MTRCxf3vjVBH40Nr8X8gdRQBpUMLUo
              Date: Wed, 28 Oct 2009 22:32:00 GMT
              Connection: close
              Server: AmazonS3
```

```
               <?xml version="1.0" encoding="UTF-8"?>
                <CopyObjectResult>
                  <LastModified>2009-10-28T22:32:00</LastModified>
                  <ETag>"9b2cf535f27731c974343645a3985328"</ETag>
                </CopyObjectResult>
```

Sample Request for general purpose buckets: Copy from unencrypted object to an object encrypted with server-side encryption with customer-provided encryption keys

The following example specifies the HTTP PUT header to copy an unencrypted object to an object encrypted with server-side encryption with customer-provided encryption keys (SSE-C).

```
                PUT /exampleDestinationObject HTTP/1.1
                Host: example-destination-bucket.s3.<Region>.amazonaws.com
                x-amz-server-side-encryption-customer-algorithm: AES256
                x-amz-server-side-encryption-customer-key: Base64(YourKey)
                x-amz-server-side-encryption-customer-key-MD5 : Base64(MD5(YourKey))
                x-amz-metadata-directive: metadata_directive
                x-amz-copy-source: /example_source_bucket/exampleSourceObject
                x-amz-copy-source-if-match: etag
                x-amz-copy-source-if-none-match: etag
                x-amz-copy-source-if-unmodified-since: time_stamp
                x-amz-copy-source-if-modified-since: time_stamp

               <request metadata>
                Authorization: authorization string (see Authenticating Requests (AWS
Signature Version 4))
                Date: date
```

Sample Request for general purpose buckets: Copy from an object encrypted with SSE-C to an object encrypted with SSE-C

The following example specifies the HTTP PUT header to copy an object encrypted with server-side encryption with customer-provided encryption keys to an object encrypted with server-side encryption with customer-provided encryption keys for key rotation.

```
                PUT /exampleDestinationObject HTTP/1.1
```

```
                Host: example-destination-bucket.s3.<Region>.amazonaws.com
                x-amz-server-side-encryption-customer-algorithm: AES256
                x-amz-server-side-encryption-customer-key: Base64(NewKey)
                x-amz-server-side-encryption-customer-key-MD5: Base64(MD5(NewKey))
                x-amz-metadata-directive: metadata_directive
                x-amz-copy-source: /source_bucket/sourceObject
                x-amz-copy-source-if-match: etag
                x-amz-copy-source-if-none-match: etag
                x-amz-copy-source-if-unmodified-since: time_stamp
                x-amz-copy-source-if-modified-since: time_stamp
                x-amz-copy-source-server-side-encryption-customer-algorithm: AES256
                x-amz-copy-source-server-side-encryption-customer-key: Base64(OldKey)
                x-amz-copy-source-server-side-encryption-customer-key-MD5:
Base64(MD5(OldKey))

               <request metadata>
                Authorization: authorization string (see Authenticating Requests (AWS
Signature Version 4))
                Date: date
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateBucket

Service: Amazon S3

> **Note**
>
> This action creates an Amazon S3 bucket. To create an Amazon S3 on Outposts bucket, see `CreateBucket`.

Creates a new S3 bucket. To create a bucket, you must set up Amazon S3 and have a valid AWS Access Key ID to authenticate requests. Anonymous requests are never allowed to create buckets. By creating the bucket, you become the bucket owner.

There are two types of buckets: general purpose buckets and directory buckets. For more information about these bucket types, see Creating, configuring, and working with Amazon S3 buckets in the *Amazon S3 User Guide*.

> **Note**
>
> - **General purpose buckets** - If you send your `CreateBucket` request to the `s3.amazonaws.com` global endpoint, the request goes to the `us-east-1` Region. So the signature calculations in Signature Version 4 must use `us-east-1` as the Region, even if the location constraint in the request specifies another Region where the bucket is to be created. If you create a bucket in a Region other than US East (N. Virginia), your application must be able to handle 307 redirect. For more information, see Virtual hosting of buckets in the *Amazon S3 User Guide*.
> - **Directory buckets** - For directory buckets, you must make requests for this API operation to the Regional endpoint. These endpoints support path-style requests in the format `https://s3express-control.`*`region_code`*`.amazonaws.com/`*`bucket-name`* . Virtual-hosted-style requests aren't supported. For more information, see Regional and Zonal endpoints in the *Amazon S3 User Guide*.

Permissions

- **General purpose bucket permissions** - In addition to the `s3:CreateBucket` permission, the following permissions are required in a policy when your `CreateBucket` request includes specific headers:

- **Access control lists (ACLs)** - In your `CreateBucket` request, if you specify an access control list (ACL) and set it to `public-read`, `public-read-write`, `authenticated-read`, or if you explicitly specify any other custom ACLs, both `s3:CreateBucket` and `s3:PutBucketAcl` permissions are required. In your `CreateBucket` request, if you set the ACL to `private`, or if you don't specify any ACLs, only the `s3:CreateBucket` permission is required.
- **Object Lock** - In your `CreateBucket` request, if you set `x-amz-bucket-object-lock-enabled` to true, the `s3:PutBucketObjectLockConfiguration` and `s3:PutBucketVersioning` permissions are required.
- **S3 Object Ownership** - If your `CreateBucket` request includes the `x-amz-object-ownership` header, then the `s3:PutBucketOwnershipControls` permission is required.

  > **Important**
  >
  > To set an ACL on a bucket as part of a `CreateBucket` request, you must explicitly set S3 Object Ownership for the bucket to a different value than the default, `BucketOwnerEnforced`. Additionally, if your desired bucket ACL grants public access, you must first create the bucket (without the bucket ACL) and then explicitly disable Block Public Access on the bucket before using `PutBucketAcl` to set the ACL. If you try to create a bucket with a public ACL, the request will fail.
  > For the majority of modern use cases in S3, we recommend that you keep all Block Public Access settings enabled and keep ACLs disabled. If you would like to share data with users outside of your account, you can use bucket policies as needed. For more information, see Controlling ownership of objects and disabling ACLs for your bucket and Blocking public access to your Amazon S3 storage in the *Amazon S3 User Guide*.

- **S3 Block Public Access** - If your specific use case requires granting public access to your S3 resources, you can disable Block Public Access. Specifically, you can create a new bucket with Block Public Access enabled, then separately call the `DeletePublicAccessBlock` API. To use this operation, you must have the `s3:PutBucketPublicAccessBlock` permission. For more information about S3 Block Public Access, see Blocking public access to your Amazon S3 storage in the *Amazon S3 User Guide*.

- **Directory bucket permissions** - You must have the `s3express:CreateBucket` permission in an IAM identity-based policy instead of a bucket policy. Cross-account access to this API operation isn't supported. This operation can only be performed by the AWS account that

owns the resource. For more information about directory bucket policies and permissions, see AWS Identity and Access Management (IAM) for S3 Express One Zone in the *Amazon S3 User Guide*.

> **Important**
>
> The permissions for ACLs, Object Lock, S3 Object Ownership, and S3 Block Public Access are not supported for directory buckets. For directory buckets, all Block Public Access settings are enabled at the bucket level and S3 Object Ownership is set to Bucket owner enforced (ACLs disabled). These settings can't be modified.
> For more information about permissions for creating and working with directory buckets, see Directory buckets in the *Amazon S3 User Guide*. For more information about supported S3 features for directory buckets, see Features of S3 Express One Zone in the *Amazon S3 User Guide*.

HTTP Host header syntax

Directory buckets - The HTTP Host header syntax is `s3express-control.region.amazonaws.com`.

The following operations are related to `CreateBucket`:

- PutObject
- DeleteBucket

Request Syntax

```
PUT / HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-acl: ACL
x-amz-grant-full-control: GrantFullControl
x-amz-grant-read: GrantRead
x-amz-grant-read-acp: GrantReadACP
x-amz-grant-write: GrantWrite
x-amz-grant-write-acp: GrantWriteACP
x-amz-bucket-object-lock-enabled: ObjectLockEnabledForBucket
x-amz-object-ownership: ObjectOwnership
<?xml version="1.0" encoding="UTF-8"?>
<CreateBucketConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
```

```
   <LocationConstraint>string</LocationConstraint>
   <Location>
      <Name>string</Name>
      <Type>string</Type>
   </Location>
   <Bucket>
      <DataRedundancy>string</DataRedundancy>
      <Type>string</Type>
   </Bucket>
</CreateBucketConfiguration>
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket to create.

General purpose buckets - For information about bucket naming restrictions, see Bucket naming rules in the *Amazon S3 User Guide*.

Directory buckets - When you use this operation with a directory bucket, you must use path-style requests in the format `https://s3express-control.region_code.amazonaws.com/bucket-name` . Virtual-hosted-style requests aren't supported. Directory bucket names must be unique in the chosen Availability Zone. Bucket names must also follow the format `bucket_base_name--az_id--x-s3` (for example, `DOC-EXAMPLE-BUCKET--usw2-az1--x-s3`). For information about bucket naming restrictions, see Directory bucket naming rules in the *Amazon S3 User Guide*

Required: Yes

x-amz-acl

The canned ACL to apply to the bucket.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `private | public-read | public-read-write | authenticated-read`

x-amz-bucket-object-lock-enabled

Specifies whether you want S3 Object Lock to be enabled for the new bucket.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-grant-full-control

Allows grantee the read, write, read ACP, and write ACP permissions on the bucket.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-grant-read

Allows grantee to list the objects in the bucket.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-grant-read-acp

Allows grantee to read the bucket ACL.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-grant-write

Allows grantee to create new objects in the bucket.

For the bucket and object owners of existing objects, also allows deletions and overwrites of those objects.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-grant-write-acp

Allows grantee to write the ACL for the applicable bucket.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-object-ownership

The container element for object ownership for a bucket's ownership controls.

`BucketOwnerPreferred` - Objects uploaded to the bucket change ownership to the bucket owner if the objects are uploaded with the `bucket-owner-full-control` canned ACL.

`ObjectWriter` - The uploading account will own the object if the object is uploaded with the `bucket-owner-full-control` canned ACL.

`BucketOwnerEnforced` - Access control lists (ACLs) are disabled and no longer affect permissions. The bucket owner automatically owns and has full control over every object in the bucket. The bucket only accepts PUT requests that don't specify an ACL or specify bucket owner full control ACLs (such as the predefined `bucket-owner-full-control` canned ACL or a custom ACL in XML format that grants the same permissions).

By default, `ObjectOwnership` is set to `BucketOwnerEnforced` and ACLs are disabled. We recommend keeping ACLs disabled, except in uncommon use cases where you must control access for each object individually. For more information about S3 Object Ownership, see Controlling ownership of objects and disabling ACLs for your bucket in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets. Directory buckets use the bucket owner enforced setting for S3 Object Ownership.

Valid Values: `BucketOwnerPreferred | ObjectWriter | BucketOwnerEnforced`

Request Body

The request accepts the following data in XML format.

CreateBucketConfiguration

Root level tag for the CreateBucketConfiguration parameters.

Required: Yes

Bucket

Specifies the information about the bucket that will be created.

> **Note**
> This functionality is only supported by directory buckets.

Type: BucketInfo data type

Required: No

Location

Specifies the location where the bucket will be created.

For directory buckets, the location type is Availability Zone.

> **Note**
> This functionality is only supported by directory buckets.

Type: LocationInfo data type

Required: No

LocationConstraint

Specifies the Region where the bucket will be created. You might choose a Region to optimize latency, minimize costs, or address regulatory requirements. For example, if you reside in

Europe, you will probably find it advantageous to create buckets in the Europe (Ireland) Region. For more information, see Accessing a bucket in the *Amazon S3 User Guide*.

If you don't specify a Region, the bucket is created in the US East (N. Virginia) Region (us-east-1) by default.

> **Note**
>
> This functionality is not supported for directory buckets.

Type: String

Valid Values: `af-south-1 | ap-east-1 | ap-northeast-1 | ap-northeast-2 | ap-northeast-3 | ap-south-1 | ap-south-2 | ap-southeast-1 | ap-southeast-2 | ap-southeast-3 | ca-central-1 | cn-north-1 | cn-northwest-1 | EU | eu-central-1 | eu-north-1 | eu-south-1 | eu-south-2 | eu-west-1 | eu-west-2 | eu-west-3 | me-south-1 | sa-east-1 | us-east-2 | us-gov-east-1 | us-gov-west-1 | us-west-1 | us-west-2`

Required: No

Response Syntax

```
HTTP/1.1 200
Location: Location
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The response returns the following HTTP headers.

Location

A forward slash followed by the name of the bucket.

Errors

BucketAlreadyExists

The requested bucket name is not available. The bucket namespace is shared by all users of the system. Select a different name and try again.

HTTP Status Code: 409

BucketAlreadyOwnedByYou

The bucket you tried to create already exists, and you own it. Amazon S3 returns this error in all AWS Regions except in the North Virginia Region. For legacy compatibility, if you re-create an existing bucket that you already own in the North Virginia Region, Amazon S3 returns 200 OK and resets the bucket access control lists (ACLs).

HTTP Status Code: 409

Examples

Sample Request for general purpose buckets

This request creates a bucket named `colorpictures`.

```
PUT / HTTP/1.1
Host: colorpictures.s3.<Region>.amazonaws.com
Content-Length: 0
Date: Wed, 01 Mar  2006 12:00:00 GMT
Authorization: authorization string
```

Sample Response for general purpose buckets

This example illustrates one usage of CreateBucket.

```
HTTP/1.1 200 OK
x-amz-id-2:
YgIPIfBiKa2bj0KMg95r/0zo3emzU4dzsD4rcKCHQUAdQkf3ShJTOOpXUueF6QKo
x-amz-request-id: 236A8905248E5A01
Date: Wed, 01 Mar  2006 12:00:00 GMT
```

```
            Location: /colorpictures
            Content-Length: 0
            Connection: close
            Server: AmazonS3
```

Sample Request for general purpose buckets: Setting the Region of a bucket

The following request sets the Region for the bucket to Europe.

```
            PUT / HTTP/1.1
            Host: bucketName.s3.amazonaws.com
            Date: Wed, 12 Oct 2009 17:50:00 GMT
            Authorization: authorization string
            Content-Type: text/plain
            Content-Length: 124

            <CreateBucketConfiguration xmlns="http://s3.amazonaws.com/
doc/2006-03-01/">
             <LocationConstraint>Europe</LocationConstraint>
            </CreateBucketConfiguration >
```

Sample Request for general purpose buckets: Creating a bucket and applying the ObjectWriter setting for S3 Object Ownership.

This request creates a bucket and applies the `ObjectWriter` setting for Object Ownership.

```
            PUT / HTTP/1.1
            Host: DOC-EXAMPLE-BUCKET.s3.<Region>.amazonaws.com
            Content-Length: 0
            x-amz-object-ownership: ObjectWriter
            Date: Tue, 30 Nov  2021 12:00:00 GMT
            Authorization: authorization string
```

Sample Response for general purpose buckets

This example illustrates one usage of CreateBucket.

```
           HTTP/1.1 200 OK
           x-amz-id-2:
YgIPIfBiKa2bj0KMg95r/0zo3emzU4dzsD4rcKCHQUAdQkf3ShJTOOpXUueF6QKo
           x-amz-request-id: 236A8905248E5A01
           Date: Tue, 30 Nov  2021 12:00:00 GMT

           Location: /DOC-EXAMPLE-BUCKET
           Content-Length: 0
           Connection: close
           Server: AmazonS3
```

Sample Request for general purpose buckets: Creating a bucket and configuring access permissions explicitly

This request creates a bucket named `colorpictures` and grants WRITE permission to the AWS account identified by an email address.

```
           PUT HTTP/1.1
           Host: colorpictures.s3.<Region>.amazonaws.com
           x-amz-date: Sat, 07 Apr 2012 00:54:40 GMT
           Authorization: authorization string
           x-amz-grant-write: emailAddress="xyz@amazon.com",
emailAddress="abc@amazon.com"
```

Sample Response for general purpose buckets

This example illustrates one usage of CreateBucket.

```
          HTTP/1.1 200 OK
```

Sample Request for general purpose buckets: Creating a bucket and configuring access permission using a canned ACL

This request creates a bucket named `colorpictures` and sets the ACL to private.

```
PUT / HTTP/1.1
Host: colorpictures.s3.<Region>.amazonaws.com
Content-Length: 0
x-amz-acl: private
Date: Wed, 01 Mar  2006 12:00:00 GMT
Authorization: authorization string
```

Sample Response for general purpose buckets

This example illustrates one usage of CreateBucket.

```
HTTP/1.1 200 OK
x-amz-id-2:
YgIPIfBiKa2bj0KMg95r/0zo3emzU4dzsD4rcKCHQUAdQkf3ShJTOOpXUueF6QKo
x-amz-request-id: 236A8905248E5A01
Date: Wed, 01 Mar  2006 12:00:00 GMT

Location: /colorpictures
Content-Length: 0
Connection: close
Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python

- AWS SDK for Ruby V3

CreateMultipartUpload

Service: Amazon S3

This action initiates a multipart upload and returns an upload ID. This upload ID is used to associate all of the parts in the specific multipart upload. You specify this upload ID in each of your subsequent upload part requests (see UploadPart). You also include this upload ID in the final request to either complete or abort the multipart upload request. For more information about multipart uploads, see Multipart Upload Overview in the *Amazon S3 User Guide*.

> **Note**
>
> After you initiate a multipart upload and upload one or more parts, to stop being charged for storing the uploaded parts, you must either complete or abort the multipart upload. Amazon S3 frees up the space used to store the parts and stops charging you for storing them only after you either complete or abort a multipart upload.

If you have configured a lifecycle rule to abort incomplete multipart uploads, the created multipart upload must be completed within the number of days specified in the bucket lifecycle configuration. Otherwise, the incomplete multipart upload becomes eligible for an abort action and Amazon S3 aborts the multipart upload. For more information, see Aborting Incomplete Multipart Uploads Using a Bucket Lifecycle Configuration.

> **Note**
>
> - **Directory buckets** - S3 Lifecycle is not supported by directory buckets.
> - **Directory buckets** - For directory buckets, you must make requests for this API operation to the Zonal endpoint. These endpoints support virtual-hosted-style requests in the format `https://bucket_name.s3express-az_id.region.amazonaws.com/key-name` . Path-style requests are not supported. For more information, see Regional and Zonal endpoints in the *Amazon S3 User Guide*.

Request signing

For request signing, multipart upload is just a series of regular requests. You initiate a multipart upload, send one or more requests to upload parts, and then complete the multipart upload process. You sign each request individually. There is nothing special about signing multipart

upload requests. For more information about signing, see Authenticating Requests (AWS Signature Version 4) in the *Amazon S3 User Guide*.

Permissions

- **General purpose bucket permissions** - For information about the permissions required to use the multipart upload API, see Multipart upload and permissions in the *Amazon S3 User Guide*.

  To perform a multipart upload with encryption by using an AWS KMS key, the requester must have permission to the `kms:Decrypt` and `kms:GenerateDataKey*` actions on the key. These permissions are required because Amazon S3 must decrypt and read data from the encrypted file parts before it completes the multipart upload. For more information, see Multipart upload API and permissions and Protecting data using server-side encryption with AWS KMS in the *Amazon S3 User Guide*.

- **Directory bucket permissions** - To grant access to this API operation on a directory bucket, we recommend that you use the `CreateSession` API operation for session-based authorization. Specifically, you grant the `s3express:CreateSession` permission to the directory bucket in a bucket policy or an IAM identity-based policy. Then, you make the `CreateSession` API call on the bucket to obtain a session token. With the session token in your request header, you can make API requests to this operation. After the session token expires, you make another `CreateSession` API call to generate a new session token for use. AWS CLI or SDKs create session and refresh the session token automatically to avoid service interruptions when a session expires. For more information about authorization, see `CreateSession`.

Encryption

- **General purpose buckets** - Server-side encryption is for data encryption at rest. Amazon S3 encrypts your data as it writes it to disks in its data centers and decrypts it when you access it. Amazon S3 automatically encrypts all new objects that are uploaded to an S3 bucket. When doing a multipart upload, if you don't specify encryption information in your request, the encryption setting of the uploaded parts is set to the default encryption configuration of the destination bucket. By default, all buckets have a base level of encryption configuration that uses server-side encryption with Amazon S3 managed keys (SSE-S3). If the destination bucket has a default encryption configuration that uses server-side encryption with an AWS Key Management Service (AWS KMS) key (SSE-KMS), or a customer-provided encryption key (SSE-C), Amazon S3 uses the corresponding KMS key, or a customer-provided key to encrypt the uploaded parts. When you perform a CreateMultipartUpload operation, if you want to use a different type of encryption setting for the uploaded parts, you can request that Amazon S3 encrypts the object with a different encryption key (such as an Amazon S3 managed

key, a KMS key, or a customer-provided key). When the encryption setting in your request is different from the default encryption configuration of the destination bucket, the encryption setting in your request takes precedence. If you choose to provide your own encryption key, the request headers you provide in UploadPart and UploadPartCopy requests must match the headers you used in the `CreateMultipartUpload` request.

- Use KMS keys (SSE-KMS) that include the AWS managed key (`aws/s3`) and AWS KMS customer managed keys stored in AWS Key Management Service (AWS KMS) – If you want AWS to manage the keys used to encrypt data, specify the following headers in the request.
  - `x-amz-server-side-encryption`
  - `x-amz-server-side-encryption-aws-kms-key-id`
  - `x-amz-server-side-encryption-context`

  Note

  - If you specify `x-amz-server-side-encryption:aws:kms`, but don't provide `x-amz-server-side-encryption-aws-kms-key-id`, Amazon S3 uses the AWS managed key (`aws/s3` key) in AWS KMS to protect the data.
  - To perform a multipart upload with encryption by using an AWS KMS key, the requester must have permission to the `kms:Decrypt` and `kms:GenerateDataKey*` actions on the key. These permissions are required because Amazon S3 must decrypt and read data from the encrypted file parts before it completes the multipart upload. For more information, see Multipart upload API and permissions and Protecting data using server-side encryption with AWS KMS in the *Amazon S3 User Guide*.
  - If your AWS Identity and Access Management (IAM) user or role is in the same AWS account as the KMS key, then you must have these permissions on the key policy. If your IAM user or role is in a different account from the key, then you must have the permissions on both the key policy and your IAM user or role.
  - All `GET` and `PUT` requests for an object protected by AWS KMS fail if you don't make them by using Secure Sockets Layer (SSL), Transport Layer Security (TLS), or Signature Version 4. For information about configuring any of the officially supported AWS SDKs and AWS CLI, see Specifying the Signature Version in Request Authentication in the *Amazon S3 User Guide*.

For more information about server-side encryption with AWS KMS keys (SSE-KMS), see Protecting Data Using Server-Side Encryption with KMS keys in the *Amazon S3 User Guide*.

- Use customer-provided encryption keys (SSE-C) – If you want to manage your own encryption keys, provide all the following headers in the request.
  - `x-amz-server-side-encryption-customer-algorithm`
  - `x-amz-server-side-encryption-customer-key`
  - `x-amz-server-side-encryption-customer-key-MD5`

  For more information about server-side encryption with customer-provided encryption keys (SSE-C), see Protecting data using server-side encryption with customer-provided encryption keys (SSE-C) in the *Amazon S3 User Guide*.
- **Directory buckets** -For directory buckets, only server-side encryption with Amazon S3 managed keys (SSE-S3) (AES256) is supported.

HTTP Host header syntax

Directory buckets - The HTTP Host header syntax is *Bucket_name*.s3express-*az_id*.*region*.amazonaws.com.

The following operations are related to `CreateMultipartUpload`:

- UploadPart
- CompleteMultipartUpload
- AbortMultipartUpload
- ListParts
- ListMultipartUploads

Request Syntax

```
POST /{Key+}?uploads HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-acl: ACL
Cache-Control: CacheControl
Content-Disposition: ContentDisposition
Content-Encoding: ContentEncoding
Content-Language: ContentLanguage
```

```
Content-Type: ContentType
Expires: Expires
x-amz-grant-full-control: GrantFullControl
x-amz-grant-read: GrantRead
x-amz-grant-read-acp: GrantReadACP
x-amz-grant-write-acp: GrantWriteACP
x-amz-server-side-encryption: ServerSideEncryption
x-amz-storage-class: StorageClass
x-amz-website-redirect-location: WebsiteRedirectLocation
x-amz-server-side-encryption-customer-algorithm: SSECustomerAlgorithm
x-amz-server-side-encryption-customer-key: SSECustomerKey
x-amz-server-side-encryption-customer-key-MD5: SSECustomerKeyMD5
x-amz-server-side-encryption-aws-kms-key-id: SSEKMSKeyId
x-amz-server-side-encryption-context: SSEKMSEncryptionContext
x-amz-server-side-encryption-bucket-key-enabled: BucketKeyEnabled
x-amz-request-payer: RequestPayer
x-amz-tagging: Tagging
x-amz-object-lock-mode: ObjectLockMode
x-amz-object-lock-retain-until-date: ObjectLockRetainUntilDate
x-amz-object-lock-legal-hold: ObjectLockLegalHoldStatus
x-amz-expected-bucket-owner: ExpectedBucketOwner
x-amz-checksum-algorithm: ChecksumAlgorithm
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket where the multipart upload is initiated and where the object is uploaded.

Directory buckets - When you use this operation with a directory bucket, you must use virtual-hosted-style requests in the format *Bucket_name*`.s3express-`*az_id*`.`*region*`.amazonaws.com`. Path-style requests are not supported. Directory bucket names must be unique in the chosen Availability Zone. Bucket names must follow the format *bucket_base_name*`--`*az-id*`--x-s3` (for example, *DOC-EXAMPLE-BUCKET*`--`*usw2-az1*`--x-s3`). For information about bucket naming restrictions, see Directory bucket naming rules in the *Amazon S3 User Guide*.

Access points - When you use this action with an access point, you must provide the alias of the access point in place of the bucket name or specify the access point ARN. When using the access

point ARN, you must direct requests to the access point hostname. The access point hostname takes the form *AccessPointName-AccountId*.s3-accesspoint.*Region*.amazonaws.com. When using this action with an access point through the AWS SDKs, you provide the access point ARN in place of the bucket name. For more information about access point ARNs, see Using access points in the *Amazon S3 User Guide*.

> **Note**
>
> Access points and Object Lambda access points are not supported by directory buckets.

S3 on Outposts - When you use this action with Amazon S3 on Outposts, you must direct requests to the S3 on Outposts hostname. The S3 on Outposts hostname takes the form *`AccessPointName-AccountId`*`.outpostID.s3-outposts.`*`Region`*`.amazonaws.com`. When you use this action with S3 on Outposts through the AWS SDKs, you provide the Outposts access point ARN in place of the bucket name. For more information about S3 on Outposts ARNs, see What is S3 on Outposts? in the *Amazon S3 User Guide*.

Required: Yes

Cache-Control

Specifies caching behavior along the request/reply chain.

Content-Disposition

Specifies presentational information for the object.

Content-Encoding

Specifies what content encodings have been applied to the object and thus what decoding mechanisms must be applied to obtain the media-type referenced by the Content-Type header field.

> **Note**
>
> For directory buckets, only the `aws-chunked` value is supported in this header field.

Content-Language

The language that the content is in.

Content-Type

A standard MIME type describing the format of the object data.

Expires

The date and time at which the object is no longer cacheable.

Key

Object key for which the multipart upload is to be initiated.

Length Constraints: Minimum length of 1.

Required: Yes

x-amz-acl

The canned ACL to apply to the object. Amazon S3 supports a set of predefined ACLs, known as *canned ACLs*. Each canned ACL has a predefined set of grantees and permissions. For more information, see Canned ACL in the *Amazon S3 User Guide*.

By default, all objects are private. Only the owner has full access control. When uploading an object, you can grant access permissions to individual AWS accounts or to predefined groups defined by Amazon S3. These permissions are then added to the access control list (ACL) on the new object. For more information, see Using ACLs. One way to grant the permissions using the request headers is to specify a canned ACL with the `x-amz-acl` request header.

> **Note**
>
> - This functionality is not supported for directory buckets.
> - This functionality is not supported for Amazon S3 on Outposts.

Valid Values: `private | public-read | public-read-write | authenticated-read | aws-exec-read | bucket-owner-read | bucket-owner-full-control`

x-amz-checksum-algorithm

Indicates the algorithm that you want Amazon S3 to use to create the checksum for the object. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

Valid Values: `CRC32 | CRC32C | SHA1 | SHA256`

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-grant-full-control

Specify access permissions explicitly to give the grantee READ, READ_ACP, and WRITE_ACP permissions on the object.

By default, all objects are private. Only the owner has full access control. When uploading an object, you can use this header to explicitly grant access permissions to specific AWS accounts or groups. This header maps to specific permissions that Amazon S3 supports in an ACL. For more information, see Access Control List (ACL) Overview in the *Amazon S3 User Guide*.

You specify each grantee as a type=value pair, where the type is one of the following:

- `id` – if the value specified is the canonical user ID of an AWS account
- `uri` – if you are granting permissions to a predefined group
- `emailAddress` – if the value specified is the email address of an AWS account

> **Note**
>
> Using email addresses to specify a grantee is only supported in the following AWS Regions:
>
> - US East (N. Virginia)
> - US West (N. California)
> - US West (Oregon)
> - Asia Pacific (Singapore)
> - Asia Pacific (Sydney)
> - Asia Pacific (Tokyo)
> - Europe (Ireland)
> - South America (São Paulo)
>
> For a list of all the Amazon S3 supported Regions and endpoints, see Regions and Endpoints in the AWS General Reference.

For example, the following `x-amz-grant-read` header grants the AWS accounts identified by account IDs permissions to read object data and its metadata:

```
x-amz-grant-read: id="11112222333", id="444455556666"
```

> **Note**
>
> - This functionality is not supported for directory buckets.
> - This functionality is not supported for Amazon S3 on Outposts.

x-amz-grant-read

Specify access permissions explicitly to allow grantee to read the object data and its metadata.

By default, all objects are private. Only the owner has full access control. When uploading an object, you can use this header to explicitly grant access permissions to specific AWS accounts or groups. This header maps to specific permissions that Amazon S3 supports in an ACL. For more information, see Access Control List (ACL) Overview in the *Amazon S3 User Guide*.

You specify each grantee as a type=value pair, where the type is one of the following:

- `id` – if the value specified is the canonical user ID of an AWS account
- `uri` – if you are granting permissions to a predefined group
- `emailAddress` – if the value specified is the email address of an AWS account

> **Note**
>
> Using email addresses to specify a grantee is only supported in the following AWS Regions:
>
> - US East (N. Virginia)
> - US West (N. California)
> - US West (Oregon)
> - Asia Pacific (Singapore)
> - Asia Pacific (Sydney)
> - Asia Pacific (Tokyo)
> - Europe (Ireland)

- South America (São Paulo)

For a list of all the Amazon S3 supported Regions and endpoints, see Regions and Endpoints in the AWS General Reference.

For example, the following `x-amz-grant-read` header grants the AWS accounts identified by account IDs permissions to read object data and its metadata:

```
x-amz-grant-read: id="11112222333", id="444455556666"
```

Note

- This functionality is not supported for directory buckets.
- This functionality is not supported for Amazon S3 on Outposts.

x-amz-grant-read-acp

Specify access permissions explicitly to allows grantee to read the object ACL.

By default, all objects are private. Only the owner has full access control. When uploading an object, you can use this header to explicitly grant access permissions to specific AWS accounts or groups. This header maps to specific permissions that Amazon S3 supports in an ACL. For more information, see Access Control List (ACL) Overview in the *Amazon S3 User Guide*.

You specify each grantee as a type=value pair, where the type is one of the following:

- `id` – if the value specified is the canonical user ID of an AWS account
- `uri` – if you are granting permissions to a predefined group
- `emailAddress` – if the value specified is the email address of an AWS account

Note

Using email addresses to specify a grantee is only supported in the following AWS Regions:

- US East (N. Virginia)
- US West (N. California)
- US West (Oregon)
- Asia Pacific (Singapore)

- Asia Pacific (Sydney)
- Asia Pacific (Tokyo)
- Europe (Ireland)
- South America (São Paulo)

For a list of all the Amazon S3 supported Regions and endpoints, see Regions and Endpoints in the AWS General Reference.

For example, the following `x-amz-grant-read` header grants the AWS accounts identified by account IDs permissions to read object data and its metadata:

```
x-amz-grant-read: id="11112222333", id="444455556666"
```

Note

- This functionality is not supported for directory buckets.
- This functionality is not supported for Amazon S3 on Outposts.

x-amz-grant-write-acp

Specify access permissions explicitly to allows grantee to allow grantee to write the ACL for the applicable object.

By default, all objects are private. Only the owner has full access control. When uploading an object, you can use this header to explicitly grant access permissions to specific AWS accounts or groups. This header maps to specific permissions that Amazon S3 supports in an ACL. For more information, see Access Control List (ACL) Overview in the *Amazon S3 User Guide*.

You specify each grantee as a type=value pair, where the type is one of the following:

- `id` – if the value specified is the canonical user ID of an AWS account
- `uri` – if you are granting permissions to a predefined group
- `emailAddress` – if the value specified is the email address of an AWS account

Note

Using email addresses to specify a grantee is only supported in the following AWS Regions:

- US East (N. Virginia)
- US West (N. California)
- US West (Oregon)
- Asia Pacific (Singapore)
- Asia Pacific (Sydney)
- Asia Pacific (Tokyo)
- Europe (Ireland)
- South America (São Paulo)

For a list of all the Amazon S3 supported Regions and endpoints, see Regions and Endpoints in the AWS General Reference.

For example, the following `x-amz-grant-read` header grants the AWS accounts identified by account IDs permissions to read object data and its metadata:

```
x-amz-grant-read: id="11112222333", id="444455556666"
```

Note

- This functionality is not supported for directory buckets.
- This functionality is not supported for Amazon S3 on Outposts.

x-amz-object-lock-legal-hold

Specifies whether you want to apply a legal hold to the uploaded object.

Note

This functionality is not supported for directory buckets.

Valid Values: `ON` | `OFF`

x-amz-object-lock-mode

Specifies the Object Lock mode that you want to apply to the uploaded object.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `GOVERNANCE | COMPLIANCE`

x-amz-object-lock-retain-until-date

Specifies the date and time when you want the Object Lock to expire.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-request-payer

Confirms that the requester knows that they will be charged for the request. Bucket owners need not specify this parameter in their requests. If either the source or destination S3 bucket has Requester Pays enabled, the requester will pay for corresponding charges to copy the object. For information about downloading objects from Requester Pays buckets, see Downloading Objects in Requester Pays Buckets in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

x-amz-server-side-encryption

The server-side encryption algorithm used when you store this object in Amazon S3 (for example, `AES256`, `aws:kms`).

> **Note**
>
> For directory buckets, only server-side encryption with Amazon S3 managed keys (SSE-S3) (`AES256`) is supported.

Valid Values: `AES256` | `aws:kms` | `aws:kms:dsse`

x-amz-server-side-encryption-aws-kms-key-id

Specifies the ID (Key ID, Key ARN, or Key Alias) of the symmetric encryption customer managed key to use for object encryption.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-bucket-key-enabled

Specifies whether Amazon S3 should use an S3 Bucket Key for object encryption with server-side encryption using AWS Key Management Service (AWS KMS) keys (SSE-KMS). Setting this header to `true` causes Amazon S3 to use an S3 Bucket Key for object encryption with SSE-KMS.

Specifying this header with an object action doesn't affect bucket-level settings for S3 Bucket Key.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-context

Specifies the AWS KMS Encryption Context to use for object encryption. The value of this header is a base64-encoded UTF-8 string holding JSON with the encryption context key-value pairs.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-algorithm

Specifies the algorithm to use when encrypting the object (for example, AES256).

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-key

Specifies the customer-provided encryption key for Amazon S3 to use in encrypting data. This value is used to store the object and then it is discarded; Amazon S3 does not store the encryption key. The key must be appropriate for use with the algorithm specified in the `x-amz-server-side-encryption-customer-algorithm` header.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-key-MD5

Specifies the 128-bit MD5 digest of the customer-provided encryption key according to RFC 1321. Amazon S3 uses this header for a message integrity check to ensure that the encryption key was transmitted without error.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-storage-class

By default, Amazon S3 uses the STANDARD Storage Class to store newly created objects. The STANDARD storage class provides high durability and high availability. Depending on performance needs, you can specify a different Storage Class. For more information, see Storage Classes in the *Amazon S3 User Guide*.

> **Note**
>
> - For directory buckets, only the S3 Express One Zone storage class is supported to store newly created objects.

- Amazon S3 on Outposts only uses the OUTPOSTS Storage Class.

Valid Values: `STANDARD | REDUCED_REDUNDANCY | STANDARD_IA | ONEZONE_IA | INTELLIGENT_TIERING | GLACIER | DEEP_ARCHIVE | OUTPOSTS | GLACIER_IR | SNOW | EXPRESS_ONEZONE`

x-amz-tagging

The tag-set for the object. The tag-set must be encoded as URL Query parameters.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-website-redirect-location

If the bucket is configured as a website, redirects requests for this object to another object in the same bucket or to an external URL. Amazon S3 stores the value of this header in the object metadata.

> **Note**
>
> This functionality is not supported for directory buckets.

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
x-amz-abort-date: AbortDate
x-amz-abort-rule-id: AbortRuleId
x-amz-server-side-encryption: ServerSideEncryption
x-amz-server-side-encryption-customer-algorithm: SSECustomerAlgorithm
x-amz-server-side-encryption-customer-key-MD5: SSECustomerKeyMD5
x-amz-server-side-encryption-aws-kms-key-id: SSEKMSKeyId
x-amz-server-side-encryption-context: SSEKMSEncryptionContext
```

```
x-amz-server-side-encryption-bucket-key-enabled: BucketKeyEnabled
x-amz-request-charged: RequestCharged
x-amz-checksum-algorithm: ChecksumAlgorithm
<?xml version="1.0" encoding="UTF-8"?>
<InitiateMultipartUploadResult>
   <Bucket>string</Bucket>
   <Key>string</Key>
   <UploadId>string</UploadId>
</InitiateMultipartUploadResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The response returns the following HTTP headers.

x-amz-abort-date

If the bucket has a lifecycle rule configured with an action to abort incomplete multipart uploads and the prefix in the lifecycle rule matches the object name in the request, the response includes this header. The header indicates when the initiated multipart upload becomes eligible for an abort operation. For more information, see Aborting Incomplete Multipart Uploads Using a Bucket Lifecycle Configuration in the *Amazon S3 User Guide*.

The response also includes the `x-amz-abort-rule-id` header that provides the ID of the lifecycle configuration rule that defines the abort action.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-abort-rule-id

This header is returned along with the `x-amz-abort-date` header. It identifies the applicable lifecycle configuration rule that defines the action to abort incomplete multipart uploads.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-checksum-algorithm

The algorithm that was used to create a checksum of the object.

Valid Values: `CRC32` | `CRC32C` | `SHA1` | `SHA256`

x-amz-request-charged

If present, indicates that the requester was successfully charged for the request.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

x-amz-server-side-encryption

The server-side encryption algorithm used when you store this object in Amazon S3 (for example, `AES256`, `aws:kms`).

> **Note**
>
> For directory buckets, only server-side encryption with Amazon S3 managed keys (SSE-S3) (`AES256`) is supported.

Valid Values: `AES256` | `aws:kms` | `aws:kms:dsse`

x-amz-server-side-encryption-aws-kms-key-id

If present, indicates the ID of the AWS Key Management Service (AWS KMS) symmetric encryption customer managed key that was used for the object.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-bucket-key-enabled

Indicates whether the multipart upload uses an S3 Bucket Key for server-side encryption with AWS Key Management Service (AWS KMS) keys (SSE-KMS).

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-context

If present, indicates the AWS KMS Encryption Context to use for object encryption. The value of this header is a base64-encoded UTF-8 string holding JSON with the encryption context key-value pairs.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-algorithm

If server-side encryption with a customer-provided encryption key was requested, the response will include this header to confirm the encryption algorithm that's used.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-key-MD5

If server-side encryption with a customer-provided encryption key was requested, the response will include this header to provide the round-trip message integrity verification of the customer-provided encryption key.

> **Note**
>
> This functionality is not supported for directory buckets.

The following data is returned in XML format by the service.

InitiateMultipartUploadResult

Root level tag for the InitiateMultipartUploadResult parameters.

Required: Yes

Bucket

The name of the bucket to which the multipart upload was initiated. Does not return the access point ARN or access point alias if used.

> **Note**
>
> Access points are not supported by directory buckets.

Type: String

Key

Object key for which the multipart upload was initiated.

Type: String

Length Constraints: Minimum length of 1.

UploadId

ID for the initiated multipart upload.

Type: String

Examples

Sample Request for general purpose buckets

This action initiates a multipart upload for the `example-object` object.

```
POST /example-object?uploads HTTP/1.1
Host: example-bucket.s3.<Region>.amazonaws.com
```

```
            Date: Mon, 1 Nov 2010 20:34:56 GMT
            Authorization: authorization string
```

Sample Response for general purpose buckets

This example illustrates one usage of CreateMultipartUpload.

```
            HTTP/1.1 200 OK
            x-amz-id-2: Uuag1LuByRx9e6j5Onimru9pO4ZVKnJ2Qz7/C1NPcfTWAtRPfTaOFg==
            x-amz-request-id: 656c76696e6727732072657175657374
            Date:  Mon, 1 Nov 2010 20:34:56 GMT
            Transfer-Encoding: chunked
            Connection: keep-alive
            Server: AmazonS3

            <?xml version="1.0" encoding="UTF-8"?>
            <InitiateMultipartUploadResult xmlns="http://s3.amazonaws.com/
doc/2006-03-01/">
              <Bucket>example-bucket</Bucket>
              <Key>example-object</Key>
              <UploadId>VXBsb2FkIElEIGZvciA2aWWpbmcncyBteS1tb3ZpZS5tMnRzIHVwbG9hZA</
UploadId>
            </InitiateMultipartUploadResult>
```

Example for general purpose buckets: Initiate a multipart upload using server-side encryption with customer-provided encryption keys

This example, which initiates a multipart upload request, specifies server-side encryption with customer-provided encryption keys by adding relevant headers.

```
            POST /example-object?uploads HTTP/1.1
            Host: example-bucket.s3.<Region>.amazonaws.com
            Authorization:authorization string
            Date: Wed, 28 May 2014 19:34:57 +0000
            x-amz-server-side-encryption-customer-key:
 g0lCfA3Dv40jZz5SQJ1ZukLRFqtI5WorC/8SEEXAMPLE
            x-amz-server-side-encryption-customer-key-MD5: ZjQrne1X/iTcskbY2example
            x-amz-server-side-encryption-customer-algorithm: AES256
```

Sample Response for general purpose buckets

In the response, Amazon S3 returns an `UploadId`. In addition, Amazon S3 returns the encryption algorithm and the MD5 digest of the encryption key that you provided in the request.

```
          HTTP/1.1 200 OK
           x-amz-id-2:
 36HRCaIGp57F1FvWvVRrvd3hNn9WoBGfEaCVHTCt8QWf00qxdHazQUgfoXAbhFWD
           x-amz-request-id: 50FA1D691B62CA43
           Date: Wed, 28 May 2014 19:34:58 GMT
           x-amz-server-side-encryption-customer-algorithm: AES256
           x-amz-server-side-encryption-customer-key-MD5: ZjQrne1X/iTcskbY2m3tFg==
           Transfer-Encoding: chunked

           <?xml version="1.0" encoding="UTF-8"?>
           <InitiateMultipartUploadResult
           xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
             <Bucket>example-bucket</Bucket>
             <Key>example-object</Key>

 <UploadId>EXAMPLEJZ6e0YupT2h66iePQCc9IEbYbDUy4RTpMeoSMLPRp8Z5o1u8feSRonpvnWsKKG35tI2LB9VDPiCgT
</UploadId>
</InitiateMultipartUploadResult>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3

- AWS SDK for Python
- AWS SDK for Ruby V3

CreateSession

Service: Amazon S3

Creates a session that establishes temporary security credentials to support fast authentication and authorization for the Zonal endpoint APIs on directory buckets. For more information about Zonal endpoint APIs that include the Availability Zone in the request endpoint, see S3 Express One Zone APIs in the *Amazon S3 User Guide*.

To make Zonal endpoint API requests on a directory bucket, use the `CreateSession` API operation. Specifically, you grant `s3express:CreateSession` permission to a bucket in a bucket policy or an IAM identity-based policy. Then, you use IAM credentials to make the `CreateSession` API request on the bucket, which returns temporary security credentials that include the access key ID, secret access key, session token, and expiration. These credentials have associated permissions to access the Zonal endpoint APIs. After the session is created, you don't need to use other policies to grant permissions to each Zonal endpoint API individually. Instead, in your Zonal endpoint API requests, you sign your requests by applying the temporary security credentials of the session to the request headers and following the SigV4 protocol for authentication. You also apply the session token to the `x-amz-s3session-token` request header for authorization. Temporary security credentials are scoped to the bucket and expire after 5 minutes. After the expiration time, any calls that you make with those credentials will fail. You must use IAM credentials again to make a `CreateSession` API request that generates a new set of temporary credentials for use. Temporary credentials cannot be extended or refreshed beyond the original specified interval.

If you use AWS SDKs, SDKs handle the session token refreshes automatically to avoid service interruptions when a session expires. We recommend that you use the AWS SDKs to initiate and manage requests to the CreateSession API. For more information, see Performance guidelines and design patterns in the *Amazon S3 User Guide*.

Note

- You must make requests for this API operation to the Zonal endpoint. These endpoints support virtual-hosted-style requests in the format `https://bucket_name.s3express-az_id.region.amazonaws.com`. Path-style requests are not supported. For more information, see Regional and Zonal endpoints in the *Amazon S3 User Guide*.
- **`CopyObject` API operation** - Unlike other Zonal endpoint APIs, the `CopyObject` API operation doesn't use the temporary security credentials returned from the

`CreateSession` API operation for authentication and authorization. For information about authentication and authorization of the `CopyObject` API operation on directory buckets, see CopyObject.

- **`HeadBucket` API operation** - Unlike other Zonal endpoint APIs, the `HeadBucket` API operation doesn't use the temporary security credentials returned from the `CreateSession` API operation for authentication and authorization. For information about authentication and authorization of the `HeadBucket` API operation on directory buckets, see HeadBucket.

Permissions

To obtain temporary security credentials, you must create a bucket policy or an IAM identity-based policy that grants `s3express:CreateSession` permission to the bucket. In a policy, you can have the `s3express:SessionMode` condition key to control who can create a `ReadWrite` or `ReadOnly` session. For more information about `ReadWrite` or `ReadOnly` sessions, see `x-amz-create-session-mode`. For example policies, see Example bucket policies for S3 Express One Zone and AWS Identity and Access Management (IAM) identity-based policies for S3 Express One Zone in the *Amazon S3 User Guide*.

To grant cross-account access to Zonal endpoint APIs, the bucket policy should also grant both accounts the `s3express:CreateSession` permission.

HTTP Host header syntax

Directory buckets - The HTTP Host header syntax is *`Bucket_name`*`.s3express-`*`az_id`*`.`*`region`*`.amazonaws.com`.

Request Syntax

```
GET /?session HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-create-session-mode: SessionMode
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket that you create a session for.

Required: Yes

x-amz-create-session-mode

Specifies the mode of the session that will be created, either `ReadWrite` or `ReadOnly`. By default, a `ReadWrite` session is created. A `ReadWrite` session is capable of executing all the Zonal endpoint APIs on a directory bucket. A `ReadOnly` session is constrained to execute the following Zonal endpoint APIs: `GetObject`, `HeadObject`, `ListObjectsV2`, `GetObjectAttributes`, `ListParts`, and `ListMultipartUploads`.

Valid Values: `ReadOnly | ReadWrite`

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<CreateSessionOutput>
   <Credentials>
      <AccessKeyId>string</AccessKeyId>
      <Expiration>timestamp</Expiration>
      <SecretAccessKey>string</SecretAccessKey>
      <SessionToken>string</SessionToken>
   </Credentials>
</CreateSessionOutput>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

CreateSessionOutput

Root level tag for the CreateSessionOutput parameters.

Required: Yes

Credentials

The established temporary security credentials for the created session.

Type: SessionCredentials data type

Errors

NoSuchBucket

The specified bucket does not exist.

HTTP Status Code: 404

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteBucket

Service: Amazon S3

Deletes the S3 bucket. All objects (including all object versions and delete markers) in the bucket must be deleted before the bucket itself can be deleted.

Note

- **Directory buckets** - If multipart uploads in a directory bucket are in progress, you can't delete the bucket until all the in-progress multipart uploads are aborted or completed.
- **Directory buckets** - For directory buckets, you must make requests for this API operation to the Regional endpoint. These endpoints support path-style requests in the format `https://s3express-control.region_code.amazonaws.com/bucket-name` . Virtual-hosted-style requests aren't supported. For more information, see Regional and Zonal endpoints in the *Amazon S3 User Guide*.

Permissions

- **General purpose bucket permissions** - You must have the `s3:DeleteBucket` permission on the specified bucket in a policy.
- **Directory bucket permissions** - You must have the `s3express:DeleteBucket` permission in an IAM identity-based policy instead of a bucket policy. Cross-account access to this API operation isn't supported. This operation can only be performed by the AWS account that owns the resource. For more information about directory bucket policies and permissions, see AWS Identity and Access Management (IAM) for S3 Express One Zone in the *Amazon S3 User Guide*.

HTTP Host header syntax

Directory buckets - The HTTP Host header syntax is `s3express-control.region.amazonaws.com`.

The following operations are related to `DeleteBucket`:

- CreateBucket
- DeleteObject

Request Syntax

```
DELETE / HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

Specifies the bucket being deleted.

Directory buckets - When you use this operation with a directory bucket, you must use path-style requests in the format `https://s3express-control.region_code.amazonaws.com/bucket-name` . Virtual-hosted-style requests aren't supported. Directory bucket names must be unique in the chosen Availability Zone. Bucket names must also follow the format `bucket_base_name--az_id--x-s3` (for example, `DOC-EXAMPLE-BUCKET--usw2-az1--x-s3`). For information about bucket naming restrictions, see Directory bucket naming rules in the *Amazon S3 User Guide*

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

> **Note**
>
> For directory buckets, this header is not supported in this API operation. If you specify this header, the request fails with the HTTP status code `501 Not Implemented`.

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Examples

Sample Request for general purpose buckets

This request deletes the bucket named `quotes`.

```
DELETE / HTTP/1.1
Host: quotes.s3.<Region>.amazonaws.com
Date: Wed, 01 Mar  2006 12:00:00 GMT
Authorization: authorization string
```

Sample Response for general purpose buckets

```
HTTP/1.1 204 No Content
x-amz-id-2: JuKZqmXuiwFeDQxhD7M8KtsKobSzWA1QEjLbTMTagkKdBX2z7Il/jGhDeJ3j6s80
x-amz-request-id: 32FE2CEB32F5EE25
Date: Wed, 01 Mar  2006 12:00:00 GMT
Connection: close
Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++

- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteBucketAnalyticsConfiguration

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Deletes an analytics configuration for the bucket (specified by the analytics configuration ID).

To use this operation, you must have permissions to perform the `s3:PutAnalyticsConfiguration` action. The bucket owner has this permission by default. The bucket owner can grant this permission to others. For more information about permissions, see Permissions Related to Bucket Subresource Operations and Managing Access Permissions to Your Amazon S3 Resources.

For information about the Amazon S3 analytics feature, see Amazon S3 Analytics – Storage Class Analysis.

The following operations are related to `DeleteBucketAnalyticsConfiguration`:

- GetBucketAnalyticsConfiguration
- ListBucketAnalyticsConfigurations
- PutBucketAnalyticsConfiguration

Request Syntax

```
DELETE /?analytics&id=Id HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket from which an analytics configuration is deleted.

Required: Yes

id

The ID that identifies the analytics configuration.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Examples

Sample Request

The following DELETE request deletes the analytics configuration with the ID `list1`.

```
DELETE ?/analytics&id=list1 HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
Date: Wed, 14 May 2014 02:11:22 GMT
Authorization: signatureValue
```

Sample Response

The following successful response shows Amazon S3 returning a `204 No Content` response. The analytics configuration with the ID `list1` for the bucket has been removed.

```
            HTTP/1.1 204 No Content
            x-amz-id-2: 0FmFIWsh/
PpBuzZ0JFRC55ZGVmQW4SHJ7xVDqKwhEdJmf3q63RtrvH8ZuxW1Bol5
            x-amz-request-id: 0CF038E9BCF63097
            Date: Wed, 14 May 2014 02:11:22 GMT
            Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteBucketCors

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Deletes the `cors` configuration information set for the bucket.

To use this operation, you must have permission to perform the `s3:PutBucketCORS` action. The bucket owner has this permission by default and can grant this permission to others.

For information about `cors`, see Enabling Cross-Origin Resource Sharing in the *Amazon S3 User Guide*.

Related Resources

- PutBucketCors
- RESTOPTIONSobject

Request Syntax

```
DELETE /?cors HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

Specifies the bucket whose `cors` configuration is being deleted.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Examples

Retrieve cors subresource

The following DELETE request deletes the `cors` subresource from the specified bucket. This action removes `cors` configuration that is stored in the subresource.

Sample Request

This example illustrates one usage of DeleteBucketCors.

```
DELETE /?cors HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
Date: Tue, 13 Dec 2011 19:14:42 GMT
Authorization: signatureValue
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2

- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteBucketEncryption

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

This implementation of the DELETE action resets the default encryption for the bucket as server-side encryption with Amazon S3 managed keys (SSE-S3). For information about the bucket default encryption feature, see Amazon S3 Bucket Default Encryption in the *Amazon S3 User Guide*.

To use this operation, you must have permissions to perform the `s3:PutEncryptionConfiguration` action. The bucket owner has this permission by default. The bucket owner can grant this permission to others. For more information about permissions, see Permissions Related to Bucket Subresource Operations and Managing Access Permissions to your Amazon S3 Resources in the *Amazon S3 User Guide*.

The following operations are related to `DeleteBucketEncryption`:

- PutBucketEncryption
- GetBucketEncryption

Request Syntax

```
DELETE /?encryption HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket containing the server-side encryption configuration to delete.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Examples

Sample Request

The following DELETE request resets the default encryption for the bucket as server-side encryption with Amazon S3 managed keys (SSE-S3).

```
DELETE ?/encryption HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
Date: Wed, 06 Sep 2017 12:00:00 GMT
Authorization: signatureValue
```

Sample Response

The following successful response shows Amazon S3 returning a `204 No Content` response confirming that default encryption for the bucket has been reset as server-side encryption with Amazon S3 managed keys (SSE-S3).

```
HTTP/1.1 204 No Content
x-amz-id-2: 0FmFIWsh/PpBuzZ0JFRC55ZGVmQW4SHJ7xVDqKwhEdJmf3q63RtrvH8ZuxW1Bol5
x-amz-request-id: 0CF038E9BCF63097
Date: Wed, 06 Sep 2017 12:00:00 GMT
```

```
Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteBucketIntelligentTieringConfiguration

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Deletes the S3 Intelligent-Tiering configuration from the specified bucket.

The S3 Intelligent-Tiering storage class is designed to optimize storage costs by automatically moving data to the most cost-effective storage access tier, without performance impact or operational overhead. S3 Intelligent-Tiering delivers automatic cost savings in three low latency and high throughput access tiers. To get the lowest storage cost on data that can be accessed in minutes to hours, you can choose to activate additional archiving capabilities.

The S3 Intelligent-Tiering storage class is the ideal storage class for data with unknown, changing, or unpredictable access patterns, independent of object size or retention period. If the size of an object is less than 128 KB, it is not monitored and not eligible for auto-tiering. Smaller objects can be stored, but they are always charged at the Frequent Access tier rates in the S3 Intelligent-Tiering storage class.

For more information, see Storage class for automatically optimizing frequently and infrequently accessed objects.

Operations related to `DeleteBucketIntelligentTieringConfiguration` include:

- GetBucketIntelligentTieringConfiguration
- PutBucketIntelligentTieringConfiguration
- ListBucketIntelligentTieringConfigurations

Request Syntax

```
DELETE /?intelligent-tiering&id=Id HTTP/1.1
Host: Bucket.s3.amazonaws.com
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the Amazon S3 bucket whose configuration you want to modify or retrieve.

Required: Yes

id

The ID used to identify the S3 Intelligent-Tiering configuration.

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteBucketInventoryConfiguration

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Deletes an inventory configuration (identified by the inventory ID) from the bucket.

To use this operation, you must have permissions to perform the `s3:PutInventoryConfiguration` action. The bucket owner has this permission by default. The bucket owner can grant this permission to others. For more information about permissions, see Permissions Related to Bucket Subresource Operations and Managing Access Permissions to Your Amazon S3 Resources.

For information about the Amazon S3 inventory feature, see Amazon S3 Inventory.

Operations related to `DeleteBucketInventoryConfiguration` include:

- GetBucketInventoryConfiguration
- PutBucketInventoryConfiguration
- ListBucketInventoryConfigurations

Request Syntax

```
DELETE /?inventory&id=Id HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket containing the inventory configuration to delete.

Required: Yes

id

The ID used to identify the inventory configuration.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Examples

Sample Request

The following DELETE request deletes the inventory configuration with the ID `list1`.

```
DELETE ?/inventory&id=list1 HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
Date: Wed, 14 May 2014 02:11:22 GMT
Authorization: signatureValue
```

Sample Response

The following successful response shows Amazon S3 returning a `204 No Content` response. The inventory configuration with the ID `list1` for the bucket has been removed.

```
HTTP/1.1 204 No Content
x-amz-id-2: 0FmFIWsh/PpBuzZ0JFRC55ZGVmQW4SHJ7xVDqKwhEdJmf3q63RtrvH8ZuxW1Bol5
x-amz-request-id: 0CF038E9BCF63097
Date: Wed, 14 May 2014 02:11:22 GMT
Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteBucketLifecycle

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Deletes the lifecycle configuration from the specified bucket. Amazon S3 removes all the lifecycle configuration rules in the lifecycle subresource associated with the bucket. Your objects never expire, and Amazon S3 no longer automatically deletes any objects on the basis of rules contained in the deleted lifecycle configuration.

To use this operation, you must have permission to perform the `s3:PutLifecycleConfiguration` action. By default, the bucket owner has this permission and the bucket owner can grant this permission to others.

There is usually some time lag before lifecycle configuration deletion is fully propagated to all the Amazon S3 systems.

For more information about the object expiration, see Elements to Describe Lifecycle Actions.

Related actions include:

- PutBucketLifecycleConfiguration
- GetBucketLifecycleConfiguration

Request Syntax

```
DELETE /?lifecycle HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name of the lifecycle to delete.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Examples

Sample Request

The following DELETE request deletes the lifecycle subresource from the specified bucket. This removes lifecycle configuration stored in the subresource.

```
DELETE /?lifecycle HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
Date: Wed, 14 Dec 2011 05:37:16 GMT
Authorization: signatureValue
```

Sample Response

The following successful response shows Amazon S3 returning a 204 No Content response. Objects in your bucket no longer expire.

```
HTTP/1.1 204 No Content
x-amz-id-2: Uuag1LuByRx9e6j5OnimrSAMPLEtRPfTaOAa==
```

```
x-amz-request-id: 656c76696e672SAMPLE5657374
Date: Wed, 14 Dec 2011 05:37:16 GMT
Connection: keep-alive
Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteBucketMetricsConfiguration

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Deletes a metrics configuration for the Amazon CloudWatch request metrics (specified by the metrics configuration ID) from the bucket. Note that this doesn't include the daily storage metrics.

To use this operation, you must have permissions to perform the `s3:PutMetricsConfiguration` action. The bucket owner has this permission by default. The bucket owner can grant this permission to others. For more information about permissions, see Permissions Related to Bucket Subresource Operations and Managing Access Permissions to Your Amazon S3 Resources.

For information about CloudWatch request metrics for Amazon S3, see Monitoring Metrics with Amazon CloudWatch.

The following operations are related to `DeleteBucketMetricsConfiguration`:

- GetBucketMetricsConfiguration
- PutBucketMetricsConfiguration
- ListBucketMetricsConfigurations
- Monitoring Metrics with Amazon CloudWatch

Request Syntax

```
DELETE /?metrics&id=Id HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket containing the metrics configuration to delete.

Required: Yes

id

The ID used to identify the metrics configuration. The ID has a 64 character limit and can only contain letters, numbers, periods, dashes, and underscores.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Examples

Sample Request

Delete the metric configuration with a specified ID, which disables the CloudWatch metrics with the `ExampleMetrics` value for the `FilterId` dimension.

```
DELETE /?metrics&id=ExampleMetrics HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
x-amz-date: Thu, 15 Nov 2016 00:17:21 GMT
Authorization: signatureValue
```

Sample Response

Delete the metric configuration with a specified ID, which disables the CloudWatch metrics with the `ExampleMetrics` value for the `FilterId` dimension.

```
            HTTP/1.1 204 No Content
            x-amz-id-2:
ITnGT1y4REXAMPLEPi4hklTXouTf0hccUjo0iCPEXAMPLEutBj3M7fPGlWO2SEWp
            x-amz-request-id: 51991EXAMPLE5321
            Date: Thu, 15 Nov 2016 00:17:22 GMT
            Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteBucketOwnershipControls

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Removes `OwnershipControls` for an Amazon S3 bucket. To use this operation, you must have the `s3:PutBucketOwnershipControls` permission. For more information about Amazon S3 permissions, see Specifying Permissions in a Policy.

For information about Amazon S3 Object Ownership, see Using Object Ownership.

The following operations are related to `DeleteBucketOwnershipControls`:

- GetBucketOwnershipControls
- PutBucketOwnershipControls

Request Syntax

```
DELETE /?ownershipControls HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The Amazon S3 bucket whose `OwnershipControls` you want to delete.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Examples

Sample DeleteBucketOwnershipControls Request

This example illustrates one usage of DeleteBucketOwnershipControls.

```
          DELETE /example-bucket?/ownershipControls HTTP/1.1
          Host: examplebucket.s3.<Region>.amazonaws.com
          Date: Thu, 18 Jun 2017 00:17:22 GMT
          Authorization: signatureValue;
```

Sample DeleteBucketOwnershipControls Response

This example illustrates one usage of DeleteBucketOwnershipControls.

```
          HTTP/1.1 204 No Content
          x-amz-id-2: dVrxJD3XHDcjZHFtd7eSB+ovpY8hQ6kSe9jPzyRVkWp27cij05qV1pTIvz/
hjlsrupiy9gEkSdw=
          x-amz-request-id: 4BFC0B777B448C97
          Date: Thu, 18 Jun 2020 22:54:03 GMT
          Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteBucketPolicy

Service: Amazon S3

Deletes the policy of a specified bucket.

> **Note**
>
> **Directory buckets** - For directory buckets, you must make requests for this API operation to the Regional endpoint. These endpoints support path-style requests in the format `https://s3express-control.region_code.amazonaws.com/bucket-name` . Virtual-hosted-style requests aren't supported. For more information, see Regional and Zonal endpoints in the *Amazon S3 User Guide*.

Permissions

If you are using an identity other than the root user of the AWS account that owns the bucket, the calling identity must both have the `DeleteBucketPolicy` permissions on the specified bucket and belong to the bucket owner's account in order to use this operation.

If you don't have `DeleteBucketPolicy` permissions, Amazon S3 returns a `403 Access Denied` error. If you have the correct permissions, but you're not using an identity that belongs to the bucket owner's account, Amazon S3 returns a `405 Method Not Allowed` error.

> **Important**
>
> To ensure that bucket owners don't inadvertently lock themselves out of their own buckets, the root principal in a bucket owner's AWS account can perform the `GetBucketPolicy`, `PutBucketPolicy`, and `DeleteBucketPolicy` API actions, even if their bucket policy explicitly denies the root principal's access. Bucket owner root principals can only be blocked from performing these API actions by VPC endpoint policies and AWS Organizations policies.

- **General purpose bucket permissions** - The `s3:DeleteBucketPolicy` permission is required in a policy. For more information about general purpose buckets bucket policies, see Using Bucket Policies and User Policies in the *Amazon S3 User Guide*.
- **Directory bucket permissions** - To grant access to this API operation, you must have the `s3express:DeleteBucketPolicy` permission in an IAM identity-based policy instead of a

bucket policy. Cross-account access to this API operation isn't supported. This operation can only be performed by the AWS account that owns the resource. For more information about directory bucket policies and permissions, see AWS Identity and Access Management (IAM) for S3 Express One Zone in the *Amazon S3 User Guide*.

HTTP Host header syntax

Directory buckets - The HTTP Host header syntax is `s3express-control.region.amazonaws.com`.

The following operations are related to `DeleteBucketPolicy`

- CreateBucket
- DeleteObject

Request Syntax

```
DELETE /?policy HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name.

Directory buckets - When you use this operation with a directory bucket, you must use path-style requests in the format `https://s3express-control.region_code.amazonaws.com/bucket-name` . Virtual-hosted-style requests aren't supported. Directory bucket names must be unique in the chosen Availability Zone. Bucket names must also follow the format `bucket_base_name--az_id--x-s3` (for example, `DOC-EXAMPLE-BUCKET--usw2-az1--x-s3`). For information about bucket naming restrictions, see Directory bucket naming rules in the *Amazon S3 User Guide*

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

> **Note**
>
> For directory buckets, this header is not supported in this API operation. If you specify this header, the request fails with the HTTP status code `501 Not Implemented`.

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Examples

Sample Request for general purpose buckets

This request deletes the bucket named `BucketName`.

```
DELETE /?policy HTTP/1.1
Host: BucketName.s3.<Region>.amazonaws.com
Date: Tue, 04 Apr 2010 20:34:56 GMT
Authorization: signatureValue
```

Sample Response for general purpose buckets

This example illustrates one usage of DeleteBucketPolicy.

```
HTTP/1.1 204 No Content
x-amz-id-2: Uuag1LuByRx9e6j5OnimrSAMPLEtRPfTaOFg==
x-amz-request-id: 656c76696e672SAMPLE5657374
Date: Tue, 04 Apr 2010 20:34:56 GMT
Connection: keep-alive
Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteBucketReplication

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Deletes the replication configuration from the bucket.

To use this operation, you must have permissions to perform the `s3:PutReplicationConfiguration` action. The bucket owner has these permissions by default and can grant it to others. For more information about permissions, see Permissions Related to Bucket Subresource Operations and Managing Access Permissions to Your Amazon S3 Resources.

> **Note**
>
> It can take a while for the deletion of a replication configuration to fully propagate.

For information about replication configuration, see Replication in the *Amazon S3 User Guide*.

The following operations are related to `DeleteBucketReplication`:

- PutBucketReplication
- GetBucketReplication

Request Syntax

```
DELETE /?replication HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Examples

Sample Request

The following DELETE request deletes the `replication` subresource from the specified bucket. This removes the replication configuration that is set for the bucket.

```
DELETE /?replication HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
Date: Wed, 11 Feb 2015 05:37:16 GMT
20150211T171320Z

Authorization: authorization string
```

Sample Response

When the `replication` subresource has been deleted, Amazon S3 returns a `204 No Content` response. It will not replicate new objects that are stored in the `examplebucket` bucket.

```
HTTP/1.1 204 No Content
x-amz-id-2: Uuag1LuByRx9e6j5OnimrSAMPLEtRPfTaOAa==
x-amz-request-id: 656c76696e672example
Date: Wed, 11 Feb 2015 05:37:16 GMT
Connection: keep-alive
Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteBucketTagging

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Deletes the tags from the bucket.

To use this operation, you must have permission to perform the `s3:PutBucketTagging` action. By default, the bucket owner has this permission and can grant this permission to others.

The following operations are related to `DeleteBucketTagging`:

- GetBucketTagging
- PutBucketTagging

Request Syntax

```
DELETE /?tagging HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket that has the tag set to be removed.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Examples

Sample Request

The following DELETE request deletes the tag set from the specified bucket.

```
DELETE /?tagging HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
Date: Wed, 14 Dec 2011 05:37:16 GMT
Authorization: signatureValue
```

Sample Response

The following successful response shows Amazon S3 returning a `204 No Content` response. The tag set for the bucket has been removed.

```
HTTP/1.1 204 No Content
Date: Wed, 25 Nov 2009 12:00:00 GMT
Connection: close
Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteBucketWebsite

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

This action removes the website configuration for a bucket. Amazon S3 returns a `200 OK` response upon successfully deleting a website configuration on the specified bucket. You will get a `200 OK` response if the website configuration you are trying to delete does not exist on the bucket. Amazon S3 returns a `404` response if the bucket specified in the request does not exist.

This DELETE action requires the `S3:DeleteBucketWebsite` permission. By default, only the bucket owner can delete the website configuration attached to a bucket. However, bucket owners can grant other users permission to delete the website configuration by writing a bucket policy granting them the `S3:DeleteBucketWebsite` permission.

For more information about hosting websites, see Hosting Websites on Amazon S3.

The following operations are related to `DeleteBucketWebsite`:

- GetBucketWebsite
- PutBucketWebsite

Request Syntax

```
DELETE /?website HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name for which you want to remove the website configuration.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Examples

Sample Request

This request deletes the website configuration on the specified bucket.

```
DELETE ?website HTTP/1.1
Host: example-bucket.s3.<Region>.amazonaws.com
Date: Thu, 27 Jan 2011 12:00:00 GMT
Authorization: signatureValue
```

Sample Response

This example illustrates one usage of DeleteBucketWebsite.

```
HTTP/1.1 204 No Content
x-amz-id-2: aws-s3integ-s3ws-31008.sea31.amazon.com
x-amz-request-id: AF1DD829D3B49707
Date: Thu, 03 Feb 2011 22:10:26 GMT
Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteObject

Service: Amazon S3

Removes an object from a bucket. The behavior depends on the bucket's versioning state:

- If bucket versioning is not enabled, the operation permanently deletes the object.
- If bucket versioning is enabled, the operation inserts a delete marker, which becomes the current version of the object. To permanently delete an object in a versioned bucket, you must include the object's `versionId` in the request. For more information about versioning-enabled buckets, see Deleting object versions from a versioning-enabled bucket.
- If bucket versioning is suspended, the operation removes the object that has a null `versionId`, if there is one, and inserts a delete marker that becomes the current version of the object. If there isn't an object with a null `versionId`, and all versions of the object have a `versionId`, Amazon S3 does not remove the object and only inserts a delete marker. To permanently delete an object that has a `versionId`, you must include the object's `versionId` in the request. For more information about versioning-suspended buckets, see Deleting objects from versioning-suspended buckets.

Note

- **Directory buckets** - S3 Versioning isn't enabled and supported for directory buckets. For this API operation, only the `null` value of the version ID is supported by directory buckets. You can only specify `null` to the `versionId` query parameter in the request.
- **Directory buckets** - For directory buckets, you must make requests for this API operation to the Zonal endpoint. These endpoints support virtual-hosted-style requests in the format `https://bucket_name.s3express-az_id.region.amazonaws.com/key-name`. Path-style requests are not supported. For more information, see Regional and Zonal endpoints in the *Amazon S3 User Guide*.

To remove a specific version, you must use the `versionId` query parameter. Using this query parameter permanently deletes the version. If the object deleted is a delete marker, Amazon S3 sets the response header `x-amz-delete-marker` to true.

If the object you want to delete is in a bucket where the bucket versioning configuration is MFA Delete enabled, you must include the `x-amz-mfa` request header in the DELETE `versionId`

request. Requests that include `x-amz-mfa` must use HTTPS. For more information about MFA Delete, see Using MFA Delete in the *Amazon S3 User Guide*. To see sample requests that use versioning, see Sample Request.

> **Note**
>
> **Directory buckets** - MFA delete is not supported by directory buckets.

You can delete objects by explicitly calling DELETE Object or calling (PutBucketLifecycle) to enable Amazon S3 to remove them for you. If you want to block users or accounts from removing or deleting objects from your bucket, you must deny them the `s3:DeleteObject`, `s3:DeleteObjectVersion`, and `s3:PutLifeCycleConfiguration` actions.

> **Note**
>
> **Directory buckets** - S3 Lifecycle is not supported by directory buckets.

Permissions

- **General purpose bucket permissions** - The following permissions are required in your policies when your `DeleteObjects` request includes specific headers.
  - **`s3:DeleteObject`** - To delete an object from a bucket, you must always have the `s3:DeleteObject` permission.
  - **`s3:DeleteObjectVersion`** - To delete a specific version of an object from a versioning-enabled bucket, you must have the `s3:DeleteObjectVersion` permission.
- **Directory bucket permissions** - To grant access to this API operation on a directory bucket, we recommend that you use the `CreateSession` API operation for session-based authorization. Specifically, you grant the `s3express:CreateSession` permission to the directory bucket in a bucket policy or an IAM identity-based policy. Then, you make the `CreateSession` API call on the bucket to obtain a session token. With the session token in your request header, you can make API requests to this operation. After the session token expires, you make another `CreateSession` API call to generate a new session token for use. AWS CLI or SDKs create session and refresh the session token automatically to avoid service interruptions when a session expires. For more information about authorization, see `CreateSession`.

HTTP Host header syntax

Directory buckets - The HTTP Host header syntax is *Bucket_name*.s3express-*az_id*.*region*.amazonaws.com.

The following action is related to `DeleteObject`:

- PutObject

Request Syntax

```
DELETE /Key+?versionId=VersionId HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-mfa: MFA
x-amz-request-payer: RequestPayer
x-amz-bypass-governance-retention: BypassGovernanceRetention
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name of the bucket containing the object.

Directory buckets - When you use this operation with a directory bucket, you must use virtual-hosted-style requests in the format *Bucket_name*.s3express-*az_id*.*region*.amazonaws.com. Path-style requests are not supported. Directory bucket names must be unique in the chosen Availability Zone. Bucket names must follow the format *bucket_base_name*--*az-id*--x-s3 (for example, *DOC-EXAMPLE-BUCKET*--*usw2-az1*--x-s3). For information about bucket naming restrictions, see Directory bucket naming rules in the *Amazon S3 User Guide*.

Access points - When you use this action with an access point, you must provide the alias of the access point in place of the bucket name or specify the access point ARN. When using the access point ARN, you must direct requests to the access point hostname. The access point hostname takes the form *AccessPointName-AccountId*.s3-accesspoint.*Region*.amazonaws.com. When using this action with an access point through the AWS SDKs, you provide the access point ARN in

place of the bucket name. For more information about access point ARNs, see Using access points in the *Amazon S3 User Guide*.

> **Note**
>
> Access points and Object Lambda access points are not supported by directory buckets.

S3 on Outposts - When you use this action with Amazon S3 on Outposts, you must direct requests to the S3 on Outposts hostname. The S3 on Outposts hostname takes the form *AccessPointName*-*AccountId*.*outpostID*.s3-outposts.*Region*.amazonaws.com. When you use this action with S3 on Outposts through the AWS SDKs, you provide the Outposts access point ARN in place of the bucket name. For more information about S3 on Outposts ARNs, see What is S3 on Outposts? in the *Amazon S3 User Guide*.

Required: Yes

Key

Key name of the object to delete.

Length Constraints: Minimum length of 1.

Required: Yes

versionId

Version ID used to reference a specific version of the object.

> **Note**
>
> For directory buckets in this API operation, only the `null` value of the version ID is supported.

x-amz-bypass-governance-retention

Indicates whether S3 Object Lock should bypass Governance-mode restrictions to process this operation. To use this header, you must have the `s3:BypassGovernanceRetention` permission.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-mfa

The concatenation of the authentication device's serial number, a space, and the value that is displayed on your authentication device. Required to permanently delete a versioned object if versioning is configured with MFA delete enabled.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-request-payer

Confirms that the requester knows that they will be charged for the request. Bucket owners need not specify this parameter in their requests. If either the source or destination S3 bucket has Requester Pays enabled, the requester will pay for corresponding charges to copy the object. For information about downloading objects from Requester Pays buckets, see Downloading Objects in Requester Pays Buckets in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
x-amz-delete-marker: DeleteMarker
x-amz-version-id: VersionId
x-amz-request-charged: RequestCharged
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response.

The response returns the following HTTP headers.

x-amz-delete-marker

Indicates whether the specified object version that was permanently deleted was (true) or was not (false) a delete marker before deletion. In a simple DELETE, this header indicates whether (true) or not (false) the current version of the object is a delete marker.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-request-charged

If present, indicates that the requester was successfully charged for the request.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

x-amz-version-id

Returns the version ID of the delete marker created as a result of the DELETE operation.

> **Note**
>
> This functionality is not supported for directory buckets.

Examples

Sample Request for general purpose buckets

The following request deletes the object `my-second-image.jpg`.

```
DELETE /my-second-image.jpg HTTP/1.1
Host: bucket.s3.<Region>.amazonaws.com
Date: Wed, 12 Oct 2009 17:50:00 GMT
Authorization: authorization string
Content-Type: text/plain
```

Sample Response for general purpose buckets

This example illustrates one usage of DeleteObject.

```
HTTP/1.1 204 NoContent
x-amz-id-2: LriYPLdmOdAiIfgSm/F1YsViT1LW94/xUQxMsF7xiEb1a0wiIOIxl+zbwZ163pt7
x-amz-request-id: 0A49CE4060975EAC
Date: Wed, 12 Oct 2009 17:50:00 GMT
Content-Length: 0
Connection: close
Server: AmazonS3
```

Sample Request for general purpose buckets: Deleting a specified version of an object

The following request deletes the specified version of the object `my-third-image.jpg`.

```
DELETE /my-third-image.jpg?
versionId=UIORUnfndfiufdisojhr398493jfdkjFJjkndnqUifhnw89493jJFJ HTTP/1.1
Host: bucket.s3.<Region>.amazonaws.com
Date: Wed, 12 Oct 2009 17:50:00 GMT
Authorization: authorization string
Content-Type: text/plain
Content-Length: 0
```

Sample Response for general purpose buckets

This example illustrates one usage of DeleteObject.

```
HTTP/1.1 204 NoContent
x-amz-id-2: LriYPLdmOdAiIfgSm/F1YsViT1LW94/xUQxMsF7xiEb1a0wiIOIxl+zbwZ163pt7
x-amz-request-id: 0A49CE4060975EAC
x-amz-version-id: UIORUnfndfiufdisojhr398493jfdkjFJjkndnqUifhnw89493jJFJ
Date: Wed, 12 Oct 2009 17:50:00 GMT
Content-Length: 0
Connection: close
Server: AmazonS3
```

Sample Response for general purpose buckets: If the object deleted is a delete marker

This example illustrates one usage of DeleteObject.

```
HTTP/1.1 204 NoContent
x-amz-id-2: LriYPLdmOdAiIfgSm/F1YsViT1LW94/xUQxMsF7xiEb1a0wiIOIxl
+zbwZ163pt7
x-amz-request-id: 0A49CE4060975EAC
x-amz-version-id: 3/L4kqtJlcpXroDTDmJ+rmSpXd3dIbrHY
+MTRCxf3vjVBH40Nr8X8gdRQBpUMLUo
x-amz-delete-marker: true
Date: Wed, 12 Oct 2009 17:50:00 GMT
Content-Length: 0
Connection: close
Server: AmazonS3
```

Sample Request for general purpose buckets: Deleting a specified version of an object in an MFA-enabled bucket

The following request deletes the specified version of the object `my-third-image.jpg`, which is stored in an MFA-enabled bucket.

```
DELETE /my-third-image.jpg?versionId=UIORUnfndfiuf HTTP/1.1
Host: bucket.s3.<Region>.amazonaws.com
```

```
            Date: Wed, 12 Oct 2009 17:50:00 GMT
            x-amz-mfa:[SerialNumber] [AuthenticationCode]
            Authorization: authorization string
            Content-Type: text/plain
            Content-Length: 0
```

Sample Response for general purpose buckets

This example illustrates one usage of DeleteObject.

```
            HTTP/1.1 204 NoContent
            x-amz-id-2: LriYPLdmOdAiIfgSm/F1YsViT1LW94/xUQxMsF7xiEb1a0wiIOIxl
+zbwZ163pt7
            x-amz-request-id: 0A49CE4060975EAC
            x-amz-version-id: UIORUnfndfiuf
            Date: Wed, 12 Oct 2009 17:50:00 GMT
            Content-Length: 0
            Connection: close
            Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteObjects

Service: Amazon S3

This operation enables you to delete multiple objects from a bucket using a single HTTP request. If you know the object keys that you want to delete, then this operation provides a suitable alternative to sending individual delete requests, reducing per-request overhead.

The request can contain a list of up to 1000 keys that you want to delete. In the XML, you provide the object key names, and optionally, version IDs if you want to delete a specific version of the object from a versioning-enabled bucket. For each key, Amazon S3 performs a delete operation and returns the result of that delete, success or failure, in the response. Note that if the object specified in the request is not found, Amazon S3 returns the result as deleted.

Note

- **Directory buckets** - S3 Versioning isn't enabled and supported for directory buckets.
- **Directory buckets** - For directory buckets, you must make requests for this API operation to the Zonal endpoint. These endpoints support virtual-hosted-style requests in the format `https://bucket_name.s3express-az_id.region.amazonaws.com/key-name`. Path-style requests are not supported. For more information, see Regional and Zonal endpoints in the *Amazon S3 User Guide*.

The operation supports two modes for the response: verbose and quiet. By default, the operation uses verbose mode in which the response includes the result of deletion of each key in your request. In quiet mode the response includes only keys where the delete operation encountered an error. For a successful deletion in a quiet mode, the operation does not return any information about the delete in the response body.

When performing this action on an MFA Delete enabled bucket, that attempts to delete any versioned objects, you must include an MFA token. If you do not provide one, the entire request will fail, even if there are non-versioned objects you are trying to delete. If you provide an invalid token, whether there are versioned keys in the request or not, the entire Multi-Object Delete request will fail. For information about MFA Delete, see MFA Delete in the *Amazon S3 User Guide*.

Note

Directory buckets - MFA delete is not supported by directory buckets.

Permissions

- **General purpose bucket permissions** - The following permissions are required in your policies when your `DeleteObjects` request includes specific headers.
  - **`s3:DeleteObject`** - To delete an object from a bucket, you must always specify the `s3:DeleteObject` permission.
  - **`s3:DeleteObjectVersion`** - To delete a specific version of an object from a versioning-enabled bucket, you must specify the `s3:DeleteObjectVersion` permission.
- **Directory bucket permissions** - To grant access to this API operation on a directory bucket, we recommend that you use the `CreateSession` API operation for session-based authorization. Specifically, you grant the `s3express:CreateSession` permission to the directory bucket in a bucket policy or an IAM identity-based policy. Then, you make the `CreateSession` API call on the bucket to obtain a session token. With the session token in your request header, you can make API requests to this operation. After the session token expires, you make another `CreateSession` API call to generate a new session token for use. AWS CLI or SDKs create session and refresh the session token automatically to avoid service interruptions when a session expires. For more information about authorization, see `CreateSession`.

Content-MD5 request header

- **General purpose bucket** - The Content-MD5 request header is required for all Multi-Object Delete requests. Amazon S3 uses the header value to ensure that your request body has not been altered in transit.
- **Directory bucket** - The Content-MD5 request header or a additional checksum request header (including `x-amz-checksum-crc32`, `x-amz-checksum-crc32c`, `x-amz-checksum-sha1`, or `x-amz-checksum-sha256`) is required for all Multi-Object Delete requests.

HTTP Host header syntax

Directory buckets - The HTTP Host header syntax is *`Bucket_name`*`.s3express-`*`az_id`*`.`*`region`*`.amazonaws.com`.

The following operations are related to `DeleteObjects`:

- CreateMultipartUpload
- UploadPart
- CompleteMultipartUpload
- ListParts
- AbortMultipartUpload

Request Syntax

```
POST /?delete HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-mfa: MFA
x-amz-request-payer: RequestPayer
x-amz-bypass-governance-retention: BypassGovernanceRetention
x-amz-expected-bucket-owner: ExpectedBucketOwner
x-amz-sdk-checksum-algorithm: ChecksumAlgorithm
<?xml version="1.0" encoding="UTF-8"?>
<Delete xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <Object>
      <Key>string</Key>
      <VersionId>string</VersionId>
   </Object>
   ...
   <Quiet>boolean</Quiet>
</Delete>
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name containing the objects to delete.

Directory buckets - When you use this operation with a directory bucket, you must use virtual-hosted-style requests in the format *Bucket_name*`.s3express-`*az_id*`.`*region*`.amazonaws.com`. Path-style requests are not supported. Directory bucket names must be unique in the chosen Availability Zone. Bucket names must follow the format *bucket_base_name*`--`*az-id*`--x-s3` (for example, *DOC-*

EXAMPLE-BUCKET--usw2-az1--x-s3). For information about bucket naming restrictions, see Directory bucket naming rules in the *Amazon S3 User Guide*.

Access points - When you use this action with an access point, you must provide the alias of the access point in place of the bucket name or specify the access point ARN. When using the access point ARN, you must direct requests to the access point hostname. The access point hostname takes the form *AccessPointName-AccountId*.s3-accesspoint.*Region*.amazonaws.com. When using this action with an access point through the AWS SDKs, you provide the access point ARN in place of the bucket name. For more information about access point ARNs, see Using access points in the *Amazon S3 User Guide*.

> **Note**
>
> Access points and Object Lambda access points are not supported by directory buckets.

S3 on Outposts - When you use this action with Amazon S3 on Outposts, you must direct requests to the S3 on Outposts hostname. The S3 on Outposts hostname takes the form *AccessPointName-AccountId*.*outpostID*.s3-outposts.*Region*.amazonaws.com. When you use this action with S3 on Outposts through the AWS SDKs, you provide the Outposts access point ARN in place of the bucket name. For more information about S3 on Outposts ARNs, see What is S3 on Outposts? in the *Amazon S3 User Guide*.

Required: Yes

x-amz-bypass-governance-retention

Specifies whether you want to delete this object even if it has a Governance-type Object Lock in place. To use this header, you must have the `s3:BypassGovernanceRetention` permission.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-mfa

The concatenation of the authentication device's serial number, a space, and the value that is displayed on your authentication device. Required to permanently delete a versioned object if versioning is configured with MFA delete enabled.

When performing the `DeleteObjects` operation on an MFA delete enabled bucket, which attempts to delete the specified versioned objects, you must include an MFA token. If you don't provide an MFA token, the entire request will fail, even if there are non-versioned objects that you are trying to delete. If you provide an invalid token, whether there are versioned object keys in the request or not, the entire Multi-Object Delete request will fail. For information about MFA Delete, see MFA Delete in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-request-payer

Confirms that the requester knows that they will be charged for the request. Bucket owners need not specify this parameter in their requests. If either the source or destination S3 bucket has Requester Pays enabled, the requester will pay for corresponding charges to copy the object. For information about downloading objects from Requester Pays buckets, see Downloading Objects in Requester Pays Buckets in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

x-amz-sdk-checksum-algorithm

Indicates the algorithm used to create the checksum for the object when you use the SDK. This header will not provide any additional functionality if you don't use the SDK. When you send this header, there must be a corresponding `x-amz-checksum-`*`algorithm`* or `x-amz-trailer` header sent. Otherwise, Amazon S3 fails the request with the HTTP status code `400 Bad Request`.

For the `x-amz-checksum-`*`algorithm`* header, replace *`algorithm`* with the supported algorithm from the following list:

- CRC32
- CRC32C
- SHA1
- SHA256

For more information, see Checking object integrity in the *Amazon S3 User Guide*.

If the individual checksum value you provide through `x-amz-checksum-`*`algorithm`* doesn't match the checksum algorithm you set through `x-amz-sdk-checksum-algorithm`, Amazon S3 ignores any provided `ChecksumAlgorithm` parameter and uses the checksum algorithm that matches the provided value in `x-amz-checksum-`*`algorithm`* .

If you provide an individual checksum, Amazon S3 ignores any provided `ChecksumAlgorithm` parameter.

Valid Values: `CRC32` | `CRC32C` | `SHA1` | `SHA256`

Request Body

The request accepts the following data in XML format.

Delete

Root level tag for the Delete parameters.

Required: Yes

Object

The object to delete.

> **Note**
>
> **Directory buckets** - For directory buckets, an object that's composed entirely of whitespace characters is not supported by the `DeleteObjects` API operation. The request will receive a `400 Bad Request` error and none of the objects in the request will be deleted.

Type: Array of ObjectIdentifier data types

Required: Yes

Quiet

Element to enable quiet mode for the request. When you add this element, you must set its value to `true`.

Type: Boolean

Required: No

Response Syntax

```
HTTP/1.1 200
x-amz-request-charged: RequestCharged
<?xml version="1.0" encoding="UTF-8"?>
<DeleteResult>
   <Deleted>
      <DeleteMarker>boolean</DeleteMarker>
      <DeleteMarkerVersionId>string</DeleteMarkerVersionId>
      <Key>string</Key>
      <VersionId>string</VersionId>
   </Deleted>
   ...
   <Error>
      <Code>string</Code>
      <Key>string</Key>
      <Message>string</Message>
      <VersionId>string</VersionId>
   </Error>
   ...
</DeleteResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The response returns the following HTTP headers.

x-amz-request-charged

If present, indicates that the requester was successfully charged for the request.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

The following data is returned in XML format by the service.

DeleteResult

Root level tag for the DeleteResult parameters.

Required: Yes

Deleted

Container element for a successful delete. It identifies the object that was successfully deleted.

Type: Array of DeletedObject data types

Error

Container for a failed delete action that describes the object that Amazon S3 attempted to delete and the error it encountered.

Type: Array of Error data types

Examples

Sample Request for general purpose buckets: Multi-object delete resulting in mixed success/ error response

This example illustrates a Multi-Object Delete request to delete objects that result in mixed success and errors response. The following request deletes two objects from a bucket (`bucketname`). In this example, the requester does not have permission to delete the `sample2.txt` object.

```
POST /?delete HTTP/1.1
Host: bucketname.s3.<Region>.amazonaws.com
Accept: */*
```

```
x-amz-date: Wed, 30 Nov 2011 03:39:05 GMT
Content-MD5: p5/WA/oEr30qrEEl21PAqw==
Authorization: AWS AKIAIOSFODNN7EXAMPLE:W0qPYCLe6JwkZAD1ei6hp9XZIee=
Content-Length: 125
Connection: Keep-Alive

<Delete>
 <Object>
 <Key>sample1.txt</Key>
 </Object>
 <Object>
   <Key>sample2.txt</Key>
 </Object>
 </Delete>
```

Sample Response for general purpose buckets

The response includes a `DeleteResult` element that includes a `Deleted` element for the item that Amazon S3 successfully deleted and an `Error` element that Amazon S3 did not delete because you didn't have permission to delete the object.

```
HTTP/1.1 200 OK
x-amz-id-2: 5h4FxSNCUS7wP5z92eGCWDshNpMnRuXvETa4HH3LvvH6VAIr0jU7tH9kM7X
+njXx
x-amz-request-id: A437B3B641629AEE
Date: Fri, 02 Dec 2011 01:53:42 GMT
Content-Type: application/xml
Server: AmazonS3
Content-Length: 251

<?xml version="1.0" encoding="UTF-8"?>
<DeleteResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
 <Deleted>
   <Key>sample1.txt</Key>
 </Deleted>
 <Error>
  <Key>sample2.txt</Key>
  <Code>AccessDenied</Code>
  <Message>Access Denied</Message>
 </Error>
</DeleteResult>
```

Sample Request for general purpose buckets: Deleting an object from a versioned bucket

If you delete an item from a versioning enabled bucket, all versions of that object remain in the bucket; however, Amazon S3 inserts a delete marker. For more information, see Object Versioning.

The following scenarios describe the behavior of a multi-object Delete request when versioning is enabled for your bucket.

Case 1 - Simple Delete: In the following sample request, the multi-object delete request specifies only one key.

```
POST /?delete HTTP/1.1
Host: bucketname.s3.<Region>.amazonaws.com
Accept: */*
x-amz-date: Wed, 30 Nov 2011 03:39:05 GMT
Content-MD5: p5/WA/oEr30qrEEl21PAqw==
Authorization: AWS AKIAIOSFODNN7EXAMPLE:W0qPYCLe6JwkZAD1ei6hp9XZIee=
Content-Length: 79
Connection: Keep-Alive

<Delete>
 <Object>
   <Key>SampleDocument.txt</Key>
 </Object>
</Delete>
```

Sample Response for general purpose buckets

Because versioning is enabled on the bucket, Amazon S3 does not delete the object. Instead, it adds a delete marker for this object. The following response indicates that a delete marker was added (the `DeleteMarker` element in the response as a value of true) and the version number of the delete marker it added.

```
HTTP/1.1 200 OK
x-amz-id-2: P3xqrhuhYxlrefdw3rEzmJh8z5KDtGzb+/FB7oiQaScI9Yaxd8olYXc7d1111ab
+
x-amz-request-id: 264A17BF16E9E80A
```

```
            Date: Wed, 30 Nov 2011 03:39:32 GMT
            Content-Type: application/xml
            Server: AmazonS3
            Content-Length: 276

            <?xml version="1.0" encoding="UTF-8"?>
            <DeleteResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
             <Deleted>
              <Key>SampleDocument.txt</Key>
               <DeleteMarker>true</DeleteMarker>
               <DeleteMarkerVersionId>NeQt5xeFTfgPJD8B4CGWnkSLtluMr11s</
DeleteMarkerVersionId>
             </Deleted>
            </DeleteResult>
```

Case 2 for general purpose buckets - Versioned Delete

The following request attempts to delete a specific version of an object.

```
            POST /?delete HTTP/1.1
            Host: bucketname.s3.<Region>.amazonaws.com
            Accept: */*
            x-amz-date: Wed, 30 Nov 2011 03:39:05 GMT
            Content-MD5: p5/WA/oEr30qrEEl21PAqw==
            Authorization: AWS AKIAIOSFODNN7EXAMPLE:W0qPYCLe6JwkZAD1ei6hp9XZIxx=
            Content-Length: 140
            Connection: Keep-Alive

            <Delete>
              <Object>
               <Key>SampleDocument.txt</Key>
               <VersionId>OYcLXagmS.WaD..oyH4KRguB95_YhLs7</VersionId>
              </Object>
            </Delete>
```

Sample Response for general purpose buckets

In this case, Amazon S3 deletes the specific object version from the bucket and returns the following response. In the response, Amazon S3 returns the key and version ID of the object deleted.

```
                HTTP/1.1 400 Bad Request
                x-amz-id-2: P3xqrhuhYxlrefdw3rEzmJh8z5KDtGzb+/
FB7oiQaScI9Yaxd8olYXc7d1111xx+
                x-amz-request-id: 264A17BF16E9E80A
                Date: Wed, 30 Nov 2011 03:39:32 GMT
                Content-Type: application/xml
                Server: AmazonS3
                Content-Length: 219

                <?xml version="1.0" encoding="UTF-8"?>
                <DeleteResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
                  <Deleted>
                    <Key>SampleDocument.txt</Key>
                    <VersionId>OYcLXagmS.WaD..oyH4KRguB95_YhLs7</VersionId>
                  </Deleted>
                </DeleteResult>
```

Case 3 for general purpose buckets - Versioned delete of a delete marker

In the preceding example, the request refers to a delete marker (instead of an object), then Amazon S3 deletes the delete marker. The effect of this action is to make your object reappear in your bucket. Amazon S3 returns a response that indicates the delete marker it deleted (`DeleteMarker` element with value true) and the version ID of the delete marker.

```
              HTTP/1.1 200 OK
              x-amz-id-2:
 IIPUZrtolxDEmWsKOae9JlSZe6yWfTye3HQ3T2iAe0ZE4XHa6NKvAJcPp51zZaBr
              x-amz-request-id: D6B284CEC9B05E4E
              Date: Wed, 30 Nov 2011 03:43:25 GMT
              Content-Type: application/xml
              Server: AmazonS3
              Content-Length: 331

              <?xml version="1.0" encoding="UTF-8"?>
              <DeleteResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
                <Deleted>
                  <Key>SampleDocument.txt</Key>
                  <VersionId>NeQt5xeFTfgPJD8B4CGWnkSLtluMr11s</VersionId>
                  <DeleteMarker>true</DeleteMarker>
```

```
                    <DeleteMarkerVersionId>NeQt5xeFTfgPJD8B4CGWnkSLtluMr11s</
DeleteMarkerVersionId>
                  </Deleted>
                </DeleteResult>
```

Sample Response for general purpose buckets

In general, when a multi-object Delete request results in Amazon S3 either adding a delete marker or removing a delete marker, the response returns the following elements.

```
                <DeleteMarker>true</DeleteMarker>
                <DeleteMarkerVersionId>NeQt5xeFTfgPJD8B4CGWnkSLtluMr11s</
DeleteMarkerVersionId>
```

Sample Request for general purpose buckets: Malformed XML in the request

This example shows how Amazon S3 responds to a request that includes a malformed XML document. The following request sends a malformed XML document (missing the Delete end element).

```
                POST /?delete HTTP/1.1
                Host: bucketname.s3.<Region>.amazonaws.com
                Accept: */*
                x-amz-date: Wed, 30 Nov 2011 03:39:05 GMT
                Content-MD5: p5/WA/oEr30qrEEl21PAqw==
                Authorization: AWS AKIAIOSFODNN7EXAMPLE:W0qPYCLe6JwkZAD1ei6hp9XZIee=
                Content-Length: 104
                Connection: Keep-Alive

                <Delete>
                  <Object>
                    <Key>404.txt</Key>
                  </Object>
                  <Object>
                    <Key>a.txt</Key>
                  </Object>
```

Sample Response for general purpose buckets

The response returns the error messages that describe the error.

```
               HTTP/1.1 200 OK
               x-amz-id-2: P3xqrhuhYxlrefdw3rEzmJh8z5KDtGzb+/
FB7oiQaScI9Yaxd8olYXc7d1111ab+
               x-amz-request-id: 264A17BF16E9E80A
               Date: Wed, 30 Nov 2011 03:39:32 GMT
               Content-Type: application/xml
               Server: AmazonS3
               Content-Length: 207

               <?xml version="1.0" encoding="UTF-8"?>
               <Error>
                <Code>MalformedXML</Code>
                 <Message>The XML you provided was not well-formed or did not
                         validate against our published schema</Message>
                <RequestId>264A17BF16E9E80A</RequestId>
                <HostId>P3xqrhuhYxlrefdw3rEzmJh8z5KDtGzb+/FB7oiQaScI9Yaxd8olYXc7d1111ab
+</HostId>
               </Error>
```

Sample Request for general purpose buckets: DeleteObjects containing a carriage return

The following example illustrates the use of an XML entity code as a substitution for a carriage return. This `DeleteObjects` request deletes an object with the `key` parameter: `/some/prefix/objectwith\rcarriagereturn` (where the `\r` is the carriage return).

```
<Delete xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Object>
    <Key>/some/prefix/objectwith&#13;carriagereturn</Key>
  </Object>
</Delete>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteObjectTagging

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Removes the entire tag set from the specified object. For more information about managing object tags, see Object Tagging.

To use this operation, you must have permission to perform the `s3:DeleteObjectTagging` action.

To delete tags of a specific object version, add the `versionId` query parameter in the request. You will need permission for the `s3:DeleteObjectVersionTagging` action.

The following operations are related to `DeleteObjectTagging`:

- PutObjectTagging
- GetObjectTagging

Request Syntax

```
DELETE /{Key+}?tagging&versionId=VersionId HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name containing the objects from which to remove the tags.

Access points - When you use this action with an access point, you must provide the alias of the access point in place of the bucket name or specify the access point ARN. When using the access point ARN, you must direct requests to the access point hostname. The access point hostname takes the form *AccessPointName-AccountId*.s3-accesspoint.*Region*.amazonaws.com. When using

this action with an access point through the AWS SDKs, you provide the access point ARN in place of the bucket name. For more information about access point ARNs, see Using access points in the *Amazon S3 User Guide*.

S3 on Outposts - When you use this action with Amazon S3 on Outposts, you must direct requests to the S3 on Outposts hostname. The S3 on Outposts hostname takes the form *AccessPointName*-*AccountId*.*outpostID*.s3-outposts.*Region*.amazonaws.com. When you use this action with S3 on Outposts through the AWS SDKs, you provide the Outposts access point ARN in place of the bucket name. For more information about S3 on Outposts ARNs, see What is S3 on Outposts? in the *Amazon S3 User Guide*.

Required: Yes

Key

The key that identifies the object in the bucket from which to remove all tags.

Length Constraints: Minimum length of 1.

Required: Yes

versionId

The versionId of the object that the tag-set will be removed from.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
x-amz-version-id: VersionId
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response.

The response returns the following HTTP headers.

x-amz-version-id

The versionId of the object the tag-set was removed from.

Examples

Sample Request

The following DELETE request deletes the tag set from the specified object.

```
 DELETE /exampleobject?tagging HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
Date: Wed, 25 Nov 2016 12:00:00 GMT
Authorization: signatureValue
```

Sample Response

The following successful response shows Amazon S3 returning a 204 No Content response. The tag set for the object has been removed.

```
HTTP/1.1 204 No Content
x-amz-versionid: VersionId
Date: Wed, 25 Nov 2016 12:00:00 GMT
Connection: close
Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++

- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeletePublicAccessBlock

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Removes the `PublicAccessBlock` configuration for an Amazon S3 bucket. To use this operation, you must have the `s3:PutBucketPublicAccessBlock` permission. For more information about permissions, see Permissions Related to Bucket Subresource Operations and Managing Access Permissions to Your Amazon S3 Resources.

The following operations are related to `DeletePublicAccessBlock`:

- Using Amazon S3 Block Public Access
- GetPublicAccessBlock
- PutPublicAccessBlock
- GetBucketPolicyStatus

Request Syntax

```
DELETE /?publicAccessBlock HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The Amazon S3 bucket whose `PublicAccessBlock` configuration you want to delete.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetBucketAccelerateConfiguration

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

This implementation of the GET action uses the `accelerate` subresource to return the Transfer Acceleration state of a bucket, which is either `Enabled` or `Suspended`. Amazon S3 Transfer Acceleration is a bucket-level feature that enables you to perform faster data transfers to and from Amazon S3.

To use this operation, you must have permission to perform the `s3:GetAccelerateConfiguration` action. The bucket owner has this permission by default. The bucket owner can grant this permission to others. For more information about permissions, see Permissions Related to Bucket Subresource Operations and Managing Access Permissions to your Amazon S3 Resources in the *Amazon S3 User Guide*.

You set the Transfer Acceleration state of an existing bucket to `Enabled` or `Suspended` by using the PutBucketAccelerateConfiguration operation.

A GET `accelerate` request does not return a state value for a bucket that has no transfer acceleration state. A bucket has no Transfer Acceleration state if a state has never been set on the bucket.

For more information about transfer acceleration, see Transfer Acceleration in the Amazon S3 User Guide.

The following operations are related to `GetBucketAccelerateConfiguration`:

- PutBucketAccelerateConfiguration

Request Syntax

```
GET /?accelerate HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
x-amz-request-payer: RequestPayer
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket for which the accelerate configuration is retrieved.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-request-payer

Confirms that the requester knows that they will be charged for the request. Bucket owners need not specify this parameter in their requests. If either the source or destination S3 bucket has Requester Pays enabled, the requester will pay for corresponding charges to copy the object. For information about downloading objects from Requester Pays buckets, see Downloading Objects in Requester Pays Buckets in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
x-amz-request-charged: RequestCharged
<?xml version="1.0" encoding="UTF-8"?>
<AccelerateConfiguration>
   <Status>string</Status>
```

```
</AccelerateConfiguration>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The response returns the following HTTP headers.

x-amz-request-charged

If present, indicates that the requester was successfully charged for the request.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

The following data is returned in XML format by the service.

AccelerateConfiguration

Root level tag for the AccelerateConfiguration parameters.

Required: Yes

Status

The accelerate configuration of the bucket.

Type: String

Valid Values: `Enabled | Suspended`

Examples

This implementation of the GET action returns the following responses.

Example

If the transfer acceleration state is set to `Enabled` on a bucket, the response is as follows:

```
<AccelerateConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Status>Enabled</Status>
</AccelerateConfiguration>
```

Example

If the transfer acceleration state is set to `Suspended` on a bucket, the response is as follows:

```
<AccelerateConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Status>Suspended</Status>
</AccelerateConfiguration>
```

Example

If the transfer acceleration state on a bucket has never been set to `Enabled` or `Suspended`, the response is as follows:

```
<AccelerateConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/" />
```

Retrieve the transfer acceleration configuration for a bucket

The following example shows a GET /?`accelerate` request to retrieve the transfer acceleration state of the bucket named `examplebucket`.

```
<AccelerateConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Status>Enabled</Status>
</AccelerateConfiguration>
```

Example

The following is a sample of the response body (only) that shows bucket transfer acceleration is enabled.

```
GET /?accelerate HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
Date: Mon, 11 Apr 2016 12:00:00 GMT
Authorization: authorization string
Content-Type: text/plain
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetBucketAcl

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

This implementation of the `GET` action uses the `acl` subresource to return the access control list (ACL) of a bucket. To use `GET` to return the ACL of the bucket, you must have the `READ_ACP` access to the bucket. If `READ_ACP` permission is granted to the anonymous user, you can return the ACL of the bucket without using an authorization header.

When you use this API operation with an access point, provide the alias of the access point in place of the bucket name.

When you use this API operation with an Object Lambda access point, provide the alias of the Object Lambda access point in place of the bucket name. If the Object Lambda access point alias in a request is not valid, the error code `InvalidAccessPointAliasError` is returned. For more information about `InvalidAccessPointAliasError`, see List of Error Codes.

> **Note**
>
> If your bucket uses the bucket owner enforced setting for S3 Object Ownership, requests to read ACLs are still supported and return the `bucket-owner-full-control` ACL with the owner being the account that created the bucket. For more information, see Controlling object ownership and disabling ACLs in the *Amazon S3 User Guide*.

The following operations are related to `GetBucketAcl`:

- ListObjects

Request Syntax

```
GET /?acl HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

Specifies the S3 bucket whose ACL is being requested.

When you use this API operation with an access point, provide the alias of the access point in place of the bucket name.

When you use this API operation with an Object Lambda access point, provide the alias of the Object Lambda access point in place of the bucket name. If the Object Lambda access point alias in a request is not valid, the error code `InvalidAccessPointAliasError` is returned. For more information about `InvalidAccessPointAliasError`, see List of Error Codes.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<AccessControlPolicy>
   <Owner>
      <DisplayName>string</DisplayName>
      <ID>string</ID>
   </Owner>
   <AccessControlList>
      <Grant>
         <Grantee>
            <DisplayName>string</DisplayName>
            <EmailAddress>string</EmailAddress>
```

```
            <ID>string</ID>
            <xsi:type>string</xsi:type>
            <URI>string</URI>
         </Grantee>
         <Permission>string</Permission>
      </Grant>
   </AccessControlList>
</AccessControlPolicy>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

AccessControlPolicy

Root level tag for the AccessControlPolicy parameters.

Required: Yes

Grants

A list of grants.

Type: Array of Grant data types

Owner

Container for the bucket owner's display name and ID.

Type: Owner data type

Examples

Sample Request

The following request returns the ACL of the specified bucket.

```
GET ?acl HTTP/1.1
Host: bucket.s3.<Region>.amazonaws.com
Date: Wed, 28 Oct 2009 22:32:00 GMT
Authorization: authorization string
```

Sample Response

```
HTTP/1.1 200 OK
x-amz-id-2: eftixk72aD6Ap51TnqcoF8eFidJG9Z/2mkiDFu8yU9AS1ed4OpIszj7UDNEHGran
x-amz-request-id: 318BC8BC148832E5
Date: Wed, 28 Oct 2009 22:32:00 GMT
Last-Modified: Sun, 1 Jan 2006 12:00:00 GMT
Content-Length: 124
Content-Type: text/plain
Connection: close
Server: AmazonS3
<AccessControlPolicy>
  <Owner>
    <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
    <DisplayName>CustomersName@amazon.com</DisplayName>
  </Owner>
  <AccessControlList>
    <Grant>
      <Grantee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xsi:type="CanonicalUser">
        <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
        <DisplayName>CustomersName@amazon.com</DisplayName>
      </Grantee>
      <Permission>FULL_CONTROL</Permission>
    </Grant>
  </AccessControlList>
</AccessControlPolicy>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetBucketAnalyticsConfiguration

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

This implementation of the GET action returns an analytics configuration (identified by the analytics configuration ID) from the bucket.

To use this operation, you must have permissions to perform the `s3:GetAnalyticsConfiguration` action. The bucket owner has this permission by default. The bucket owner can grant this permission to others. For more information about permissions, see Permissions Related to Bucket Subresource Operations and Managing Access Permissions to Your Amazon S3 Resources in the *Amazon S3 User Guide*.

For information about Amazon S3 analytics feature, see Amazon S3 Analytics – Storage Class Analysis in the *Amazon S3 User Guide*.

The following operations are related to `GetBucketAnalyticsConfiguration`:

- DeleteBucketAnalyticsConfiguration
- ListBucketAnalyticsConfigurations
- PutBucketAnalyticsConfiguration

Request Syntax

```
GET /?analytics&id=Id HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket from which an analytics configuration is retrieved.

Required: Yes

id

The ID that identifies the analytics configuration.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<AnalyticsConfiguration>
   <Id>string</Id>
   <Filter>
      <And>
         <Prefix>string</Prefix>
         <Tag>
            <Key>string</Key>
            <Value>string</Value>
         </Tag>
         ...
      </And>
      <Prefix>string</Prefix>
      <Tag>
         <Key>string</Key>
         <Value>string</Value>
      </Tag>
   </Filter>
   <StorageClassAnalysis>
      <DataExport>
         <Destination>
            <S3BucketDestination>
```

```
                <Bucket>string</Bucket>
                <BucketAccountId>string</BucketAccountId>
                <Format>string</Format>
                <Prefix>string</Prefix>
             </S3BucketDestination>
          </Destination>
          <OutputSchemaVersion>string</OutputSchemaVersion>
       </DataExport>
    </StorageClassAnalysis>
</AnalyticsConfiguration>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

AnalyticsConfiguration

Root level tag for the AnalyticsConfiguration parameters.

Required: Yes

Filter

The filter used to describe a set of objects for analyses. A filter must have exactly one prefix, one tag, or one conjunction (AnalyticsAndOperator). If no filter is provided, all objects will be considered in any analysis.

Type: AnalyticsFilter data type

Id

The ID that identifies the analytics configuration.

Type: String

StorageClassAnalysis

Contains data related to access patterns to be collected and made available to analyze the tradeoffs between different storage classes.

Type: StorageClassAnalysis data type

Examples

Configure an Analytics Report

The following GET request for the bucket `examplebucket` returns the inventory configuration with the ID `list1`:

```
GET /?analytics&id=list1 HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
Date: Mon, 31 Oct 2016 12:00:00 GMT
Authorization: authorization string
```

Example

The following is a sample response to the preceding GET request.

```
HTTP/1.1 200 OK
x-amz-id-2: YgIPIfBiKa2bj0KMgUAdQkf3ShJTOOpXUueF6QKo
x-amz-request-id: 236A8905248E5A02
Date: Mon, 31 Oct 2016 12:00:00 GMT
Server: AmazonS3
Content-Length: length

<?xml version="1.0" encoding="UTF-8"?>
<AnalyticsConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Id>list1</Id>
  <Filter>
    <And>
      <Prefix>images/</Prefix>
      <Tag>
        <Key>dog</Key>
        <Value>corgi</Value>
      </Tag>
    </And>
  </Filter>
  <StorageClassAnalysis>
    <DataExport>
      <OutputSchemaVersion>V_1</OutputSchemaVersion>
      <Destination>
        <S3BucketDestination>
```

```
          <Format>CSV</Format>
          <BucketAccountId>123456789012</BucketAccountId>
          <Bucket>arn:aws:s3:::destination-bucket</Bucket>
          <Prefix>destination-prefix</Prefix>
        </S3BucketDestination>
      </Destination>
    </DataExport>
  </StorageClassAnalysis>
</AnalyticsConfiguration>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetBucketCors

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Returns the Cross-Origin Resource Sharing (CORS) configuration information set for the bucket.

To use this operation, you must have permission to perform the `s3:GetBucketCORS` action. By default, the bucket owner has this permission and can grant it to others.

When you use this API operation with an access point, provide the alias of the access point in place of the bucket name.

When you use this API operation with an Object Lambda access point, provide the alias of the Object Lambda access point in place of the bucket name. If the Object Lambda access point alias in a request is not valid, the error code `InvalidAccessPointAliasError` is returned. For more information about `InvalidAccessPointAliasError`, see List of Error Codes.

For more information about CORS, see Enabling Cross-Origin Resource Sharing.

The following operations are related to `GetBucketCors`:

- PutBucketCors
- DeleteBucketCors

Request Syntax

```
GET /?cors HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name for which to get the cors configuration.

When you use this API operation with an access point, provide the alias of the access point in place of the bucket name.

When you use this API operation with an Object Lambda access point, provide the alias of the Object Lambda access point in place of the bucket name. If the Object Lambda access point alias in a request is not valid, the error code `InvalidAccessPointAliasError` is returned. For more information about `InvalidAccessPointAliasError`, see List of Error Codes.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<CORSConfiguration>
   <CORSRule>
      <AllowedHeader>string</AllowedHeader>
      ...
      <AllowedMethod>string</AllowedMethod>
      ...
      <AllowedOrigin>string</AllowedOrigin>
      ...
      <ExposeHeader>string</ExposeHeader>
      ...
      <ID>string</ID>
      <MaxAgeSeconds>integer</MaxAgeSeconds>
   </CORSRule>
   ...
</CORSConfiguration>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

CORSConfiguration

Root level tag for the CORSConfiguration parameters.

Required: Yes

CORSRule

A set of origins and methods (cross-origin access that you want to allow). You can add up to 100 rules to the configuration.

Type: Array of CORSRule data types

Examples

Configure CORS Sample Request

The following PUT request adds the `cors` subresource to a bucket (`examplebucket`).

```
PUT /?cors HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
x-amz-date: Tue, 21 Aug 2012 17:54:50 GMT
Content-MD5: 8dYiLewFWZyGgV2Q5FNI4W==
Authorization: authorization string
Content-Length: 216

<CORSConfiguration>
 <CORSRule>
   <AllowedOrigin>http://www.example.com</AllowedOrigin>
   <AllowedMethod>PUT</AllowedMethod>
   <AllowedMethod>POST</AllowedMethod>
   <AllowedMethod>DELETE</AllowedMethod>
   <AllowedHeader>*</AllowedHeader>
   <MaxAgeSeconds>3000</MaxAgeSec>
   <ExposeHeader>x-amz-server-side-encryption</ExposeHeader>
 </CORSRule>
 <CORSRule>
   <AllowedOrigin>*</AllowedOrigin>
   <AllowedMethod>GET</AllowedMethod>
   <AllowedHeader>*</AllowedHeader>
```

```
   <MaxAgeSeconds>3000</MaxAgeSeconds>
 </CORSRule>
</CORSConfiguration>
```

Example

This is the sample response to the preceding request.

```
HTTP/1.1 200 OK
x-amz-id-2: CCshOvbOPfxzhwOADyC4qHj/Ck3F9Q0viXKw3rivZ+GcBoZSOOahvEJfPisZB7B
x-amz-request-id: BDC4B83DF5096BBE
Date: Tue, 21 Aug 2012 17:54:50 GMT
Server: AmazonS3
```

Sample Request: Retrieve cors subresource

The following example gets the cors subresource of a bucket.

```
            GET /?cors HTTP/1.1
            Host: examplebucket.s3.<Region>.amazonaws.com
            Date: Tue, 13 Dec 2011 19:14:42 GMT
            Authorization: signatureValue
```

Example

Sample Response

```
            HTTP/1.1 200 OK
            x-amz-id-2: 0FmFIWsh/
PpBuzZ0JFRC55ZGVmQW4SHJ7xVDqKwhEdJmf3q63RtrvH8ZuxW1Bol5
            x-amz-request-id: 0CF038E9BCF63097
            Date: Tue, 13 Dec 2011 19:14:42 GMT
            Server: AmazonS3
            Content-Length: 280
            <CORSConfiguration>
                 <CORSRule>
```

```
            <AllowedOrigin>http://www.example.com</AllowedOrigin>
            <AllowedMethod>GET</AllowedMethod>
            <MaxAgeSeconds>3000</MaxAgeSec>
           <ExposeHeader>x-amz-server-side-encryption</ExposeHeader>
        </CORSRule>
    </CORSConfiguration>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetBucketEncryption

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Returns the default encryption configuration for an Amazon S3 bucket. By default, all buckets have a default encryption configuration that uses server-side encryption with Amazon S3 managed keys (SSE-S3). For information about the bucket default encryption feature, see Amazon S3 Bucket Default Encryption in the *Amazon S3 User Guide*.

To use this operation, you must have permission to perform the `s3:GetEncryptionConfiguration` action. The bucket owner has this permission by default. The bucket owner can grant this permission to others. For more information about permissions, see Permissions Related to Bucket Subresource Operations and Managing Access Permissions to Your Amazon S3 Resources.

The following operations are related to `GetBucketEncryption`:

- PutBucketEncryption
- DeleteBucketEncryption

Request Syntax

```
GET /?encryption HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket from which the server-side encryption configuration is retrieved.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<ServerSideEncryptionConfiguration>
   <Rule>
      <ApplyServerSideEncryptionByDefault>
         <KMSMasterKeyID>string</KMSMasterKeyID>
         <SSEAlgorithm>string</SSEAlgorithm>
      </ApplyServerSideEncryptionByDefault>
      <BucketKeyEnabled>boolean</BucketKeyEnabled>
   </Rule>
   ...
</ServerSideEncryptionConfiguration>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

ServerSideEncryptionConfiguration

Root level tag for the ServerSideEncryptionConfiguration parameters.

Required: Yes

Rule

Container for information about a particular server-side encryption configuration rule.

Type: Array of ServerSideEncryptionRule data types

Examples

Sample Request: Retrieve the encryption configuration for an S3 bucket

The following example shows a GET /?encryption request.

```
GET /?encryption HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
Date: Wed, 06 Sep 2017 12:00:00 GMT
Authorization: authorization string
Content-Length: length
```

Sample Response

This example illustrates one usage of GetBucketEncryption.

```
HTTP/1.1 200 OK
x-amz-id-2: kDmqsuw5FDmgLmxQaUkd9A4NJ/PIiE0c1rAU/ue2Yp60toXs4I5k5fqlwZsA6fV
+wJQCzRRwygQ=
x-amz-request-id: 5D8706FCB2673B7D
Date: Wed, 06 Sep 2017 12:00:00 GMT
Transfer-Encoding: chunked
Server: AmazonS3

<ServerSideEncryptionConfiguration xmlns="http://s3.amazonaws.com/
doc/2006-03-01/">
 <Rule>
   <ApplyServerSideEncryptionByDefault>
       <SSEAlgorithm>aws:kms</SSEAlgorithm>
       <KMSKeyID>arn:aws:kms:us-east-1:1234/5678example</KMSKeyID>
   </ApplyServerSideEncryptionByDefault>
</Rule>
</ServerSideEncryptionConfiguration>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetBucketIntelligentTieringConfiguration

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Gets the S3 Intelligent-Tiering configuration from the specified bucket.

The S3 Intelligent-Tiering storage class is designed to optimize storage costs by automatically moving data to the most cost-effective storage access tier, without performance impact or operational overhead. S3 Intelligent-Tiering delivers automatic cost savings in three low latency and high throughput access tiers. To get the lowest storage cost on data that can be accessed in minutes to hours, you can choose to activate additional archiving capabilities.

The S3 Intelligent-Tiering storage class is the ideal storage class for data with unknown, changing, or unpredictable access patterns, independent of object size or retention period. If the size of an object is less than 128 KB, it is not monitored and not eligible for auto-tiering. Smaller objects can be stored, but they are always charged at the Frequent Access tier rates in the S3 Intelligent-Tiering storage class.

For more information, see Storage class for automatically optimizing frequently and infrequently accessed objects.

Operations related to `GetBucketIntelligentTieringConfiguration` include:

- DeleteBucketIntelligentTieringConfiguration
- PutBucketIntelligentTieringConfiguration
- ListBucketIntelligentTieringConfigurations

Request Syntax

```
GET /?intelligent-tiering&id=Id HTTP/1.1
Host: Bucket.s3.amazonaws.com
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the Amazon S3 bucket whose configuration you want to modify or retrieve.

Required: Yes

id

The ID used to identify the S3 Intelligent-Tiering configuration.

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<IntelligentTieringConfiguration>
   <Id>string</Id>
   <Filter>
      <And>
         <Prefix>string</Prefix>
         <Tag>
            <Key>string</Key>
            <Value>string</Value>
         </Tag>
         ...
      </And>
      <Prefix>string</Prefix>
      <Tag>
         <Key>string</Key>
         <Value>string</Value>
      </Tag>
   </Filter>
   <Status>string</Status>
   <Tiering>
      <AccessTier>string</AccessTier>
      <Days>integer</Days>
   </Tiering>
   ...
```

```
</IntelligentTieringConfiguration>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

IntelligentTieringConfiguration

Root level tag for the IntelligentTieringConfiguration parameters.

Required: Yes

Filter

Specifies a bucket filter. The configuration only includes objects that meet the filter's criteria.

Type: IntelligentTieringFilter data type

Id

The ID used to identify the S3 Intelligent-Tiering configuration.

Type: String

Status

Specifies the status of the configuration.

Type: String

Valid Values: `Enabled | Disabled`

Tiering

Specifies the S3 Intelligent-Tiering storage class tier of the configuration.

Type: Array of Tiering data types

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetBucketInventoryConfiguration

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Returns an inventory configuration (identified by the inventory configuration ID) from the bucket.

To use this operation, you must have permissions to perform the `s3:GetInventoryConfiguration` action. The bucket owner has this permission by default and can grant this permission to others. For more information about permissions, see Permissions Related to Bucket Subresource Operations and Managing Access Permissions to Your Amazon S3 Resources.

For information about the Amazon S3 inventory feature, see Amazon S3 Inventory.

The following operations are related to `GetBucketInventoryConfiguration`:

- DeleteBucketInventoryConfiguration
- ListBucketInventoryConfigurations
- PutBucketInventoryConfiguration

Request Syntax

```
GET /?inventory&id=Id HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket containing the inventory configuration to retrieve.

Required: Yes

id

The ID used to identify the inventory configuration.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<InventoryConfiguration>
   <Destination>
      <S3BucketDestination>
         <AccountId>string</AccountId>
         <Bucket>string</Bucket>
         <Encryption>
            <SSE-KMS>
               <KeyId>string</KeyId>
            </SSE-KMS>
            <SSE-S3>
            </SSE-S3>
         </Encryption>
         <Format>string</Format>
         <Prefix>string</Prefix>
      </S3BucketDestination>
   </Destination>
   <IsEnabled>boolean</IsEnabled>
   <Filter>
      <Prefix>string</Prefix>
   </Filter>
   <Id>string</Id>
   <IncludedObjectVersions>string</IncludedObjectVersions>
   <OptionalFields>
```

```
      <Field>string</Field>
   </OptionalFields>
   <Schedule>
      <Frequency>string</Frequency>
   </Schedule>
</InventoryConfiguration>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

InventoryConfiguration

Root level tag for the InventoryConfiguration parameters.

Required: Yes

Destination

Contains information about where to publish the inventory results.

Type: InventoryDestination data type

Filter

Specifies an inventory filter. The inventory only includes objects that meet the filter's criteria.

Type: InventoryFilter data type

Id

The ID used to identify the inventory configuration.

Type: String

IncludedObjectVersions

Object versions to include in the inventory list. If set to `All`, the list includes all the object versions, which adds the version-related fields `VersionId`, `IsLatest`, and `DeleteMarker` to the list. If set to `Current`, the list does not contain these version-related fields.

Type: String

Valid Values: `All | Current`

IsEnabled

Specifies whether the inventory is enabled or disabled. If set to `True`, an inventory list is generated. If set to `False`, no inventory list is generated.

Type: Boolean

OptionalFields

Contains the optional fields that are included in the inventory results.

Type: Array of strings

Valid Values: `Size | LastModifiedDate | StorageClass | ETag | IsMultipartUploaded | ReplicationStatus | EncryptionStatus | ObjectLockRetainUntilDate | ObjectLockMode | ObjectLockLegalHoldStatus | IntelligentTieringAccessTier | BucketKeyStatus | ChecksumAlgorithm | ObjectAccessControlList | ObjectOwner`

Schedule

Specifies the schedule for generating inventory results.

Type: InventorySchedule data type

Examples

Sample Request: Configure an inventory report

The following GET request for the bucket `examplebucket` returns the inventory configuration with the ID `list1`.

```
GET /?inventory&id=list1 HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
Date: Mon, 31 Oct 2016 12:00:00 GMT
Authorization: authorization string
```

Sample Response

This example illustrates one usage of GetBucketInventoryConfiguration.

```
HTTP/1.1 200 OK
x-amz-id-2: YgIPIfBiKa2bj0KMgUAdQkf3ShJTOOpXUueF6QKo
x-amz-request-id: 236A8905248E5A02
Date: Mon, 31 Oct 2016 12:00:00 GMT
Server: AmazonS3
Content-Length: length

<?xml version="1.0" encoding="UTF-8"?>
<InventoryConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <Id>report1</Id>
  <IsEnabled>true</IsEnabled>
  <Destination>
     <S3BucketDestination>
        <Format>CSV</Format>
         <AccountId>123456789012</AccountId>
         <Bucket>arn:aws:s3:::destination-bucket</Bucket>
        <Prefix>prefix1</Prefix>
        <SSE-S3/>
      </S3BucketDestination>
   </Destination>
   <Schedule>
      <Frequency>Daily</Frequency>
  </Schedule>
  <Filter>
    <Prefix>myprefix/</Prefix>
  </Filter>
  <IncludedObjectVersions>All</IncludedObjectVersions>
  <OptionalFields>
    <Field>Size</Field>
    <Field>LastModifiedDate</Field>
      <Field>ETag</Field>
      <Field>StorageClass</Field>
      <Field>IsMultipartUploaded</Field>
    <Field>ReplicationStatus</Field>
      <Field>ObjectLockRetainUntilDate</Field>
      <Field>ObjectLockMode</Field>
    <Field>ObjectLockLegalHoldStatus</Field>
 </OptionalFields>
</InventoryConfiguration>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetBucketLifecycle

Service: Amazon S3

> **Important**
>
> For an updated version of this API, see GetBucketLifecycleConfiguration. If you configured a bucket lifecycle using the `filter` element, you should see the updated version of this topic. This topic is provided for backward compatibility.

> **Note**
>
> This operation is not supported by directory buckets.

Returns the lifecycle configuration information set on the bucket. For information about lifecycle configuration, see Object Lifecycle Management.

To use this operation, you must have permission to perform the `s3:GetLifecycleConfiguration` action. The bucket owner has this permission by default. The bucket owner can grant this permission to others. For more information about permissions, see Permissions Related to Bucket Subresource Operations and Managing Access Permissions to Your Amazon S3 Resources.

`GetBucketLifecycle` has the following special error:

- Error code: `NoSuchLifecycleConfiguration`
  - Description: The lifecycle configuration does not exist.
  - HTTP Status Code: 404 Not Found
  - SOAP Fault Code Prefix: Client

The following operations are related to `GetBucketLifecycle`:

- GetBucketLifecycleConfiguration
- PutBucketLifecycle
- DeleteBucketLifecycle

Request Syntax

```
GET /?lifecycle HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket for which to get the lifecycle information.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<LifecycleConfiguration>
   <Rule>
      <AbortIncompleteMultipartUpload>
         <DaysAfterInitiation>integer</DaysAfterInitiation>
      </AbortIncompleteMultipartUpload>
      <Expiration>
         <Date>timestamp</Date>
         <Days>integer</Days>
         <ExpiredObjectDeleteMarker>boolean</ExpiredObjectDeleteMarker>
      </Expiration>
      <ID>string</ID>
      <NoncurrentVersionExpiration>
```

```
            <NewerNoncurrentVersions>integer</NewerNoncurrentVersions>
            <NoncurrentDays>integer</NoncurrentDays>
         </NoncurrentVersionExpiration>
         <NoncurrentVersionTransition>
            <NewerNoncurrentVersions>integer</NewerNoncurrentVersions>
            <NoncurrentDays>integer</NoncurrentDays>
            <StorageClass>string</StorageClass>
         </NoncurrentVersionTransition>
         <Prefix>string</Prefix>
         <Status>string</Status>
         <Transition>
            <Date>timestamp</Date>
            <Days>integer</Days>
            <StorageClass>string</StorageClass>
         </Transition>
      </Rule>
      ...
</LifecycleConfiguration>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

LifecycleConfiguration

Root level tag for the LifecycleConfiguration parameters.

Required: Yes

Rule

Container for a lifecycle rule.

Type: Array of Rule data types

Examples

Sample Request: Retrieve a lifecycle subresource

This example is a GET request to retrieve the lifecycle subresource from the specified bucket, and an example response with the returned lifecycle configuration.

```
GET /?lifecycle HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
x-amz-date: Thu, 15 Nov 2012 00:17:21 GMT
Authorization: signatureValue
```

Sample Response

This example illustrates one usage of GetBucketLifecycle.

```
HTTP/1.1 200 OK
x-amz-id-2:
ITnGT1y4RyTmXa3rPi4hklTXouTf0hccUjo0iCPjz6FnfIutBj3M7fPGlWO2SEWp
x-amz-request-id: 51991C342C575321
Date: Thu, 15 Nov 2012 00:17:23 GMT
Server: AmazonS3
Content-Length: 358

<?xml version="1.0" encoding="UTF-8"?>
<LifecycleConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <Rule>
        <ID>Archive and then delete rule</ID>
        <Prefix>projectdocs/</Prefix>
       <Status>Enabled</Status>
      <Transition>
           <Days>30</Days>
           <StorageClass>STANDARD_IA</StorageClass>
      </Transition>
      <Transition>
         <Days>365</Days>
          <StorageClass>GLACIER</StorageClass>
       </Transition>
       <Expiration>
          <Days>3650</Days>
       </Expiration>
   </Rule>
</LifecycleConfiguration>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetBucketLifecycleConfiguration

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

> **Note**
>
> Bucket lifecycle configuration now supports specifying a lifecycle rule using an object key name prefix, one or more object tags, object size, or any combination of these. Accordingly, this section describes the latest API. The previous version of the API supported filtering based only on an object key name prefix, which is supported for backward compatibility. For the related API description, see GetBucketLifecycle. Accordingly, this section describes the latest API. The response describes the new filter element that you can use to specify a filter to select a subset of objects to which the rule applies. If you are using a previous version of the lifecycle configuration, it still works. For the earlier action,

Returns the lifecycle configuration information set on the bucket. For information about lifecycle configuration, see Object Lifecycle Management.

To use this operation, you must have permission to perform the `s3:GetLifecycleConfiguration` action. The bucket owner has this permission, by default. The bucket owner can grant this permission to others. For more information about permissions, see Permissions Related to Bucket Subresource Operations and Managing Access Permissions to Your Amazon S3 Resources.

`GetBucketLifecycleConfiguration` has the following special error:

- Error code: `NoSuchLifecycleConfiguration`
  - Description: The lifecycle configuration does not exist.
  - HTTP Status Code: 404 Not Found
  - SOAP Fault Code Prefix: Client

The following operations are related to `GetBucketLifecycleConfiguration`:

- GetBucketLifecycle
- PutBucketLifecycle
- DeleteBucketLifecycle

Request Syntax

```
GET /?lifecycle HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket for which to get the lifecycle information.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<LifecycleConfiguration>
   <Rule>
      <AbortIncompleteMultipartUpload>
         <DaysAfterInitiation>integer</DaysAfterInitiation>
      </AbortIncompleteMultipartUpload>
      <Expiration>
         <Date>timestamp</Date>
         <Days>integer</Days>
```

```
         <ExpiredObjectDeleteMarker>boolean</ExpiredObjectDeleteMarker>
      </Expiration>
      <Filter>
         <And>
            <ObjectSizeGreaterThan>long</ObjectSizeGreaterThan>
            <ObjectSizeLessThan>long</ObjectSizeLessThan>
            <Prefix>string</Prefix>
            <Tag>
               <Key>string</Key>
               <Value>string</Value>
            </Tag>
            ...
         </And>
         <ObjectSizeGreaterThan>long</ObjectSizeGreaterThan>
         <ObjectSizeLessThan>long</ObjectSizeLessThan>
         <Prefix>string</Prefix>
         <Tag>
            <Key>string</Key>
            <Value>string</Value>
         </Tag>
      </Filter>
      <ID>string</ID>
      <NoncurrentVersionExpiration>
         <NewerNoncurrentVersions>integer</NewerNoncurrentVersions>
         <NoncurrentDays>integer</NoncurrentDays>
      </NoncurrentVersionExpiration>
      <NoncurrentVersionTransition>
         <NewerNoncurrentVersions>integer</NewerNoncurrentVersions>
         <NoncurrentDays>integer</NoncurrentDays>
         <StorageClass>string</StorageClass>
      </NoncurrentVersionTransition>
      ...
      <Prefix>string</Prefix>
      <Status>string</Status>
      <Transition>
         <Date>timestamp</Date>
         <Days>integer</Days>
         <StorageClass>string</StorageClass>
      </Transition>
      ...
   </Rule>
   ...
</LifecycleConfiguration>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

LifecycleConfiguration

Root level tag for the LifecycleConfiguration parameters.

Required: Yes

Rule

Container for a lifecycle rule.

Type: Array of LifecycleRule data types

Examples

Sample Request

This example illustrates one usage of GetBucketLifecycleConfiguration.

```
GET /?lifecycle HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
x-amz-date: Thu, 15 Nov 2012 00:17:21 GMT
Authorization: signatureValue
```

Sample Response

This example illustrates one usage of GetBucketLifecycleConfiguration.

```
HTTP/1.1 200 OK
x-amz-id-2:
ITnGT1y4RyTmXa3rPi4hklTXouTf0hccUjo0iCPjz6FnfIutBj3M7fPGlWO2SEWp
x-amz-request-id: 51991C342C575321
Date: Thu, 15 Nov 2012 00:17:23 GMT
Server: AmazonS3
Content-Length: 358
```

```
<?xml version="1.0" encoding="UTF-8"?>
<LifecycleConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <Rule>
        <ID>Archive and then delete rule</ID>
        <Prefix>projectdocs/</Prefix>
       <Status>Enabled</Status>
      <Transition>
           <Days>30</Days>
           <StorageClass>STANDARD_IA</StorageClass>
      </Transition>
      <Transition>
         <Days>365</Days>
          <StorageClass>GLACIER</StorageClass>
       </Transition>
       <Expiration>
          <Days>3650</Days>
       </Expiration>
   </Rule>
</LifecycleConfiguration>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetBucketLocation

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Returns the Region the bucket resides in. You set the bucket's Region using the `LocationConstraint` request parameter in a `CreateBucket` request. For more information, see CreateBucket.

When you use this API operation with an access point, provide the alias of the access point in place of the bucket name.

When you use this API operation with an Object Lambda access point, provide the alias of the Object Lambda access point in place of the bucket name. If the Object Lambda access point alias in a request is not valid, the error code `InvalidAccessPointAliasError` is returned. For more information about `InvalidAccessPointAliasError`, see List of Error Codes.

> **Note**
>
> We recommend that you use HeadBucket to return the Region that a bucket resides in. For backward compatibility, Amazon S3 continues to support GetBucketLocation.

The following operations are related to `GetBucketLocation`:

- GetObject
- CreateBucket

Request Syntax

```
GET /?location HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket for which to get the location.

When you use this API operation with an access point, provide the alias of the access point in place of the bucket name.

When you use this API operation with an Object Lambda access point, provide the alias of the Object Lambda access point in place of the bucket name. If the Object Lambda access point alias in a request is not valid, the error code `InvalidAccessPointAliasError` is returned. For more information about `InvalidAccessPointAliasError`, see List of Error Codes.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<LocationConstraint>
   <LocationConstraint>string</LocationConstraint>
</LocationConstraint>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

LocationConstraint

Root level tag for the LocationConstraint parameters.

Required: Yes

LocationConstraint

Specifies the Region where the bucket resides. For a list of all the Amazon S3 supported location constraints by Region, see Regions and Endpoints. Buckets in Region `us-east-1` have a LocationConstraint of `null`.

Type: String

Valid Values: `af-south-1 | ap-east-1 | ap-northeast-1 | ap-northeast-2 | ap-northeast-3 | ap-south-1 | ap-south-2 | ap-southeast-1 | ap-southeast-2 | ap-southeast-3 | ca-central-1 | cn-north-1 | cn-northwest-1 | EU | eu-central-1 | eu-north-1 | eu-south-1 | eu-south-2 | eu-west-1 | eu-west-2 | eu-west-3 | me-south-1 | sa-east-1 | us-east-2 | us-gov-east-1 | us-gov-west-1 | us-west-1 | us-west-2`

Examples

Sample Request

The following request returns the Region of the specified bucket.

```
GET /?location HTTP/1.1
Host: myBucket.s3.amazonaws.com
Date: Tue, 09 Oct 2007 20:26:04 +0000
Authorization: signatureValue
```

Sample Response

This example illustrates one usage of GetBucketLocation.

```
<?xml version="1.0" encoding="UTF-8"?>
<LocationConstraint xmlns="http://s3.amazonaws.com/doc/2006-03-01/">us-
west-2</LocationConstraint>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetBucketLogging

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Returns the logging status of a bucket and the permissions users have to view and modify that status.

The following operations are related to `GetBucketLogging`:

- CreateBucket
- PutBucketLogging

Request Syntax

```
GET /?logging HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name for which to get the logging information.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<BucketLoggingStatus>
   <LoggingEnabled>
      <TargetBucket>string</TargetBucket>
      <TargetGrants>
         <Grant>
            <Grantee>
               <DisplayName>string</DisplayName>
               <EmailAddress>string</EmailAddress>
               <ID>string</ID>
               <xsi:type>string</xsi:type>
               <URI>string</URI>
            </Grantee>
            <Permission>string</Permission>
         </Grant>
      </TargetGrants>
      <TargetObjectKeyFormat>
         <PartitionedPrefix>
            <PartitionDateSource>string</PartitionDateSource>
         </PartitionedPrefix>
         <SimplePrefix>
         </SimplePrefix>
      </TargetObjectKeyFormat>
      <TargetPrefix>string</TargetPrefix>
   </LoggingEnabled>
</BucketLoggingStatus>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

BucketLoggingStatus

Root level tag for the BucketLoggingStatus parameters.

Required: Yes

LoggingEnabled

Describes where logs are stored and the prefix that Amazon S3 assigns to all log object keys for a bucket. For more information, see PUT Bucket logging in the *Amazon S3 API Reference*.

Type: LoggingEnabled data type

Examples

Sample Request

The following request returns the logging status for `mybucket`.

```
GET ?logging HTTP/1.1
Host: mybucket.s3.<Region>.amazonaws.com
Date: Wed, 25 Nov 2009 12:00:00 GMT
Authorization: authorization string
```

Sample Response: Showing an enabled logging status

This example illustrates one usage of GetBucketLogging.

```
HTTP/1.1 200 OK
Date: Wed, 25 Nov 2009 12:00:00 GMT
Connection: close
Server: AmazonS3

<?xml version="1.0" encoding="UTF-8"?>
<BucketLoggingStatus xmlns="http://doc.s3.amazonaws.com/2006-03-01">
 <LoggingEnabled>
  <TargetBucket>mybucketlogs</TargetBucket>
  <TargetPrefix>mybucket-access_log-/</TargetPrefix>
    <TargetGrants>
      <Grant>
       <Grantee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
        xsi:type="AmazonCustomerByEmail">
        <EmailAddress>user@company.com</EmailAddress>
       </Grantee>
       <Permission>READ</Permission>
```

```
            </Grant>
          </TargetGrants>
        </LoggingEnabled>
        </BucketLoggingStatus>
```

Sample Response: Showing a disabled logging status

This example illustrates one usage of GetBucketLogging.

```
HTTP/1.1 200 OK
Date: Wed, 25 Nov 2009 12:00:00 GMT
Connection: close
Server: AmazonS3

<?xml version="1.0" encoding="UTF-8"?>
<BucketLoggingStatus xmlns="http://doc.s3.amazonaws.com/2006-03-01" />
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetBucketMetricsConfiguration

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Gets a metrics configuration (specified by the metrics configuration ID) from the bucket. Note that this doesn't include the daily storage metrics.

To use this operation, you must have permissions to perform the `s3:GetMetricsConfiguration` action. The bucket owner has this permission by default. The bucket owner can grant this permission to others. For more information about permissions, see Permissions Related to Bucket Subresource Operations and Managing Access Permissions to Your Amazon S3 Resources.

For information about CloudWatch request metrics for Amazon S3, see Monitoring Metrics with Amazon CloudWatch.

The following operations are related to `GetBucketMetricsConfiguration`:

- PutBucketMetricsConfiguration
- DeleteBucketMetricsConfiguration
- ListBucketMetricsConfigurations
- Monitoring Metrics with Amazon CloudWatch

Request Syntax

```
GET /?metrics&id=Id HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket containing the metrics configuration to retrieve.

Required: Yes

id

The ID used to identify the metrics configuration. The ID has a 64 character limit and can only contain letters, numbers, periods, dashes, and underscores.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<MetricsConfiguration>
   <Id>string</Id>
   <Filter>
      <AccessPointArn>string</AccessPointArn>
      <And>
         <AccessPointArn>string</AccessPointArn>
         <Prefix>string</Prefix>
         <Tag>
            <Key>string</Key>
            <Value>string</Value>
         </Tag>
         ...
      </And>
      <Prefix>string</Prefix>
      <Tag>
         <Key>string</Key>
         <Value>string</Value>
      </Tag>
   </Filter>
</MetricsConfiguration>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

MetricsConfiguration

Root level tag for the MetricsConfiguration parameters.

Required: Yes

Filter

Specifies a metrics configuration filter. The metrics configuration will only include objects that meet the filter's criteria. A filter must be a prefix, an object tag, an access point ARN, or a conjunction (MetricsAndOperator).

Type: MetricsFilter data type

Id

The ID used to identify the metrics configuration. The ID has a 64 character limit and can only contain letters, numbers, periods, dashes, and underscores.

Type: String

Examples

First Sample Request

Retrieve a metrics configuration that filters metrics based on a specified prefix.

```
GET /?metrics&id=Documents HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
x-amz-date: Thu, 15 Nov 2016 00:17:21 GMT
Authorization: signatureValue
```

First Sample Response

This example illustrates one usage of GetBucketMetricsConfiguration.

```
           HTTP/1.1 200 OK
           x-amz-id-2:
ITnGT1y4REXAMPLEPi4hklTXouTf0hccUjo0iCPEXAMPLEutBj3M7fPGlWO2SEWp
           x-amz-request-id: 51991EXAMPLE5321
           Date: Thu, 15 Nov 2016 00:17:22 GMT
           Server: AmazonS3
           Content-Length: 180

           <?xml version="1.0" encoding="UTF-8"?>
           <MetricsConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
              <Id>Documents</Id>
             <Filter>
                 <Prefix>documents/</Prefix>
             </Filter>
           </MetricsConfiguration>
```

Second Sample Request

Retrieve a metrics configuration that enables metrics for objects that start with a particular prefix and have specific tags applied.

```
           GET /?metrics&id=ImportantBlueDocuments HTTP/1.1
           Host: examplebucket.s3.<Region>.amazonaws.com
           x-amz-date: Thu, 15 Nov 2016 00:17:21 GMT
           Authorization: signatureValue
```

Second Sample Response

This example illustrates one usage of GetBucketMetricsConfiguration.

```
           HTTP/1.1 200 OK
           x-amz-id-2:
ITnGT1y4REXAMPLEPi4hklTXouTf0hccUjo0iCPEXAMPLEutBj3M7fPGlWO2SEWp
           x-amz-request-id: 51991EXAMPLE5321
           Date: Thu, 15 Nov 2016 00:17:22 GMT
           Server: AmazonS3
           Content-Length: 480
```

```
<?xml version="1.0" encoding="UTF-8"?>
<MetricsConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Id>ImportantBlueDocuments</Id>
  <Filter>
      <And>
          <Prefix>documents/</Prefix>
          <Tag>
              <Key>priority</Key>
              <Value>high</Value>
          </Tag>
          <Tag>
                <Key>class</Key>
                <Value>blue</Value>
          </Tag>
       </And>
   </Filter>
</MetricsConfiguration>
```

Third Sample Request

Retrieve a metrics configuration that enables metrics for a specific access point.

```
GET /?metrics&id=ImportantDocumentsAccessPoint HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
x-amz-date: Thu, 26 Aug 2021 00:17:21 GMT
Authorization: signatureValue
```

Third Sample Response

This example illustrates one usage of GetBucketMetricsConfiguration.

```
HTTP/1.1 200 OK
x-amz-id-2:
ITnGT1y4REXAMPLEPi4hklTXouTf0hccUjo0iCPEXAMPLEutBj3M7fPGlWO2SEWp
x-amz-request-id: 51991EXAMPLE5321
Date: Thu, 26 Aug 2021 00:17:22 GMT
Server: AmazonS3
Content-Length: 480
```

```
            <?xml version="1.0" encoding="UTF-8"?>
            <MetricsConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
              <Id>ImportantDocumentsAccessPoint</Id>
              <Filter>
                  <AccessPointArn>arn:aws:s3:us-west-2:123456789012:accesspoint/test</
AccessPointArn>
               </Filter>
            </MetricsConfiguration>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetBucketNotification

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

No longer used, see GetBucketNotificationConfiguration.

Request Syntax

```
GET /?notification HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket for which to get the notification configuration.

When you use this API operation with an access point, provide the alias of the access point in place of the bucket name.

When you use this API operation with an Object Lambda access point, provide the alias of the Object Lambda access point in place of the bucket name. If the Object Lambda access point alias in a request is not valid, the error code `InvalidAccessPointAliasError` is returned. For more information about `InvalidAccessPointAliasError`, see List of Error Codes.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<NotificationConfiguration>
   <TopicConfiguration>
      <Event>string</Event>
      <Event>string</Event>
      ...
      <Id>string</Id>
      <Topic>string</Topic>
   </TopicConfiguration>
   <QueueConfiguration>
      <Event>string</Event>
      <Event>string</Event>
      ...
      <Id>string</Id>
      <Queue>string</Queue>
   </QueueConfiguration>
   <CloudFunctionConfiguration>
      <CloudFunction>string</CloudFunction>
      <Event>string</Event>
      <Event>string</Event>
      ...
      <Id>string</Id>
      <InvocationRole>string</InvocationRole>
   </CloudFunctionConfiguration>
</NotificationConfiguration>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

NotificationConfiguration

Root level tag for the NotificationConfiguration parameters.

Required: Yes

CloudFunctionConfiguration

Container for specifying the AWS Lambda notification configuration.

Type: CloudFunctionConfiguration data type

QueueConfiguration

This data type is deprecated. This data type specifies the configuration for publishing messages to an Amazon Simple Queue Service (Amazon SQS) queue when Amazon S3 detects specified events.

Type: QueueConfigurationDeprecated data type

TopicConfiguration

This data type is deprecated. A container for specifying the configuration for publication of messages to an Amazon Simple Notification Service (Amazon SNS) topic when Amazon S3 detects specified events.

Type: TopicConfigurationDeprecated data type

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetBucketNotificationConfiguration

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Returns the notification configuration of a bucket.

If notifications are not enabled on the bucket, the action returns an empty `NotificationConfiguration` element.

By default, you must be the bucket owner to read the notification configuration of a bucket. However, the bucket owner can use a bucket policy to grant permission to other users to read this configuration with the `s3:GetBucketNotification` permission.

When you use this API operation with an access point, provide the alias of the access point in place of the bucket name.

When you use this API operation with an Object Lambda access point, provide the alias of the Object Lambda access point in place of the bucket name. If the Object Lambda access point alias in a request is not valid, the error code `InvalidAccessPointAliasError` is returned. For more information about `InvalidAccessPointAliasError`, see List of Error Codes.

For more information about setting and reading the notification configuration on a bucket, see Setting Up Notification of Bucket Events. For more information about bucket policies, see Using Bucket Policies.

The following action is related to `GetBucketNotification`:

- PutBucketNotification

Request Syntax

```
GET /?notification HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket for which to get the notification configuration.

When you use this API operation with an access point, provide the alias of the access point in place of the bucket name.

When you use this API operation with an Object Lambda access point, provide the alias of the Object Lambda access point in place of the bucket name. If the Object Lambda access point alias in a request is not valid, the error code `InvalidAccessPointAliasError` is returned. For more information about `InvalidAccessPointAliasError`, see List of Error Codes.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<NotificationConfiguration>
   <TopicConfiguration>
      <Event>string</Event>
      ...
      <Filter>
         <S3Key>
            <FilterRule>
               <Name>string</Name>
               <Value>string</Value>
            </FilterRule>
            ...
```

```
            </S3Key>
         </Filter>
         <Id>string</Id>
         <Topic>string</Topic>
      </TopicConfiguration>
      ...
      <QueueConfiguration>
         <Event>string</Event>
         ...
         <Filter>
            <S3Key>
               <FilterRule>
                  <Name>string</Name>
                  <Value>string</Value>
               </FilterRule>
               ...
            </S3Key>
         </Filter>
         <Id>string</Id>
         <Queue>string</Queue>
      </QueueConfiguration>
      ...
      <CloudFunctionConfiguration>
         <Event>string</Event>
         ...
         <Filter>
            <S3Key>
               <FilterRule>
                  <Name>string</Name>
                  <Value>string</Value>
               </FilterRule>
               ...
            </S3Key>
         </Filter>
         <Id>string</Id>
         <CloudFunction>string</CloudFunction>
      </CloudFunctionConfiguration>
      ...
      <EventBridgeConfiguration>
      </EventBridgeConfiguration>
</NotificationConfiguration>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

NotificationConfiguration

Root level tag for the NotificationConfiguration parameters.

Required: Yes

CloudFunctionConfiguration

Describes the AWS Lambda functions to invoke and the events for which to invoke them.

Type: Array of LambdaFunctionConfiguration data types

EventBridgeConfiguration

Enables delivery of events to Amazon EventBridge.

Type: EventBridgeConfiguration data type

QueueConfiguration

The Amazon Simple Queue Service queues to publish messages to and the events for which to publish messages.

Type: Array of QueueConfiguration data types

TopicConfiguration

The topic to which notifications are sent and the events for which notifications are generated.

Type: Array of TopicConfiguration data types

Examples

Sample Request

This request returns the notification configuration on the bucket `quotes.s3.<Region>.amazonaws.com`.

```
GET ?notification HTTP/1.1
Host: quotes.s3.<Region>.amazonaws.com
Date: Wed, 15 Oct 2014 16:59:03 GMT
Authorization: authorization string
```

Sample Response

This response returns that the notification configuration for the specified bucket.

```
HTTP/1.1 200 OK
x-amz-id-2: YgIPIfBiKa2bj0KMgUAdQkf3ShJTOOpXUueF6QKo
x-amz-request-id: 236A8905248E5A02
Date: Wed, 15 Oct 2014 16:59:04 GMT
Server: AmazonS3
<?xml version="1.0" encoding="UTF-8"?>

<NotificationConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
 <TopicConfiguration>
   <Id>YjVkM2Y0YmUtNGI3NC00ZjQyLWEwNGItNDIyYWUxY2I0N2M4</Id>
  <Topic>arn:aws:sns:us-east-1:account-id:s3notificationtopic2</Topic>
  <Event>s3:ReducedRedundancyLostObject</Event>
  <Event>s3:ObjectCreated:*</Event>
 </TopicConfiguration>
</NotificationConfiguration>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3

- AWS SDK for Python
- AWS SDK for Ruby V3

GetBucketOwnershipControls

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Retrieves `OwnershipControls` for an Amazon S3 bucket. To use this operation, you must have the `s3:GetBucketOwnershipControls` permission. For more information about Amazon S3 permissions, see Specifying permissions in a policy.

For information about Amazon S3 Object Ownership, see Using Object Ownership.

The following operations are related to `GetBucketOwnershipControls`:

- PutBucketOwnershipControls
- DeleteBucketOwnershipControls

Request Syntax

```
GET /?ownershipControls HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the Amazon S3 bucket whose `OwnershipControls` you want to retrieve.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<OwnershipControls>
   <Rule>
      <ObjectOwnership>string</ObjectOwnership>
   </Rule>
   ...
</OwnershipControls>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

OwnershipControls

Root level tag for the OwnershipControls parameters.

Required: Yes

Rule

The container element for an ownership control rule.

Type: Array of OwnershipControlsRule data types

Examples

Sample GetBucketOwnershipControls Request for BucketOwnerEnforced

This example illustrates one usage of GetBucketOwnershipControls.

```
GET /DOC-EXAMPLE-BUCKET?/ownershipControls HTTP/1.1
Host: DOC-EXAMPLE-BUCKET.s3.<Region>.amazonaws.com
Date: Mon, 29 Nov 2021 00:17:22 GMT
```

```
          Authorization: signatureValue;
```

Sample GetBucketOwnershipControls Response

This example illustrates one usage of GetBucketOwnershipControls.

```
          HTTP/1.1 200 OK
          x-amz-id-2: Adphn7MaAHDEg9mh5JmcTN8mzyVX0JhIztSiQNaqTxnXXcYi4uiZbYdwWC3JXmh/
XXVUUQwO4Vs=
          x-amz-request-id: 252631E05F84A415
          Date: Mon, 29 Nov 2021 00:17:22 GMT
          Server: AmazonS3
          Content-Length: 194

          <OwnershipControls xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
            <Rule>
              <ObjectOwnership>BucketOwnerEnforced</ObjectOwnership>
            </Rule>
          </OwnershipControls>
```

Sample GetBucketOwnershipControls Request for BucketOwnerPreferred

This example illustrates one usage of GetBucketOwnershipControls.

```
          GET /DOC-EXAMPLE-BUCKET?/ownershipControls HTTP/1.1
          Host: DOC-EXAMPLE-BUCKET.s3.<Region>.amazonaws.com
          Date: Thu, 18 Jun 2017 00:17:22 GMT
          Authorization: signatureValue;
```

Sample GetBucketOwnershipControls Response

This example illustrates one usage of GetBucketOwnershipControls.

```
          HTTP/1.1 200 OK
          x-amz-id-2: Adphn7MaAHDEg9mh5JmcTN8mzyVX0JhIztSiQNaqTxnXXcYi4uiZbYdwWC3JXmh/
XXVUUQwO4Vs=
```

```
x-amz-request-id: 252631E05F84A415
Date: Thu, 18 Jun 2020 00:17:22 GMT
Server: AmazonS3
Content-Length: 194

<OwnershipControls xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Rule>
    <ObjectOwnership>BucketOwnerPreferred</ObjectOwnership>
  </Rule>
</OwnershipControls>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetBucketPolicy

Service: Amazon S3

Returns the policy of a specified bucket.

> **Note**
>
> **Directory buckets** - For directory buckets, you must make requests for this API operation to the Regional endpoint. These endpoints support path-style requests in the format `https://s3express-control.region_code.amazonaws.com/bucket-name` . Virtual-hosted-style requests aren't supported. For more information, see Regional and Zonal endpoints in the *Amazon S3 User Guide*.

Permissions

If you are using an identity other than the root user of the AWS account that owns the bucket, the calling identity must both have the `GetBucketPolicy` permissions on the specified bucket and belong to the bucket owner's account in order to use this operation.

If you don't have `GetBucketPolicy` permissions, Amazon S3 returns a `403 Access Denied` error. If you have the correct permissions, but you're not using an identity that belongs to the bucket owner's account, Amazon S3 returns a `405 Method Not Allowed` error.

> **Important**
>
> To ensure that bucket owners don't inadvertently lock themselves out of their own buckets, the root principal in a bucket owner's AWS account can perform the `GetBucketPolicy`, `PutBucketPolicy`, and `DeleteBucketPolicy` API actions, even if their bucket policy explicitly denies the root principal's access. Bucket owner root principals can only be blocked from performing these API actions by VPC endpoint policies and AWS Organizations policies.

- **General purpose bucket permissions** - The `s3:GetBucketPolicy` permission is required in a policy. For more information about general purpose buckets bucket policies, see Using Bucket Policies and User Policies in the *Amazon S3 User Guide*.
- **Directory bucket permissions** - To grant access to this API operation, you must have the `s3express:GetBucketPolicy` permission in an IAM identity-based policy instead of a

bucket policy. Cross-account access to this API operation isn't supported. This operation can only be performed by the AWS account that owns the resource. For more information about directory bucket policies and permissions, see AWS Identity and Access Management (IAM) for S3 Express One Zone in the *Amazon S3 User Guide*.

Example bucket policies

General purpose buckets example bucket policies - See Bucket policy examples in the *Amazon S3 User Guide*.

Directory bucket example bucket policies - See Example bucket policies for S3 Express One Zone in the *Amazon S3 User Guide*.

HTTP Host header syntax

Directory buckets - The HTTP Host header syntax is `s3express-control.region.amazonaws.com`.

The following action is related to `GetBucketPolicy`:

- GetObject

Request Syntax

```
GET /?policy HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name to get the bucket policy for.

Directory buckets - When you use this operation with a directory bucket, you must use path-style requests in the format `https://s3express-control.region_code.amazonaws.com/bucket-name` . Virtual-hosted-style requests aren't supported. Directory bucket names must be unique in the chosen Availability Zone. Bucket names must also follow the format *bucket_base_name*`--`*az_id*`--x-s3` (for

example, *DOC-EXAMPLE-BUCKET--usw2-az1--x-s3*). For information about bucket naming restrictions, see Directory bucket naming rules in the *Amazon S3 User Guide*

Access points - When you use this API operation with an access point, provide the alias of the access point in place of the bucket name.

Object Lambda access points - When you use this API operation with an Object Lambda access point, provide the alias of the Object Lambda access point in place of the bucket name. If the Object Lambda access point alias in a request is not valid, the error code `InvalidAccessPointAliasError` is returned. For more information about `InvalidAccessPointAliasError`, see List of Error Codes.

> **Note**
>
> Access points and Object Lambda access points are not supported by directory buckets.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

> **Note**
>
> For directory buckets, this header is not supported in this API operation. If you specify this header, the request fails with the HTTP status code `501 Not Implemented`.

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200

{ Policy in JSON format }
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.
<varlistentry> **Policy** </varlistentry>

Examples

Sample Request for general purpose buckets

The following request returns the policy of the specified bucket.

```
GET ?policy HTTP/1.1
Host: bucket.s3.<Region>.amazonaws.com
Date: Wed, 28 Oct 2009 22:32:00 GMT
Authorization: authorization string
```

Sample Response for general purpose buckets

This example illustrates one usage of GetBucketPolicy.

```
HTTP/1.1 200 OK
x-amz-id-2: Uuag1LuByru9pO4SAMPLEAtRPfTaOFg==
x-amz-request-id: 656c76696e67SAMPLE57374
Date: Tue, 04 Apr 2010 20:34:56 GMT
Connection: keep-alive
Server: AmazonS3


{
"Version":"2008-10-17",
"Id":"aaaa-bbbb-cccc-dddd",
"Statement" : [
    {
        "Effect":"Deny",
        "Sid":"1",
        "Principal" : {
           "AWS":["111122223333","444455556666"]
        },
```

```
                "Action":["s3:*"],
                "Resource":"arn:aws:s3:::bucket/*"
            }
         ]
        }
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetBucketPolicyStatus

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Retrieves the policy status for an Amazon S3 bucket, indicating whether the bucket is public. In order to use this operation, you must have the `s3:GetBucketPolicyStatus` permission. For more information about Amazon S3 permissions, see Specifying Permissions in a Policy.

For more information about when Amazon S3 considers a bucket public, see The Meaning of "Public".

The following operations are related to `GetBucketPolicyStatus`:

- Using Amazon S3 Block Public Access
- GetPublicAccessBlock
- PutPublicAccessBlock
- DeletePublicAccessBlock

Request Syntax

```
GET /?policyStatus HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the Amazon S3 bucket whose policy status you want to retrieve.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<PolicyStatus>
   <IsPublic>boolean</IsPublic>
</PolicyStatus>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

PolicyStatus

Root level tag for the PolicyStatus parameters.

Required: Yes

IsPublic

The policy status for this bucket. TRUE indicates that this bucket is public. FALSE indicates that the bucket is not public.

Type: Boolean

Examples

Sample Request

The following request gets a bucket policy status.

```
GET /<bucket-name>?policyStatus HTTP/1.1
Host: <bucket-name>.s3.<Region>.amazonaws.com
x-amz-date: <Thu, 15 Nov 2016 00:17:21 GMT>
Authorization: <signatureValue>
```

Sample Response

This example illustrates one usage of GetBucketPolicyStatus.

```
HTTP/1.1 200 OK
x-amz-id-2:
ITnGT1y4REXAMPLEPi4hklTXouTf0hccUjo0iCPEXAMPLEutBj3M7fPGlWO2SEWp
x-amz-request-id: 51991EXAMPLE5321
Date: Thu, 15 Nov 2016 00:17:22 GMT
Server: AmazonS3
Content-Length: 0

<PolicyStatus>
   <IsPublic>TRUE</IsPublic>
</PolicyStatus>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python

- AWS SDK for Ruby V3

GetBucketReplication

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Returns the replication configuration of a bucket.

> **Note**
>
> It can take a while to propagate the put or delete a replication configuration to all Amazon S3 systems. Therefore, a get request soon after put or delete can return a wrong result.

For information about replication configuration, see Replication in the *Amazon S3 User Guide*.

This action requires permissions for the `s3:GetReplicationConfiguration` action. For more information about permissions, see Using Bucket Policies and User Policies.

If you include the `Filter` element in a replication configuration, you must also include the `DeleteMarkerReplication` and `Priority` elements. The response also returns those elements.

For information about `GetBucketReplication` errors, see List of replication-related error codes

The following operations are related to `GetBucketReplication`:

- PutBucketReplication
- DeleteBucketReplication

Request Syntax

```
GET /?replication HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name for which to get the replication information.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<ReplicationConfiguration>
   <Role>string</Role>
   <Rule>
      <DeleteMarkerReplication>
         <Status>string</Status>
      </DeleteMarkerReplication>
      <Destination>
         <AccessControlTranslation>
            <Owner>string</Owner>
         </AccessControlTranslation>
         <Account>string</Account>
         <Bucket>string</Bucket>
         <EncryptionConfiguration>
            <ReplicaKmsKeyID>string</ReplicaKmsKeyID>
         </EncryptionConfiguration>
         <Metrics>
            <EventThreshold>
               <Minutes>integer</Minutes>
            </EventThreshold>
            <Status>string</Status>
         </Metrics>
         <ReplicationTime>
            <Status>string</Status>
            <Time>
```

```
            <Minutes>integer</Minutes>
         </Time>
      </ReplicationTime>
      <StorageClass>string</StorageClass>
   </Destination>
   <ExistingObjectReplication>
      <Status>string</Status>
   </ExistingObjectReplication>
   <Filter>
      <And>
         <Prefix>string</Prefix>
         <Tag>
            <Key>string</Key>
            <Value>string</Value>
         </Tag>
         ...
      </And>
      <Prefix>string</Prefix>
      <Tag>
         <Key>string</Key>
         <Value>string</Value>
      </Tag>
   </Filter>
   <ID>string</ID>
   <Prefix>string</Prefix>
   <Priority>integer</Priority>
   <SourceSelectionCriteria>
      <ReplicaModifications>
         <Status>string</Status>
      </ReplicaModifications>
      <SseKmsEncryptedObjects>
         <Status>string</Status>
      </SseKmsEncryptedObjects>
   </SourceSelectionCriteria>
   <Status>string</Status>
 </Rule>
 ...
</ReplicationConfiguration>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

ReplicationConfiguration

Root level tag for the ReplicationConfiguration parameters.

Required: Yes

Role

The Amazon Resource Name (ARN) of the AWS Identity and Access Management (IAM) role that Amazon S3 assumes when replicating objects. For more information, see How to Set Up Replication in the *Amazon S3 User Guide*.

Type: String

Rule

A container for one or more replication rules. A replication configuration must have at least one rule and can contain a maximum of 1,000 rules.

Type: Array of ReplicationRule data types

Examples

Sample Request: Retrieve replication configuration information

The following GET request retrieves information about the replication configuration set for the `examplebucket` bucket:

```
GET /?replication HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
Date: Tue, 10 Feb 2015 00:17:21 GMT
Authorization: authorization string
```

Sample Response

The following response shows that replication is enabled on the bucket. The empty prefix indicates that Amazon S3 will replicate all objects that are created in the `examplebucket` bucket. The `Destination` element identifies the target bucket where Amazon S3 creates the object replicas, and the storage class (STANDARD_IA) that Amazon S3 uses when creating replicas.

Amazon S3 assumes the specified IAM role to replicate objects on behalf of the bucket owner, which is the AWS account that created the bucket.

```
            HTTP/1.1 200 OK
            x-amz-id-2:
 ITnGT1y4RyTmXa3rPi4hklTXouTf0hccUjo0iCPjz6FnfIutBj3M7fPGlWO2SEWp
            x-amz-request-id: 51991C342example
            Date: Tue, 10 Feb 2015 00:17:23 GMT
            Server: AmazonS3
            Content-Length: contentlength

            <?xml version="1.0" encoding="UTF-8"?>
            <ReplicationConfiguration>
              <Role>arn:aws:iam::35667example:role/CrossRegionReplicationRoleForS3</
Role>
             <Rule>
               <ID>rule1</ID>
               <Status>Enabled</Status>
               <Priority>1</Priority>
               <DeleteMarkerReplication>
                   <Status>Disabled</Status>
               </DeleteMarkerReplication>
               <Filter>
                  <And>
                       <Prefix>TaxDocs</Prefix>
                       <Tag>
                         <Key>key1</Key>
                         <Value>value1</Value>
                       </Tag>
                       <Tag>
                         <Key>key1</Key>
                        <Value>value1</Value>
                      </Tag>
                  </And>
                </Filter>
               <Destination>
                  <Bucket>arn:aws:s3:::exampletargetbucket</Bucket>
               </Destination>
              </Rule>
            </ReplicationConfiguration>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetBucketRequestPayment

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Returns the request payment configuration of a bucket. To use this version of the operation, you must be the bucket owner. For more information, see Requester Pays Buckets.

The following operations are related to `GetBucketRequestPayment`:

- ListObjects

Request Syntax

```
GET /?requestPayment HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket for which to get the payment request configuration

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<RequestPaymentConfiguration>
   <Payer>string</Payer>
</RequestPaymentConfiguration>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

RequestPaymentConfiguration

Root level tag for the RequestPaymentConfiguration parameters.

Required: Yes

Payer

Specifies who pays for the download and request fees.

Type: String

Valid Values: `Requester | BucketOwner`

Examples

Sample Request

The following request returns the payer for the bucket, `colorpictures`.

```
GET ?requestPayment HTTP/1.1
Host: colorpictures.s3.<Region>.amazonaws.com
Date: Wed, 01 Mar 2009 12:00:00 GMT
Authorization: authorization string
```

Sample Response

This response shows that the bucket is a Requester Pays bucket, meaning the person requesting a download from this bucket pays the transfer fees.

```
            HTTP/1.1 200 OK
            x-amz-id-2:
 YgIPIfBiKa2bj0KMg95r/0zo3emzU4dzsD4rcKCHQUAdQkf3ShJTOOpXUueF6QKo
            x-amz-request-id: 236A8905248E5A01
            Date: Wed, 01 Mar 2009 12:00:00 GMT
            Content-Type: [type]
            Content-Length: 0
            Connection: close
            Server: AmazonS3

            <?xml version="1.0" encoding="UTF-8"?>
            <RequestPaymentConfiguration xmlns="http://s3.amazonaws.com/
doc/2006-03-01/">
              <Payer>Requester</Payer>
            </RequestPaymentConfiguration>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetBucketTagging

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Returns the tag set associated with the bucket.

To use this operation, you must have permission to perform the `s3:GetBucketTagging` action. By default, the bucket owner has this permission and can grant this permission to others.

`GetBucketTagging` has the following special error:

- Error code: `NoSuchTagSet`
  - Description: There is no tag set associated with the bucket.

The following operations are related to `GetBucketTagging`:

- PutBucketTagging
- DeleteBucketTagging

Request Syntax

```
GET /?tagging HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket for which to get the tagging information.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<Tagging>
   <TagSet>
      <Tag>
         <Key>string</Key>
         <Value>string</Value>
      </Tag>
   </TagSet>
</Tagging>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

Tagging

Root level tag for the Tagging parameters.

Required: Yes

TagSet

Contains the tag set.

Type: Array of Tag data types

Examples

Sample Request

The following request returns the tag set of the specified bucket.

```
GET ?tagging HTTP/1.1
Host: bucket.s3.<Region>.amazonaws.com
Date: Wed, 28 Oct 2009 22:32:00 GMT
Authorization: authorization string
```

Sample Response

Delete the metric configuration with a specified ID, which disables the CloudWatch metrics with the `ExampleMetrics` value for the `FilterId` dimension.

```
HTTP/1.1 200 OK
Date: Wed, 25 Nov 2009 12:00:00 GMT
Connection: close
Server: AmazonS3

<Tagging>
  <TagSet>
     <Tag>
       <Key>Project</Key>
      <Value>Project One</Value>
     </Tag>
     <Tag>
       <Key>User</Key>
       <Value>jsmith</Value>
     </Tag>
  </TagSet>
</Tagging>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetBucketVersioning

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Returns the versioning state of a bucket.

To retrieve the versioning state of a bucket, you must be the bucket owner.

This implementation also returns the MFA Delete status of the versioning state. If the MFA Delete status is `enabled`, the bucket owner must use an authentication device to change the versioning state of the bucket.

The following operations are related to `GetBucketVersioning`:

- GetObject
- PutObject
- DeleteObject

Request Syntax

```
GET /?versioning HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket for which to get the versioning information.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<VersioningConfiguration>
   <Status>string</Status>
   <MfaDelete>string</MfaDelete>
</VersioningConfiguration>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

VersioningConfiguration

Root level tag for the VersioningConfiguration parameters.

Required: Yes

MFADelete

Specifies whether MFA delete is enabled in the bucket versioning configuration. This element is only returned if the bucket has been configured with MFA delete. If the bucket has never been so configured, this element is not returned.

Type: String

Valid Values: `Enabled | Disabled`

Status

The versioning state of the bucket.

Type: String

Valid Values: `Enabled | Suspended`

Examples

Example

This example returns the versioning state of `myBucket`.

```
GET /?versioning HTTP/1.1
Host: myBucket.s3.<Region>.amazonaws.com
Date: Wed, 12 Oct 2009 17:50:00 GMT
Authorization: authorization string
Content-Type: text/plain
```

Example

There are three versioning states:

If you enabled versioning on a bucket, the response is:

```
<VersioningConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <Status>Enabled</Status>
</VersioningConfiguration>
```

Example

If you suspended versioning on a bucket, the response is:

```
<VersioningConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <Status>Suspended</Status>
</VersioningConfiguration>
```

Example

If you never enabled (or suspended) versioning on a bucket, the response is:

```
<VersioningConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/"/>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetBucketWebsite

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Returns the website configuration for a bucket. To host website on Amazon S3, you can configure a bucket as website by adding a website configuration. For more information about hosting websites, see Hosting Websites on Amazon S3.

This GET action requires the `S3:GetBucketWebsite` permission. By default, only the bucket owner can read the bucket website configuration. However, bucket owners can allow other users to read the website configuration by writing a bucket policy granting them the `S3:GetBucketWebsite` permission.

The following operations are related to `GetBucketWebsite`:

- DeleteBucketWebsite
- PutBucketWebsite

Request Syntax

```
GET /?website HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name for which to get the website configuration.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<WebsiteConfiguration>
   <RedirectAllRequestsTo>
      <HostName>string</HostName>
      <Protocol>string</Protocol>
   </RedirectAllRequestsTo>
   <IndexDocument>
      <Suffix>string</Suffix>
   </IndexDocument>
   <ErrorDocument>
      <Key>string</Key>
   </ErrorDocument>
   <RoutingRules>
      <RoutingRule>
         <Condition>
            <HttpErrorCodeReturnedEquals>string</HttpErrorCodeReturnedEquals>
            <KeyPrefixEquals>string</KeyPrefixEquals>
         </Condition>
         <Redirect>
            <HostName>string</HostName>
            <HttpRedirectCode>string</HttpRedirectCode>
            <Protocol>string</Protocol>
            <ReplaceKeyPrefixWith>string</ReplaceKeyPrefixWith>
            <ReplaceKeyWith>string</ReplaceKeyWith>
         </Redirect>
      </RoutingRule>
   </RoutingRules>
</WebsiteConfiguration>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

WebsiteConfiguration

Root level tag for the WebsiteConfiguration parameters.

Required: Yes

ErrorDocument

The object key name of the website error document to use for 4XX class errors.

Type: ErrorDocument data type

IndexDocument

The name of the index document for the website (for example `index.html`).

Type: IndexDocument data type

RedirectAllRequestsTo

Specifies the redirect behavior of all requests to a website endpoint of an Amazon S3 bucket.

Type: RedirectAllRequestsTo data type

RoutingRules

Rules that define when a redirect is applied and the redirect behavior.

Type: Array of RoutingRule data types

Examples

Sample Request

This request retrieves website configuration on the specified bucket.

```
GET ?website HTTP/1.1
Host: example-bucket.s3.<Region>.amazonaws.com
Date: Thu, 27 Jan 2011 00:49:20 GMT
```

```
Authorization: AWS AKIAIOSFODNN7EXAMPLE:n0Nhek72Ufg/u7Sm5C1dqRLs8XX=
```

Sample Response

This example illustrates one usage of GetBucketWebsite.

```
HTTP/1.1 200 OK
x-amz-id-2: YgIPIfBiKa2bj0KMgUAdQkf3ShJTOOpXUueF6QKo
x-amz-request-id: 3848CD259D811111
Date: Thu, 27 Jan 2011 00:49:26 GMT
Content-Length: 240
Content-Type: application/xml
Transfer-Encoding: chunked
Server: AmazonS3

<?xml version="1.0" encoding="UTF-8"?>
<WebsiteConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <IndexDocument>
    <Suffix>index.html</Suffix>
  </IndexDocument>
 <ErrorDocument>
   <Key>404.html</Key>
 </ErrorDocument>
</WebsiteConfiguration>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetObject

Service: Amazon S3

Retrieves an object from Amazon S3.

In the `GetObject` request, specify the full key name for the object.

General purpose buckets - Both the virtual-hosted-style requests and the path-style requests are supported. For a virtual hosted-style request example, if you have the object `photos/2006/February/sample.jpg`, specify the object key name as `/photos/2006/February/sample.jpg`. For a path-style request example, if you have the object `photos/2006/February/sample.jpg` in the bucket named `examplebucket`, specify the object key name as `/examplebucket/photos/2006/February/sample.jpg`. For more information about request types, see HTTP Host Header Bucket Specification in the *Amazon S3 User Guide*.

Directory buckets - Only virtual-hosted-style requests are supported. For a virtual hosted-style request example, if you have the object `photos/2006/February/sample.jpg` in the bucket named `examplebucket--use1-az5--x-s3`, specify the object key name as `/photos/2006/February/sample.jpg`. Also, when you make requests to this API operation, your requests are sent to the Zonal endpoint. These endpoints support virtual-hosted-style requests in the format `https://bucket_name.s3express-az_id.region.amazonaws.com/key-name` . Path-style requests are not supported. For more information, see Regional and Zonal endpoints in the *Amazon S3 User Guide*.

Permissions

- **General purpose bucket permissions** - You must have the required permissions in a policy. To use `GetObject`, you must have the `READ` access to the object (or version). If you grant `READ` access to the anonymous user, the `GetObject` operation returns the object without using an authorization header. For more information, see Specifying permissions in a policy in the *Amazon S3 User Guide*.

  If you include a `versionId` in your request header, you must have the `s3:GetObjectVersion` permission to access a specific version of an object. The `s3:GetObject` permission is not required in this scenario.

  If you request the current version of an object without a specific `versionId` in the request header, only the `s3:GetObject` permission is required. The `s3:GetObjectVersion` permission is not required in this scenario.

If the object that you request doesn't exist, the error that Amazon S3 returns depends on whether you also have the `s3:ListBucket` permission.

- If you have the `s3:ListBucket` permission on the bucket, Amazon S3 returns an HTTP status code `404 Not Found` error.
- If you don't have the `s3:ListBucket` permission, Amazon S3 returns an HTTP status code `403 Access Denied` error.

- **Directory bucket permissions** - To grant access to this API operation on a directory bucket, we recommend that you use the `CreateSession` API operation for session-based authorization. Specifically, you grant the `s3express:CreateSession` permission to the directory bucket in a bucket policy or an IAM identity-based policy. Then, you make the `CreateSession` API call on the bucket to obtain a session token. With the session token in your request header, you can make API requests to this operation. After the session token expires, you make another `CreateSession` API call to generate a new session token for use. AWS CLI or SDKs create session and refresh the session token automatically to avoid service interruptions when a session expires. For more information about authorization, see `CreateSession`.

Storage classes

If the object you are retrieving is stored in the S3 Glacier Flexible Retrieval storage class, the S3 Glacier Deep Archive storage class, the S3 Intelligent-Tiering Archive Access tier, or the S3 Intelligent-Tiering Deep Archive Access tier, before you can retrieve the object you must first restore a copy using RestoreObject. Otherwise, this operation returns an `InvalidObjectState` error. For information about restoring archived objects, see Restoring Archived Objects in the *Amazon S3 User Guide*.

Directory buckets - For directory buckets, only the S3 Express One Zone storage class is supported to store newly created objects. Unsupported storage class values won't write a destination object and will respond with the HTTP status code `400 Bad Request`.

Encryption

Encryption request headers, like `x-amz-server-side-encryption`, should not be sent for the `GetObject` requests, if your object uses server-side encryption with Amazon S3 managed encryption keys (SSE-S3), server-side encryption with AWS Key Management Service (AWS KMS) keys (SSE-KMS), or dual-layer server-side encryption with AWS KMS keys (DSSE-KMS). If you include the header in your `GetObject` requests for the object that uses these types of keys, you'll get an HTTP `400 Bad Request` error.

Overriding response header values through the request

There are times when you want to override certain response header values of a `GetObject` response. For example, you might override the `Content-Disposition` response header value through your `GetObject` request.

You can override values for a set of response headers. These modified response header values are included only in a successful response, that is, when the HTTP status code `200 OK` is returned. The headers you can override using the following query parameters in the request are a subset of the headers that Amazon S3 accepts when you create an object.

The response headers that you can override for the `GetObject` response are `Cache-Control`, `Content-Disposition`, `Content-Encoding`, `Content-Language`, `Content-Type`, and `Expires`.

To override values for a set of response headers in the `GetObject` response, you can use the following query parameters in the request.

- `response-cache-control`
- `response-content-disposition`
- `response-content-encoding`
- `response-content-language`
- `response-content-type`
- `response-expires`

> **Note**
>
> When you use these parameters, you must sign the request by using either an Authorization header or a presigned URL. These parameters cannot be used with an unsigned (anonymous) request.

HTTP Host header syntax

Directory buckets - The HTTP Host header syntax is *`Bucket_name`*`.s3express-`*`az_id`*`.`*`region`*`.amazonaws.com`.

The following operations are related to `GetObject`:

- ListBuckets
- GetObjectAcl

Request Syntax

```
GET /Key+?partNumber=PartNumber&response-cache-control=ResponseCacheControl&response-
content-disposition=ResponseContentDisposition&response-
content-encoding=ResponseContentEncoding&response-content-
language=ResponseContentLanguage&response-content-type=ResponseContentType&response-
expires=ResponseExpires&versionId=VersionId HTTP/1.1
Host: Bucket.s3.amazonaws.com
If-Match: IfMatch
If-Modified-Since: IfModifiedSince
If-None-Match: IfNoneMatch
If-Unmodified-Since: IfUnmodifiedSince
Range: Range
x-amz-server-side-encryption-customer-algorithm: SSECustomerAlgorithm
x-amz-server-side-encryption-customer-key: SSECustomerKey
x-amz-server-side-encryption-customer-key-MD5: SSECustomerKeyMD5
x-amz-request-payer: RequestPayer
x-amz-expected-bucket-owner: ExpectedBucketOwner
x-amz-checksum-mode: ChecksumMode
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name containing the object.

Directory buckets - When you use this operation with a directory bucket, you must use virtual-hosted-style requests in the format *Bucket_name*.s3express-*az_id*.*region*.amazonaws.com. Path-style requests are not supported. Directory bucket names must be unique in the chosen Availability Zone. Bucket names must follow the format *bucket_base_name*--*az-id*--x-s3 (for example, *DOC-EXAMPLE-BUCKET*--*usw2-az1*--x-s3). For information about bucket naming restrictions, see Directory bucket naming rules in the *Amazon S3 User Guide*.

Access points - When you use this action with an access point, you must provide the alias of the access point in place of the bucket name or specify the access point ARN. When using the access

point ARN, you must direct requests to the access point hostname. The access point hostname takes the form *AccessPointName-AccountId*.s3-accesspoint.*Region*.amazonaws.com. When using this action with an access point through the AWS SDKs, you provide the access point ARN in place of the bucket name. For more information about access point ARNs, see Using access points in the *Amazon S3 User Guide*.

Object Lambda access points - When you use this action with an Object Lambda access point, you must direct requests to the Object Lambda access point hostname. The Object Lambda access point hostname takes the form *AccessPointName-AccountId*.s3-object-lambda.*Region*.amazonaws.com.

> **Note**
>
> Access points and Object Lambda access points are not supported by directory buckets.

S3 on Outposts - When you use this action with Amazon S3 on Outposts, you must direct requests to the S3 on Outposts hostname. The S3 on Outposts hostname takes the form *`AccessPointName-AccountId.outpostID`*`.s3-outposts.`*`Region`*`.amazonaws.com`. When you use this action with S3 on Outposts through the AWS SDKs, you provide the Outposts access point ARN in place of the bucket name. For more information about S3 on Outposts ARNs, see What is S3 on Outposts? in the *Amazon S3 User Guide*.

Required: Yes

If-Match

Return the object only if its entity tag (ETag) is the same as the one specified in this header; otherwise, return a `412 Precondition Failed` error.

If both of the `If-Match` and `If-Unmodified-Since` headers are present in the request as follows: `If-Match` condition evaluates to `true`, and; `If-Unmodified-Since` condition evaluates to `false`; then, S3 returns `200 OK` and the data requested.

For more information about conditional requests, see RFC 7232.

If-Modified-Since

Return the object only if it has been modified since the specified time; otherwise, return a `304 Not Modified` error.

If both of the `If-None-Match` and `If-Modified-Since` headers are present in the request as follows: `If-None-Match` condition evaluates to `false`, and; `If-Modified-Since` condition evaluates to `true`; then, S3 returns `304 Not Modified` status code.

For more information about conditional requests, see RFC 7232.

If-None-Match

Return the object only if its entity tag (ETag) is different from the one specified in this header; otherwise, return a `304 Not Modified` error.

If both of the `If-None-Match` and `If-Modified-Since` headers are present in the request as follows: `If-None-Match` condition evaluates to `false`, and; `If-Modified-Since` condition evaluates to `true`; then, S3 returns `304 Not Modified` HTTP status code.

For more information about conditional requests, see RFC 7232.

If-Unmodified-Since

Return the object only if it has not been modified since the specified time; otherwise, return a `412 Precondition Failed` error.

If both of the `If-Match` and `If-Unmodified-Since` headers are present in the request as follows: `If-Match` condition evaluates to `true`, and; `If-Unmodified-Since` condition evaluates to `false`; then, S3 returns `200 OK` and the data requested.

For more information about conditional requests, see RFC 7232.

Key

Key of the object to get.

Length Constraints: Minimum length of 1.

Required: Yes

partNumber

Part number of the object being read. This is a positive integer between 1 and 10,000. Effectively performs a 'ranged' GET request for the part specified. Useful for downloading just a part of an object.

Range

Downloads the specified byte range of an object. For more information about the HTTP Range header, see https://www.rfc-editor.org/rfc/rfc9110.html#name-range.

> **Note**
>
> Amazon S3 doesn't support retrieving multiple ranges of data per GET request.

response-cache-control

Sets the `Cache-Control` header of the response.

response-content-disposition

Sets the `Content-Disposition` header of the response.

response-content-encoding

Sets the `Content-Encoding` header of the response.

response-content-language

Sets the `Content-Language` header of the response.

response-content-type

Sets the `Content-Type` header of the response.

response-expires

Sets the `Expires` header of the response.

versionId

Version ID used to reference a specific version of the object.

By default, the `GetObject` operation returns the current version of an object. To return a different version, use the `versionId` subresource.

> **Note**
>
> - If you include a `versionId` in your request header, you must have the `s3:GetObjectVersion` permission to access a specific version of an object. The `s3:GetObject` permission is not required in this scenario.
> - If you request the current version of an object without a specific `versionId` in the request header, only the `s3:GetObject` permission is required. The `s3:GetObjectVersion` permission is not required in this scenario.

- **Directory buckets** - S3 Versioning isn't enabled and supported for directory buckets. For this API operation, only the `null` value of the version ID is supported by directory buckets. You can only specify `null` to the `versionId` query parameter in the request.

For more information about versioning, see PutBucketVersioning.

x-amz-checksum-mode

To retrieve the checksum, this mode must be enabled.

Valid Values: `ENABLED`

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-request-payer

Confirms that the requester knows that they will be charged for the request. Bucket owners need not specify this parameter in their requests. If either the source or destination S3 bucket has Requester Pays enabled, the requester will pay for corresponding charges to copy the object. For information about downloading objects from Requester Pays buckets, see Downloading Objects in Requester Pays Buckets in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

x-amz-server-side-encryption-customer-algorithm

Specifies the algorithm to use when decrypting the object (for example, `AES256`).

If you encrypt an object by using server-side encryption with customer-provided encryption keys (SSE-C) when you store the object in Amazon S3, then when you GET the object, you must use the following headers:

- `x-amz-server-side-encryption-customer-algorithm`

- `x-amz-server-side-encryption-customer-key`
- `x-amz-server-side-encryption-customer-key-MD5`

For more information about SSE-C, see Server-Side Encryption (Using Customer-Provided Encryption Keys) in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-key

Specifies the customer-provided encryption key that you originally provided for Amazon S3 to encrypt the data before storing it. This value is used to decrypt the object when recovering it and must match the one used when storing the data. The key must be appropriate for use with the algorithm specified in the `x-amz-server-side-encryption-customer-algorithm` header.

If you encrypt an object by using server-side encryption with customer-provided encryption keys (SSE-C) when you store the object in Amazon S3, then when you GET the object, you must use the following headers:

- `x-amz-server-side-encryption-customer-algorithm`
- `x-amz-server-side-encryption-customer-key`
- `x-amz-server-side-encryption-customer-key-MD5`

For more information about SSE-C, see Server-Side Encryption (Using Customer-Provided Encryption Keys) in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-key-MD5

Specifies the 128-bit MD5 digest of the customer-provided encryption key according to RFC 1321. Amazon S3 uses this header for a message integrity check to ensure that the encryption key was transmitted without error.

If you encrypt an object by using server-side encryption with customer-provided encryption keys (SSE-C) when you store the object in Amazon S3, then when you GET the object, you must use the following headers:

- `x-amz-server-side-encryption-customer-algorithm`
- `x-amz-server-side-encryption-customer-key`
- `x-amz-server-side-encryption-customer-key-MD5`

For more information about SSE-C, see Server-Side Encryption (Using Customer-Provided Encryption Keys) in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
x-amz-delete-marker: DeleteMarker
accept-ranges: AcceptRanges
x-amz-expiration: Expiration
x-amz-restore: Restore
Last-Modified: LastModified
Content-Length: ContentLength
ETag: ETag
x-amz-checksum-crc32: ChecksumCRC32
x-amz-checksum-crc32c: ChecksumCRC32C
x-amz-checksum-sha1: ChecksumSHA1
x-amz-checksum-sha256: ChecksumSHA256
x-amz-missing-meta: MissingMeta
x-amz-version-id: VersionId
Cache-Control: CacheControl
Content-Disposition: ContentDisposition
Content-Encoding: ContentEncoding
Content-Language: ContentLanguage
Content-Range: ContentRange
Content-Type: ContentType
```

```
Expires: Expires
x-amz-website-redirect-location: WebsiteRedirectLocation
x-amz-server-side-encryption: ServerSideEncryption
x-amz-server-side-encryption-customer-algorithm: SSECustomerAlgorithm
x-amz-server-side-encryption-customer-key-MD5: SSECustomerKeyMD5
x-amz-server-side-encryption-aws-kms-key-id: SSEKMSKeyId
x-amz-server-side-encryption-bucket-key-enabled: BucketKeyEnabled
x-amz-storage-class: StorageClass
x-amz-request-charged: RequestCharged
x-amz-replication-status: ReplicationStatus
x-amz-mp-parts-count: PartsCount
x-amz-tagging-count: TagCount
x-amz-object-lock-mode: ObjectLockMode
x-amz-object-lock-retain-until-date: ObjectLockRetainUntilDate
x-amz-object-lock-legal-hold: ObjectLockLegalHoldStatus

Body
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The response returns the following HTTP headers.

accept-ranges

Indicates that a range of bytes was specified in the request.

Cache-Control

Specifies caching behavior along the request/reply chain.

Content-Disposition

Specifies presentational information for the object.

Content-Encoding

Indicates what content encodings have been applied to the object and thus what decoding mechanisms must be applied to obtain the media-type referenced by the Content-Type header field.

Content-Language

The language the content is in.

Content-Length

Size of the body in bytes.

Content-Range

The portion of the object returned in the response.

Content-Type

A standard MIME type describing the format of the object data.

ETag

An entity tag (ETag) is an opaque identifier assigned by a web server to a specific version of a resource found at a URL.

Expires

The date and time at which the object is no longer cacheable.

Last-Modified

Date and time when the object was last modified.

General purpose buckets - When you specify a `versionId` of the object in your request, if the specified version in the request is a delete marker, the response returns a `405 Method Not Allowed` error and the `Last-Modified: timestamp` response header.

x-amz-checksum-crc32

The base64-encoded, 32-bit CRC32 checksum of the object. This will only be present if it was uploaded with the object. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

x-amz-checksum-crc32c

The base64-encoded, 32-bit CRC32C checksum of the object. This will only be present if it was uploaded with the object. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

x-amz-checksum-sha1

The base64-encoded, 160-bit SHA-1 digest of the object. This will only be present if it was uploaded with the object. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

x-amz-checksum-sha256

The base64-encoded, 256-bit SHA-256 digest of the object. This will only be present if it was uploaded with the object. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

x-amz-delete-marker

Indicates whether the object retrieved was (true) or was not (false) a Delete Marker. If false, this response header does not appear in the response.

> **Note**
>
> - If the current version of the object is a delete marker, Amazon S3 behaves as if the object was deleted and includes `x-amz-delete-marker: true` in the response.
> - If the specified version in the request is a delete marker, the response returns a `405 Method Not Allowed` error and the `Last-Modified: timestamp` response header.

x-amz-expiration

If the object expiration is configured (see `PutBucketLifecycleConfiguration`), the response includes this header. It includes the `expiry-date` and `rule-id` key-value pairs providing object expiration information. The value of the `rule-id` is URL-encoded.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-missing-meta

This is set to the number of metadata entries not returned in the headers that are prefixed with `x-amz-meta-`. This can happen if you create metadata using an API like SOAP that supports more flexible metadata than the REST API. For example, using SOAP, you can create metadata whose values are not legal HTTP headers.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-mp-parts-count

The count of parts this object has. This value is only returned if you specify `partNumber` in your request and the object was uploaded as a multipart upload.

x-amz-object-lock-legal-hold

Indicates whether this object has an active legal hold. This field is only returned if you have permission to view an object's legal hold status.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `ON | OFF`

x-amz-object-lock-mode

The Object Lock mode that's currently in place for this object.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `GOVERNANCE | COMPLIANCE`

x-amz-object-lock-retain-until-date

The date and time when this object's Object Lock will expire.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-replication-status

Amazon S3 can return this if your request involves a bucket that is either a source or destination in a replication rule.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `COMPLETE | PENDING | FAILED | REPLICA | COMPLETED`

x-amz-request-charged

If present, indicates that the requester was successfully charged for the request.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

x-amz-restore

Provides information about object restoration action and expiration time of the restored object copy.

> **Note**
>
> This functionality is not supported for directory buckets. Only the S3 Express One Zone storage class is supported by directory buckets to store objects.

x-amz-server-side-encryption

The server-side encryption algorithm used when you store this object in Amazon S3 (for example, `AES256`, `aws:kms`, `aws:kms:dsse`).

> **Note**
>
> For directory buckets, only server-side encryption with Amazon S3 managed keys (SSE-S3) (AES256) is supported.

Valid Values: `AES256 | aws:kms | aws:kms:dsse`

x-amz-server-side-encryption-aws-kms-key-id

If present, indicates the ID of the AWS Key Management Service (AWS KMS) symmetric encryption customer managed key that was used for the object.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-bucket-key-enabled

Indicates whether the object uses an S3 Bucket Key for server-side encryption with AWS Key Management Service (AWS KMS) keys (SSE-KMS).

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-algorithm

If server-side encryption with a customer-provided encryption key was requested, the response will include this header to confirm the encryption algorithm that's used.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-key-MD5

If server-side encryption with a customer-provided encryption key was requested, the response will include this header to provide the round-trip message integrity verification of the customer-provided encryption key.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-storage-class

Provides storage class information of the object. Amazon S3 returns this header for all objects except for S3 Standard storage class objects.

> **Note**
>
> **Directory buckets** - Only the S3 Express One Zone storage class is supported by directory buckets to store objects.

Valid Values: `STANDARD | REDUCED_REDUNDANCY | STANDARD_IA | ONEZONE_IA | INTELLIGENT_TIERING | GLACIER | DEEP_ARCHIVE | OUTPOSTS | GLACIER_IR | SNOW | EXPRESS_ONEZONE`

x-amz-tagging-count

The number of tags, if any, on the object, when you have the relevant permission to read object tags.

You can use GetObjectTagging to retrieve the tag set associated with an object.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-version-id

Version ID of the object.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-website-redirect-location

If the bucket is configured as a website, redirects requests for this object to another object in the same bucket or to an external URL. Amazon S3 stores the value of this header in the object metadata.

> **Note**
>
> This functionality is not supported for directory buckets.

The following data is returned in binary format by the service.
<varlistentry> **Body** </varlistentry>

Errors

InvalidObjectState

Object is archived and inaccessible until restored.

If the object you are retrieving is stored in the S3 Glacier Flexible Retrieval storage class, the S3 Glacier Deep Archive storage class, the S3 Intelligent-Tiering Archive Access tier, or the S3 Intelligent-Tiering Deep Archive Access tier, before you can retrieve the object you must first restore a copy using RestoreObject. Otherwise, this operation returns an `InvalidObjectState` error. For information about restoring archived objects, see Restoring Archived Objects in the *Amazon S3 User Guide*.

HTTP Status Code: 403

NoSuchKey

The specified key does not exist.

HTTP Status Code: 404

Examples

Sample Request for general purpose buckets

The following request returns the object `my-image.jpg`.

```
GET /my-image.jpg HTTP/1.1
Host: bucket.s3.<Region>.amazonaws.com
Date: Mon, 3 Oct 2016 22:32:00 GMT
Authorization: authorization string
```

Sample Response for general purpose buckets

This example illustrates one usage of GetObject.

```
HTTP/1.1 200 OK
x-amz-id-2:
eftixk72aD6Ap51TnqcoF8eFidJG9Z/2mkiDFu8yU9AS1ed4OpIszj7UDNEHGran
x-amz-request-id: 318BC8BC148832E5
Date: Mon, 3 Oct 2016 22:32:00 GMT
Last-Modified: Wed, 12 Oct 2009 17:50:00 GMT
ETag: "fba9dede5f27731c9771645a39863328"
Content-Length: 434234

[434234 bytes of object data]
```

Sample Response for general purpose buckets: Object with associated tags

If the object had tags associated with it, Amazon S3 returns the `x-amz-tagging-count` header with tag count.

```
HTTP/1.1 200 OK
x-amz-id-2:
eftixk72aD6Ap51TnqcoF8eFidJG9Z/2mkiDFu8yU9AS1ed4OpIszj7UDNEHGran
x-amz-request-id: 318BC8BC148832E5
Date: Mon, 3 Oct 2016 22:32:00 GMT
Last-Modified: Wed, 12 Oct 2009 17:50:00 GMT
```

```
            ETag: "fba9dede5f27731c9771645a39863328"
            Content-Length: 434234
            x-amz-tagging-count: 2

           [434234 bytes of object data]
```

Sample Response for general purpose buckets: Object with an expiration

If the object had expiration set using lifecycle configuration, you get the following response with the `x-amz-expiration` header.

```
            HTTP/1.1 200 OK
            x-amz-id-2:
 eftixk72aD6Ap51TnqcoF8eFidJG9Z/2mkiDFu8yU9AS1ed4OpIszj7UDNEHGran
            x-amz-request-id: 318BC8BC148832E5
            Date: Wed, 28 Oct 2009 22:32:00 GMT
            Last-Modified: Wed, 12 Oct 2009 17:50:00 GMT
            x-amz-expiration: expiry-date="Fri, 23 Dec 2012 00:00:00 GMT", rule-
id="picture-deletion-rule"
            ETag: "fba9dede5f27731c9771645a39863328"
            Content-Length: 434234
            Content-Type: text/plain

            [434234 bytes of object data]
```

Sample Response for general purpose buckets: If an object is archived in the S3 Glacier Flexible Retrieval or S3 Glacier Deep Archive storage classes

If the object you are retrieving is stored in the S3 Glacier Flexible Retrieval or S3 Glacier Deep Archive storage classes, you must first restore a copy using RestoreObject. Otherwise, this action returns an `InvalidObjectState` error.

```
            HTTP/1.1 403 Forbidden
            x-amz-request-id: CD4BD8A1310A11B3
            x-amz-id-2: m9RDbQU0+RRBTjOUN1ChQ1eqMUnr9dv8b
+KP6I2gHfRJZSTSrMCoRP8RtPRzX9mb
            Content-Type: application/xml
            Date: Mon, 12 Nov 2012 23:53:21 GMT
```

```
            Server: Amazon S3
            Content-Length: 231

            <Error>
              <Code>InvalidObjectState</Code>
              <Message>The action is not valid for the object's storage class</Message>
              <RequestId>9FEFFF118E15B86F</RequestId>
              <HostId>WVQ5kzhiT+oiUfDCOiOYv8W4Tk9eNcxWi/MK+hTS/av34Xy4rBU3zsavf0aaaaa</
HostId>
            </Error>
```

Sample Response for general purpose buckets: If an object is archived with the S3 Intelligent-Tiering Archive or S3 Intelligent-Tiering Deep Archive tiers

If the object you are retrieving is stored in the S3 Intelligent-Tiering Archive or S3 Intelligent-Tiering Deep Archive tiers, you must first restore a copy using RestoreObject. Otherwise, this action returns an `InvalidObjectState` error. When restoring from Archive Access or Deep Archive Access tiers, the response will include `StorageClass` and `AccessTier` elements. Access tier valid values are `ARCHIVE_ACCESS` and `DEEP_ARCHIVE_ACCESS`. There is no syntax change if there is an ongoing restore.

```
            HTTP/1.1 403 Forbidden
            x-amz-request-id: CB6AW8C4332B23B7
            x-amz-id-2: n3RRfT90+PJDUhut3nhGW2ehfhfNU5f55c
+a2ceCC36ab7c7fe3a71Q273b9Q45b1R5
            Content-Type: application/xml
            Date: Mon, 12 Nov 2012 23:53:21 GMT
            Server: Amazon S3
            Content-Length: 231

            <Error>
              <Code>InvalidObjectState</Code>
              <Message>The action is not valid for the object's access tier</Message>
              <StorageClass>INTELLIGENT_TIERING</StorageClass>
              <AccessTier>ARCHIVE_ACCESS</AccessTier>
              <RequestId>9FEFFF118E15B86F</RequestId>
              <HostId>WVQ5kzhiT+oiUfDCOiOYv8W4Tk9eNcxWi/MK+hTS/av34Xy4rBU3zsavf0aaaaa</
HostId>
            </Error>
```

Sample Response for general purpose buckets: If the Latest Object Is a Delete Marker

Notice that the delete marker returns a 404 Not Found error.

```
HTTP/1.1 404 Not Found
x-amz-request-id: 318BC8BC148832E5
x-amz-id-2: eftixk72aD6Ap51Tnqzj7UDNEHGran
x-amz-version-id: 3GL4kqtJlcpXroDTDm3vjVBH40Nr8X8g
x-amz-delete-marker:  true
Date: Wed, 28 Oct 2009 22:32:00 GMT
Content-Type: text/plain
Connection: close
Server: AmazonS3
```

Sample Request for general purpose buckets: Getting a specified version of an object

The following request returns the specified version of an object.

```
GET /myObject?versionId=3/L4kqtJlcpXroDTDmpUMLUo HTTP/1.1
Host: bucket.s3.<Region>.amazonaws.com
Date: Wed, 28 Oct 2009 22:32:00 GMT
Authorization: authorization string
```

Sample Response for general purpose buckets: GET a versioned object

This example illustrates one usage of GetObject.

```
HTTP/1.1 200 OK
x-amz-id-2: eftixk72aD6Ap54OpIszj7UDNEHGran
x-amz-request-id: 318BC8BC148832E5
Date: Wed, 28 Oct 2009 22:32:00 GMT
Last-Modified: Sun, 1 Jan 2006 12:00:00 GMT
x-amz-version-id: 3/L4kqtJlcpXroDTDmJ+rmSpXd3QBpUMLUo
ETag: "fba9dede5f27731c9771645a39863328"
Content-Length: 434234
Content-Type: text/plain
Connection: close
```

```
            Server: AmazonS3
            [434234 bytes of object data]
```

Sample Request for general purpose buckets: Parameters altering response header values

The following request specifies all the query string parameters in a GET request overriding the response header values.

```
            GET /Junk3.txt?response-cache-control=No-cache&response-content-
disposition=attachment%3B%20filename%3Dtesting.txt&response-content-encoding=x-
gzip&response-content-language=mi%2C%20en&response-expires=Thu%2C%2001%20Dec
%201994%2016:00:00%20GMT HTTP/1.1
            x-amz-date: Sun, 19 Dec 2010 01:53:44 GMT
            Accept: */*
            Authorization: AWS AKIAIOSFODNN7EXAMPLE:aaStE6nKnw8ihhiIdReoXYlMamW=
```

Sample Response for general purpose buckets: With overridden response header values

The following request specifies all the query string parameters in a GET request overriding the response header values.

```
            HTTP/1.1 200 OK
            x-amz-id-2: SIidWAK3hK+Il3/
Qqiu1ZKEuegzLAAspwsgwnwygb9GgFseeFHL5CII8NXSrfWW2
            x-amz-request-id: 881B1CBD9DF17WA1
            Date: Sun, 19 Dec 2010 01:54:01 GMT
            x-amz-meta-param1: value 1
            x-amz-meta-param2: value 2
            Cache-Control: No-cache
            Content-Language: mi, en
            Expires: Thu, 01 Dec 1994 16:00:00 GMT
            Content-Disposition: attachment; filename=testing.txt
            Content-Encoding: x-gzip
            Last-Modified: Fri, 17 Dec 2010 18:10:41 GMT
            ETag: "0332bee1a7bf845f176c5c0d1ae7cf07"
            Accept-Ranges: bytes
            Content-Type: text/plain
            Content-Length: 22
```

```
            Server: AmazonS3

            [object data not shown]
```

Sample Request for general purpose buckets: Range header

The following request specifies the HTTP Range header to retrieve the first 10 bytes of an object. For more information about the HTTP Range header, see https://www.rfc-editor.org/rfc/rfc9110.html#name-range.

> **Note**
>
> Amazon S3 doesn't support retrieving multiple ranges of data per GET request.

```
            GET /example-object HTTP/1.1
            Host: example-bucket.s3.<Region>.amazonaws.com
            x-amz-date: Fri, 28 Jan 2011 21:32:02 GMT
            Range: bytes=0-9
            Authorization: AWS AKIAIOSFODNN7EXAMPLE:Yxg83MZaEgh3OZ3l0rLo5RTX11o=
            Sample Response with Specified Range of the Object Bytes
```

Sample Response for general purpose buckets

In the following sample response, note that the header values are set to the values specified in the true request.

```
            HTTP/1.1 206 Partial Content
            x-amz-id-2: MzRISOwyjmnupCzjI1WC06l5TTAzm7/JypPGXLh0OVFGcJaaO3KW/
hRAqKOpIEEp
            x-amz-request-id: 47622117804B3E11
            Date: Fri, 28 Jan 2011 21:32:09 GMT
            x-amz-meta-title: the title
            Last-Modified: Fri, 28 Jan 2011 20:10:32 GMT
            ETag: "b2419b1e3fd45d596ee22bdf62aaaa2f"
            Accept-Ranges: bytes
```

```
            Content-Range: bytes 0-9/443
            Content-Type: text/plain
            Content-Length: 10
            Server: AmazonS3

           [10 bytes of object data]
```

Sample Request for general purpose buckets: Get an object stored using server-side encryption with customer-provided encryption keys

If an object is stored in Amazon S3 using server-side encryption with customer-provided encryption keys, Amazon S3 needs encryption information so that it can decrypt the object before sending it to you in response to a GET request. You provide the encryption information in your GET request using the relevant headers, as shown in the following example request.

```
            GET /example-object HTTP/1.1
            Host: example-bucket.s3.<Region>.amazonaws.com

            Accept: */*
            Authorization:authorization string
            Date: Wed, 28 May 2014 19:24:44 +0000
            x-amz-server-side-encryption-customer-
key:g0lCfA3Dv40jZz5SQJ1ZukLRFqtI5WorC/8SEKEXAMPLE
            x-amz-server-side-encryption-customer-key-MD5:ZjQrne1X/iTcskbY2m3example
            x-amz-server-side-encryption-customer-algorithm:AES256
```

Sample Response for general purpose buckets

The following sample response shows some of the response headers Amazon S3 returns. Note that it includes the encryption information in the response.

```
            HTTP/1.1 200 OK
            x-amz-id-2: ka5jRm8X3N12ZiY29Z989zg2tNSJPMcK+to7jNjxImXBbyChqc6tLAv
+sau7Vjzh
            x-amz-request-id: 195157E3E073D3F9
            Date: Wed, 28 May 2014 19:24:45 GMT
            Last-Modified: Wed, 28 May 2014 19:21:01 GMT
            ETag: "c12022c9a3c6d3a28d29d90933a2b096"
```

```
            x-amz-server-side-encryption-customer-algorithm: AES256
            x-amz-server-side-encryption-customer-key-MD5: ZjQrne1X/iTcskbY2m3example
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetObjectAcl

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Returns the access control list (ACL) of an object. To use this operation, you must have `s3:GetObjectAcl` permissions or `READ_ACP` access to the object. For more information, see Mapping of ACL permissions and access policy permissions in the *Amazon S3 User Guide*

This functionality is not supported for Amazon S3 on Outposts.

By default, GET returns ACL information about the current version of an object. To return ACL information about a different version, use the versionId subresource.

> **Note**
>
> If your bucket uses the bucket owner enforced setting for S3 Object Ownership, requests to read ACLs are still supported and return the `bucket-owner-full-control` ACL with the owner being the account that created the bucket. For more information, see Controlling object ownership and disabling ACLs in the *Amazon S3 User Guide*.

The following operations are related to `GetObjectAcl`:

- GetObject
- GetObjectAttributes
- DeleteObject
- PutObject

Request Syntax

```
GET /{Key+}?acl&versionId=VersionId HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-request-payer: RequestPayer
```

```
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name that contains the object for which to get the ACL information.

Access points - When you use this action with an access point, you must provide the alias of the access point in place of the bucket name or specify the access point ARN. When using the access point ARN, you must direct requests to the access point hostname. The access point hostname takes the form *AccessPointName-AccountId*.s3-accesspoint.*Region*.amazonaws.com. When using this action with an access point through the AWS SDKs, you provide the access point ARN in place of the bucket name. For more information about access point ARNs, see Using access points in the *Amazon S3 User Guide*.

Required: Yes

Key

The key of the object for which to get the ACL information.

Length Constraints: Minimum length of 1.

Required: Yes

versionId

Version ID used to reference a specific version of the object.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-request-payer

Confirms that the requester knows that they will be charged for the request. Bucket owners need not specify this parameter in their requests. If either the source or destination S3 bucket has Requester Pays enabled, the requester will pay for corresponding charges to copy the object. For information about downloading objects from Requester Pays buckets, see Downloading Objects in Requester Pays Buckets in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
x-amz-request-charged: RequestCharged
<?xml version="1.0" encoding="UTF-8"?>
<AccessControlPolicy>
   <Owner>
      <DisplayName>string</DisplayName>
      <ID>string</ID>
   </Owner>
   <AccessControlList>
      <Grant>
         <Grantee>
            <DisplayName>string</DisplayName>
            <EmailAddress>string</EmailAddress>
            <ID>string</ID>
            <xsi:type>string</xsi:type>
            <URI>string</URI>
         </Grantee>
         <Permission>string</Permission>
      </Grant>
   </AccessControlList>
```

```
</AccessControlPolicy>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The response returns the following HTTP headers.

x-amz-request-charged

If present, indicates that the requester was successfully charged for the request.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

The following data is returned in XML format by the service.

AccessControlPolicy

Root level tag for the AccessControlPolicy parameters.

Required: Yes

Grants

A list of grants.

Type: Array of Grant data types

Owner

Container for the bucket owner's display name and ID.

Type: Owner data type

Errors

NoSuchKey

The specified key does not exist.

HTTP Status Code: 404

Examples

Sample Request

The following request returns information, including the ACL, of the object `my-image.jpg`.

```
GET /my-image.jpg?acl HTTP/1.1
Host: bucket.s3.<Region>.amazonaws.com
Date: Wed, 28 Oct 2009 22:32:00 GMT
Authorization: authorization string
```

Sample Response

This example illustrates one usage of GetObjectAcl.

```
           HTTP/1.1 200 OK
           x-amz-id-2:
 eftixk72aD6Ap51TnqcoF8eFidJG9Z/2mkiDFu8yU9AS1ed4OpIszj7UDNEHGran
           x-amz-request-id: 318BC8BC148832E5
           x-amz-version-id: 4HL4kqtJlcpXroDTDmJ+rmSpXd3dIbrHY+MTRCxf3vjVBH40Nrjfkd
           Date: Wed, 28 Oct 2009 22:32:00 GMT
           Last-Modified: Sun, 1 Jan 2006 12:00:00 GMT
           Content-Length: 124
           Content-Type: text/plain
           Connection: close
           Server: AmazonS3

           <AccessControlPolicy>
             <Owner>
               <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</
ID>
               <DisplayName>mtd@amazon.com</DisplayName>
             </Owner>
             <AccessControlList>
               <Grant>
                <Grantee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">

 <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
```

```
                  <DisplayName>mtd@amazon.com</DisplayName>
                  <Type>CanonicalUser</Type>
                 </Grantee>
                 <Permission>FULL_CONTROL</Permission>
               </Grant>
             </AccessControlList>
           </AccessControlPolicy>
```

Sample Request: Getting the ACL of the specific version of an object

The following request returns information, including the ACL, of the specified version of the object, my-image.jpg.

```
           GET /my-image.jpg?versionId=3/L4kqtJlcpXroDVBH40Nr8X8gdRQBpUMLUo&acl
 HTTP/1.1
           Host: bucket.s3.<Region>.amazonaws.com
           Date: Wed, 28 Oct 2009 22:32:00 GMT
           Authorization: authorization string
```

Sample Response: Showing the ACL of the specific version

This example illustrates one usage of GetObjectAcl.

```
           HTTP/1.1 200 OK
           x-amz-id-2:
 eftixk72aD6Ap51TnqcoF8eFidJG9Z/2mkiDFu8yU9AS1ed4OpIszj7UDNEHGran
           x-amz-request-id: 318BC8BC148832E5
           Date: Wed, 28 Oct 2009 22:32:00 GMT
           Last-Modified: Sun, 1 Jan 2006 12:00:00 GMT
           x-amz-version-id: 3/L4kqtJlcpXroDTDmJ+rmSpXd3dIbrHY
+MTRCxf3vjVBH40Nr8X8gdRQBpUMLUo
           Content-Length: 124
           Content-Type: text/plain
           Connection: close
           Server: AmazonS3

           <AccessControlPolicy>
            <Owner>
```

```
                <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</
ID>
                <DisplayName>mdtd@amazon.com</DisplayName>
              </Owner>
              <AccessControlList>
                <Grant>
                  <Grantee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">

 <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
                    <DisplayName>mdtd@amazon.com</DisplayName>
                    <Type>CanonicalUser</Type>
                  </Grantee>
                  <Permission>FULL_CONTROL</Permission>
                </Grant>
              </AccessControlList>
            </AccessControlPolicy>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetObjectAttributes

Service: Amazon S3

Retrieves all the metadata from an object without returning the object itself. This operation is useful if you're interested only in an object's metadata.

`GetObjectAttributes` combines the functionality of `HeadObject` and `ListParts`. All of the data returned with each of those individual calls can be returned with a single call to `GetObjectAttributes`.

> **Note**
>
> **Directory buckets** - For directory buckets, you must make requests for this API operation to the Zonal endpoint. These endpoints support virtual-hosted-style requests in the format `https://bucket_name.s3express-az_id.region.amazonaws.com/key-name`. Path-style requests are not supported. For more information, see Regional and Zonal endpoints in the *Amazon S3 User Guide*.

Permissions

- **General purpose bucket permissions** - To use `GetObjectAttributes`, you must have READ access to the object. The permissions that you need to use this operation with depend on whether the bucket is versioned. If the bucket is versioned, you need both the `s3:GetObjectVersion` and `s3:GetObjectVersionAttributes` permissions for this operation. If the bucket is not versioned, you need the `s3:GetObject` and `s3:GetObjectAttributes` permissions. For more information, see Specifying Permissions in a Policy in the *Amazon S3 User Guide*. If the object that you request does not exist, the error Amazon S3 returns depends on whether you also have the `s3:ListBucket` permission.
  - If you have the `s3:ListBucket` permission on the bucket, Amazon S3 returns an HTTP status code `404 Not Found` ("no such key") error.
  - If you don't have the `s3:ListBucket` permission, Amazon S3 returns an HTTP status code `403 Forbidden` ("access denied") error.
- **Directory bucket permissions** - To grant access to this API operation on a directory bucket, we recommend that you use the `CreateSession` API operation for session-based authorization. Specifically, you grant the `s3express:CreateSession` permission to the directory bucket in a bucket policy or an IAM identity-based policy. Then, you make the `CreateSession` API call on the bucket to obtain a session token. With the session token in

your request header, you can make API requests to this operation. After the session token expires, you make another `CreateSession` API call to generate a new session token for use. AWS CLI or SDKs create session and refresh the session token automatically to avoid service interruptions when a session expires. For more information about authorization, see `CreateSession`.

Encryption

> **Note**
>
> Encryption request headers, like `x-amz-server-side-encryption`, should not be sent for HEAD requests if your object uses server-side encryption with AWS Key Management Service (AWS KMS) keys (SSE-KMS), dual-layer server-side encryption with AWS KMS keys (DSSE-KMS), or server-side encryption with Amazon S3 managed encryption keys (SSE-S3). The `x-amz-server-side-encryption` header is used when you PUT an object to S3 and want to specify the encryption method. If you include this header in a `GET` request for an object that uses these types of keys, you'll get an HTTP `400 Bad Request` error. It's because the encryption method can't be changed when you retrieve the object.

If you encrypt an object by using server-side encryption with customer-provided encryption keys (SSE-C) when you store the object in Amazon S3, then when you retrieve the metadata from the object, you must use the following headers to provide the encryption key for the server to be able to retrieve the object's metadata. The headers are:

- `x-amz-server-side-encryption-customer-algorithm`
- `x-amz-server-side-encryption-customer-key`
- `x-amz-server-side-encryption-customer-key-MD5`

For more information about SSE-C, see Server-Side Encryption (Using Customer-Provided Encryption Keys) in the *Amazon S3 User Guide*.

> **Note**
>
> **Directory bucket permissions** - For directory buckets, only server-side encryption with Amazon S3 managed keys (SSE-S3) (`AES256`) is supported.

Versioning

Directory buckets - S3 Versioning isn't enabled and supported for directory buckets. For this API operation, only the `null` value of the version ID is supported by directory buckets. You can only specify `null` to the `versionId` query parameter in the request.

Conditional request headers

Consider the following when using request headers:

- If both of the `If-Match` and `If-Unmodified-Since` headers are present in the request as follows, then Amazon S3 returns the HTTP status code `200 OK` and the data requested:
  - `If-Match` condition evaluates to `true`.
  - `If-Unmodified-Since` condition evaluates to `false`.

  For more information about conditional requests, see RFC 7232.
- If both of the `If-None-Match` and `If-Modified-Since` headers are present in the request as follows, then Amazon S3 returns the HTTP status code `304 Not Modified`:
  - `If-None-Match` condition evaluates to `false`.
  - `If-Modified-Since` condition evaluates to `true`.

  For more information about conditional requests, see RFC 7232.

HTTP Host header syntax

Directory buckets - The HTTP Host header syntax is *`Bucket_name`*`.s3express-`*`az_id`*`.`*`region`*`.amazonaws.com`.

The following actions are related to `GetObjectAttributes`:

- GetObject
- GetObjectAcl
- GetObjectLegalHold
- GetObjectLockConfiguration
- GetObjectRetention
- GetObjectTagging
- HeadObject
- ListParts

Request Syntax

```
GET /{Key+}?attributes&versionId=VersionId HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-max-parts: MaxParts
x-amz-part-number-marker: PartNumberMarker
x-amz-server-side-encryption-customer-algorithm: SSECustomerAlgorithm
x-amz-server-side-encryption-customer-key: SSECustomerKey
x-amz-server-side-encryption-customer-key-MD5: SSECustomerKeyMD5
x-amz-request-payer: RequestPayer
x-amz-expected-bucket-owner: ExpectedBucketOwner
x-amz-object-attributes: ObjectAttributes
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket that contains the object.

Directory buckets - When you use this operation with a directory bucket, you must use virtual-hosted-style requests in the format *Bucket_name*.s3express-*az_id*.*region*.amazonaws.com. Path-style requests are not supported. Directory bucket names must be unique in the chosen Availability Zone. Bucket names must follow the format *bucket_base_name*--*az-id*--x-s3 (for example, *DOC-EXAMPLE-BUCKET*--*usw2-az1*--x-s3). For information about bucket naming restrictions, see Directory bucket naming rules in the *Amazon S3 User Guide*.

Access points - When you use this action with an access point, you must provide the alias of the access point in place of the bucket name or specify the access point ARN. When using the access point ARN, you must direct requests to the access point hostname. The access point hostname takes the form *AccessPointName-AccountId*.s3-accesspoint.*Region*.amazonaws.com. When using this action with an access point through the AWS SDKs, you provide the access point ARN in place of the bucket name. For more information about access point ARNs, see Using access points in the *Amazon S3 User Guide*.

> **Note**
>
> Access points and Object Lambda access points are not supported by directory buckets.

S3 on Outposts - When you use this action with Amazon S3 on Outposts, you must direct requests to the S3 on Outposts hostname. The S3 on Outposts hostname takes the form *AccessPointName*-*AccountId*.*outpostID*.s3-outposts.*Region*.amazonaws.com. When you use this action with S3 on Outposts through the AWS SDKs, you provide the Outposts access point ARN in place of the bucket name. For more information about S3 on Outposts ARNs, see What is S3 on Outposts? in the *Amazon S3 User Guide*.

Required: Yes

Key

The object key.

Length Constraints: Minimum length of 1.

Required: Yes

versionId

The version ID used to reference a specific version of the object.

> **Note**
>
> S3 Versioning isn't enabled and supported for directory buckets. For this API operation, only the `null` value of the version ID is supported by directory buckets. You can only specify `null` to the `versionId` query parameter in the request.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-max-parts

Sets the maximum number of parts to return.

x-amz-object-attributes

Specifies the fields at the root level that you want returned in the response. Fields that you do not specify are not returned.

Valid Values: `ETag | Checksum | ObjectParts | StorageClass | ObjectSize`

Required: Yes

x-amz-part-number-marker

Specifies the part after which listing should begin. Only parts with higher part numbers will be listed.

x-amz-request-payer

Confirms that the requester knows that they will be charged for the request. Bucket owners need not specify this parameter in their requests. If either the source or destination S3 bucket has Requester Pays enabled, the requester will pay for corresponding charges to copy the object. For information about downloading objects from Requester Pays buckets, see Downloading Objects in Requester Pays Buckets in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

x-amz-server-side-encryption-customer-algorithm

Specifies the algorithm to use when encrypting the object (for example, AES256).

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-key

Specifies the customer-provided encryption key for Amazon S3 to use in encrypting data. This value is used to store the object and then it is discarded; Amazon S3 does not store the encryption key. The key must be appropriate for use with the algorithm specified in the `x-amz-server-side-encryption-customer-algorithm` header.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-key-MD5

Specifies the 128-bit MD5 digest of the encryption key according to RFC 1321. Amazon S3 uses this header for a message integrity check to ensure that the encryption key was transmitted without error.

> **Note**
>
> This functionality is not supported for directory buckets.

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
x-amz-delete-marker: DeleteMarker
Last-Modified: LastModified
x-amz-version-id: VersionId
x-amz-request-charged: RequestCharged
<?xml version="1.0" encoding="UTF-8"?>
<GetObjectAttributesOutput>
   <ETag>string</ETag>
   <Checksum>
      <ChecksumCRC32>string</ChecksumCRC32>
      <ChecksumCRC32C>string</ChecksumCRC32C>
      <ChecksumSHA1>string</ChecksumSHA1>
      <ChecksumSHA256>string</ChecksumSHA256>
   </Checksum>
   <ObjectParts>
      <IsTruncated>boolean</IsTruncated>
      <MaxParts>integer</MaxParts>
      <NextPartNumberMarker>integer</NextPartNumberMarker>
      <PartNumberMarker>integer</PartNumberMarker>
      <Part>
         <ChecksumCRC32>string</ChecksumCRC32>
         <ChecksumCRC32C>string</ChecksumCRC32C>
         <ChecksumSHA1>string</ChecksumSHA1>
         <ChecksumSHA256>string</ChecksumSHA256>
         <PartNumber>integer</PartNumber>
         <Size>long</Size>
```

```
      </Part>
      ...
      <PartsCount>integer</PartsCount>
   </ObjectParts>
   <StorageClass>string</StorageClass>
   <ObjectSize>long</ObjectSize>
</GetObjectAttributesOutput>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The response returns the following HTTP headers.

Last-Modified

The creation date of the object.

x-amz-delete-marker

Specifies whether the object retrieved was (`true`) or was not (`false`) a delete marker. If `false`, this response header does not appear in the response.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-request-charged

If present, indicates that the requester was successfully charged for the request.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

x-amz-version-id

The version ID of the object.

> **Note**
>
> This functionality is not supported for directory buckets.

The following data is returned in XML format by the service.

GetObjectAttributesOutput

Root level tag for the GetObjectAttributesOutput parameters.

Required: Yes

Checksum

The checksum or digest of the object.

Type: Checksum data type

ETag

An ETag is an opaque identifier assigned by a web server to a specific version of a resource found at a URL.

Type: String

ObjectParts

A collection of parts associated with a multipart upload.

Type: GetObjectAttributesParts data type

ObjectSize

The size of the object in bytes.

Type: Long

StorageClass

Provides the storage class information of the object. Amazon S3 returns this header for all objects except for S3 Standard storage class objects.

For more information, see Storage Classes.

> **Note**
>
> **Directory buckets** - Only the S3 Express One Zone storage class is supported by directory buckets to store objects.

Type: String

Valid Values: `STANDARD | REDUCED_REDUNDANCY | STANDARD_IA | ONEZONE_IA | INTELLIGENT_TIERING | GLACIER | DEEP_ARCHIVE | OUTPOSTS | GLACIER_IR | SNOW | EXPRESS_ONEZONE`

Errors

NoSuchKey

The specified key does not exist.

HTTP Status Code: 404

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetObjectLegalHold

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Gets an object's current legal hold status. For more information, see Locking Objects.

This functionality is not supported for Amazon S3 on Outposts.

The following action is related to `GetObjectLegalHold`:

- GetObjectAttributes

Request Syntax

```
GET /{Key+}?legal-hold&versionId=VersionId HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-request-payer: RequestPayer
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name containing the object whose legal hold status you want to retrieve.

Access points - When you use this action with an access point, you must provide the alias of the access point in place of the bucket name or specify the access point ARN. When using the access point ARN, you must direct requests to the access point hostname. The access point hostname takes the form *AccessPointName-AccountId*.s3-accesspoint.*Region*.amazonaws.com. When using this action with an access point through the AWS SDKs, you provide the access point ARN in place of the bucket name. For more information about access point ARNs, see Using access points in the *Amazon S3 User Guide*.

Required: Yes

Key

The key name for the object whose legal hold status you want to retrieve.

Length Constraints: Minimum length of 1.

Required: Yes

versionId

The version ID of the object whose legal hold status you want to retrieve.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-request-payer

Confirms that the requester knows that they will be charged for the request. Bucket owners need not specify this parameter in their requests. If either the source or destination S3 bucket has Requester Pays enabled, the requester will pay for corresponding charges to copy the object. For information about downloading objects from Requester Pays buckets, see Downloading Objects in Requester Pays Buckets in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<LegalHold>
   <Status>string</Status>
```

```
</LegalHold>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

LegalHold

Root level tag for the LegalHold parameters.

Required: Yes

Status

Indicates whether the specified object has a legal hold in place.

Type: String

Valid Values: `ON | OFF`

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetObjectLockConfiguration

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Gets the Object Lock configuration for a bucket. The rule specified in the Object Lock configuration will be applied by default to every new object placed in the specified bucket. For more information, see Locking Objects.

The following action is related to `GetObjectLockConfiguration`:

- GetObjectAttributes

Request Syntax

```
GET /?object-lock HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket whose Object Lock configuration you want to retrieve.

Access points - When you use this action with an access point, you must provide the alias of the access point in place of the bucket name or specify the access point ARN. When using the access point ARN, you must direct requests to the access point hostname. The access point hostname takes the form *AccessPointName-AccountId*.s3-accesspoint.*Region*.amazonaws.com. When using this action with an access point through the AWS SDKs, you provide the access point ARN in place of the bucket name. For more information about access point ARNs, see Using access points in the *Amazon S3 User Guide*.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<ObjectLockConfiguration>
   <ObjectLockEnabled>string</ObjectLockEnabled>
   <Rule>
      <DefaultRetention>
         <Days>integer</Days>
         <Mode>string</Mode>
         <Years>integer</Years>
      </DefaultRetention>
   </Rule>
</ObjectLockConfiguration>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

ObjectLockConfiguration

Root level tag for the ObjectLockConfiguration parameters.

Required: Yes

ObjectLockEnabled

Indicates whether this bucket has an Object Lock configuration enabled. Enable `ObjectLockEnabled` when you apply `ObjectLockConfiguration` to a bucket.

Type: String

Valid Values: `Enabled`

Rule

Specifies the Object Lock rule for the specified object. Enable the this rule when you apply `ObjectLockConfiguration` to a bucket. Bucket settings require both a mode and a period. The period can be either `Days` or `Years` but you must select one. You cannot specify `Days` and `Years` at the same time.

Type: ObjectLockRule data type

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetObjectRetention

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Retrieves an object's retention settings. For more information, see Locking Objects.

This functionality is not supported for Amazon S3 on Outposts.

The following action is related to `GetObjectRetention`:

- GetObjectAttributes

Request Syntax

```
GET /{Key+}?retention&versionId=VersionId HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-request-payer: RequestPayer
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name containing the object whose retention settings you want to retrieve.

Access points - When you use this action with an access point, you must provide the alias of the access point in place of the bucket name or specify the access point ARN. When using the access point ARN, you must direct requests to the access point hostname. The access point hostname takes the form *AccessPointName-AccountId*.s3-accesspoint.*Region*.amazonaws.com. When using this action with an access point through the AWS SDKs, you provide the access point ARN in place of the bucket name. For more information about access point ARNs, see Using access points in the *Amazon S3 User Guide*.

Required: Yes

Key

The key name for the object whose retention settings you want to retrieve.

Length Constraints: Minimum length of 1.

Required: Yes

versionId

The version ID for the object whose retention settings you want to retrieve.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-request-payer

Confirms that the requester knows that they will be charged for the request. Bucket owners need not specify this parameter in their requests. If either the source or destination S3 bucket has Requester Pays enabled, the requester will pay for corresponding charges to copy the object. For information about downloading objects from Requester Pays buckets, see Downloading Objects in Requester Pays Buckets in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<Retention>
   <Mode>string</Mode>
```

```
   <RetainUntilDate>timestamp</RetainUntilDate>
</Retention>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

Retention

Root level tag for the Retention parameters.

Required: Yes

Mode

Indicates the Retention mode for the specified object.

Type: String

Valid Values: `GOVERNANCE | COMPLIANCE`

RetainUntilDate

The date on which this Object Lock Retention will expire.

Type: Timestamp

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3

- AWS SDK for Python
- AWS SDK for Ruby V3

GetObjectTagging

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Returns the tag-set of an object. You send the GET request against the tagging subresource associated with the object.

To use this operation, you must have permission to perform the `s3:GetObjectTagging` action. By default, the GET action returns information about current version of an object. For a versioned bucket, you can have multiple versions of an object in your bucket. To retrieve tags of any other version, use the versionId query parameter. You also need permission for the `s3:GetObjectVersionTagging` action.

By default, the bucket owner has this permission and can grant this permission to others.

For information about the Amazon S3 object tagging feature, see Object Tagging.

The following actions are related to `GetObjectTagging`:

- DeleteObjectTagging
- GetObjectAttributes
- PutObjectTagging

Request Syntax

```
GET /{Key+}?tagging&versionId=VersionId HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
x-amz-request-payer: RequestPayer
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name containing the object for which to get the tagging information.

Access points - When you use this action with an access point, you must provide the alias of the access point in place of the bucket name or specify the access point ARN. When using the access point ARN, you must direct requests to the access point hostname. The access point hostname takes the form *AccessPointName-AccountId*.s3-accesspoint.*Region*.amazonaws.com. When using this action with an access point through the AWS SDKs, you provide the access point ARN in place of the bucket name. For more information about access point ARNs, see Using access points in the *Amazon S3 User Guide*.

S3 on Outposts - When you use this action with Amazon S3 on Outposts, you must direct requests to the S3 on Outposts hostname. The S3 on Outposts hostname takes the form *`AccessPointName-AccountId.outpostID`*`.s3-outposts.`*`Region`*`.amazonaws.com`. When you use this action with S3 on Outposts through the AWS SDKs, you provide the Outposts access point ARN in place of the bucket name. For more information about S3 on Outposts ARNs, see What is S3 on Outposts? in the *Amazon S3 User Guide*.

Required: Yes

Key

Object key for which to get the tagging information.

Length Constraints: Minimum length of 1.

Required: Yes

versionId

The versionId of the object for which to get the tagging information.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-request-payer

Confirms that the requester knows that they will be charged for the request. Bucket owners need not specify this parameter in their requests. If either the source or destination S3

bucket has Requester Pays enabled, the requester will pay for corresponding charges to copy the object. For information about downloading objects from Requester Pays buckets, see Downloading Objects in Requester Pays Buckets in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
x-amz-version-id: VersionId
<?xml version="1.0" encoding="UTF-8"?>
<Tagging>
   <TagSet>
      <Tag>
         <Key>string</Key>
         <Value>string</Value>
      </Tag>
   </TagSet>
</Tagging>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The response returns the following HTTP headers.

x-amz-version-id

The versionId of the object for which you got the tagging information.

The following data is returned in XML format by the service.

Tagging

Root level tag for the Tagging parameters.

Required: Yes

TagSet

Contains the tag set.

Type: Array of Tag data types

Examples

Sample Request

The following request returns the tag set of the specified object.

```
GET /example-object?tagging HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
Date: Thu, 22 Sep 2016 21:33:08 GMT
Authorization: authorization string
```

Sample Response

This example illustrates one usage of GetObjectTagging.

```
HTTP/1.1 200 OK
Date: Thu, 22 Sep 2016 21:33:08 GMT
Connection: close
Server: AmazonS3
<?xml version="1.0" encoding="UTF-8"?>
<Tagging xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <TagSet>
     <Tag>
       <Key>tag1</Key>
       <Value>val1</Value>
    </Tag>
    <Tag>
        <Key>tag2</Key>
```

```
                    <Value>val2</Value>
                </Tag>
            </TagSet>
        </Tagging>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetObjectTorrent

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Returns torrent files from a bucket. BitTorrent can save you bandwidth when you're distributing large files.

> **Note**
>
> You can get torrent only for objects that are less than 5 GB in size, and that are not encrypted using server-side encryption with a customer-provided encryption key.

To use GET, you must have READ access to the object.

This functionality is not supported for Amazon S3 on Outposts.

The following action is related to `GetObjectTorrent`:

- GetObject

Request Syntax

```
GET /{Key+}?torrent HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-request-payer: RequestPayer
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket containing the object for which to get the torrent files.

Required: Yes

Key

The object key for which to get the information.

Length Constraints: Minimum length of 1.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-request-payer

Confirms that the requester knows that they will be charged for the request. Bucket owners need not specify this parameter in their requests. If either the source or destination S3 bucket has Requester Pays enabled, the requester will pay for corresponding charges to copy the object. For information about downloading objects from Requester Pays buckets, see Downloading Objects in Requester Pays Buckets in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
x-amz-request-charged: RequestCharged

Body
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The response returns the following HTTP headers.

x-amz-request-charged

If present, indicates that the requester was successfully charged for the request.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

The following data is returned in binary format by the service.
<varlistentry> **Body** </varlistentry>

Examples

Getting torrent files in a bucket

This example retrieves the `Torrent` file for the `Nelson` object in the `quotes` bucket.

```
GET /quotes/Nelson?torrent HTTP/1.0
Host: bucket.s3.<Region>.amazonaws.com
Date: Wed, 28 Oct 2009 22:32:00 GMT
Authorization: authorization string
```

Sample Response

This example illustrates one usage of GetObjectTorrent.

```
HTTP/1.1 200 OK
x-amz-request-id: 7CD745EBB7AB5ED9
Date: Wed, 25 Nov 2009 12:00:00 GMT
```

```
            Content-Disposition: attachment; filename=Nelson.torrent;
            Content-Type: application/x-bittorrent
            Content-Length: 537
            Server: AmazonS3

            <body: a Bencoded dictionary as defined by the BitTorrent specification>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetPublicAccessBlock

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Retrieves the `PublicAccessBlock` configuration for an Amazon S3 bucket. To use this operation, you must have the `s3:GetBucketPublicAccessBlock` permission. For more information about Amazon S3 permissions, see Specifying Permissions in a Policy.

> **Important**
>
> When Amazon S3 evaluates the `PublicAccessBlock` configuration for a bucket or an object, it checks the `PublicAccessBlock` configuration for both the bucket (or the bucket that contains the object) and the bucket owner's account. If the `PublicAccessBlock` settings are different between the bucket and the account, Amazon S3 uses the most restrictive combination of the bucket-level and account-level settings.

For more information about when Amazon S3 considers a bucket or an object public, see The Meaning of "Public".

The following operations are related to `GetPublicAccessBlock`:

- Using Amazon S3 Block Public Access
- PutPublicAccessBlock
- GetPublicAccessBlock
- DeletePublicAccessBlock

Request Syntax

```
GET /?publicAccessBlock HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the Amazon S3 bucket whose `PublicAccessBlock` configuration you want to retrieve.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<PublicAccessBlockConfiguration>
   <BlockPublicAcls>boolean</BlockPublicAcls>
   <IgnorePublicAcls>boolean</IgnorePublicAcls>
   <BlockPublicPolicy>boolean</BlockPublicPolicy>
   <RestrictPublicBuckets>boolean</RestrictPublicBuckets>
</PublicAccessBlockConfiguration>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

PublicAccessBlockConfiguration

Root level tag for the PublicAccessBlockConfiguration parameters.

Required: Yes

BlockPublicAcls

Specifies whether Amazon S3 should block public access control lists (ACLs) for this bucket and objects in this bucket. Setting this element to TRUE causes the following behavior:

- PUT Bucket ACL and PUT Object ACL calls fail if the specified ACL is public.
- PUT Object calls fail if the request includes a public ACL.
- PUT Bucket calls fail if the request includes a public ACL.

Enabling this setting doesn't affect existing policies or ACLs.

Type: Boolean

BlockPublicPolicy

Specifies whether Amazon S3 should block public bucket policies for this bucket. Setting this element to TRUE causes Amazon S3 to reject calls to PUT Bucket policy if the specified bucket policy allows public access.

Enabling this setting doesn't affect existing bucket policies.

Type: Boolean

IgnorePublicAcls

Specifies whether Amazon S3 should ignore public ACLs for this bucket and objects in this bucket. Setting this element to TRUE causes Amazon S3 to ignore all public ACLs on this bucket and objects in this bucket.

Enabling this setting doesn't affect the persistence of any existing ACLs and doesn't prevent new public ACLs from being set.

Type: Boolean

RestrictPublicBuckets

Specifies whether Amazon S3 should restrict public bucket policies for this bucket. Setting this element to TRUE restricts access to this bucket to only AWS service principals and authorized users within this account if the bucket has a public policy.

Enabling this setting doesn't affect previously stored bucket policies, except that public and cross-account access within any public bucket policy, including non-public delegation to specific accounts, is blocked.

Type: Boolean

Examples

Sample Request

The following request gets a bucket `PublicAccessBlock` configuration.

```
GET /<bucket-name>?publicAccessBlock HTTP/1.1
Host: <bucket-name>.s3.<Region>.amazonaws.com
x-amz-date: <Thu, 15 Nov 2016 00:17:21 GMT>
Authorization: <signatureValue>
```

Sample Response

This example illustrates one usage of GetPublicAccessBlock.

```
HTTP/1.1 200 OK
x-amz-id-2: ITnGT1y4REXAMPLEPi4hklTXouTf0hccUjo0iCPEXAMPLEutBj3M7fPGlWO2SEWp
x-amz-request-id: 51991EXAMPLE5321
Date: Thu, 15 Nov 2016 00:17:22 GMT
Server: AmazonS3
Content-Length: 0

<PublicAccessBlockConfiguration>
   <BlockPublicAcls>TRUE</BlockPublicAcls>
   <IgnorePublicAcls>FALSE</IgnorePublicAcls>
   <BlockPublicPolicy>FALSE</BlockPublicPolicy>
   <RestrictPublicBuckets>FALSE</RestrictPublicBuckets>
</PublicAccessBlockConfiguration>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface

- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

HeadBucket

Service: Amazon S3

You can use this operation to determine if a bucket exists and if you have permission to access it. The action returns a `200 OK` if the bucket exists and you have permission to access it.

If the bucket does not exist or you do not have permission to access it, the HEAD request returns a generic `400 Bad Request`, `403 Forbidden` or `404 Not Found` code. A message body is not included, so you cannot determine the exception beyond these HTTP response codes.

> **Note**
>
> **Directory buckets** - You must make requests for this API operation to the Zonal endpoint. These endpoints support virtual-hosted-style requests in the format `https://bucket_name.s3express-az_id.region.amazonaws.com`. Path-style requests are not supported. For more information, see Regional and Zonal endpoints in the *Amazon S3 User Guide*.

Authentication and authorization

All `HeadBucket` requests must be authenticated and signed by using IAM credentials (access key ID and secret access key for the IAM identities). All headers with the `x-amz-` prefix, including `x-amz-copy-source`, must be signed. For more information, see REST Authentication.

Directory bucket - You must use IAM credentials to authenticate and authorize your access to the `HeadBucket` API operation, instead of using the temporary security credentials through the `CreateSession` API operation.

AWS CLI or SDKs handles authentication and authorization on your behalf.

Permissions

- **General purpose bucket permissions** - To use this operation, you must have permissions to perform the `s3:ListBucket` action. The bucket owner has this permission by default and can grant this permission to others. For more information about permissions, see Managing access permissions to your Amazon S3 resources in the *Amazon S3 User Guide*.
- **Directory bucket permissions** - You must have the **`s3express:CreateSession`** permission in the `Action` element of a policy. By default, the session is in the `ReadWrite`

mode. If you want to restrict the access, you can explicitly set the `s3express:SessionMode` condition key to `ReadOnly` on the bucket.

For more information about example bucket policies, see Example bucket policies for S3 Express One Zone and AWS Identity and Access Management (IAM) identity-based policies for S3 Express One Zone in the *Amazon S3 User Guide*.

HTTP Host header syntax

Directory buckets - The HTTP Host header syntax is *Bucket_name*.s3express-*az_id*.*region*.amazonaws.com.

Request Syntax

```
HEAD / HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name.

Directory buckets - When you use this operation with a directory bucket, you must use virtual-hosted-style requests in the format *Bucket_name*.s3express-*az_id*.*region*.amazonaws.com. Path-style requests are not supported. Directory bucket names must be unique in the chosen Availability Zone. Bucket names must follow the format *bucket_base_name*--*az-id*--x-s3 (for example, *DOC-EXAMPLE-BUCKET*--*usw2-az1*--x-s3). For information about bucket naming restrictions, see Directory bucket naming rules in the *Amazon S3 User Guide*.

Access points - When you use this action with an access point, you must provide the alias of the access point in place of the bucket name or specify the access point ARN. When using the access point ARN, you must direct requests to the access point hostname. The access point hostname takes the form *AccessPointName-AccountId*.s3-accesspoint.*Region*.amazonaws.com. When using this action with an access point through the AWS SDKs, you provide the access point ARN in

place of the bucket name. For more information about access point ARNs, see Using access points in the *Amazon S3 User Guide*.

Object Lambda access points - When you use this API operation with an Object Lambda access point, provide the alias of the Object Lambda access point in place of the bucket name. If the Object Lambda access point alias in a request is not valid, the error code `InvalidAccessPointAliasError` is returned. For more information about `InvalidAccessPointAliasError`, see List of Error Codes.

> **Note**
>
> Access points and Object Lambda access points are not supported by directory buckets.

S3 on Outposts - When you use this action with Amazon S3 on Outposts, you must direct requests to the S3 on Outposts hostname. The S3 on Outposts hostname takes the form *`AccessPointName-AccountId.outpostID`*`.s3-outposts.`*`Region`*`.amazonaws.com`. When you use this action with S3 on Outposts through the AWS SDKs, you provide the Outposts access point ARN in place of the bucket name. For more information about S3 on Outposts ARNs, see What is S3 on Outposts? in the *Amazon S3 User Guide*.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
x-amz-bucket-location-type: BucketLocationType
x-amz-bucket-location-name: BucketLocationName
x-amz-bucket-region: BucketRegion
x-amz-access-point-alias: AccessPointAlias
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The response returns the following HTTP headers.

x-amz-access-point-alias

Indicates whether the bucket name used in the request is an access point alias.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-bucket-location-name

The name of the location where the bucket will be created.

For directory buckets, the AZ ID of the Availability Zone where the bucket is created. An example AZ ID value is `usw2-az1`.

> **Note**
>
> This functionality is only supported by directory buckets.

x-amz-bucket-location-type

The type of location where the bucket is created.

> **Note**
>
> This functionality is only supported by directory buckets.

Valid Values: `AvailabilityZone`

x-amz-bucket-region

The Region that the bucket is located.

> **Note**
>
> This functionality is not supported for directory buckets.

Length Constraints: Minimum length of 0. Maximum length of 20.

Errors

NoSuchBucket

The specified bucket does not exist.

HTTP Status Code: 404

Examples

Sample Request for general purpose buckets

This example illustrates one usage of HeadBucket.

```
HEAD / HTTP/1.1
Date: Fri, 10 Feb 2012 21:34:55 GMT
Authorization: authorization string
Host: myawsbucket.s3.amazonaws.com
Connection: Keep-Alive
```

Sample Response for general purpose buckets

This example illustrates one usage of HeadBucket.

```
HTTP/1.1 200 OK
x-amz-id-2: JuKZqmXuiwFeDQxhD7M8KtsKobSzWA1QEjLbTMTagkKdBX2z7Il/
jGhDeJ3j6s80
x-amz-request-id: 32FE2CEB32F5EE25
x-amz-bucket-region: us-west-2
x-amz-access-point-alias: false
Date: Fri, 10 2012 21:34:56 GMT
```

```
            Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

HeadObject

Service: Amazon S3

The HEAD operation retrieves metadata from an object without returning the object itself. This operation is useful if you're interested only in an object's metadata.

A HEAD request has the same options as a GET operation on an object. The response is identical to the GET response except that there is no response body. Because of this, if the HEAD request generates an error, it returns a generic code, such as `400 Bad Request`, `403 Forbidden`, `404 Not Found`, `405 Method Not Allowed`, `412 Precondition Failed`, or `304 Not Modified`. It's not possible to retrieve the exact exception of these error codes.

Request headers are limited to 8 KB in size. For more information, see Common Request Headers.

> **Note**
>
> **Directory buckets** - For directory buckets, you must make requests for this API operation to the Zonal endpoint. These endpoints support virtual-hosted-style requests in the format `https://bucket_name.s3express-az_id.region.amazonaws.com/key-name`. Path-style requests are not supported. For more information, see Regional and Zonal endpoints in the *Amazon S3 User Guide*.

Permissions

- **General purpose bucket permissions** - To use HEAD, you must have the `s3:GetObject` permission. You need the relevant read object (or version) permission for this operation. For more information, see Actions, resources, and condition keys for Amazon S3 in the *Amazon S3 User Guide*.

  If the object you request doesn't exist, the error that Amazon S3 returns depends on whether you also have the `s3:ListBucket` permission.

  - If you have the `s3:ListBucket` permission on the bucket, Amazon S3 returns an HTTP status code `404 Not Found` error.
  - If you don't have the `s3:ListBucket` permission, Amazon S3 returns an HTTP status code `403 Forbidden` error.
- **Directory bucket permissions** - To grant access to this API operation on a directory bucket, we recommend that you use the `CreateSession` API operation for session-based

authorization. Specifically, you grant the `s3express:CreateSession` permission to the directory bucket in a bucket policy or an IAM identity-based policy. Then, you make the `CreateSession` API call on the bucket to obtain a session token. With the session token in your request header, you can make API requests to this operation. After the session token expires, you make another `CreateSession` API call to generate a new session token for use. AWS CLI or SDKs create session and refresh the session token automatically to avoid service interruptions when a session expires. For more information about authorization, see `CreateSession`.

Encryption

> **Note**
>
> Encryption request headers, like `x-amz-server-side-encryption`, should not be sent for HEAD requests if your object uses server-side encryption with AWS Key Management Service (AWS KMS) keys (SSE-KMS), dual-layer server-side encryption with AWS KMS keys (DSSE-KMS), or server-side encryption with Amazon S3 managed encryption keys (SSE-S3). The `x-amz-server-side-encryption` header is used when you PUT an object to S3 and want to specify the encryption method. If you include this header in a HEAD request for an object that uses these types of keys, you'll get an HTTP `400 Bad Request` error. It's because the encryption method can't be changed when you retrieve the object.

If you encrypt an object by using server-side encryption with customer-provided encryption keys (SSE-C) when you store the object in Amazon S3, then when you retrieve the metadata from the object, you must use the following headers to provide the encryption key for the server to be able to retrieve the object's metadata. The headers are:

- `x-amz-server-side-encryption-customer-algorithm`
- `x-amz-server-side-encryption-customer-key`
- `x-amz-server-side-encryption-customer-key-MD5`

For more information about SSE-C, see Server-Side Encryption (Using Customer-Provided Encryption Keys) in the *Amazon S3 User Guide*.

> **Note**
>
> **Directory bucket permissions** - For directory buckets, only server-side encryption with Amazon S3 managed keys (SSE-S3) (`AES256`) is supported.

Versioning

- If the current version of the object is a delete marker, Amazon S3 behaves as if the object was deleted and includes `x-amz-delete-marker: true` in the response.
- If the specified version is a delete marker, the response returns a `405 Method Not Allowed` error and the `Last-Modified: timestamp` response header.

> **Note**
>
> - **Directory buckets** - Delete marker is not supported by directory buckets.
> - **Directory buckets** - S3 Versioning isn't enabled and supported for directory buckets. For this API operation, only the `null` value of the version ID is supported by directory buckets. You can only specify `null` to the `versionId` query parameter in the request.

HTTP Host header syntax

Directory buckets - The HTTP Host header syntax is *`Bucket_name`*`.s3express-`*`az_id`*`.`*`region`*`.amazonaws.com`.

The following actions are related to `HeadObject`:

- GetObject
- GetObjectAttributes

Request Syntax

```
HEAD /Key+?partNumber=PartNumber&versionId=VersionId HTTP/1.1
Host: Bucket.s3.amazonaws.com
If-Match: IfMatch
If-Modified-Since: IfModifiedSince
```

```
If-None-Match: IfNoneMatch
If-Unmodified-Since: IfUnmodifiedSince
Range: Range
x-amz-server-side-encryption-customer-algorithm: SSECustomerAlgorithm
x-amz-server-side-encryption-customer-key: SSECustomerKey
x-amz-server-side-encryption-customer-key-MD5: SSECustomerKeyMD5
x-amz-request-payer: RequestPayer
x-amz-expected-bucket-owner: ExpectedBucketOwner
x-amz-checksum-mode: ChecksumMode
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket that contains the object.

Directory buckets - When you use this operation with a directory bucket, you must use virtual-hosted-style requests in the format *Bucket_name*.s3express-*az_id*.*region*.amazonaws.com. Path-style requests are not supported. Directory bucket names must be unique in the chosen Availability Zone. Bucket names must follow the format *bucket_base_name*--*az-id*--x-s3 (for example, *DOC-EXAMPLE-BUCKET*--*usw2-az1*--x-s3). For information about bucket naming restrictions, see Directory bucket naming rules in the *Amazon S3 User Guide*.

Access points - When you use this action with an access point, you must provide the alias of the access point in place of the bucket name or specify the access point ARN. When using the access point ARN, you must direct requests to the access point hostname. The access point hostname takes the form *AccessPointName-AccountId*.s3-accesspoint.*Region*.amazonaws.com. When using this action with an access point through the AWS SDKs, you provide the access point ARN in place of the bucket name. For more information about access point ARNs, see Using access points in the *Amazon S3 User Guide*.

> **Note**
>
> Access points and Object Lambda access points are not supported by directory buckets.

S3 on Outposts - When you use this action with Amazon S3 on Outposts, you must direct requests to the S3 on Outposts hostname. The S3 on Outposts hostname takes the form

AccessPointName-AccountId.outpostID.s3-outposts.*Region*.amazonaws.com. When you use this action with S3 on Outposts through the AWS SDKs, you provide the Outposts access point ARN in place of the bucket name. For more information about S3 on Outposts ARNs, see What is S3 on Outposts? in the *Amazon S3 User Guide*.

Required: Yes

If-Match

Return the object only if its entity tag (ETag) is the same as the one specified; otherwise, return a 412 (precondition failed) error.

If both of the `If-Match` and `If-Unmodified-Since` headers are present in the request as follows:

- `If-Match` condition evaluates to `true`, and;
- `If-Unmodified-Since` condition evaluates to `false`;

Then Amazon S3 returns `200 OK` and the data requested.

For more information about conditional requests, see RFC 7232.

If-Modified-Since

Return the object only if it has been modified since the specified time; otherwise, return a 304 (not modified) error.

If both of the `If-None-Match` and `If-Modified-Since` headers are present in the request as follows:

- `If-None-Match` condition evaluates to `false`, and;
- `If-Modified-Since` condition evaluates to `true`;

Then Amazon S3 returns the `304 Not Modified` response code.

For more information about conditional requests, see RFC 7232.

If-None-Match

Return the object only if its entity tag (ETag) is different from the one specified; otherwise, return a 304 (not modified) error.

If both of the `If-None-Match` and `If-Modified-Since` headers are present in the request as follows:

- `If-None-Match` condition evaluates to `false`, and;
- `If-Modified-Since` condition evaluates to `true`;

Then Amazon S3 returns the `304 Not Modified` response code.

For more information about conditional requests, see RFC 7232.

If-Unmodified-Since

Return the object only if it has not been modified since the specified time; otherwise, return a 412 (precondition failed) error.

If both of the `If-Match` and `If-Unmodified-Since` headers are present in the request as follows:

- `If-Match` condition evaluates to `true`, and;
- `If-Unmodified-Since` condition evaluates to `false`;

Then Amazon S3 returns `200 OK` and the data requested.

For more information about conditional requests, see RFC 7232.

Key

The object key.

Length Constraints: Minimum length of 1.

Required: Yes

partNumber

Part number of the object being read. This is a positive integer between 1 and 10,000. Effectively performs a 'ranged' HEAD request for the part specified. Useful querying about the size of the part and the number of parts in this object.

Range

HeadObject returns only the metadata for an object. If the Range is satisfiable, only the `ContentLength` is affected in the response. If the Range is not satisfiable, S3 returns a `416 - Requested Range Not Satisfiable` error.

versionId

Version ID used to reference a specific version of the object.

> **Note**
>
> For directory buckets in this API operation, only the `null` value of the version ID is supported.

x-amz-checksum-mode

To retrieve the checksum, this parameter must be enabled.

In addition, if you enable `ChecksumMode` and the object is encrypted with AWS Key Management Service (AWS KMS), you must have permission to use the `kms:Decrypt` action for the request to succeed.

Valid Values: `ENABLED`

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-request-payer

Confirms that the requester knows that they will be charged for the request. Bucket owners need not specify this parameter in their requests. If either the source or destination S3 bucket has Requester Pays enabled, the requester will pay for corresponding charges to copy the object. For information about downloading objects from Requester Pays buckets, see Downloading Objects in Requester Pays Buckets in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

x-amz-server-side-encryption-customer-algorithm

Specifies the algorithm to use when encrypting the object (for example, AES256).

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-key

Specifies the customer-provided encryption key for Amazon S3 to use in encrypting data. This value is used to store the object and then it is discarded; Amazon S3 does not store the encryption key. The key must be appropriate for use with the algorithm specified in the `x-amz-server-side-encryption-customer-algorithm` header.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-key-MD5

Specifies the 128-bit MD5 digest of the encryption key according to RFC 1321. Amazon S3 uses this header for a message integrity check to ensure that the encryption key was transmitted without error.

> **Note**
>
> This functionality is not supported for directory buckets.

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
x-amz-delete-marker: DeleteMarker
accept-ranges: AcceptRanges
x-amz-expiration: Expiration
x-amz-restore: Restore
x-amz-archive-status: ArchiveStatus
Last-Modified: LastModified
```

```
Content-Length: ContentLength
x-amz-checksum-crc32: ChecksumCRC32
x-amz-checksum-crc32c: ChecksumCRC32C
x-amz-checksum-sha1: ChecksumSHA1
x-amz-checksum-sha256: ChecksumSHA256
ETag: ETag
x-amz-missing-meta: MissingMeta
x-amz-version-id: VersionId
Cache-Control: CacheControl
Content-Disposition: ContentDisposition
Content-Encoding: ContentEncoding
Content-Language: ContentLanguage
Content-Type: ContentType
Expires: Expires
x-amz-website-redirect-location: WebsiteRedirectLocation
x-amz-server-side-encryption: ServerSideEncryption
x-amz-server-side-encryption-customer-algorithm: SSECustomerAlgorithm
x-amz-server-side-encryption-customer-key-MD5: SSECustomerKeyMD5
x-amz-server-side-encryption-aws-kms-key-id: SSEKMSKeyId
x-amz-server-side-encryption-bucket-key-enabled: BucketKeyEnabled
x-amz-storage-class: StorageClass
x-amz-request-charged: RequestCharged
x-amz-replication-status: ReplicationStatus
x-amz-mp-parts-count: PartsCount
x-amz-object-lock-mode: ObjectLockMode
x-amz-object-lock-retain-until-date: ObjectLockRetainUntilDate
x-amz-object-lock-legal-hold: ObjectLockLegalHoldStatus
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The response returns the following HTTP headers.

accept-ranges

Indicates that a range of bytes was specified.

Cache-Control

Specifies caching behavior along the request/reply chain.

Content-Disposition

Specifies presentational information for the object.

Content-Encoding

Indicates what content encodings have been applied to the object and thus what decoding mechanisms must be applied to obtain the media-type referenced by the Content-Type header field.

Content-Language

The language the content is in.

Content-Length

Size of the body in bytes.

Content-Type

A standard MIME type describing the format of the object data.

ETag

An entity tag (ETag) is an opaque identifier assigned by a web server to a specific version of a resource found at a URL.

Expires

The date and time at which the object is no longer cacheable.

Last-Modified

Date and time when the object was last modified.

x-amz-archive-status

The archive state of the head object.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `ARCHIVE_ACCESS | DEEP_ARCHIVE_ACCESS`

x-amz-checksum-crc32

The base64-encoded, 32-bit CRC32 checksum of the object. This will only be present if it was uploaded with the object. When you use an API operation on an object that was uploaded using

multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

x-amz-checksum-crc32c

The base64-encoded, 32-bit CRC32C checksum of the object. This will only be present if it was uploaded with the object. When you use an API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

x-amz-checksum-sha1

The base64-encoded, 160-bit SHA-1 digest of the object. This will only be present if it was uploaded with the object. When you use the API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

x-amz-checksum-sha256

The base64-encoded, 256-bit SHA-256 digest of the object. This will only be present if it was uploaded with the object. When you use an API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

x-amz-delete-marker

Specifies whether the object retrieved was (true) or was not (false) a Delete Marker. If false, this response header does not appear in the response.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-expiration

If the object expiration is configured (see `PutBucketLifecycleConfiguration`), the response includes this header. It includes the `expiry-date` and `rule-id` key-value pairs providing object expiration information. The value of the `rule-id` is URL-encoded.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-missing-meta

This is set to the number of metadata entries not returned in `x-amz-meta` headers. This can happen if you create metadata using an API like SOAP that supports more flexible metadata than the REST API. For example, using SOAP, you can create metadata whose values are not legal HTTP headers.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-mp-parts-count

The count of parts this object has. This value is only returned if you specify `partNumber` in your request and the object was uploaded as a multipart upload.

x-amz-object-lock-legal-hold

Specifies whether a legal hold is in effect for this object. This header is only returned if the requester has the `s3:GetObjectLegalHold` permission. This header is not returned if the specified version of this object has never had a legal hold applied. For more information about S3 Object Lock, see Object Lock.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `ON` | `OFF`

x-amz-object-lock-mode

The Object Lock mode, if any, that's in effect for this object. This header is only returned if the requester has the `s3:GetObjectRetention` permission. For more information about S3 Object Lock, see Object Lock.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `GOVERNANCE | COMPLIANCE`

x-amz-object-lock-retain-until-date

The date and time when the Object Lock retention period expires. This header is only returned if the requester has the `s3:GetObjectRetention` permission.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-replication-status

Amazon S3 can return this header if your request involves a bucket that is either a source or a destination in a replication rule.

In replication, you have a source bucket on which you configure replication and destination bucket or buckets where Amazon S3 stores object replicas. When you request an object (`GetObject`) or object metadata (`HeadObject`) from these buckets, Amazon S3 will return the `x-amz-replication-status` header in the response as follows:

- **If requesting an object from the source bucket**, Amazon S3 will return the `x-amz-replication-status` header if the object in your request is eligible for replication.

  For example, suppose that in your replication configuration, you specify object prefix `TaxDocs` requesting Amazon S3 to replicate objects with key prefix `TaxDocs`. Any objects you upload with this key name prefix, for example `TaxDocs/document1.pdf`, are eligible for replication. For any object request with this key name prefix, Amazon S3 will return the `x-`

`amz-replication-status` header with value PENDING, COMPLETED or FAILED indicating object replication status.

- **If requesting an object from a destination bucket**, Amazon S3 will return the `x-amz-replication-status` header with value REPLICA if the object in your request is a replica that Amazon S3 created and there is no replica modification replication in progress.
- **When replicating objects to multiple destination buckets**, the `x-amz-replication-status` header acts differently. The header of the source object will only return a value of COMPLETED when replication is successful to all destinations. The header will remain at value PENDING until replication has completed for all destinations. If one or more destinations fails replication the header will return FAILED.

For more information, see Replication.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `COMPLETE | PENDING | FAILED | REPLICA | COMPLETED`

x-amz-request-charged

If present, indicates that the requester was successfully charged for the request.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

x-amz-restore

If the object is an archived object (an object whose storage class is GLACIER), the response includes this header if either the archive restoration is in progress (see RestoreObject or an archive copy is already restored.

If an archive copy is already restored, the header value indicates when Amazon S3 is scheduled to delete the object copy. For example:

```
x-amz-restore: ongoing-request="false", expiry-date="Fri, 21 Dec 2012
00:00:00 GMT"
```

If the object restoration is in progress, the header returns the value `ongoing-request="true"`.

For more information about archiving objects, see Transitioning Objects: General Considerations.

> **Note**
>
> This functionality is not supported for directory buckets. Only the S3 Express One Zone storage class is supported by directory buckets to store objects.

x-amz-server-side-encryption

The server-side encryption algorithm used when you store this object in Amazon S3 (for example, `AES256`, `aws:kms`, `aws:kms:dsse`).

> **Note**
>
> For directory buckets, only server-side encryption with Amazon S3 managed keys (SSE-S3) (`AES256`) is supported.

Valid Values: `AES256` | `aws:kms` | `aws:kms:dsse`

x-amz-server-side-encryption-aws-kms-key-id

If present, indicates the ID of the AWS Key Management Service (AWS KMS) symmetric encryption customer managed key that was used for the object.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-bucket-key-enabled

Indicates whether the object uses an S3 Bucket Key for server-side encryption with AWS Key Management Service (AWS KMS) keys (SSE-KMS).

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-algorithm

If server-side encryption with a customer-provided encryption key was requested, the response will include this header to confirm the encryption algorithm that's used.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-key-MD5

If server-side encryption with a customer-provided encryption key was requested, the response will include this header to provide the round-trip message integrity verification of the customer-provided encryption key.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-storage-class

Provides storage class information of the object. Amazon S3 returns this header for all objects except for S3 Standard storage class objects.

For more information, see Storage Classes.

> **Note**
>
> **Directory buckets** - Only the S3 Express One Zone storage class is supported by directory buckets to store objects.

Valid Values: `STANDARD | REDUCED_REDUNDANCY | STANDARD_IA | ONEZONE_IA | INTELLIGENT_TIERING | GLACIER | DEEP_ARCHIVE | OUTPOSTS | GLACIER_IR | SNOW | EXPRESS_ONEZONE`

x-amz-version-id

Version ID of the object.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-website-redirect-location

If the bucket is configured as a website, redirects requests for this object to another object in the same bucket or to an external URL. Amazon S3 stores the value of this header in the object metadata.

> **Note**
>
> This functionality is not supported for directory buckets.

Errors

NoSuchKey

The specified key does not exist.

HTTP Status Code: 404

Examples

Sample Request for general purpose buckets

The following request returns the metadata of an object.

```
HEAD /my-image.jpg HTTP/1.1
Host: bucket.s3.<Region>.amazonaws.com
Date: Wed, 28 Oct 2009 22:32:00 GMT
Authorization: AWS AKIAIOSFODNN7EXAMPLE:02236Q3V0RonhpaBX5sCYVf1bNRuU=
```

Sample Response for general purpose buckets

This example illustrates one usage of HeadObject.

```
HTTP/1.1 200 OK
x-amz-id-2: ef8yU9AS1ed4OpIszj7UDNEHGran
x-amz-request-id: 318BC8BC143432E5
x-amz-version-id: 3HL4kqtJlcpXroDTDmjVBH40Nrjfkd
Date: Wed, 28 Oct 2009 22:32:00 GMT
Last-Modified: Sun, 1 Jan 2006 12:00:00 GMT
ETag: "fba9dede5f27731c9771645a39863328"
Content-Length: 434234
Content-Type: text/plain
Connection: close
Server: AmazonS3
```

Sample Response for general purpose buckets: With an expiration tag

If the object is scheduled to expire according to a lifecycle configuration set on the bucket, the response returns the `x-amz-expiration` tag with information about when Amazon S3 will delete the object. For more information, see Transitioning Objects: General Considerations.

```
HTTP/1.1 200 OK
x-amz-id-2: azQRZtQJ2m1P8R+TIsG9h0VuC/DmiSJmjXUMq7snk
+LKSJeurtmfzSlGhR46GzSJ
```

```
            x-amz-request-id: 0EFF61CCE3F24A26
            Date: Mon, 17 Dec 2012 02:26:39 GMT
            Last-Modified: Mon, 17 Dec 2012 02:14:10 GMT
            x-amz-expiration: expiry-date="Fri, 21 Dec 2012 00:00:00 GMT", rule-
id="Rule for testfile.txt"
            ETag: "54b0c58c7ce9f2a8b551351102ee0938"
            Accept-Ranges: bytes
            Content-Type: text/plain
            Content-Length: 14
            Server: AmazonS3
```

Sample Request for general purpose buckets: Getting metadata from a specified version of an object

The following request returns the metadata of the specified version of an object.

```
            HEAD /my-image.jpg?versionId=3HL4kqCxf3vjVBH40Nrjfkd HTTP/1.1
            Host: bucket.s3.<Region>.amazonaws.com
            Date: Wed, 28 Oct 2009 22:32:00 GMT
            Authorization: AWS AKIAIOSFODNN7EXAMPLE:02236Q3V0WpaBX5sCYVf1bNRuU=
```

Sample Response for general purpose buckets: To a versioned HEAD request

This example illustrates one usage of HeadObject.

```
            HTTP/1.1 200 OK
            x-amz-id-2: eftixk72aD6Ap51TnqcoF8epIszj7UDNEHGran
            x-amz-request-id: 318BC8BC143432E5
            x-amz-version-id: 3HL4kqtJlcpXrof3vjVBH40Nrjfkd
            Date: Wed, 28 Oct 2009 22:32:00 GMT
            Last-Modified: Sun, 1 Jan 2006 12:00:00 GMT
            ETag: "fba9dede5f27731c9771645a39863328"
            Content-Length: 434234
            Content-Type: text/plain
            Connection: close
            Server: AmazonS3
```

Sample Request for general purpose buckets: For an S3 Glacier object

For an archived object, the `x-amz-restore` header provides the date when the restored copy expires, as shown in the following response. Even if the object is stored in S3 Glacier, all object metadata is still available.

```
HEAD /my-image.jpg HTTP/1.1
Host: bucket.s3.<Region>.amazonaws.com
Date: 13 Nov 2012 00:28:38 GMT
Authorization: AWS AKIAIOSFODNN7EXAMPLE:02236Q3V0RonhpaBX5sCYVf1bNRuU=
```

Sample Response for general purpose buckets: S3 Glacier object

If the object is already restored, the `x-amz-restore` header provides the date when the restored copy will expire, as shown in the following response.

```
HTTP/1.1 200 OK
x-amz-id-2: FSVaTMjrmBp3Izs1NnwBZeu7M19iI8UbxMbi0A8AirHANJBo
+hEftBuiESACOMJp
x-amz-request-id: E5CEFCB143EB505A
Date: Tue, 13 Nov 2012 00:28:38 GMT
Last-Modified: Mon, 15 Oct 2012 21:58:07 GMT
x-amz-restore: ongoing-request="false", expiry-date="Wed, 07 Nov 2012
 00:00:00 GMT"
ETag: "1accb31fcf202eba0c0f41fa2f09b4d7"
Accept-Ranges: bytes
Content-Type: binary/octet-stream
Content-Length: 300
Server: AmazonS3
```

Sample Response for general purpose buckets: In-progress restoration

If the restoration is in progress, the `x-amz-restore` header returns a message accordingly.

```
HTTP/1.1 200 OK
x-amz-id-2: b+V2mDiMHTdy1myoUBpctvmJl95H9U/OSUm/
jRtHxjh0+pCk5SvByL4xu2TDv4GM
```

```
            x-amz-request-id: E2E7B6AEE4E9BD2B
            Date: Tue, 13 Nov 2012 00:43:32 GMT
            Last-Modified: Sat, 20 Oct 2012 21:28:27 GMT
            x-amz-restore: ongoing-request="true"
            ETag: "1accb31fcf202eba0c0f41fa2f09b4d7"
            Accept-Ranges: bytes
            Content-Type: binary/octet-stream
            Content-Length: 300
            Server: AmazonS3
```

Sample Response for general purpose buckets: Object archived using S3 Intelligent-Tiering

If an object is stored using the S3 Intelligent-Tiering storage class and is currently in one of the archive tiers, then this action shows the current tier using the `x-amz-archive-status` header.

```
            HTTP/1.1 200 OK
            x-amz-id-2: FSVaTMjrmBp3Izs1NnwBZeu7M19iI8UbxMbi0A8AirHANJBo
+hEftBuiESACOMJp
            x-amz-request-id: E5CEFCB143EB505A
            Date: Fri, 13 Nov 2020 00:28:38 GMT
            Last-Modified: Mon, 15 Oct 2012 21:58:07 GMT
            ETag: "1accb31fcf202eba0c0f41fa2f09b4d7"
     x-amz-storage-class: 'INTELLIGENT_TIERING'
            x-amz-archive-status: 'ARCHIVE_ACCESS'
            Accept-Ranges: bytes
            Content-Type: binary/octet-stream
            Content-Length: 300
            Server: AmazonS3
```

Sample Response for general purpose buckets: Object archived using S3 Intelligent-Tiering with restore in progress

If an object is stored using the S3 Intelligent-Tiering storage class and is currently in the process of being restored from one of the archive tiers, then this action shows the current tier using the `x-amz-archive-status` header and the current restore status using the `x-amz-restore` header.

```
            HTTP/1.1 200 OK
```

```
            x-amz-id-2: FSVaTMjrmBp3Izs1NnwBZeu7M19iI8UbxMbi0A8AirHANJBo
+hEftBuiESACOMJp
            x-amz-request-id: E5CEFCB143EB505A
            Date: Fri, 13 Nov 2020 00:28:38 GMT
            Last-Modified: Mon, 15 Oct 2012 21:58:07 GMT
            ETag: "1accb31fcf202eba0c0f41fa2f09b4d7"
     x-amz-storage-class: 'INTELLIGENT_TIERING'
     x-amz-archive-status: 'ARCHIVE_ACCESS'
     x-amz-restore: 'ongoing-request="true"'
            x-amz-restore-request-date: 'Fri, 13 Nov 2020 00:20:00 GMT'
            Accept-Ranges: bytes
            Content-Type: binary/octet-stream
            Content-Length: 300
            Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListBucketAnalyticsConfigurations

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Lists the analytics configurations for the bucket. You can have up to 1,000 analytics configurations per bucket.

This action supports list pagination and does not return more than 100 configurations at a time. You should always check the `IsTruncated` element in the response. If there are no more configurations to list, `IsTruncated` is set to false. If there are more configurations to list, `IsTruncated` is set to true, and there will be a value in `NextContinuationToken`. You use the `NextContinuationToken` value to continue the pagination of the list by passing the value in continuation-token in the request to `GET` the next page.

To use this operation, you must have permissions to perform the `s3:GetAnalyticsConfiguration` action. The bucket owner has this permission by default. The bucket owner can grant this permission to others. For more information about permissions, see Permissions Related to Bucket Subresource Operations and Managing Access Permissions to Your Amazon S3 Resources.

For information about Amazon S3 analytics feature, see Amazon S3 Analytics – Storage Class Analysis.

The following operations are related to `ListBucketAnalyticsConfigurations`:

- GetBucketAnalyticsConfiguration
- DeleteBucketAnalyticsConfiguration
- PutBucketAnalyticsConfiguration

Request Syntax

```
GET /?analytics&continuation-token=ContinuationToken HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket from which analytics configurations are retrieved.

Required: Yes

continuation-token

The `ContinuationToken` that represents a placeholder from where this request should begin.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<ListBucketAnalyticsConfigurationResult>
   <IsTruncated>boolean</IsTruncated>
   <ContinuationToken>string</ContinuationToken>
   <NextContinuationToken>string</NextContinuationToken>
   <AnalyticsConfiguration>
      <Filter>
         <And>
            <Prefix>string</Prefix>
            <Tag>
               <Key>string</Key>
               <Value>string</Value>
            </Tag>
            ...
         </And>
         <Prefix>string</Prefix>
         <Tag>
```

```
            <Key>string</Key>
            <Value>string</Value>
         </Tag>
      </Filter>
      <Id>string</Id>
      <StorageClassAnalysis>
         <DataExport>
            <Destination>
               <S3BucketDestination>
                  <Bucket>string</Bucket>
                  <BucketAccountId>string</BucketAccountId>
                  <Format>string</Format>
                  <Prefix>string</Prefix>
               </S3BucketDestination>
            </Destination>
            <OutputSchemaVersion>string</OutputSchemaVersion>
         </DataExport>
      </StorageClassAnalysis>
   </AnalyticsConfiguration>
   ...
</ListBucketAnalyticsConfigurationResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

ListBucketAnalyticsConfigurationResult

Root level tag for the ListBucketAnalyticsConfigurationResult parameters.

Required: Yes

AnalyticsConfiguration

The list of analytics configurations for a bucket.

Type: Array of AnalyticsConfiguration data types

ContinuationToken

The marker that is used as a starting point for this analytics configuration list response. This value is present if it was sent in the request.

Type: String

IsTruncated

Indicates whether the returned list of analytics configurations is complete. A value of true indicates that the list is not complete and the NextContinuationToken will be provided for a subsequent request.

Type: Boolean

NextContinuationToken

`NextContinuationToken` is sent when `isTruncated` is true, which indicates that there are more analytics configurations to list. The next request must include this `NextContinuationToken`. The token is obfuscated and is not a usable value.

Type: String

Examples

Sample Request

Delete the metric configuration with a specified ID, which disables the CloudWatch metrics with the `ExampleMetrics` value for the `FilterId` dimension.

```
GET /?analytics HTTP/1.1
Host: example-bucket.s3.<Region>.amazonaws.com
x-amz-date: 20160430T233541Z
Authorization: authorization string
```

Sample Response

This example illustrates one usage of ListBucketAnalyticsConfigurations.

```
HTTP/1.1 200 OK
x-amz-id-2: gyB+3jRPnrkN98ZajxHXr3u7EFM67bNgSAxexeEHndCX/7GRnfTXxReKUQF28IfP
x-amz-request-id: 3B3C7C725673C630
Date: Sat, 30 Apr 2016 23:29:37 GMT
Content-Length: length
Server: AmazonS3
```

```
<ListBucketAnalyticsConfigurationResult xmlns="http://s3.amazonaws.com/
doc/2006-03-01/">
    <AnalyticsConfiguration>
        <Id>list1</Id>
        <Filter>
            <And>
                <Prefix>images/</Prefix>
                <Tag>
                    <Key>dog</Key>
                    <Value>corgi</Value>
                </Tag>
            </And>
        </Filter>
        <StorageClassAnalysis>
            <DataExport>
                <OutputSchemaVersion>V_1</OutputSchemaVersion>
                <Destination>
                    <S3BucketDestination>
                        <Format>CSV</Format>
                        <BucketAccountId>123456789012</BucketAccountId>
                        <Bucket>arn:aws:s3:::destination-bucket</Bucket>
                        <Prefix>destination-prefix</Prefix>
                    </S3BucketDestination>
                </Destination>
            </DataExport>
        </StorageClassAnalysis>
    </AnalyticsConfiguration>

    <AnalyticsConfiguration>
        <Id>report1</Id>
        <Filter>
            <And>
                <Prefix>images/</Prefix>
                <Tag>
                    <Key>dog</Key>
                    <Value>bulldog</Value>
                </Tag>
            </And>
        </Filter>
        <StorageClassAnalysis>
            <DataExport>
                <OutputSchemaVersion>V_1</OutputSchemaVersion>
                <Destination>
                    <S3BucketDestination>
```

```
                        <Format>CSV</Format>
                        <BucketAccountId>123456789012</BucketAccountId>
                        <Bucket>arn:aws:s3:::destination-bucket</Bucket>
                        <Prefix>destination-prefix</Prefix>
                    </S3BucketDestination>
                </Destination>
            </DataExport>
        </StorageClassAnalysis>
    </AnalyticsConfiguration>
    ...
    <IsTruncated>false</IsTruncated>
    <!-- If ContinuationToken was provided in the request. -->
    <ContinuationToken>...</ContinuationToken>
    <!-- if IsTruncated == true -->
    <IsTruncated>true</IsTruncated>
   <NextContinuationToken>...</NextContinuationToken>
</ListBucketAnalyticsConfigurationResult>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListBucketIntelligentTieringConfigurations

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Lists the S3 Intelligent-Tiering configuration from the specified bucket.

The S3 Intelligent-Tiering storage class is designed to optimize storage costs by automatically moving data to the most cost-effective storage access tier, without performance impact or operational overhead. S3 Intelligent-Tiering delivers automatic cost savings in three low latency and high throughput access tiers. To get the lowest storage cost on data that can be accessed in minutes to hours, you can choose to activate additional archiving capabilities.

The S3 Intelligent-Tiering storage class is the ideal storage class for data with unknown, changing, or unpredictable access patterns, independent of object size or retention period. If the size of an object is less than 128 KB, it is not monitored and not eligible for auto-tiering. Smaller objects can be stored, but they are always charged at the Frequent Access tier rates in the S3 Intelligent-Tiering storage class.

For more information, see Storage class for automatically optimizing frequently and infrequently accessed objects.

Operations related to `ListBucketIntelligentTieringConfigurations` include:

- DeleteBucketIntelligentTieringConfiguration
- PutBucketIntelligentTieringConfiguration
- GetBucketIntelligentTieringConfiguration

Request Syntax

```
GET /?intelligent-tiering&continuation-token=ContinuationToken HTTP/1.1
Host: Bucket.s3.amazonaws.com
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the Amazon S3 bucket whose configuration you want to modify or retrieve.

Required: Yes

continuation-token

The `ContinuationToken` that represents a placeholder from where this request should begin.

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<ListBucketIntelligentTieringConfigurationsOutput>
   <IsTruncated>boolean</IsTruncated>
   <ContinuationToken>string</ContinuationToken>
   <NextContinuationToken>string</NextContinuationToken>
   <IntelligentTieringConfiguration>
      <Filter>
         <And>
            <Prefix>string</Prefix>
            <Tag>
               <Key>string</Key>
               <Value>string</Value>
            </Tag>
            ...
         </And>
         <Prefix>string</Prefix>
         <Tag>
            <Key>string</Key>
            <Value>string</Value>
         </Tag>
      </Filter>
      <Id>string</Id>
      <Status>string</Status>
      <Tiering>
         <AccessTier>string</AccessTier>
         <Days>integer</Days>
      </Tiering>
```

```
      ...
   </IntelligentTieringConfiguration>
   ...
</ListBucketIntelligentTieringConfigurationsOutput>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

ListBucketIntelligentTieringConfigurationsOutput

Root level tag for the ListBucketIntelligentTieringConfigurationsOutput parameters.

Required: Yes

ContinuationToken

The `ContinuationToken` that represents a placeholder from where this request should begin.

Type: String

IntelligentTieringConfiguration

The list of S3 Intelligent-Tiering configurations for a bucket.

Type: Array of IntelligentTieringConfiguration data types

IsTruncated

Indicates whether the returned list of analytics configurations is complete. A value of `true` indicates that the list is not complete and the `NextContinuationToken` will be provided for a subsequent request.

Type: Boolean

NextContinuationToken

The marker used to continue this inventory configuration listing. Use the `NextContinuationToken` from this response to continue the listing in a subsequent request. The continuation token is an opaque value that Amazon S3 understands.

Type: String

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListBucketInventoryConfigurations

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Returns a list of inventory configurations for the bucket. You can have up to 1,000 analytics configurations per bucket.

This action supports list pagination and does not return more than 100 configurations at a time. Always check the `IsTruncated` element in the response. If there are no more configurations to list, `IsTruncated` is set to false. If there are more configurations to list, `IsTruncated` is set to true, and there is a value in `NextContinuationToken`. You use the `NextContinuationToken` value to continue the pagination of the list by passing the value in continuation-token in the request to `GET` the next page.

To use this operation, you must have permissions to perform the `s3:GetInventoryConfiguration` action. The bucket owner has this permission by default. The bucket owner can grant this permission to others. For more information about permissions, see Permissions Related to Bucket Subresource Operations and Managing Access Permissions to Your Amazon S3 Resources.

For information about the Amazon S3 inventory feature, see Amazon S3 Inventory

The following operations are related to `ListBucketInventoryConfigurations`:

- GetBucketInventoryConfiguration
- DeleteBucketInventoryConfiguration
- PutBucketInventoryConfiguration

Request Syntax

```
GET /?inventory&continuation-token=ContinuationToken HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket containing the inventory configurations to retrieve.

Required: Yes

continuation-token

The marker used to continue an inventory configuration listing that has been truncated. Use the `NextContinuationToken` from a previously truncated list response to continue the listing. The continuation token is an opaque value that Amazon S3 understands.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<ListInventoryConfigurationsResult>
   <ContinuationToken>string</ContinuationToken>
   <InventoryConfiguration>
      <Destination>
         <S3BucketDestination>
            <AccountId>string</AccountId>
            <Bucket>string</Bucket>
            <Encryption>
               <SSE-KMS>
                  <KeyId>string</KeyId>
               </SSE-KMS>
               <SSE-S3>
               </SSE-S3>
            </Encryption>
```

```
            <Format>string</Format>
            <Prefix>string</Prefix>
         </S3BucketDestination>
      </Destination>
      <Filter>
         <Prefix>string</Prefix>
      </Filter>
      <Id>string</Id>
      <IncludedObjectVersions>string</IncludedObjectVersions>
      <IsEnabled>boolean</IsEnabled>
      <OptionalFields>
         <Field>string</Field>
      </OptionalFields>
      <Schedule>
         <Frequency>string</Frequency>
      </Schedule>
   </InventoryConfiguration>
   ...
   <IsTruncated>boolean</IsTruncated>
   <NextContinuationToken>string</NextContinuationToken>
</ListInventoryConfigurationsResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

ListInventoryConfigurationsResult

Root level tag for the ListInventoryConfigurationsResult parameters.

Required: Yes

ContinuationToken

If sent in the request, the marker that is used as a starting point for this inventory configuration list response.

Type: String

InventoryConfiguration

The list of inventory configurations for a bucket.

Type: Array of InventoryConfiguration data types

IsTruncated

Tells whether the returned list of inventory configurations is complete. A value of true indicates that the list is not complete and the NextContinuationToken is provided for a subsequent request.

Type: Boolean

NextContinuationToken

The marker used to continue this inventory configuration listing. Use the `NextContinuationToken` from this response to continue the listing in a subsequent request. The continuation token is an opaque value that Amazon S3 understands.

Type: String

Examples

Sample Request

The following request returns the inventory configurations in `example-bucket`.

```
GET /?inventory HTTP/1.1
Host: example-bucket.s3.<Region>.amazonaws.com
x-amz-date: 20160430T233541Z
Authorization: authorization string
Content-Type: text/plain
```

Sample Response

Delete the metric configuration with a specified ID, which disables the CloudWatch metrics with the `ExampleMetrics` value for the `FilterId` dimension.

```
HTTP/1.1 200 OK
x-amz-id-2: gyB+3jRPnrkN98ZajxHXr3u7EFM67bNgSAxexeEHndCX/7GRnfTXxReKUQF28IfP
x-amz-request-id: 3B3C7C725673C630
Date: Sat, 30 Apr 2016 23:29:37 GMT
Content-Type: application/xml
Content-Length: length
Connection: close
```

```
Server: AmazonS3

<?xml version="1.0" encoding="UTF-8"?>
<ListInventoryConfigurationsResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <InventoryConfiguration>
      <Id>report1</Id>
      <IsEnabled>true</IsEnabled>
      <Destination>
         <S3BucketDestination>
            <Format>CSV</Format>
            <AccountId>123456789012</AccountId>
            <Bucket>arn:aws:s3:::destination-bucket</Bucket>
            <Prefix>prefix1</Prefix>
         </S3BucketDestination>
      </Destination>
      <Schedule>
         <Frequency>Daily</Frequency>
      </Schedule>
      <Filter>
         <Prefix>prefix/One</Prefix>
      </Filter>
      <IncludedObjectVersions>All</IncludedObjectVersions>
      <OptionalFields>
         <Field>Size</Field>
         <Field>LastModifiedDate</Field>
         <Field>ETag</Field>
         <Field>StorageClass</Field>
         <Field>IsMultipartUploaded</Field>
         <Field>ReplicationStatus</Field>
      </OptionalFields>
   </InventoryConfiguration>
      <InventoryConfiguration>
      <Id>report2</Id>
      <IsEnabled>true</IsEnabled>
      <Destination>
         <S3BucketDestination>
            <Format>CSV</Format>
            <AccountId>123456789012</AccountId>
            <Bucket>arn:aws:s3:::bucket2</Bucket>
            <Prefix>prefix2</Prefix>
         </S3BucketDestination>
      </Destination>
      <Schedule>
         <Frequency>Daily</Frequency>
```

```
      </Schedule>
      <Filter>
         <Prefix>prefix/Two</Prefix>
      </Filter>
      <IncludedObjectVersions>All</IncludedObjectVersions>
      <OptionalFields>
         <Field>Size</Field>
         <Field>LastModifiedDate</Field>
         <Field>ETag</Field>
         <Field>StorageClass</Field>
         <Field>IsMultipartUploaded</Field>
         <Field>ReplicationStatus</Field>
         <Field>ObjectLockRetainUntilDate</Field>
         <Field>ObjectLockMode</Field>
         <Field>ObjectLockLegalHoldStatus</Field>
      </OptionalFields>
   </InventoryConfiguration>
   <InventoryConfiguration>
      <Id>report3</Id>
      <IsEnabled>true</IsEnabled>
      <Destination>
         <S3BucketDestination>
            <Format>CSV</Format>
            <AccountId>123456789012</AccountId>
            <Bucket>arn:aws:s3:::bucket3</Bucket>
            <Prefix>prefix3</Prefix>
         </S3BucketDestination>
      </Destination>
      <Schedule>
         <Frequency>Daily</Frequency>
      </Schedule>
      <Filter>
         <Prefix>prefix/Three</Prefix>
      </Filter>
      <IncludedObjectVersions>All</IncludedObjectVersions>
      <OptionalFields>
         <Field>Size</Field>
         <Field>LastModifiedDate</Field>
         <Field>ETag</Field>
         <Field>StorageClass</Field>
         <Field>IsMultipartUploaded</Field>
         <Field>ReplicationStatus</Field>
      </OptionalFields>
   </InventoryConfiguration>
```

```
    ...
    <IsTruncated>false</IsTruncated>
    <!-- If ContinuationToken was provided in the request. -->
    <ContinuationToken>...</ContinuationToken>
    <!-- if IsTruncated == true -->
    <IsTruncated>true</IsTruncated>
   <NextContinuationToken>...</NextContinuationToken>
</ListInventoryConfigurationsResult>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListBucketMetricsConfigurations

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Lists the metrics configurations for the bucket. The metrics configurations are only for the request metrics of the bucket and do not provide information on daily storage metrics. You can have up to 1,000 configurations per bucket.

This action supports list pagination and does not return more than 100 configurations at a time. Always check the `IsTruncated` element in the response. If there are no more configurations to list, `IsTruncated` is set to false. If there are more configurations to list, `IsTruncated` is set to true, and there is a value in `NextContinuationToken`. You use the `NextContinuationToken` value to continue the pagination of the list by passing the value in `continuation-token` in the request to `GET` the next page.

To use this operation, you must have permissions to perform the `s3:GetMetricsConfiguration` action. The bucket owner has this permission by default. The bucket owner can grant this permission to others. For more information about permissions, see Permissions Related to Bucket Subresource Operations and Managing Access Permissions to Your Amazon S3 Resources.

For more information about metrics configurations and CloudWatch request metrics, see Monitoring Metrics with Amazon CloudWatch.

The following operations are related to `ListBucketMetricsConfigurations`:

- PutBucketMetricsConfiguration
- GetBucketMetricsConfiguration
- DeleteBucketMetricsConfiguration

Request Syntax

```
GET /?metrics&continuation-token=ContinuationToken HTTP/1.1
Host: Bucket.s3.amazonaws.com
```

```
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket containing the metrics configurations to retrieve.

Required: Yes

continuation-token

The marker that is used to continue a metrics configuration listing that has been truncated. Use the `NextContinuationToken` from a previously truncated list response to continue the listing. The continuation token is an opaque value that Amazon S3 understands.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<ListMetricsConfigurationsResult>
   <IsTruncated>boolean</IsTruncated>
   <ContinuationToken>string</ContinuationToken>
   <NextContinuationToken>string</NextContinuationToken>
   <MetricsConfiguration>
      <Filter>
         <AccessPointArn>string</AccessPointArn>
         <And>
            <AccessPointArn>string</AccessPointArn>
            <Prefix>string</Prefix>
            <Tag>
               <Key>string</Key>
```

```
            <Value>string</Value>
         </Tag>
         ...
      </And>
      <Prefix>string</Prefix>
      <Tag>
         <Key>string</Key>
         <Value>string</Value>
      </Tag>
   </Filter>
   <Id>string</Id>
</MetricsConfiguration>
...
</ListMetricsConfigurationsResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

ListMetricsConfigurationsResult

Root level tag for the ListMetricsConfigurationsResult parameters.

Required: Yes

ContinuationToken

The marker that is used as a starting point for this metrics configuration list response. This value is present if it was sent in the request.

Type: String

IsTruncated

Indicates whether the returned list of metrics configurations is complete. A value of true indicates that the list is not complete and the NextContinuationToken will be provided for a subsequent request.

Type: Boolean

MetricsConfiguration

The list of metrics configurations for a bucket.

Type: Array of MetricsConfiguration data types

NextContinuationToken

The marker used to continue a metrics configuration listing that has been truncated. Use the `NextContinuationToken` from a previously truncated list response to continue the listing. The continuation token is an opaque value that Amazon S3 understands.

Type: String

Examples

Sample Request

Delete the metric configuration with a specified ID, which disables the CloudWatch metrics with the `ExampleMetrics` value for the `FilterId` dimension.

```
GET /?metrics HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
x-amz-date: Thu, 15 Nov 2016 00:17:21 GMT
Authorization: signatureValue
```

Sample Response

Delete the metric configuration with a specified ID, which disables the CloudWatch metrics with the `ExampleMetrics` value for the `FilterId` dimension.

```
HTTP/1.1 200 OK
x-amz-id-2: ITnGT1y4REXAMPLEPi4hklTXouTf0hccUjo0iCPEXAMPLEutBj3M7fPGlWO2SEWp
x-amz-request-id: 51991EXAMPLE5321
Date: Thu, 15 Nov 2016 00:17:22 GMT
Server: AmazonS3
Content-Length: 758

<?xml version="1.0" encoding="UTF-8"?>
<ListMetricsConfigurationsResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
    <MetricsConfiguration>
        <Id>EntireBucket</Id>
    </MetricsConfiguration>
```

```
    <MetricsConfiguration>
        <Id>Documents</Id>
        <Filter>
            <Prefix>documents/</Prefix>
        </Filter>
    </MetricsConfiguration>
    <MetricsConfiguration>
        <Id>BlueDocuments</Id>
        <Filter>
            <And>
                <Prefix>documents/</Prefix>
                <Tag>
                    <Key>class</Key>
                    <Value>blue</Value>
                </Tag>
            </And>
        </Filter>
    </MetricsConfiguration>
    <IsTruncated>false</IsTruncated>
</ListMetricsConfigurationsResult>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListBuckets

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Returns a list of all buckets owned by the authenticated sender of the request. To use this operation, you must have the `s3:ListAllMyBuckets` permission.

For information about Amazon S3 buckets, see Creating, configuring, and working with Amazon S3 buckets.

Request Syntax

```
GET / HTTP/1.1
Host: s3.amazonaws.com
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<ListAllMyBucketsResult>
   <Buckets>
      <Bucket>
         <CreationDate>timestamp</CreationDate>
         <Name>string</Name>
      </Bucket>
   </Buckets>
   <Owner>
      <DisplayName>string</DisplayName>
      <ID>string</ID>
```

```
   </Owner>
</ListAllMyBucketsResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

ListAllMyBucketsResult

Root level tag for the ListAllMyBucketsResult parameters.

Required: Yes

Buckets

The list of buckets owned by the requester.

Type: Array of Bucket data types

Owner

The owner of the buckets listed.

Type: Owner data type

Examples

Sample Request

The following request returns a list of all buckets of the sender.

```
HTTP/1.1 200 OK
<ListAllMyBucketsResult>
   <Buckets>
      <Bucket>
         <CreationDate>2019-12-11T23:32:47+00:00</CreationDate>
         <String>DOC-EXAMPLE-BUCKET</String>
      </Bucket>
      <Bucket>
         <CreationDate>2019-11-10T23:32:13+00:00</CreationDate>
         <String>DOC-EXAMPLE-BUCKET2</String>
```

```
      </Bucket>
   </Buckets>
   <Owner>
      <DisplayName>Account+Name</DisplayName>
      <ID>AIDACKCEVSQ6C2EXAMPLE</ID>
   </Owner>
</ListAllMyBucketsResult>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListDirectoryBuckets

Service: Amazon S3

Returns a list of all Amazon S3 directory buckets owned by the authenticated sender of the request. For more information about directory buckets, see Directory buckets in the *Amazon S3 User Guide*.

> **Note**
>
> **Directory buckets** - For directory buckets, you must make requests for this API operation to the Regional endpoint. These endpoints support path-style requests in the format `https://s3express-control.region_code.amazonaws.com/bucket-name` . Virtual-hosted-style requests aren't supported. For more information, see Regional and Zonal endpoints in the *Amazon S3 User Guide*.

Permissions

You must have the `s3express:ListAllMyDirectoryBuckets` permission in an IAM identity-based policy instead of a bucket policy. Cross-account access to this API operation isn't supported. This operation can only be performed by the AWS account that owns the resource. For more information about directory bucket policies and permissions, see AWS Identity and Access Management (IAM) for S3 Express One Zone in the *Amazon S3 User Guide*.

HTTP Host header syntax

Directory buckets - The HTTP Host header syntax is `s3express-control.region.amazonaws.com`.

Request Syntax

```
GET /?continuation-token=ContinuationToken&max-directory-buckets=MaxDirectoryBuckets
 HTTP/1.1
Host: s3.amazonaws.com
```

URI Request Parameters

The request uses the following URI parameters.

continuation-token

ContinuationToken indicates to Amazon S3 that the list is being continued on this bucket with a token. ContinuationToken is obfuscated and is not a real key. You can use this ContinuationToken for pagination of the list results.

Length Constraints: Minimum length of 0. Maximum length of 1024.

max-directory-buckets

Maximum number of buckets to be returned in response. When the number is more than the count of buckets that are owned by an AWS account, return all the buckets in response.

Valid Range: Minimum value of 0. Maximum value of 1000.

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<ListDirectoryBucketsOutput>
   <Buckets>
      <Bucket>
         <CreationDate>timestamp</CreationDate>
         <Name>string</Name>
      </Bucket>
   </Buckets>
   <ContinuationToken>string</ContinuationToken>
</ListDirectoryBucketsOutput>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

ListDirectoryBucketsOutput

Root level tag for the ListDirectoryBucketsOutput parameters.

Required: Yes

Buckets

The list of buckets owned by the requester.

Type: Array of Bucket data types

ContinuationToken

If `ContinuationToken` was sent with the request, it is included in the response. You can use the returned `ContinuationToken` for pagination of the list response.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1024.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListMultipartUploads

Service: Amazon S3

This operation lists in-progress multipart uploads in a bucket. An in-progress multipart upload is a multipart upload that has been initiated by the `CreateMultipartUpload` request, but has not yet been completed or aborted.

> **Note**
>
> **Directory buckets** - If multipart uploads in a directory bucket are in progress, you can't delete the bucket until all the in-progress multipart uploads are aborted or completed. To delete these in-progress multipart uploads, use the `ListMultipartUploads` operation to list the in-progress multipart uploads in the bucket and use the `AbortMultupartUpload` operation to abort all the in-progress multipart uploads.

The `ListMultipartUploads` operation returns a maximum of 1,000 multipart uploads in the response. The limit of 1,000 multipart uploads is also the default value. You can further limit the number of uploads in a response by specifying the `max-uploads` request parameter. If there are more than 1,000 multipart uploads that satisfy your `ListMultipartUploads` request, the response returns an `IsTruncated` element with the value of `true`, a `NextKeyMarker` element, and a `NextUploadIdMarker` element. To list the remaining multipart uploads, you need to make subsequent `ListMultipartUploads` requests. In these requests, include two query parameters: `key-marker` and `upload-id-marker`. Set the value of `key-marker` to the `NextKeyMarker` value from the previous response. Similarly, set the value of `upload-id-marker` to the `NextUploadIdMarker` value from the previous response.

> **Note**
>
> **Directory buckets** - The `upload-id-marker` element and the `NextUploadIdMarker` element aren't supported by directory buckets. To list the additional multipart uploads, you only need to set the value of `key-marker` to the `NextKeyMarker` value from the previous response.

For more information about multipart uploads, see Uploading Objects Using Multipart Upload in the *Amazon S3 User Guide*.

> **Note**
>
> **Directory buckets** - For directory buckets, you must make requests for this API operation to the Zonal endpoint. These endpoints support virtual-hosted-style requests in the format `https://bucket_name.s3express-az_id.region.amazonaws.com/key-name`. Path-style requests are not supported. For more information, see Regional and Zonal endpoints in the *Amazon S3 User Guide*.

Permissions

- **General purpose bucket permissions** - For information about permissions required to use the multipart upload API, see Multipart Upload and Permissions in the *Amazon S3 User Guide*.
- **Directory bucket permissions** - To grant access to this API operation on a directory bucket, we recommend that you use the `CreateSession` API operation for session-based authorization. Specifically, you grant the `s3express:CreateSession` permission to the directory bucket in a bucket policy or an IAM identity-based policy. Then, you make the `CreateSession` API call on the bucket to obtain a session token. With the session token in your request header, you can make API requests to this operation. After the session token expires, you make another `CreateSession` API call to generate a new session token for use. AWS CLI or SDKs create session and refresh the session token automatically to avoid service interruptions when a session expires. For more information about authorization, see `CreateSession`.

Sorting of multipart uploads in response

- **General purpose bucket** - In the `ListMultipartUploads` response, the multipart uploads are sorted based on two criteria:
  - Key-based sorting - Multipart uploads are initially sorted in ascending order based on their object keys.
  - Time-based sorting - For uploads that share the same object key, they are further sorted in ascending order based on the upload initiation time. Among uploads with the same key, the one that was initiated first will appear before the ones that were initiated later.
- **Directory bucket** - In the `ListMultipartUploads` response, the multipart uploads aren't sorted lexicographically based on the object keys.

HTTP Host header syntax

Directory buckets - The HTTP Host header syntax is *Bucket_name*.s3express-*az_id*.*region*.amazonaws.com.

The following operations are related to `ListMultipartUploads`:

- CreateMultipartUpload
- UploadPart
- CompleteMultipartUpload
- ListParts
- AbortMultipartUpload

Request Syntax

```
GET /?uploads&delimiter=Delimiter&encoding-type=EncodingType&key-marker=KeyMarker&max-
uploads=MaxUploads&prefix=Prefix&upload-id-marker=UploadIdMarker HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
x-amz-request-payer: RequestPayer
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket to which the multipart upload was initiated.

Directory buckets - When you use this operation with a directory bucket, you must use virtual-hosted-style requests in the format *Bucket_name*.s3express-*az_id*.*region*.amazonaws.com. Path-style requests are not supported. Directory bucket names must be unique in the chosen Availability Zone. Bucket names must follow the format *bucket_base_name*--*az-id*--x-s3 (for example, *DOC-EXAMPLE-BUCKET*--*usw2-az1*--x-s3). For information about bucket naming restrictions, see Directory bucket naming rules in the *Amazon S3 User Guide*.

Access points - When you use this action with an access point, you must provide the alias of the access point in place of the bucket name or specify the access point ARN. When using the access

point ARN, you must direct requests to the access point hostname. The access point hostname takes the form *AccessPointName-AccountId*.s3-accesspoint.*Region*.amazonaws.com. When using this action with an access point through the AWS SDKs, you provide the access point ARN in place of the bucket name. For more information about access point ARNs, see Using access points in the *Amazon S3 User Guide*.

> **Note**
>
> Access points and Object Lambda access points are not supported by directory buckets.

S3 on Outposts - When you use this action with Amazon S3 on Outposts, you must direct requests to the S3 on Outposts hostname. The S3 on Outposts hostname takes the form *`AccessPointName-AccountId.outpostID`*`.s3-outposts.`*`Region`*`.amazonaws.com`. When you use this action with S3 on Outposts through the AWS SDKs, you provide the Outposts access point ARN in place of the bucket name. For more information about S3 on Outposts ARNs, see What is S3 on Outposts? in the *Amazon S3 User Guide*.

Required: Yes

delimiter

Character you use to group keys.

All keys that contain the same string between the prefix, if specified, and the first occurrence of the delimiter after the prefix are grouped under a single result element, `CommonPrefixes`. If you don't specify the prefix parameter, then the substring starts at the beginning of the key. The keys that are grouped under `CommonPrefixes` result element are not returned elsewhere in the response.

> **Note**
>
> **Directory buckets** - For directory buckets, `/` is the only supported delimiter.

encoding-type

Requests Amazon S3 to encode the object keys in the response and specifies the encoding method to use. An object key can contain any Unicode character; however, the XML 1.0

parser cannot parse some characters, such as characters with an ASCII value from 0 to 10. For characters that are not supported in XML 1.0, you can add this parameter to request that Amazon S3 encode the keys in the response.

Valid Values: `url`

key-marker

Specifies the multipart upload after which listing should begin.

> **Note**
>
> - **General purpose buckets** - For general purpose buckets, `key-marker` is an object key. Together with `upload-id-marker`, this parameter specifies the multipart upload after which listing should begin.
>
> If `upload-id-marker` is not specified, only the keys lexicographically greater than the specified `key-marker` will be included in the list.
>
> If `upload-id-marker` is specified, any multipart uploads for a key equal to the `key-marker` might also be included, provided those multipart uploads have upload IDs lexicographically greater than the specified `upload-id-marker`.
> - **Directory buckets** - For directory buckets, `key-marker` is obfuscated and isn't a real object key. The `upload-id-marker` parameter isn't supported by directory buckets. To list the additional multipart uploads, you only need to set the value of `key-marker` to the `NextKeyMarker` value from the previous response.
>
> In the `ListMultipartUploads` response, the multipart uploads aren't sorted lexicographically based on the object keys.

max-uploads

Sets the maximum number of multipart uploads, from 1 to 1,000, to return in the response body. 1,000 is the maximum number of uploads that can be returned in a response.

prefix

Lists in-progress uploads only for those keys that begin with the specified prefix. You can use prefixes to separate a bucket into different grouping of keys. (You can think of using `prefix` to make groups in the same way that you'd use a folder in a file system.)

> **Note**
>
> **Directory buckets** - For directory buckets, only prefixes that end in a delimiter (/) are supported.

upload-id-marker

Together with key-marker, specifies the multipart upload after which listing should begin. If key-marker is not specified, the upload-id-marker parameter is ignored. Otherwise, any multipart uploads for a key equal to the key-marker might be included in the list only if they have an upload ID lexicographically greater than the specified `upload-id-marker`.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-request-payer

Confirms that the requester knows that they will be charged for the request. Bucket owners need not specify this parameter in their requests. If either the source or destination S3 bucket has Requester Pays enabled, the requester will pay for corresponding charges to copy the object. For information about downloading objects from Requester Pays buckets, see Downloading Objects in Requester Pays Buckets in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
x-amz-request-charged: RequestCharged
<?xml version="1.0" encoding="UTF-8"?>
<ListMultipartUploadsResult>
   <Bucket>string</Bucket>
   <KeyMarker>string</KeyMarker>
   <UploadIdMarker>string</UploadIdMarker>
   <NextKeyMarker>string</NextKeyMarker>
   <Prefix>string</Prefix>
   <Delimiter>string</Delimiter>
   <NextUploadIdMarker>string</NextUploadIdMarker>
   <MaxUploads>integer</MaxUploads>
   <IsTruncated>boolean</IsTruncated>
   <Upload>
      <ChecksumAlgorithm>string</ChecksumAlgorithm>
      <Initiated>timestamp</Initiated>
      <Initiator>
         <DisplayName>string</DisplayName>
         <ID>string</ID>
      </Initiator>
      <Key>string</Key>
      <Owner>
         <DisplayName>string</DisplayName>
         <ID>string</ID>
      </Owner>
      <StorageClass>string</StorageClass>
      <UploadId>string</UploadId>
   </Upload>
   ...
   <CommonPrefixes>
      <Prefix>string</Prefix>
   </CommonPrefixes>
   ...
   <EncodingType>string</EncodingType>
</ListMultipartUploadsResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The response returns the following HTTP headers.

x-amz-request-charged

If present, indicates that the requester was successfully charged for the request.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

The following data is returned in XML format by the service.

ListMultipartUploadsResult

Root level tag for the ListMultipartUploadsResult parameters.

Required: Yes

Bucket

The name of the bucket to which the multipart upload was initiated. Does not return the access point ARN or access point alias if used.

Type: String

CommonPrefixes

If you specify a delimiter in the request, then the result returns each distinct key prefix containing the delimiter in a `CommonPrefixes` element. The distinct key prefixes are returned in the `Prefix` child element.

> **Note**
>
> **Directory buckets** - For directory buckets, only prefixes that end in a delimiter (/) are supported.

Type: Array of CommonPrefix data types

Delimiter

Contains the delimiter you specified in the request. If you don't specify a delimiter in your request, this element is absent from the response.

> **Note**
>
> **Directory buckets** - For directory buckets, / is the only supported delimiter.

Type: String

EncodingType

Encoding type used by Amazon S3 to encode object keys in the response.

If you specify the `encoding-type` request parameter, Amazon S3 includes this element in the response, and returns encoded key name values in the following response elements:

`Delimiter`, `KeyMarker`, `Prefix`, `NextKeyMarker`, `Key`.

Type: String

Valid Values: `url`

IsTruncated

Indicates whether the returned list of multipart uploads is truncated. A value of true indicates that the list was truncated. The list can be truncated if the number of multipart uploads exceeds the limit allowed or specified by max uploads.

Type: Boolean

KeyMarker

The key at or after which the listing began.

Type: String

MaxUploads

Maximum number of multipart uploads that could have been included in the response.

Type: Integer

NextKeyMarker

When a list is truncated, this element specifies the value that should be used for the key-marker request parameter in a subsequent request.

Type: String

NextUploadIdMarker

When a list is truncated, this element specifies the value that should be used for the `upload-id-marker` request parameter in a subsequent request.

> **Note**
>
> This functionality is not supported for directory buckets.

Type: String

Prefix

When a prefix is provided in the request, this field contains the specified prefix. The result contains only keys starting with the specified prefix.

> **Note**
>
> **Directory buckets** - For directory buckets, only prefixes that end in a delimiter (/) are supported.

Type: String

Upload

Container for elements related to a particular multipart upload. A response can contain zero or more `Upload` elements.

Type: Array of MultipartUpload data types

UploadIdMarker

Together with key-marker, specifies the multipart upload after which listing should begin. If key-marker is not specified, the upload-id-marker parameter is ignored. Otherwise, any

multipart uploads for a key equal to the key-marker might be included in the list only if they have an upload ID lexicographically greater than the specified `upload-id-marker`.

> **Note**
>
> This functionality is not supported for directory buckets.

Type: String

Examples

Sample Request for general purpose buckets

The following request lists three multipart uploads. The request specifies the `max-uploads` request parameter to set the maximum number of multipart uploads to return in the response body.

```
GET /?uploads&max-uploads=3 HTTP/1.1
Host: example-bucket.s3.<Region>.amazonaws.com
Date: Mon, 1 Nov 2010 20:34:56 GMT
Authorization: authorization string
```

Sample Response for general purpose buckets

The following sample response indicates that the multipart upload list was truncated and provides the `NextKeyMarker` and the `NextUploadIdMarker` elements. You specify these values in your subsequent requests to read the next set of multipart uploads. That is, send a subsequent request specifying `key-marker=my-movie2.m2ts` (value of the `NextKeyMarker` element) and `upload-id-marker=YW55IGlkZWEgd2h5IGVsdmluZydzIHVwbG9hZCBmYWlsZWQ` (value of the `NextUploadIdMarker`).

The sample response also shows a case of two multipart uploads in progress with the same key (`my-movie.m2ts`). That is, the response shows two uploads with the same key. This response shows the uploads sorted by key, and within each key the uploads are sorted in ascending order by the time the multipart upload was initiated.

```
HTTP/1.1 200 OK
x-amz-id-2: Uuag1LuByRx9e6j5Onimru9pO4ZVKnJ2Qz7/C1NPcfTWAtRPfTaOFg==
x-amz-request-id: 656c76696e6727732072657175657374
Date: Mon, 1 Nov 2010 20:34:56 GMT
Content-Length: 1330
Connection: keep-alive
Server: AmazonS3

<?xml version="1.0" encoding="UTF-8"?>
<ListMultipartUploadsResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Bucket>bucket</Bucket>
  <KeyMarker></KeyMarker>
  <UploadIdMarker></UploadIdMarker>
  <NextKeyMarker>my-movie.m2ts</NextKeyMarker>
  <NextUploadIdMarker>YW55IGlkZWEgd2h5IGVsdmluZydzIHVwbG9hZCBmYWlsZWQ</
NextUploadIdMarker>
  <MaxUploads>3</MaxUploads>
  <IsTruncated>true</IsTruncated>
  <Upload>
    <Key>my-divisor</Key>
    <UploadId>XMgbGlrZSBlbHZpbmcncyBub3QgaGF2aW5nIG11Y2ggbHVjaw</UploadId>
    <Initiator>
      <ID>arn:aws:iam::111122223333:user/user1-11111a31-17b5-4fb7-9df5-b111111f13de</
ID>
      <DisplayName>user1-11111a31-17b5-4fb7-9df5-b111111f13de</DisplayName>
    </Initiator>
    <Owner>
      <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
      <DisplayName>OwnerDisplayName</DisplayName>
    </Owner>
    <StorageClass>STANDARD</StorageClass>
    <Initiated>2010-11-10T20:48:33.000Z</Initiated>
  </Upload>
  <Upload>
    <Key>my-movie.m2ts</Key>
    <UploadId>VXBsb2FkIElEIGZvciBlbHZpbmcncyBteS1tb3ZpZS5tMnRzIHVwbG9hZA</UploadId>
    <Initiator>
      <ID>b1d16700c70b0b05597d7acd6a3f92be</ID>
      <DisplayName>InitiatorDisplayName</DisplayName>
    </Initiator>
    <Owner>
      <ID>b1d16700c70b0b05597d7acd6a3f92be</ID>
      <DisplayName>OwnerDisplayName</DisplayName>
    </Owner>
```

```
    <StorageClass>STANDARD</StorageClass>
    <Initiated>2010-11-10T20:48:33.000Z</Initiated>
  </Upload>
  <Upload>
    <Key>my-movie.m2ts</Key>
    <UploadId>YW55IGlkZWEgd2h5IGVsdmluZydzIHVwbG9hZCBmYWlsZWQ</UploadId>
    <Initiator>
      <ID>arn:aws:iam::444455556666:user/user1-22222a31-17b5-4fb7-9df5-b222222f13de</
ID>
      <DisplayName>user1-22222a31-17b5-4fb7-9df5-b222222f13de</DisplayName>
    </Initiator>
    <Owner>
      <ID>b1d16700c70b0b05597d7acd6a3f92be</ID>
      <DisplayName>OwnerDisplayName</DisplayName>
    </Owner>
    <StorageClass>STANDARD</StorageClass>
    <Initiated>2010-11-10T20:49:33.000Z</Initiated>
  </Upload>
</ListMultipartUploadsResult>
```

Sample Request for general purpose buckets: Using the delimiter and the prefix parameters

Assume you have a multipart upload in progress for the following keys in your bucket, `example-bucket`.

- photos/2006/January/sample.jpg
- photos/2006/February/sample.jpg
- photos/2006/March/sample.jpg
- videos/2006/March/sample.wmv
- sample.jpg

The following list multipart upload request specifies the delimiter parameter with value "/".

```
GET /?uploads&delimiter=/ HTTP/1.1
Host: example-bucket.s3.<Region>.amazonaws.com
Date: Mon, 1 Nov 2010 20:34:56 GMT
Authorization: authorization string
```

Sample Response for general purpose buckets

The following sample response lists multipart uploads on the specified bucket, `example-bucket`.

The response returns multipart upload for the `sample.jpg` key in an <Upload> element.

However, because all the other keys contain the specified delimiter, a distinct substring, from the beginning of the key to the first occurrence of the delimiter, from each of these keys is returned in a <CommonPrefixes> element. The key substrings, `photos/` and `videos/` in the <CommonPrefixes> element, indicate that there are one or more in-progress multipart uploads with these key prefixes.

This is a useful scenario if you use key prefixes for your objects to create a logical folder like structure. In this case, you can interpret the result as the folders `photos/` and `videos/` have one or more multipart uploads in progress.

```
<ListMultipartUploadsResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Bucket>example-bucket</Bucket>
  <KeyMarker/>
  <UploadIdMarker/>
  <NextKeyMarker>sample.jpg</NextKeyMarker>

 <NextUploadIdMarker>Xgw4MJT6ZPAVxpY0SAuGN7q4uWJJM22ZYg1W99trdp4tpO88.PT6.MhO0w2E17eutfAvQfQWoa
</NextUploadIdMarker>
  <Delimiter>/</Delimiter>
  <Prefix/>
  <MaxUploads>1000</MaxUploads>
  <IsTruncated>false</IsTruncated>
  <Upload>
    <Key>sample.jpg</Key>

 <UploadId>Agw4MJT6ZPAVxpY0SAuGN7q4uWJJM22ZYg1N99trdp4tpO88.PT6.MhO0w2E17eutfAvQfQWoajgE_W2gpcx
</UploadId>
    <Initiator>
      <ID>314133b66967d86f031c7249d1d9a80249109428335cd0ef1cdc487b4566cb1b</ID>
      <DisplayName>string</DisplayName>
    </Initiator>
    <Owner>
      <ID>314133b66967d86f031c7249d1d9a80249109428335cd0ef1cdc487b4566cb1b</ID>
      <DisplayName>string</DisplayName>
    </Owner>
    <StorageClass>STANDARD</StorageClass>
```

```
    <Initiated>2010-11-26T19:24:17.000Z</Initiated>
  </Upload>
  <CommonPrefixes>
    <Prefix>photos/</Prefix>
  </CommonPrefixes>
  <CommonPrefixes>
    <Prefix>videos/</Prefix>
  </CommonPrefixes>
  </ListMultipartUploadsResult>
```

Sample Request for general purpose buckets

In addition to the delimiter parameter, you can filter results by adding a prefix parameter as shown in the following request.

```
GET /?uploads&delimiter=/&prefix=photos/2006/ HTTP/1.1
Host: example-bucket.s3.<Region>.amazonaws.com
Date: Mon, 1 Nov 2010 20:34:56 GMT
Authorization: authorization string
```

Sample Response for general purpose buckets

In this case, the response will include only multipart uploads for keys that start with the specified prefix. The value returned in the <CommonPrefixes> element is a substring from the beginning of the key to the first occurrence of the specified delimiter after the prefix.

```
<?xml version="1.0" encoding="UTF-8"?>
<ListMultipartUploadsResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Bucket>example-bucket</Bucket>
  <KeyMarker/>
  <UploadIdMarker/>
  <NextKeyMarker/>
  <NextUploadIdMarker/>
  <Delimiter>/</Delimiter>
  <Prefix>photos/2006/</Prefix>
  <MaxUploads>1000</MaxUploads>
  <IsTruncated>false</IsTruncated>
  <CommonPrefixes>
```

```
    <Prefix>photos/2006/February/</Prefix>
  </CommonPrefixes>
  <CommonPrefixes>
    <Prefix>photos/2006/January/</Prefix>
  </CommonPrefixes>
  <CommonPrefixes>
    <Prefix>photos/2006/March/</Prefix>
  </CommonPrefixes>
</ListMultipartUploadsResult>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListObjects

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Returns some or all (up to 1,000) of the objects in a bucket. You can use the request parameters as selection criteria to return a subset of the objects in a bucket. A 200 OK response can contain valid or invalid XML. Be sure to design your application to parse the contents of the response and handle it appropriately.

> **Important**
>
> This action has been revised. We recommend that you use the newer version, ListObjectsV2, when developing applications. For backward compatibility, Amazon S3 continues to support `ListObjects`.

The following operations are related to `ListObjects`:

- ListObjectsV2
- GetObject
- PutObject
- CreateBucket
- ListBuckets

Request Syntax

```
GET /?delimiter=Delimiter&encoding-type=EncodingType&marker=Marker&max-
keys=MaxKeys&prefix=Prefix HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-request-payer: RequestPayer
x-amz-expected-bucket-owner: ExpectedBucketOwner
x-amz-optional-object-attributes: OptionalObjectAttributes
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket containing the objects.

Directory buckets - When you use this operation with a directory bucket, you must use virtual-hosted-style requests in the format *Bucket_name*.s3express-*az_id*.*region*.amazonaws.com. Path-style requests are not supported. Directory bucket names must be unique in the chosen Availability Zone. Bucket names must follow the format *bucket_base_name*--*az-id*--x-s3 (for example, *DOC-EXAMPLE-BUCKET*--*usw2-az1*--x-s3). For information about bucket naming restrictions, see Directory bucket naming rules in the *Amazon S3 User Guide*.

Access points - When you use this action with an access point, you must provide the alias of the access point in place of the bucket name or specify the access point ARN. When using the access point ARN, you must direct requests to the access point hostname. The access point hostname takes the form *AccessPointName-AccountId*.s3-accesspoint.*Region*.amazonaws.com. When using this action with an access point through the AWS SDKs, you provide the access point ARN in place of the bucket name. For more information about access point ARNs, see Using access points in the *Amazon S3 User Guide*.

> **Note**
>
> Access points and Object Lambda access points are not supported by directory buckets.

S3 on Outposts - When you use this action with Amazon S3 on Outposts, you must direct requests to the S3 on Outposts hostname. The S3 on Outposts hostname takes the form *AccessPointName-AccountId*.*outpostID*.s3-outposts.*Region*.amazonaws.com. When you use this action with S3 on Outposts through the AWS SDKs, you provide the Outposts access point ARN in place of the bucket name. For more information about S3 on Outposts ARNs, see What is S3 on Outposts? in the *Amazon S3 User Guide*.

Required: Yes

delimiter

A delimiter is a character that you use to group keys.

encoding-type

Requests Amazon S3 to encode the object keys in the response and specifies the encoding method to use. An object key can contain any Unicode character; however, the XML 1.0 parser cannot parse some characters, such as characters with an ASCII value from 0 to 10. For characters that are not supported in XML 1.0, you can add this parameter to request that Amazon S3 encode the keys in the response.

Valid Values: `url`

marker

Marker is where you want Amazon S3 to start listing from. Amazon S3 starts listing after this specified key. Marker can be any key in the bucket.

max-keys

Sets the maximum number of keys returned in the response. By default, the action returns up to 1,000 key names. The response might contain fewer keys but will never contain more.

prefix

Limits the response to keys that begin with the specified prefix.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-optional-object-attributes

Specifies the optional fields that you want returned in the response. Fields that you do not specify are not returned.

Valid Values: `RestoreStatus`

x-amz-request-payer

Confirms that the requester knows that she or he will be charged for the list objects request. Bucket owners need not specify this parameter in their requests.

Valid Values: `requester`

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
x-amz-request-charged: RequestCharged
<?xml version="1.0" encoding="UTF-8"?>
<ListBucketResult>
   <IsTruncated>boolean</IsTruncated>
   <Marker>string</Marker>
   <NextMarker>string</NextMarker>
   <Contents>
      <ChecksumAlgorithm>string</ChecksumAlgorithm>
      ...
      <ETag>string</ETag>
      <Key>string</Key>
      <LastModified>timestamp</LastModified>
      <Owner>
         <DisplayName>string</DisplayName>
         <ID>string</ID>
      </Owner>
      <RestoreStatus>
         <IsRestoreInProgress>boolean</IsRestoreInProgress>
         <RestoreExpiryDate>timestamp</RestoreExpiryDate>
      </RestoreStatus>
      <Size>long</Size>
      <StorageClass>string</StorageClass>
   </Contents>
   ...
   <Name>string</Name>
   <Prefix>string</Prefix>
   <Delimiter>string</Delimiter>
   <MaxKeys>integer</MaxKeys>
   <CommonPrefixes>
      <Prefix>string</Prefix>
   </CommonPrefixes>
   ...
   <EncodingType>string</EncodingType>
</ListBucketResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The response returns the following HTTP headers.

x-amz-request-charged

If present, indicates that the requester was successfully charged for the request.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

The following data is returned in XML format by the service.

ListBucketResult

Root level tag for the ListBucketResult parameters.

Required: Yes

CommonPrefixes

All of the keys (up to 1,000) rolled up in a common prefix count as a single return when calculating the number of returns.

A response can contain `CommonPrefixes` only if you specify a delimiter.

`CommonPrefixes` contains all (if there are any) keys between `Prefix` and the next occurrence of the string specified by the delimiter.

`CommonPrefixes` lists keys that act like subdirectories in the directory specified by `Prefix`.

For example, if the prefix is `notes/` and the delimiter is a slash (`/`), as in `notes/summer/july`, the common prefix is `notes/summer/`. All of the keys that roll up into a common prefix count as a single return when calculating the number of returns.

Type: Array of CommonPrefix data types

Contents

Metadata about each object returned.

Type: Array of Object data types

Delimiter

Causes keys that contain the same string between the prefix and the first occurrence of the delimiter to be rolled up into a single result element in the `CommonPrefixes` collection. These rolled-up keys are not returned elsewhere in the response. Each rolled-up result counts as only one return against the `MaxKeys` value.

Type: String

EncodingType

Encoding type used by Amazon S3 to encode object keys in the response. If using `url`, non-ASCII characters used in an object's key name will be URL encoded. For example, the object `test_file(3).png` will appear as `test_file%283%29.png`.

Type: String

Valid Values: `url`

IsTruncated

A flag that indicates whether Amazon S3 returned all of the results that satisfied the search criteria.

Type: Boolean

Marker

Indicates where in the bucket listing begins. Marker is included in the response if it was sent with the request.

Type: String

MaxKeys

The maximum number of keys returned in the response body.

Type: Integer

Name

The bucket name.

Type: String

NextMarker

When the response is truncated (the `IsTruncated` element value in the response is `true`), you can use the key name in this field as the `marker` parameter in the subsequent request to get the next set of objects. Amazon S3 lists objects in alphabetical order.

> **Note**
>
> This element is returned only if you have the `delimiter` request parameter specified. If the response does not include the `NextMarker` element and it is truncated, you can use the value of the last `Key` element in the response as the `marker` parameter in the subsequent request to get the next set of object keys.

Type: String

Prefix

Keys that begin with the indicated prefix.

Type: String

Errors

NoSuchBucket

The specified bucket does not exist.

HTTP Status Code: 404

Examples

Sample Request

This request returns the objects in `BucketName`.

```
GET / HTTP/1.1
Host: BucketName.s3.<Region>.amazonaws.com
Date: Wed, 12 Oct 2009 17:50:00 GMT
Authorization: authorization string
Content-Type: text/plain
```

Sample Response

This example illustrates one usage of ListObjects.

```
<?xml version="1.0" encoding="UTF-8"?>
<ListBucketResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
    <Name>bucket</Name>
    <Prefix/>
    <Marker/>
    <MaxKeys>1000</MaxKeys>
    <IsTruncated>false</IsTruncated>
    <Contents>
        <Key>my-image.jpg</Key>
        <LastModified>2009-10-12T17:50:30.000Z</LastModified>
        <ETag>"fba9dede5f27731c9771645a39863328"</ETag>
        <Size>434234</Size>
        <StorageClass>STANDARD</StorageClass>
        <Owner>
            <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
            <DisplayName>mtd@amazon.com</DisplayName>
        </Owner>
    </Contents>
    <Contents>
       <Key>my-third-image.jpg</Key>
         <LastModified>2009-10-12T17:50:30.000Z</LastModified>
         <ETag>"1b2cf535f27731c974343645a3985328"</ETag>
         <Size>64994</Size>
         <StorageClass>STANDARD_IA</StorageClass>
         <Owner>
            <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
            <DisplayName>mtd@amazon.com</DisplayName>
        </Owner>
    </Contents>
```

```
</ListBucketResult>
```

Sample Request: Using request parameters

This example lists up to 40 keys in the quotes bucket that start with N and occur lexicographically after Ned.

```
GET /?prefix=N&marker=Ned&max-keys=40 HTTP/1.1
Host: quotes.s3.<Region>.amazonaws.com
Date: Wed, 01 Mar  2006 12:00:00 GMT
Authorization: authorization string
```

Sample Response

This example illustrates one usage of ListObjects.

```
HTTP/1.1 200 OK
x-amz-id-2: gyB+3jRPnrkN98ZajxHXr3u7EFM67bNgSAxexeEHndCX/7GRnfTXxReKUQF28IfP
x-amz-request-id: 3B3C7C725673C630
Date: Wed, 01 Mar  2006 12:00:00 GMT
Content-Type: application/xml
Content-Length: 302
Connection: close
Server: AmazonS3

<?xml version="1.0" encoding="UTF-8"?>
<ListBucketResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Name>quotes</Name>
  <Prefix>N</Prefix>
  <Marker>Ned</Marker>
  <MaxKeys>40</MaxKeys>
  <IsTruncated>false</IsTruncated>
  <Contents>
    <Key>Nelson</Key>
    <LastModified>2006-01-01T12:00:00.000Z</LastModified>
    <ETag>"828ef3fdfa96f00ad9f27c383fc9ac7f"</ETag>
    <Size>5</Size>
```

```
    <StorageClass>STANDARD</StorageClass>
    <Owner>
      <ID>bcaf161ca5fb16fd081034f</ID>
      <DisplayName>webfile</DisplayName>
     </Owner>
  </Contents>
  <Contents>
    <Key>Neo</Key>
    <LastModified>2006-01-01T12:00:00.000Z</LastModified>
    <ETag>"828ef3fdfa96f00ad9f27c383fc9ac7f"</ETag>
    <Size>4</Size>
    <StorageClass>STANDARD</StorageClass>
     <Owner>
      <ID>bcaf1ffd86a5fb16fd081034f</ID>
      <DisplayName>webfile</DisplayName>
    </Owner>
 </Contents>
</ListBucketResult>
```

Sample Request: Using a prefix and delimiter

For this example, we assume that you have the following keys in your bucket:

- `sample.jpg`
- `photos/2006/January/sample.jpg`
- `photos/2006/February/sample2.jpg`
- `photos/2006/February/sample3.jpg`
- `photos/2006/February/sample4.jpg`

The following `GET` request specifies the `delimiter` parameter with a value of `/`.

```
GET /?delimiter=/ HTTP/1.1
Host: example-bucket.s3.<Region>.amazonaws.com
Date: Wed, 01 Mar  2006 12:00:00 GMT
Authorization: authorization string
```

Sample Response

The key `sample.jpg` does not contain the delimiter character, and Amazon S3 returns it in the `Contents` element in the response. However, all of the other keys contain the delimiter character. Amazon S3 groups these keys and returns a single `CommonPrefixes` element with the `Prefix` value `photos/`, which is a substring from the beginning of these keys to the first occurrence of the specified delimiter.

```
<ListBucketResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Name>example-bucket</Name>
  <Prefix></Prefix>
  <Marker></Marker>
  <MaxKeys>1000</MaxKeys>
  <Delimiter>/</Delimiter>
  <IsTruncated>false</IsTruncated>
  <Contents>
    <Key>sample.jpg</Key>
    <LastModified>2011-02-26T01:56:20.000Z</LastModified>
    <ETag>"bf1d737a4d46a19f3bced6905cc8b902"</ETag>
    <Size>142863</Size>
    <Owner>
      <ID>canonical-user-id</ID>
      <DisplayName>display-name</DisplayName>
    </Owner>
    <StorageClass>STANDARD</StorageClass>
  </Contents>
  <CommonPrefixes>
    <Prefix>photos/</Prefix>
  </CommonPrefixes>
</ListBucketResult>
```

Sample Request

The following `GET` request specifies the `delimiter` parameter with the value `/`, and the `prefix` parameter with the value `photos/2006/`.

```
GET /?prefix=photos/2006/&delimiter=/ HTTP/1.1
Host: example-bucket.s3.<Region>.amazonaws.com
```

```
Date: Wed, 01 Mar  2006 12:00:00 GMT
Authorization: authorization string
```

Sample Response

In response, Amazon S3 returns only the keys that start with the specified prefix. Amazon S3 uses the delimiter character to group keys that contain the same substring until the first occurrence of the delimiter character after the specified prefix. For each such key group, Amazon S3 returns one `CommonPrefixes` element in the response. The keys grouped under this `CommonPrefixes` element are not returned elsewhere in the response. The value returned in the `CommonPrefixes` element is a substring that starts at the beginning of the key and ends at the first occurrence of the specified delimiter after the prefix.

```
<ListBucketResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Name>example-bucket</Name>
  <Prefix>photos/2006/</Prefix>
  <Marker></Marker>
  <MaxKeys>1000</MaxKeys>
  <Delimiter>/</Delimiter>
  <IsTruncated>false</IsTruncated>

  <CommonPrefixes>
    <Prefix>photos/2006/February/</Prefix>
  </CommonPrefixes>
  <CommonPrefixes>
    <Prefix>photos/2006/January/</Prefix>
  </CommonPrefixes>
</ListBucketResult>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET

- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListObjectsV2

Service: Amazon S3

Returns some or all (up to 1,000) of the objects in a bucket with each request. You can use the request parameters as selection criteria to return a subset of the objects in a bucket. A `200 OK` response can contain valid or invalid XML. Make sure to design your application to parse the contents of the response and handle it appropriately. For more information about listing objects, see Listing object keys programmatically in the *Amazon S3 User Guide*. To get a list of your buckets, see ListBuckets.

> **Note**
>
> - **General purpose bucket** - For general purpose buckets, `ListObjectsV2` doesn't return prefixes that are related only to in-progress multipart uploads.
> - **Directory buckets** - For directory buckets, `ListObjectsV2` response includes the prefixes that are related only to in-progress multipart uploads.
> - **Directory buckets** - For directory buckets, you must make requests for this API operation to the Zonal endpoint. These endpoints support virtual-hosted-style requests in the format `https://bucket_name.s3express-az_id.region.amazonaws.com/key-name` . Path-style requests are not supported. For more information, see Regional and Zonal endpoints in the *Amazon S3 User Guide*.

Permissions

- **General purpose bucket permissions** - To use this operation, you must have READ access to the bucket. You must have permission to perform the `s3:ListBucket` action. The bucket owner has this permission by default and can grant this permission to others. For more information about permissions, see Permissions Related to Bucket Subresource Operations and Managing Access Permissions to Your Amazon S3 Resources in the *Amazon S3 User Guide*.
- **Directory bucket permissions** - To grant access to this API operation on a directory bucket, we recommend that you use the `CreateSession` API operation for session-based authorization. Specifically, you grant the `s3express:CreateSession` permission to the directory bucket in a bucket policy or an IAM identity-based policy. Then, you make the `CreateSession` API call on the bucket to obtain a session token. With the session token in your request header, you can make API requests to this operation. After the session token expires, you make another `CreateSession` API call to generate a new session token for

use. AWS CLI or SDKs create session and refresh the session token automatically to avoid service interruptions when a session expires. For more information about authorization, see `CreateSession`.

Sorting order of returned objects

- **General purpose bucket** - For general purpose buckets, `ListObjectsV2` returns objects in lexicographical order based on their key names.
- **Directory bucket** - For directory buckets, `ListObjectsV2` does not return objects in lexicographical order.

HTTP Host header syntax

Directory buckets - The HTTP Host header syntax is *Bucket_name*`.s3express-`*az_id*`.`*region*`.amazonaws.com`.

> **Important**
>
> This section describes the latest revision of this action. We recommend that you use this revised API operation for application development. For backward compatibility, Amazon S3 continues to support the prior version of this API operation, ListObjects.

The following operations are related to `ListObjectsV2`:

- GetObject
- PutObject
- CreateBucket

Request Syntax

```
GET /?list-type=2&continuation-token=ContinuationToken&delimiter=Delimiter&encoding-
type=EncodingType&fetch-owner=FetchOwner&max-keys=MaxKeys&prefix=Prefix&start-
after=StartAfter HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-request-payer: RequestPayer
x-amz-expected-bucket-owner: ExpectedBucketOwner
x-amz-optional-object-attributes: OptionalObjectAttributes
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

Directory buckets - When you use this operation with a directory bucket, you must use virtual-hosted-style requests in the format *Bucket_name*.s3express-*az_id*.*region*.amazonaws.com. Path-style requests are not supported. Directory bucket names must be unique in the chosen Availability Zone. Bucket names must follow the format *bucket_base_name*--*az-id*--x-s3 (for example, *DOC-EXAMPLE-BUCKET*--*usw2-az1*--x-s3). For information about bucket naming restrictions, see Directory bucket naming rules in the *Amazon S3 User Guide*.

Access points - When you use this action with an access point, you must provide the alias of the access point in place of the bucket name or specify the access point ARN. When using the access point ARN, you must direct requests to the access point hostname. The access point hostname takes the form *AccessPointName-AccountId*.s3-accesspoint.*Region*.amazonaws.com. When using this action with an access point through the AWS SDKs, you provide the access point ARN in place of the bucket name. For more information about access point ARNs, see Using access points in the *Amazon S3 User Guide*.

> **Note**
>
> Access points and Object Lambda access points are not supported by directory buckets.

S3 on Outposts - When you use this action with Amazon S3 on Outposts, you must direct requests to the S3 on Outposts hostname. The S3 on Outposts hostname takes the form *AccessPointName-AccountId*.*outpostID*.s3-outposts.*Region*.amazonaws.com. When you use this action with S3 on Outposts through the AWS SDKs, you provide the Outposts access point ARN in place of the bucket name. For more information about S3 on Outposts ARNs, see What is S3 on Outposts? in the *Amazon S3 User Guide*.

Required: Yes

continuation-token

`ContinuationToken` indicates to Amazon S3 that the list is being continued on this bucket with a token. `ContinuationToken` is obfuscated and is not a real key. You can use this `ContinuationToken` for pagination of the list results.

delimiter

A delimiter is a character that you use to group keys.

> **Note**
>
> - **Directory buckets** - For directory buckets, `/` is the only supported delimiter.
> - **Directory buckets** - When you query `ListObjectsV2` with a delimiter during in-progress multipart uploads, the `CommonPrefixes` response parameter contains the prefixes that are associated with the in-progress multipart uploads. For more information about multipart uploads, see Multipart Upload Overview in the *Amazon S3 User Guide*.

encoding-type

Encoding type used by Amazon S3 to encode object keys in the response. If using `url`, non-ASCII characters used in an object's key name will be URL encoded. For example, the object `test_file(3).png` will appear as `test_file%283%29.png`.

Valid Values: `url`

fetch-owner

The owner field is not present in `ListObjectsV2` by default. If you want to return the owner field with each key in the result, then set the `FetchOwner` field to `true`.

> **Note**
>
> **Directory buckets** - For directory buckets, the bucket owner is returned as the object owner for all objects.

max-keys

Sets the maximum number of keys returned in the response. By default, the action returns up to 1,000 key names. The response might contain fewer keys but will never contain more.

prefix

Limits the response to keys that begin with the specified prefix.

> **Note**
>
> **Directory buckets** - For directory buckets, only prefixes that end in a delimiter (/) are supported.

start-after

StartAfter is where you want Amazon S3 to start listing from. Amazon S3 starts listing after this specified key. StartAfter can be any key in the bucket.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-optional-object-attributes

Specifies the optional fields that you want returned in the response. Fields that you do not specify are not returned.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `RestoreStatus`

x-amz-request-payer

Confirms that the requester knows that she or he will be charged for the list objects request in V2 style. Bucket owners need not specify this parameter in their requests.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
x-amz-request-charged: RequestCharged
<?xml version="1.0" encoding="UTF-8"?>
<ListBucketResult>
   <IsTruncated>boolean</IsTruncated>
   <Contents>
      <ChecksumAlgorithm>string</ChecksumAlgorithm>
      ...
      <ETag>string</ETag>
      <Key>string</Key>
      <LastModified>timestamp</LastModified>
      <Owner>
         <DisplayName>string</DisplayName>
         <ID>string</ID>
      </Owner>
      <RestoreStatus>
         <IsRestoreInProgress>boolean</IsRestoreInProgress>
         <RestoreExpiryDate>timestamp</RestoreExpiryDate>
      </RestoreStatus>
      <Size>long</Size>
      <StorageClass>string</StorageClass>
   </Contents>
   ...
   <Name>string</Name>
```

```
    <Prefix>string</Prefix>
    <Delimiter>string</Delimiter>
    <MaxKeys>integer</MaxKeys>
    <CommonPrefixes>
       <Prefix>string</Prefix>
    </CommonPrefixes>
    ...
    <EncodingType>string</EncodingType>
    <KeyCount>integer</KeyCount>
    <ContinuationToken>string</ContinuationToken>
    <NextContinuationToken>string</NextContinuationToken>
    <StartAfter>string</StartAfter>
</ListBucketResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The response returns the following HTTP headers.

x-amz-request-charged

If present, indicates that the requester was successfully charged for the request.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

The following data is returned in XML format by the service.

ListBucketResult

Root level tag for the ListBucketResult parameters.

Required: Yes

CommonPrefixes

All of the keys (up to 1,000) that share the same prefix are grouped together. When counting the total numbers of returns by this API operation, this group of keys is considered as one item.

A response can contain CommonPrefixes only if you specify a delimiter.

CommonPrefixes contains all (if there are any) keys between Prefix and the next occurrence of the string specified by a delimiter.

CommonPrefixes lists keys that act like subdirectories in the directory specified by Prefix.

For example, if the prefix is notes/ and the delimiter is a slash (/) as in notes/summer/july, the common prefix is notes/summer/. All of the keys that roll up into a common prefix count as a single return when calculating the number of returns.

> **Note**
>
> - **Directory buckets** - For directory buckets, only prefixes that end in a delimiter (/) are supported.
> - **Directory buckets** - When you query ListObjectsV2 with a delimiter during in-progress multipart uploads, the CommonPrefixes response parameter contains the prefixes that are associated with the in-progress multipart uploads. For more information about multipart uploads, see Multipart Upload Overview in the *Amazon S3 User Guide*.

Type: Array of CommonPrefix data types

Contents

Metadata about each object returned.

Type: Array of Object data types

ContinuationToken

If ContinuationToken was sent with the request, it is included in the response. You can use the returned ContinuationToken for pagination of the list response. You can use this ContinuationToken for pagination of the list results.

Type: String

Delimiter

Causes keys that contain the same string between the prefix and the first occurrence of the delimiter to be rolled up into a single result element in the CommonPrefixes collection. These

rolled-up keys are not returned elsewhere in the response. Each rolled-up result counts as only one return against the `MaxKeys` value.

> **Note**
>
> **Directory buckets** - For directory buckets, `/` is the only supported delimiter.

Type: String

EncodingType

Encoding type used by Amazon S3 to encode object key names in the XML response.

If you specify the `encoding-type` request parameter, Amazon S3 includes this element in the response, and returns encoded key name values in the following response elements:

`Delimiter, Prefix, Key,` and `StartAfter`.

Type: String

Valid Values: `url`

IsTruncated

Set to `false` if all of the results were returned. Set to `true` if more keys are available to return. If the number of results exceeds that specified by `MaxKeys`, all of the results might not be returned.

Type: Boolean

KeyCount

`KeyCount` is the number of keys returned with this request. `KeyCount` will always be less than or equal to the `MaxKeys` field. For example, if you ask for 50 keys, your result will include 50 keys or fewer.

Type: Integer

MaxKeys

Sets the maximum number of keys returned in the response. By default, the action returns up to 1,000 key names. The response might contain fewer keys but will never contain more.

Type: Integer

Name

The bucket name.

Type: String

NextContinuationToken

`NextContinuationToken` is sent when `isTruncated` is true, which means there are more keys in the bucket that can be listed. The next list requests to Amazon S3 can be continued with this `NextContinuationToken`. `NextContinuationToken` is obfuscated and is not a real key

Type: String

Prefix

Keys that begin with the indicated prefix.

> **Note**
>
> **Directory buckets** - For directory buckets, only prefixes that end in a delimiter (/) are supported.

Type: String

StartAfter

If StartAfter was sent with the request, it is included in the response.

> **Note**
>
> This functionality is not supported for directory buckets.

Type: String

Errors

NoSuchBucket

The specified bucket does not exist.

HTTP Status Code: 404

Examples

Sample Request for general purpose buckets: Listing keys

This request returns the objects in `bucket`. The request specifies the `list-type` parameter, which indicates version 2 of the API operation.

```
GET /?list-type=2 HTTP/1.1
Host: bucket.s3.<Region>.amazonaws.com
x-amz-date: 20160430T233541Z
Authorization: authorization string
Content-Type: text/plain
```

Sample Response for general purpose buckets

This example illustrates one usage of ListObjectsV2.

```
<?xml version="1.0" encoding="UTF-8"?>
<ListBucketResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
    <Name>bucket</Name>
    <Prefix/>
    <KeyCount>205</KeyCount>
    <MaxKeys>1000</MaxKeys>
    <IsTruncated>false</IsTruncated>
    <Contents>
        <Key>my-image.jpg</Key>
        <LastModified>2009-10-12T17:50:30.000Z</LastModified>
        <ETag>"fba9dede5f27731c9771645a39863328"</ETag>
        <Size>434234</Size>
        <StorageClass>STANDARD</StorageClass>
    </Contents>
    <Contents>
       ...
    </Contents>
    ...
</ListBucketResult>
```

Sample Request for general purpose buckets: Listing keys using the max-keys, prefix, and start-after parameters

In addition to the `list-type` parameter that indicates version 2 of the API operation, the request also specifies additional parameters to retrieve up to three keys in the `quotes` bucket that start with `E` and occur lexicographically after `ExampleGuide.pdf`.

```
GET /?list-type=2&max-keys=3&prefix=E&start-after=ExampleGuide.pdf HTTP/1.1
Host: quotes.s3.<Region>.amazonaws.com
x-amz-date: 20160430T232933Z
Authorization: authorization string
```

Sample Response for general purpose buckets

This example illustrates one usage of ListObjectsV2.

```
HTTP/1.1 200 OK
x-amz-id-2: gyB+3jRPnrkN98ZajxHXr3u7EFM67bNgSAxexeEHndCX/7GRnfTXxReKUQF28IfP
x-amz-request-id: 3B3C7C725673C630
Date: Sat, 30 Apr 2016 23:29:37 GMT
Content-Type: application/xml
Content-Length: length
Connection: close
Server: AmazonS3

<?xml version="1.0" encoding="UTF-8"?>
<ListBucketResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Name>quotes</Name>
  <Prefix>E</Prefix>
  <StartAfter>ExampleGuide.pdf</StartAfter>
  <KeyCount>1</KeyCount>
  <MaxKeys>3</MaxKeys>
  <IsTruncated>false</IsTruncated>
  <Contents>
    <Key>ExampleObject.txt</Key>
    <LastModified>2013-09-17T18:07:53.000Z</LastModified>
    <ETag>"599bab3ed2c697f1d26842727561fd94"</ETag>
    <Size>857</Size>
```

```
    <StorageClass>REDUCED_REDUNDANCY</StorageClass>
  </Contents>
</ListBucketResult>
```

Sample Request for general purpose buckets: Listing keys by using the prefix and delimiter parameters

This example illustrates the use of the `prefix` and the `delimiter` parameters in the request. For this example, we assume that you have the following keys in your bucket:

- `sample.jpg`
- `photos/2006/January/sample.jpg`
- `photos/2006/February/sample2.jpg`
- `photos/2006/February/sample3.jpg`
- `photos/2006/February/sample4.jpg`

The following `GET` request specifies the `delimiter` parameter with a value of `/`.

```
GET /?list-type=2&delimiter=/ HTTP/1.1
Host: example-bucket.s3.<Region>.amazonaws.com
x-amz-date: 20160430T235931Z
Authorization: authorization string
```

Sample Response for general purpose buckets

The key `sample.jpg` does not contain the delimiter character, and Amazon S3 returns it in the `Contents` element in the response. However, all of the other keys contain the delimiter character. Amazon S3 groups these keys and returns a single `CommonPrefixes` element with the `Prefix` value `photos/`. The `Prefix` element is a substring that starts at the beginning of these keys and ends at the first occurrence of the specified delimiter.

```
<ListBucketResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Name>example-bucket</Name>
```

```
  <Prefix></Prefix>
  <KeyCount>2</KeyCount>
  <MaxKeys>1000</MaxKeys>
  <Delimiter>/</Delimiter>
  <IsTruncated>false</IsTruncated>
  <Contents>
    <Key>sample.jpg</Key>
    <LastModified>2011-02-26T01:56:20.000Z</LastModified>
    <ETag>"bf1d737a4d46a19f3bced6905cc8b902"</ETag>
    <Size>142863</Size>
    <StorageClass>STANDARD</StorageClass>
  </Contents>
  <CommonPrefixes>
    <Prefix>photos/</Prefix>
  </CommonPrefixes>
</ListBucketResult>
```

Sample Request for general purpose buckets

The following request specifies the `delimiter` parameter with the value `/`, and the `prefix` parameter with the value `photos/2006/`.

```
GET /?list-type=2&prefix=photos/2006/&delimiter=/ HTTP/1.1
Host: example-bucket.s3.<Region>.amazonaws.com
x-amz-date: 20160501T000433Z
Authorization: authorization string
```

Sample Response for general purpose buckets

In response, Amazon S3 returns only the keys that start with the specified prefix. Further, Amazon S3 uses the delimiter character to group keys that contain the same substring until the first occurrence of the delimiter character after the specified prefix. For each such key group, Amazon S3 returns one `CommonPrefixes` element in the response. The keys grouped under this `CommonPrefixes` element are not returned elsewhere in the response. The `Prefix` value returned in the `CommonPrefixes` element is a substring that starts at the beginning of the key and ends at the first occurrence of the specified delimiter after the prefix.

> **Note**
>
> If you created folders by using the Amazon S3 console, you will see an additional 0-byte object with a key of `photos/2006/`. This object is created because of the way that the console supports folder structures. For more information, see Organizing objects in the Amazon S3 console using folders in the *Amazon S3 User Guide*.

```
<ListBucketResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Name>example-bucket</Name>
  <Prefix>photos/2006/</Prefix>
  <KeyCount>2</KeyCount>
  <MaxKeys>1000</MaxKeys>
  <Delimiter>/</Delimiter>
  <IsTruncated>false</IsTruncated>

  <CommonPrefixes>
    <Prefix>photos/2006/February/</Prefix>
  </CommonPrefixes>
  <CommonPrefixes>
    <Prefix>photos/2006/January/</Prefix>
  </CommonPrefixes>
</ListBucketResult>
```

Sample Request for general purpose buckets: Using a continuation token

In this example, the initial request returns more than 1,000 keys. In response to this request, Amazon S3 returns the `IsTruncated` element with the value set to `true` and with a `NextContinuationToken` element.

```
GET /?list-type=2 HTTP/1.1
Host: bucket.s3.<Region>.amazonaws.com
Date: Mon, 02 May 2016 23:17:07 GMT
Authorization: authorization string
```

Sample Response for general purpose buckets: Using a continuation token

This example illustrates one usage of ListObjectsV2.

```
HTTP/1.1 200 OK
x-amz-id-2: gyB+3jRPnrkN98ZajxHXr3u7EFM67bNgSAxexeEHndCX/7GRnfTXxReKUQF28IfP
x-amz-request-id: 3B3C7C725673C630
Date: Sat, 30 Apr 2016 23:29:37 GMT
Content-Type: application/xml
Content-Length: length
Connection: close
Server: AmazonS3

<ListBucketResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Name>bucket</Name>
  <Prefix></Prefix>
  <NextContinuationToken>1ueGcxLPRx1Tr/XYExHnhbYLgveDs2J/wm36Hy4vbOwM=</
NextContinuationToken>
  <KeyCount>1000</KeyCount>
  <MaxKeys>1000</MaxKeys>
  <IsTruncated>true</IsTruncated>
  <Contents>
    <Key>happyface.jpg</Key>
    <LastModified>2014-11-21T19:40:05.000Z</LastModified>
    <ETag>"70ee1738b6b21e2c8a43f3a5ab0eee71"</ETag>
    <Size>11</Size>
    <StorageClass>STANDARD</StorageClass>
  </Contents>
   ...
</ListBucketResult>
```

Sample request for general purpose buckets

In the following subsequent request, we include a `continuation-token` query parameter in the request with the value of the `NextContinuationToken` element from the preceding response.

```
GET /?list-type=2 HTTP/1.1
GET /?list-type=2&continuation-token=1ueGcxLPRx1Tr/XYExHnhbYLgveDs2J/wm36Hy4vbOwM=
 HTTP/1.1
```

```
Host: bucket.s3.<Region>.amazonaws.com
Date: Mon, 02 May 2016 23:17:07 GMT
Authorization: authorization string
```

Sample response for general purpose buckets:

Amazon S3 returns a list of the next set of keys starting where the previous request ended.

```
HTTP/1.1 200 OK
x-amz-id-2: gyB+3jRPnrkN98ZajxHXr3u7EFM67bNgSAxexeEHndCX/7GRnfTXxReKUQF28IfP
x-amz-request-id: 3B3C7C725673C630
Date: Sat, 30 Apr 2016 23:29:37 GMT
Content-Type: application/xml
Content-Length: length
Connection: close
Server: AmazonS3

<ListBucketResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Name>bucket</Name>
  <Prefix></Prefix>
  <ContinuationToken>1ueGcxLPRx1Tr/XYExHnhbYLgveDs2J/wm36Hy4vbOwM=</ContinuationToken>
  <KeyCount>112</KeyCount>
  <MaxKeys>1000</MaxKeys>
  <IsTruncated>false</IsTruncated>
  <Contents>
    <Key>happyfacex.jpg</Key>
    <LastModified>2014-11-21T19:40:05.000Z</LastModified>
    <ETag>"70ee1738b6b21e2c8a43f3a5ab0eee71"</ETag>
    <Size>1111</Size>
    <StorageClass>STANDARD</StorageClass>
  </Contents>
   ...
</ListBucketResult>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListObjectVersions

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Returns metadata about all versions of the objects in a bucket. You can also use request parameters as selection criteria to return metadata about a subset of all the object versions.

> **Important**
>
> To use this operation, you must have permission to perform the `s3:ListBucketVersions` action. Be aware of the name difference.

> **Note**
>
> A `200 OK` response can contain valid or invalid XML. Make sure to design your application to parse the contents of the response and handle it appropriately.

To use this operation, you must have READ access to the bucket.

The following operations are related to `ListObjectVersions`:

- ListObjectsV2
- GetObject
- PutObject
- DeleteObject

Request Syntax

```
GET /?versions&delimiter=Delimiter&encoding-type=EncodingType&key-marker=KeyMarker&max-keys=MaxKeys&prefix=Prefix&version-id-marker=VersionIdMarker HTTP/1.1
Host: Bucket.s3.amazonaws.com
```

```
x-amz-expected-bucket-owner: ExpectedBucketOwner
x-amz-request-payer: RequestPayer
x-amz-optional-object-attributes: OptionalObjectAttributes
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name that contains the objects.

Required: Yes

delimiter

A delimiter is a character that you specify to group keys. All keys that contain the same string between the `prefix` and the first occurrence of the delimiter are grouped under a single result element in `CommonPrefixes`. These groups are counted as one result against the `max-keys` limitation. These keys are not returned elsewhere in the response.

encoding-type

Requests Amazon S3 to encode the object keys in the response and specifies the encoding method to use. An object key can contain any Unicode character; however, the XML 1.0 parser cannot parse some characters, such as characters with an ASCII value from 0 to 10. For characters that are not supported in XML 1.0, you can add this parameter to request that Amazon S3 encode the keys in the response.

Valid Values: `url`

key-marker

Specifies the key to start with when listing objects in a bucket.

max-keys

Sets the maximum number of keys returned in the response. By default, the action returns up to 1,000 key names. The response might contain fewer keys but will never contain more. If additional keys satisfy the search criteria, but were not returned because `max-keys` was exceeded, the response contains `<isTruncated>true</isTruncated>`. To return the additional keys, see `key-marker` and `version-id-marker`.

prefix

Use this parameter to select only those keys that begin with the specified prefix. You can use prefixes to separate a bucket into different groupings of keys. (You can think of using `prefix` to make groups in the same way that you'd use a folder in a file system.) You can use `prefix` with `delimiter` to roll up numerous objects into a single result under `CommonPrefixes`.

version-id-marker

Specifies the object version you want to start listing from.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-optional-object-attributes

Specifies the optional fields that you want returned in the response. Fields that you do not specify are not returned.

Valid Values: `RestoreStatus`

x-amz-request-payer

Confirms that the requester knows that they will be charged for the request. Bucket owners need not specify this parameter in their requests. If either the source or destination S3 bucket has Requester Pays enabled, the requester will pay for corresponding charges to copy the object. For information about downloading objects from Requester Pays buckets, see Downloading Objects in Requester Pays Buckets in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
x-amz-request-charged: RequestCharged
<?xml version="1.0" encoding="UTF-8"?>
<ListVersionsResult>
   <IsTruncated>boolean</IsTruncated>
   <KeyMarker>string</KeyMarker>
   <VersionIdMarker>string</VersionIdMarker>
   <NextKeyMarker>string</NextKeyMarker>
   <NextVersionIdMarker>string</NextVersionIdMarker>
   <Version>
      <ChecksumAlgorithm>string</ChecksumAlgorithm>
      ...
      <ETag>string</ETag>
      <IsLatest>boolean</IsLatest>
      <Key>string</Key>
      <LastModified>timestamp</LastModified>
      <Owner>
         <DisplayName>string</DisplayName>
         <ID>string</ID>
      </Owner>
      <RestoreStatus>
         <IsRestoreInProgress>boolean</IsRestoreInProgress>
         <RestoreExpiryDate>timestamp</RestoreExpiryDate>
      </RestoreStatus>
      <Size>long</Size>
      <StorageClass>string</StorageClass>
      <VersionId>string</VersionId>
   </Version>
   ...
   <DeleteMarker>
      <IsLatest>boolean</IsLatest>
      <Key>string</Key>
      <LastModified>timestamp</LastModified>
      <Owner>
         <DisplayName>string</DisplayName>
         <ID>string</ID>
      </Owner>
      <VersionId>string</VersionId>
   </DeleteMarker>
   ...
   <Name>string</Name>
   <Prefix>string</Prefix>
```

```
    <Delimiter>string</Delimiter>
    <MaxKeys>integer</MaxKeys>
    <CommonPrefixes>
       <Prefix>string</Prefix>
    </CommonPrefixes>
    ...
    <EncodingType>string</EncodingType>
</ListVersionsResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The response returns the following HTTP headers.

x-amz-request-charged

If present, indicates that the requester was successfully charged for the request.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

The following data is returned in XML format by the service.

ListVersionsResult

Root level tag for the ListVersionsResult parameters.

Required: Yes

CommonPrefixes

All of the keys rolled up into a common prefix count as a single return when calculating the number of returns.

Type: Array of CommonPrefix data types

DeleteMarker

Container for an object that is a delete marker.

Type: Array of DeleteMarkerEntry data types

Delimiter

The delimiter grouping the included keys. A delimiter is a character that you specify to group keys. All keys that contain the same string between the prefix and the first occurrence of the delimiter are grouped under a single result element in `CommonPrefixes`. These groups are counted as one result against the `max-keys` limitation. These keys are not returned elsewhere in the response.

Type: String

EncodingType

Encoding type used by Amazon S3 to encode object key names in the XML response.

If you specify the `encoding-type` request parameter, Amazon S3 includes this element in the response, and returns encoded key name values in the following response elements:

`KeyMarker, NextKeyMarker, Prefix, Key`, and `Delimiter`.

Type: String

Valid Values: `url`

IsTruncated

A flag that indicates whether Amazon S3 returned all of the results that satisfied the search criteria. If your results were truncated, you can make a follow-up paginated request by using the `NextKeyMarker` and `NextVersionIdMarker` response parameters as a starting place in another request to return the rest of the results.

Type: Boolean

KeyMarker

Marks the last key returned in a truncated response.

Type: String

MaxKeys

Specifies the maximum number of objects to return.

Type: Integer

Name

The bucket name.

Type: String

NextKeyMarker

When the number of responses exceeds the value of `MaxKeys`, `NextKeyMarker` specifies the first key not returned that satisfies the search criteria. Use this value for the key-marker request parameter in a subsequent request.

Type: String

NextVersionIdMarker

When the number of responses exceeds the value of `MaxKeys`, `NextVersionIdMarker` specifies the first object version not returned that satisfies the search criteria. Use this value for the `version-id-marker` request parameter in a subsequent request.

Type: String

Prefix

Selects objects that start with the value supplied by this parameter.

Type: String

Version

Container for version information.

Type: Array of ObjectVersion data types

VersionIdMarker

Marks the last version of the key returned in a truncated response.

Type: String

Examples

Sample Request

The following request returns all of the versions of all of the objects in the specified bucket.

```
GET /?versions HTTP/1.1
Host: BucketName.s3.<Region>.amazonaws.com
Date: Wed, 28 Oct 2009 22:32:00 +0000
Authorization: authorization string (see Authenticating Requests (AWS Signature Version
  4))
```

Sample Response

This example illustrates one usage of ListObjectVersions.

```
<?xml version="1.0" encoding="UTF-8"?>

<ListVersionsResult xmlns="http://s3.amazonaws.com/doc/2006-03-01">
    <Name>bucket</Name>
    <Prefix>my</Prefix>
    <KeyMarker/>
    <VersionIdMarker/>
    <MaxKeys>5</MaxKeys>
    <IsTruncated>false</IsTruncated>
    <Version>
        <Key>my-image.jpg</Key>
        <VersionId>3/L4kqtJl40Nr8X8gdRQBpUMLUo</VersionId>
        <IsLatest>true</IsLatest>
         <LastModified>2009-10-12T17:50:30.000Z</LastModified>
        <ETag>"fba9dede5f27731c9771645a39863328"</ETag>
        <Size>434234</Size>
        <StorageClass>STANDARD</StorageClass>
        <Owner>
            <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
            <DisplayName>mtd@amazon.com</DisplayName>
        </Owner>
    </Version>
    <DeleteMarker>
        <Key>my-second-image.jpg</Key>
        <VersionId>03jpff543dhffds434rfdsFDN943fdsFkdmqnh892</VersionId>
        <IsLatest>true</IsLatest>
        <LastModified>2009-11-12T17:50:30.000Z</LastModified>
        <Owner>
            <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
            <DisplayName>mtd@amazon.com</DisplayName>
        </Owner>
    </DeleteMarker>
```

```
    <Version>
        <Key>my-second-image.jpg</Key>
        <VersionId>QUpfdndhfd8438MNFDN93jdnJFkdmqnh893</VersionId>
        <IsLatest>false</IsLatest>
        <LastModified>2009-10-10T17:50:30.000Z</LastModified>
        <ETag>"9b2cf535f27731c974343645a3985328"</ETag>
        <Size>166434</Size>
        <StorageClass>STANDARD</StorageClass>
        <Owner>
            <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
            <DisplayName>mtd@amazon.com</DisplayName>
        </Owner>
    </Version>
    <DeleteMarker>
        <Key>my-third-image.jpg</Key>
        <VersionId>03jpff543dhffds434rfdsFDN943fdsFkdmqnh892</VersionId>
        <IsLatest>true</IsLatest>
        <LastModified>2009-10-15T17:50:30.000Z</LastModified>
        <Owner>
            <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
            <DisplayName>mtd@amazon.com</DisplayName>
        </Owner>
    </DeleteMarker>
    <Version>
        <Key>my-third-image.jpg</Key>
        <VersionId>UIORUnfndfhnw89493jJFJ</VersionId>
        <IsLatest>false</IsLatest>
        <LastModified>2009-10-11T12:50:30.000Z</LastModified>
        <ETag>"772cf535f27731c974343645a3985328"</ETag>
        <Size>64</Size>
        <StorageClass>STANDARD</StorageClass>
        <Owner>
            <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
            <DisplayName>mtd@amazon.com</DisplayName>
        </Owner>
     </Version>
</ListVersionsResult>
```

Sample Request

The following request returns objects in the order that they were stored, returning the most recently stored object first, starting with the value for `key-marker`.

```
GET /?versions&key-marker=key2 HTTP/1.1
Host: s3.amazonaws.com
Pragma: no-cache
Accept: image/gif, image/x-xbitmap, image/jpeg, image/pjpeg, */*
Date: Thu, 10 Dec 2009 22:46:32 +0000
Authorization: signatureValue
```

Sample Response

This example illustrates one usage of ListObjectVersions.

```
<?xml version="1.0" encoding="UTF-8"?>
<ListVersionsResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Name>mtp-versioning-fresh</Name>
  <Prefix/>
  <KeyMarker>key2</KeyMarker>
  <VersionIdMarker/>
  <MaxKeys>1000</MaxKeys>
  <IsTruncated>false</IsTruncated>
  <Version>
    <Key>key3</Key>
    <VersionId>I5VhmK6CDDdQ5Pwfe1gcHZWmHDpcv7gfmfc29UBxsKU.</VersionId>
    <IsLatest>true</IsLatest>
    <LastModified>2009-12-09T00:19:04.000Z</LastModified>
    <ETag>"396fefef536d5ce46c7537ecf978a360"</ETag>
    <Size>217</Size>
    <Owner>
      <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
    </Owner>
    <StorageClass>STANDARD</StorageClass>
  </Version>
  <DeleteMarker>
    <Key>sourcekey</Key>
    <VersionId>qDhprLU80sAlCFLu2DWgXAEDgKzWarn-HS_JU0TvYqs.</VersionId>
    <IsLatest>true</IsLatest>
    <LastModified>2009-12-10T16:38:11.000Z</LastModified>
    <Owner>
      <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
    </Owner>
```

```
  </DeleteMarker>
  <Version>
    <Key>sourcekey</Key>
    <VersionId>wxxQ7ezLaL5JN2Sislq66Syxxo0k7uHTUpb9qiiMxNg.</VersionId>
    <IsLatest>false</IsLatest>
    <LastModified>2009-12-10T16:37:44.000Z</LastModified>
    <ETag>"396fefef536d5ce46c7537ecf978a360"</ETag>
    <Size>217</Size>
    <Owner>
      <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
    </Owner>
    <StorageClass>STANDARD</StorageClass>
  </Version>
</ListVersionsResult>
```

Sample Request Using the prefix Parameter

This example returns objects whose keys begin with `source`.

```
GET /?versions&prefix=source HTTP/1.1
Host: bucket.s3.<Region>.amazonaws.com
Date: Wed, 28 Oct 2009 22:32:00 +0000
Authorization: authorization string
```

Sample Response

This example illustrates one usage of ListObjectVersions.

```
<?xml version="1.0" encoding="UTF-8"?>
<ListVersionsResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Name>mtp-versioning-fresh</Name>
  <Prefix>source</Prefix>
  <KeyMarker/>
  <VersionIdMarker/>
  <MaxKeys>1000</MaxKeys>
  <IsTruncated>false</IsTruncated>
  <DeleteMarker>
```

```
    <Key>sourcekey</Key>
    <VersionId>qDhprLU80sAlCFLu2DWgXAEDgKzWarn-HS_JU0TvYqs.</VersionId>
    <IsLatest>true</IsLatest>
    <LastModified>2009-12-10T16:38:11.000Z</LastModified>
    <Owner>
      <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
    </Owner>
  </DeleteMarker>
  <Version>
    <Key>sourcekey</Key>
    <VersionId>wxxQ7ezLaL5JN2Sislq66Syxxo0k7uHTUpb9qiiMxNg.</VersionId>
    <IsLatest>false</IsLatest>
    <LastModified>2009-12-10T16:37:44.000Z</LastModified>
    <ETag>"396fefef536d5ce46c7537ecf978a360"</ETag>
    <Size>217</Size>
    <Owner>
      <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
    </Owner>
    <StorageClass>STANDARD</StorageClass>
  </Version>
</ListVersionsResult>
```

Sample Request: Using the key-marker and version-id-marker Parameters

The following example returns objects starting at the specified key (`key-marker`) and version ID (`version-id-marker`).

```
GET /?versions&key-marker=key3&version-id-marker=t46ZenlYTZBnj HTTP/1.1
Host: bucket.s3.<Region>.amazonaws.com
Date: Wed, 28 Oct 2009 22:32:00 +0000
Authorization: signatureValue
```

Sample Response

This example illustrates one usage of ListObjectVersions.

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<ListVersionsResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Name>mtp-versioning-fresh</Name>
  <Prefix/>
  <KeyMarker>key3</KeyMarker>
  <VersionIdMarker>t46ZenlYTZBnj</VersionIdMarker>
  <MaxKeys>1000</MaxKeys>
  <IsTruncated>false</IsTruncated>
  <DeleteMarker>
    <Key>sourcekey</Key>
    <VersionId>qDhprLU80sAlCFLu2DWgXAEDgKzWarn-HS_JU0TvYqs.</VersionId>
    <IsLatest>true</IsLatest>
    <LastModified>2009-12-10T16:38:11.000Z</LastModified>
    <Owner>
      <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
    </Owner>
  </DeleteMarker>
  <Version>
    <Key>sourcekey</Key>
    <VersionId>wxxQ7ezLaL5JN2Sislq66Syxxo0k7uHTUpb9qiiMxNg.</VersionId>
    <IsLatest>false</IsLatest>
    <LastModified>2009-12-10T16:37:44.000Z</LastModified>
    <ETag>"396fefef536d5ce46c7537ecf978a360"</ETag>
    <Size>217</Size>
    <Owner>
      <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
    </Owner>
    <StorageClass>STANDARD</StorageClass>
  </Version>
</ListVersionsResult>
```

Sample Request: Using the key-marker, version-id-marker, and max-keys Parameters

The following request returns up to three (the value of `max-keys`) objects starting with the key specified by `key-marker` and the version ID specified by `version-id-marker`.

```
GET /?versions&key-marker=key3&version-id-marker=t46Z0menlYTZBnj&max-keys=3
Host: bucket.s3.<Region>.amazonaws.com
Date: Wed, 28 Oct 2009 22:32:00 +0000
Authorization: authorization string
```

Sample Response

This example illustrates one usage of ListObjectVersions.

```
<?xml version="1.0" encoding="UTF-8"?>
<ListVersionsResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Name>mtp-versioning-fresh</Name>
  <Prefix/>
  <KeyMarker>key3</KeyMarker>
  <VersionIdMarker>null</VersionIdMarker>
  <NextKeyMarker>key3</NextKeyMarker>
  <NextVersionIdMarker>d-d309mfjFrUmoQ0DBsVqmcMV15OI.</NextVersionIdMarker>
  <MaxKeys>3</MaxKeys>
  <IsTruncated>true</IsTruncated>
  <Version>
    <Key>key3</Key>
    <VersionId>8XECiENpj8pydEDJdd-_VRrvaGKAHOaGMNW7tg6UViI.</VersionId>
    <IsLatest>false</IsLatest>
    <LastModified>2009-12-09T00:18:23.000Z</LastModified>
    <ETag>"396fefef536d5ce46c7537ecf978a360"</ETag>
    <Size>217</Size>
    <Owner>
      <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
    </Owner>
    <StorageClass>STANDARD</StorageClass>
  </Version>
  <Version>
    <Key>key3</Key>
    <VersionId>d-d309mfjFri40QYukDozqBt3UmoQ0DBsVqmcMV15OI.</VersionId>
    <IsLatest>false</IsLatest>
    <LastModified>2009-12-09T00:18:08.000Z</LastModified>
    <ETag>"396fefef536d5ce46c7537ecf978a360"</ETag>
    <Size>217</Size>
    <Owner>
      <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
    </Owner>
    <StorageClass>STANDARD</StorageClass>
  </Version>
</ListVersionsResult>
```

Sample Request: Using the delimiter and prefix Parameters

Assume you have the following keys in your bucket, `example-bucket`.

`photos/2006/January/sample.jpg`

`photos/2006/February/sample.jpg`

`photos/2006/March/sample.jpg`

`videos/2006/March/sample.wmv`

`sample.jpg`

The following GET versions request specifies the `delimiter` parameter with the value `/`.

```
GET /?versions&delimiter=/ HTTP/1.1
Host: example-bucket.s3.<Region>.amazonaws.com
Date: Wed, 02 Feb 2011 20:34:56 GMT
Authorization: authorization string
```

Sample Response

The list of keys from the specified bucket is shown in the following response.

The response returns the `sample.jpg` key in a `Version` element. However, because all the other keys contain the specified delimiter, a distinct substring, from the beginning of the key to the first occurrence of the delimiter, from each of these keys is returned in a `CommonPrefixes` element. The key substrings, `photos/` and `videos/`, in the `CommonPrefixes` element indicate that there are one or more keys with these key prefixes.

This is a useful scenario if you use key prefixes for your objects to create a logical folder-like structure. In this case, you can interpret the result as the folders `photos/` and `videos/` have one or more objects.

```
<ListVersionsResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Name>mvbucketwithversionon1</Name>
```

```
  <Prefix></Prefix>
  <KeyMarker></KeyMarker>
  <VersionIdMarker></VersionIdMarker>
  <MaxKeys>1000</MaxKeys>
  <Delimiter>/</Delimiter>
  <IsTruncated>false</IsTruncated>

  <Version>
    <Key>Sample.jpg</Key>
    <VersionId>toxMzQlBsGyGCz1YuMWMp90cdXLzqOCH</VersionId>
    <IsLatest>true</IsLatest>
    <LastModified>2011-02-02T18:46:20.000Z</LastModified>
    <ETag>"3305f2cfc46c0f04559748bb039d69ae"</ETag>
    <Size>3191</Size>
    <Owner>
      <ID>852b113e7a2f25102679df27bb0ae12b3f85be6f290b936c4393484be31bebcc</ID>
      <DisplayName>display-name</DisplayName>
    </Owner>
    <StorageClass>STANDARD</StorageClass>
  </Version>

  <CommonPrefixes>
    <Prefix>photos/</Prefix>
  </CommonPrefixes>
  <CommonPrefixes>
    <Prefix>videos/</Prefix>
  </CommonPrefixes>
</ListVersionsResult>
```

Example

In addition to the `delimiter` parameter, you can filter results by adding a `prefix` parameter as shown in the following request.

```
GET /?versions&prefix=photos/2006/&delimiter=/ HTTP/1.1
Host: example-bucket.s3.<Region>.amazonaws.com
Date: Wed, 02 Feb 2011 19:34:02 GMT
Authorization: authorization string
```

Example

In this case, the response will include only object keys that start with the specified prefix. The value returned in the `CommonPrefixes` element is a substring from the beginning of the key to the first occurrence of the specified delimiter after the prefix.

> **Note**
>
> If you created folders by using the Amazon S3 console, you will see an additional 0-byte object with a key of `photos/2006/`. This object is created because of the way that the console supports folder structures. For more information, see Organizing objects in the Amazon S3 console using folders in the *Amazon S3 User Guide*.

```
<?xml version="1.0" encoding="UTF-8"?>
<ListVersionsResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Name>example-bucket</Name>
  <Prefix>photos/2006/</Prefix>
  <KeyMarker></KeyMarker>
  <VersionIdMarker></VersionIdMarker>
  <MaxKeys>1000</MaxKeys>
  <Delimiter>/</Delimiter>
  <IsTruncated>false</IsTruncated>
  <CommonPrefixes>
    <Prefix>photos/2006/February/</Prefix>
  </CommonPrefixes>
  <CommonPrefixes>
    <Prefix>photos/2006/January/</Prefix>
  </CommonPrefixes>
  <CommonPrefixes>
    <Prefix>photos/2006/March/</Prefix>
  </CommonPrefixes>
</ListVersionsResult>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListParts

Service: Amazon S3

Lists the parts that have been uploaded for a specific multipart upload.

To use this operation, you must provide the `upload ID` in the request. You obtain this uploadID by sending the initiate multipart upload request through CreateMultipartUpload.

The `ListParts` request returns a maximum of 1,000 uploaded parts. The limit of 1,000 parts is also the default value. You can restrict the number of parts in a response by specifying the `max-parts` request parameter. If your multipart upload consists of more than 1,000 parts, the response returns an `IsTruncated` field with the value of `true`, and a `NextPartNumberMarker` element. To list remaining uploaded parts, in subsequent `ListParts` requests, include the `part-number-marker` query string parameter and set its value to the `NextPartNumberMarker` field value from the previous response.

For more information on multipart uploads, see Uploading Objects Using Multipart Upload in the *Amazon S3 User Guide*.

> **Note**
>
> **Directory buckets** - For directory buckets, you must make requests for this API operation to the Zonal endpoint. These endpoints support virtual-hosted-style requests in the format `https://bucket_name.s3express-az_id.region.amazonaws.com/key-name`. Path-style requests are not supported. For more information, see Regional and Zonal endpoints in the *Amazon S3 User Guide*.

Permissions

- **General purpose bucket permissions** - For information about permissions required to use the multipart upload API, see Multipart Upload and Permissions in the *Amazon S3 User Guide*.

  If the upload was created using server-side encryption with AWS Key Management Service (AWS KMS) keys (SSE-KMS) or dual-layer server-side encryption with AWS KMS keys (DSSE-KMS), you must have permission to the `kms:Decrypt` action for the `ListParts` request to succeed.
- **Directory bucket permissions** - To grant access to this API operation on a directory bucket, we recommend that you use the `CreateSession` API operation for session-based

authorization. Specifically, you grant the `s3express:CreateSession` permission to the directory bucket in a bucket policy or an IAM identity-based policy. Then, you make the `CreateSession` API call on the bucket to obtain a session token. With the session token in your request header, you can make API requests to this operation. After the session token expires, you make another `CreateSession` API call to generate a new session token for use. AWS CLI or SDKs create session and refresh the session token automatically to avoid service interruptions when a session expires. For more information about authorization, see `CreateSession`.

HTTP Host header syntax

Directory buckets - The HTTP Host header syntax is *`Bucket_name`*`.s3express-`*`az_id`*`.`*`region`*`.amazonaws.com`.

The following operations are related to `ListParts`:

- CreateMultipartUpload
- UploadPart
- CompleteMultipartUpload
- AbortMultipartUpload
- GetObjectAttributes
- ListMultipartUploads

Request Syntax

```
GET /Key+?max-parts=MaxParts&part-number-marker=PartNumberMarker&uploadId=UploadId
 HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-request-payer: RequestPayer
x-amz-expected-bucket-owner: ExpectedBucketOwner
x-amz-server-side-encryption-customer-algorithm: SSECustomerAlgorithm
x-amz-server-side-encryption-customer-key: SSECustomerKey
x-amz-server-side-encryption-customer-key-MD5: SSECustomerKeyMD5
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket to which the parts are being uploaded.

Directory buckets - When you use this operation with a directory bucket, you must use virtual-hosted-style requests in the format *Bucket_name*.s3express-*az_id*.*region*.amazonaws.com. Path-style requests are not supported. Directory bucket names must be unique in the chosen Availability Zone. Bucket names must follow the format *bucket_base_name*--*az-id*--x-s3 (for example, *DOC-EXAMPLE-BUCKET*--*usw2-az1*--x-s3). For information about bucket naming restrictions, see Directory bucket naming rules in the *Amazon S3 User Guide*.

Access points - When you use this action with an access point, you must provide the alias of the access point in place of the bucket name or specify the access point ARN. When using the access point ARN, you must direct requests to the access point hostname. The access point hostname takes the form *AccessPointName-AccountId*.s3-accesspoint.*Region*.amazonaws.com. When using this action with an access point through the AWS SDKs, you provide the access point ARN in place of the bucket name. For more information about access point ARNs, see Using access points in the *Amazon S3 User Guide*.

> **Note**
>
> Access points and Object Lambda access points are not supported by directory buckets.

S3 on Outposts - When you use this action with Amazon S3 on Outposts, you must direct requests to the S3 on Outposts hostname. The S3 on Outposts hostname takes the form *AccessPointName-AccountId*.*outpostID*.s3-outposts.*Region*.amazonaws.com. When you use this action with S3 on Outposts through the AWS SDKs, you provide the Outposts access point ARN in place of the bucket name. For more information about S3 on Outposts ARNs, see What is S3 on Outposts? in the *Amazon S3 User Guide*.

Required: Yes

Key

Object key for which the multipart upload was initiated.

Length Constraints: Minimum length of 1.

Required: Yes

max-parts

Sets the maximum number of parts to return.

part-number-marker

Specifies the part after which listing should begin. Only parts with higher part numbers will be listed.

uploadId

Upload ID identifying the multipart upload whose parts are being listed.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-request-payer

Confirms that the requester knows that they will be charged for the request. Bucket owners need not specify this parameter in their requests. If either the source or destination S3 bucket has Requester Pays enabled, the requester will pay for corresponding charges to copy the object. For information about downloading objects from Requester Pays buckets, see Downloading Objects in Requester Pays Buckets in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

x-amz-server-side-encryption-customer-algorithm

The server-side encryption (SSE) algorithm used to encrypt the object. This parameter is needed only when the object was created using a checksum algorithm. For more information, see Protecting data using SSE-C keys in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-key

The server-side encryption (SSE) customer managed key. This parameter is needed only when the object was created using a checksum algorithm. For more information, see Protecting data using SSE-C keys in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-key-MD5

The MD5 server-side encryption (SSE) customer managed key. This parameter is needed only when the object was created using a checksum algorithm. For more information, see Protecting data using SSE-C keys in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
x-amz-abort-date: AbortDate
x-amz-abort-rule-id: AbortRuleId
x-amz-request-charged: RequestCharged
<?xml version="1.0" encoding="UTF-8"?>
<ListPartsResult>
```

```
   <Bucket>string</Bucket>
   <Key>string</Key>
   <UploadId>string</UploadId>
   <PartNumberMarker>integer</PartNumberMarker>
   <NextPartNumberMarker>integer</NextPartNumberMarker>
   <MaxParts>integer</MaxParts>
   <IsTruncated>boolean</IsTruncated>
   <Part>
      <ChecksumCRC32>string</ChecksumCRC32>
      <ChecksumCRC32C>string</ChecksumCRC32C>
      <ChecksumSHA1>string</ChecksumSHA1>
      <ChecksumSHA256>string</ChecksumSHA256>
      <ETag>string</ETag>
      <LastModified>timestamp</LastModified>
      <PartNumber>integer</PartNumber>
      <Size>long</Size>
   </Part>
   ...
   <Initiator>
      <DisplayName>string</DisplayName>
      <ID>string</ID>
   </Initiator>
   <Owner>
      <DisplayName>string</DisplayName>
      <ID>string</ID>
   </Owner>
   <StorageClass>string</StorageClass>
   <ChecksumAlgorithm>string</ChecksumAlgorithm>
</ListPartsResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The response returns the following HTTP headers.

x-amz-abort-date

If the bucket has a lifecycle rule configured with an action to abort incomplete multipart uploads and the prefix in the lifecycle rule matches the object name in the request, then the response includes this header indicating when the initiated multipart upload will become eligible for abort operation. For more information, see Aborting Incomplete Multipart Uploads Using a Bucket Lifecycle Configuration.

The response will also include the `x-amz-abort-rule-id` header that will provide the ID of the lifecycle configuration rule that defines this action.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-abort-rule-id

This header is returned along with the `x-amz-abort-date` header. It identifies applicable lifecycle configuration rule that defines the action to abort incomplete multipart uploads.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-request-charged

If present, indicates that the requester was successfully charged for the request.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

The following data is returned in XML format by the service.

ListPartsResult

Root level tag for the ListPartsResult parameters.

Required: Yes

Bucket

The name of the bucket to which the multipart upload was initiated. Does not return the access point ARN or access point alias if used.

Type: String

ChecksumAlgorithm

The algorithm that was used to create a checksum of the object.

Type: String

Valid Values: `CRC32` | `CRC32C` | `SHA1` | `SHA256`

Initiator

Container element that identifies who initiated the multipart upload. If the initiator is an AWS account, this element provides the same information as the `Owner` element. If the initiator is an IAM User, this element provides the user ARN and display name.

Type: Initiator data type

IsTruncated

Indicates whether the returned list of parts is truncated. A true value indicates that the list was truncated. A list can be truncated if the number of parts exceeds the limit returned in the MaxParts element.

Type: Boolean

Key

Object key for which the multipart upload was initiated.

Type: String

Length Constraints: Minimum length of 1.

MaxParts

Maximum number of parts that were allowed in the response.

Type: Integer

NextPartNumberMarker

When a list is truncated, this element specifies the last part in the list, as well as the value to use for the `part-number-marker` request parameter in a subsequent request.

Type: Integer

Owner

Container element that identifies the object owner, after the object is created. If multipart upload is initiated by an IAM user, this element provides the parent account ID and display name.

> **Note**
>
> **Directory buckets** - The bucket owner is returned as the object owner for all the parts.

Type: Owner data type

Part

Container for elements related to a particular part. A response can contain zero or more `Part` elements.

Type: Array of Part data types

PartNumberMarker

Specifies the part after which listing should begin. Only parts with higher part numbers will be listed.

Type: Integer

StorageClass

The class of storage used to store the uploaded object.

> **Note**
>
> **Directory buckets** - Only the S3 Express One Zone storage class is supported by directory buckets to store objects.

Type: String

Valid Values: `STANDARD | REDUCED_REDUNDANCY | STANDARD_IA | ONEZONE_IA | INTELLIGENT_TIERING | GLACIER | DEEP_ARCHIVE | OUTPOSTS | GLACIER_IR | SNOW | EXPRESS_ONEZONE`

UploadId

Upload ID identifying the multipart upload whose parts are being listed.

Type: String

Examples

Sample Request for general purpose buckets

Assume you have uploaded parts with sequential part numbers starting with 1. The following List Parts request specifies `max-parts` and `part-number-marker` query parameters. The request lists the first two parts that follow part number 1, that is, you will get parts 2 and 3 in the response. If more parts exist, the result is a truncated result and therefore the response will return an `IsTruncated` element with the value `true`. The response will also return the `NextPartNumberMarker` element with the value 3, which should be used for the value of the `part-number-marker` request query string parameter in the next ListParts request.

```
GET /example-object?
uploadId=XXBsb2FkIElEIGZvciBlbHZpbmcncyVcdS1tb3ZpZS5tMnRzEEEwbG9hZA&max-parts=2&part-
number-marker=1 HTTP/1.1
Host: example-bucket.s3.<Region>.amazonaws.com
Date: Mon, 1 Nov 2010 20:34:56 GMT
Authorization: authorization string
```

Sample Response for general purpose buckets

This example illustrates one usage of ListParts.

```
HTTP/1.1 200 OK
x-amz-id-2: Uuag1LuByRx9e6j5Onimru9pO4ZVKnJ2Qz7/C1NPcfTWAtRPfTaOFg==
x-amz-request-id: 656c76696e672773207265717565737 4
Date: Mon, 1 Nov 2010 20:34:56 GMT
Content-Length: 985
Connection: keep-alive
Server: AmazonS3

<?xml version="1.0" encoding="UTF-8"?>
```

```
<ListPartsResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Bucket>example-bucket</Bucket>
  <Key>example-object</Key>
  <UploadId>XXBsb2FkIElEIGZvciBlbHZpbmcncyVcdS1tb3ZpZS5tMnRzEEEwbG9hZA</UploadId>
  <Initiator>
      <ID>arn:aws:iam::111122223333:user/some-user-11116a31-17b5-4fb7-9df5-
b288870f11xx</ID>
      <DisplayName>umat-user-11116a31-17b5-4fb7-9df5-b288870f11xx</DisplayName>
  </Initiator>
  <Owner>
    <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
    <DisplayName>someName</DisplayName>
  </Owner>
  <StorageClass>STANDARD</StorageClass>
  <PartNumberMarker>1</PartNumberMarker>
  <NextPartNumberMarker>3</NextPartNumberMarker>
  <MaxParts>2</MaxParts>
  <IsTruncated>true</IsTruncated>
  <Part>
    <PartNumber>2</PartNumber>
    <LastModified>2010-11-10T20:48:34.000Z</LastModified>
    <ETag>"7778aef83f66abc1fa1e8477f296d394"</ETag>
    <Size>10485760</Size>
  </Part>
  <Part>
    <PartNumber>3</PartNumber>
    <LastModified>2010-11-10T20:48:33.000Z</LastModified>
    <ETag>"aaaa18db4cc2f85cedef654fccc4a4x8"</ETag>
    <Size>10485760</Size>
  </Part>
</ListPartsResult>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2

- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutBucketAccelerateConfiguration

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Sets the accelerate configuration of an existing bucket. Amazon S3 Transfer Acceleration is a bucket-level feature that enables you to perform faster data transfers to Amazon S3.

To use this operation, you must have permission to perform the `s3:PutAccelerateConfiguration` action. The bucket owner has this permission by default. The bucket owner can grant this permission to others. For more information about permissions, see Permissions Related to Bucket Subresource Operations and Managing Access Permissions to Your Amazon S3 Resources.

The Transfer Acceleration state of a bucket can be set to one of the following two values:

- Enabled – Enables accelerated data transfers to the bucket.
- Suspended – Disables accelerated data transfers to the bucket.

The GetBucketAccelerateConfiguration action returns the transfer acceleration state of a bucket.

After setting the Transfer Acceleration state of a bucket to Enabled, it might take up to thirty minutes before the data transfer rates to the bucket increase.

The name of the bucket used for Transfer Acceleration must be DNS-compliant and must not contain periods (".").

For more information about transfer acceleration, see Transfer Acceleration.

The following operations are related to `PutBucketAccelerateConfiguration`:

- GetBucketAccelerateConfiguration
- CreateBucket

Request Syntax

```
PUT /?accelerate HTTP/1.1
```

```
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
x-amz-sdk-checksum-algorithm: ChecksumAlgorithm
<?xml version="1.0" encoding="UTF-8"?>
<AccelerateConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <Status>string</Status>
</AccelerateConfiguration>
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket for which the accelerate configuration is set.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-sdk-checksum-algorithm

Indicates the algorithm used to create the checksum for the object when you use the SDK. This header will not provide any additional functionality if you don't use the SDK. When you send this header, there must be a corresponding `x-amz-checksum` or `x-amz-trailer` header sent. Otherwise, Amazon S3 fails the request with the HTTP status code `400 Bad Request`. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

If you provide an individual checksum, Amazon S3 ignores any provided `ChecksumAlgorithm` parameter.

Valid Values: `CRC32 | CRC32C | SHA1 | SHA256`

Request Body

The request accepts the following data in XML format.

AccelerateConfiguration

Root level tag for the AccelerateConfiguration parameters.

Required: Yes

Status

Specifies the transfer acceleration status of the bucket.

Type: String

Valid Values: `Enabled | Suspended`

Required: No

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

Sample Request: Add transfer acceleration configuration to set acceleration status

The following is an example of a `PUT /?accelerate` request that enables transfer acceleration for the bucket named `examplebucket`.

```
PUT /?accelerate HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
Date: Mon, 11 Apr 2016 12:00:00 GMT
Authorization: authorization string
Content-Type: text/plain
Content-Length: length

<AccelerateConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Status>Enabled</Status>
</AccelerateConfiguration>
```

Sample Response

This example illustrates one usage of PutBucketAccelerateConfiguration.

```
HTTP/1.1 200 OK
x-amz-id-2: YgIPIfBiKa2bj0KMg95r/0zo3emzU4dzsD4rcKCHQUAdQkf3ShJTOOpXUueF6QKo
x-amz-request-id: 236A8905248E5A01
Date: Mon, 11 Apr 2016 12:00:00 GMT
Content-Length: 0
Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutBucketAcl

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Sets the permissions on an existing bucket using access control lists (ACL). For more information, see Using ACLs. To set the ACL of a bucket, you must have the `WRITE_ACP` permission.

You can use one of the following two ways to set a bucket's permissions:

- Specify the ACL in the request body
- Specify permissions using request headers

> **Note**
>
> You cannot specify access permission using both the body and the request headers.

Depending on your application needs, you may choose to set the ACL on a bucket using either the request body or the headers. For example, if you have an existing application that updates a bucket ACL using the request body, then you can continue to use that approach.

> **Important**
>
> If your bucket uses the bucket owner enforced setting for S3 Object Ownership, ACLs are disabled and no longer affect permissions. You must use policies to grant access to your bucket and the objects in it. Requests to set ACLs or update ACLs fail and return the `AccessControlListNotSupported` error code. Requests to read ACLs are still supported. For more information, see Controlling object ownership in the *Amazon S3 User Guide*.

Permissions

You can set access permissions by using one of the following methods:

- Specify a canned ACL with the `x-amz-acl` request header. Amazon S3 supports a set of predefined ACLs, known as *canned ACLs*. Each canned ACL has a predefined set of grantees and permissions. Specify the canned ACL name as the value of `x-amz-acl`. If you use this header, you cannot use other access control-specific headers in your request. For more information, see Canned ACL.
- Specify access permissions explicitly with the `x-amz-grant-read`, `x-amz-grant-read-acp`, `x-amz-grant-write-acp`, and `x-amz-grant-full-control` headers. When using these headers, you specify explicit access permissions and grantees (AWS accounts or Amazon S3 groups) who will receive the permission. If you use these ACL-specific headers, you cannot use the `x-amz-acl` header to set a canned ACL. These parameters map to the set of permissions that Amazon S3 supports in an ACL. For more information, see Access Control List (ACL) Overview.

  You specify each grantee as a type=value pair, where the type is one of the following:

  - `id` – if the value specified is the canonical user ID of an AWS account
  - `uri` – if you are granting permissions to a predefined group
  - `emailAddress` – if the value specified is the email address of an AWS account

  > **Note**
  >
  > Using email addresses to specify a grantee is only supported in the following AWS Regions:
  >
  > - US East (N. Virginia)
  > - US West (N. California)
  > - US West (Oregon)
  > - Asia Pacific (Singapore)
  > - Asia Pacific (Sydney)
  > - Asia Pacific (Tokyo)
  > - Europe (Ireland)
  > - South America (São Paulo)
  >
  > For a list of all the Amazon S3 supported Regions and endpoints, see Regions and Endpoints in the AWS General Reference.

For example, the following `x-amz-grant-write` header grants create, overwrite, and delete objects permission to LogDelivery group predefined by Amazon S3 and two AWS accounts identified by their email addresses.

```
x-amz-grant-write: uri="http://acs.amazonaws.com/groups/s3/
LogDelivery", id="111122223333", id="555566667777"
```

You can use either a canned ACL or specify access permissions explicitly. You cannot do both.

Grantee Values

You can specify the person (grantee) to whom you're assigning access rights (using request elements) in the following ways:

- By the person's ID:

  ```
  <Grantee xmlns:xsi="http://www.w3.org/2001/XMLSchema-
  instance" xsi:type="CanonicalUser"><ID><>ID<></
  ID><DisplayName><>GranteesEmail<></DisplayName> </Grantee>
  ```

  DisplayName is optional and ignored in the request

- By URI:

  ```
  <Grantee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:type="Group"><URI><>http://acs.amazonaws.com/groups/global/
  AuthenticatedUsers<></URI></Grantee>
  ```

- By Email address:

  ```
  <Grantee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:type="AmazonCustomerByEmail"><EmailAddress><>Grantees@email.com<></
  EmailAddress>&</Grantee>
  ```

  The grantee is resolved to the CanonicalUser and, in a response to a GET Object acl request, appears as the CanonicalUser.

  Note

  Using email addresses to specify a grantee is only supported in the following AWS Regions:

  - US East (N. Virginia)

- US West (N. California)
- US West (Oregon)
- Asia Pacific (Singapore)
- Asia Pacific (Sydney)
- Asia Pacific (Tokyo)
- Europe (Ireland)
- South America (São Paulo)

For a list of all the Amazon S3 supported Regions and endpoints, see Regions and Endpoints in the AWS General Reference.

The following operations are related to `PutBucketAcl`:

- CreateBucket
- DeleteBucket
- GetObjectAcl

Request Syntax

```
PUT /?acl HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-acl: ACL
Content-MD5: ContentMD5
x-amz-sdk-checksum-algorithm: ChecksumAlgorithm
x-amz-grant-full-control: GrantFullControl
x-amz-grant-read: GrantRead
x-amz-grant-read-acp: GrantReadACP
x-amz-grant-write: GrantWrite
x-amz-grant-write-acp: GrantWriteACP
x-amz-expected-bucket-owner: ExpectedBucketOwner
<?xml version="1.0" encoding="UTF-8"?>
<AccessControlPolicy xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <AccessControlList>
      <Grant>
         <Grantee>
            <DisplayName>string</DisplayName>
            <EmailAddress>string</EmailAddress>
            <ID>string</ID>
```

```
            <xsi:type>string</xsi:type>
            <URI>string</URI>
         </Grantee>
         <Permission>string</Permission>
      </Grant>
   </AccessControlList>
   <Owner>
      <DisplayName>string</DisplayName>
      <ID>string</ID>
   </Owner>
</AccessControlPolicy>
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket to which to apply the ACL.

Required: Yes

Content-MD5

The base64-encoded 128-bit MD5 digest of the data. This header must be used as a message integrity check to verify that the request body was not corrupted in transit. For more information, go to RFC 1864.

For requests made using the AWS Command Line Interface (CLI) or AWS SDKs, this field is calculated automatically.

x-amz-acl

The canned ACL to apply to the bucket.

Valid Values: `private | public-read | public-read-write | authenticated-read`

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-grant-full-control

Allows grantee the read, write, read ACP, and write ACP permissions on the bucket.

x-amz-grant-read

Allows grantee to list the objects in the bucket.

x-amz-grant-read-acp

Allows grantee to read the bucket ACL.

x-amz-grant-write

Allows grantee to create new objects in the bucket.

For the bucket and object owners of existing objects, also allows deletions and overwrites of those objects.

x-amz-grant-write-acp

Allows grantee to write the ACL for the applicable bucket.

x-amz-sdk-checksum-algorithm

Indicates the algorithm used to create the checksum for the object when you use the SDK. This header will not provide any additional functionality if you don't use the SDK. When you send this header, there must be a corresponding `x-amz-checksum` or `x-amz-trailer` header sent. Otherwise, Amazon S3 fails the request with the HTTP status code `400 Bad Request`. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

If you provide an individual checksum, Amazon S3 ignores any provided `ChecksumAlgorithm` parameter.

Valid Values: `CRC32 | CRC32C | SHA1 | SHA256`

Request Body

The request accepts the following data in XML format.

AccessControlPolicy

Root level tag for the AccessControlPolicy parameters.

Required: Yes

Grants

A list of grants.

Type: Array of Grant data types

Required: No

Owner

Container for the bucket owner's display name and ID.

Type: Owner data type

Required: No

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

Sample Request: Access permissions specified in the body

The following request grants access permission to the existing `examplebucket` bucket. The request specifies the ACL in the body. In addition to granting full control to the bucket owner, the XML specifies the following grants.

- Grant the `AllUsers` group READ permission on the bucket.
- Grant the `LogDelivery` group WRITE permission on the bucket.
- Grant an AWS account, identified by email address, WRITE_ACP permission.
- Grant an AWS account, identified by canonical user ID, READ_ACP permission.

```
PUT ?acl HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
Content-Length: 1660
x-amz-date: Thu, 12 Apr 2012 20:04:21 GMT
Authorization: authorization string

<AccessControlPolicy xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
```

```
  <Owner>
    <ID>852b113e7a2f25102679df27bb0ae12b3f85be6BucketOwnerCanonicalUserID</ID>
    <DisplayName>OwnerDisplayName</DisplayName>
  </Owner>
  <AccessControlList>
    <Grant>
      <Grantee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xsi:type="CanonicalUser">
        <ID>852b113e7a2f25102679df27bb0ae12b3f85be6BucketOwnerCanonicalUserID</ID>
        <DisplayName>OwnerDisplayName</DisplayName>
      </Grantee>
      <Permission>FULL_CONTROL</Permission>
    </Grant>
    <Grant>
      <Grantee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="Group">
        <URI xmlns="">http://acs.amazonaws.com/groups/global/AllUsers</URI>
      </Grantee>
      <Permission xmlns="">READ</Permission>
    </Grant>
    <Grant>
      <Grantee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="Group">
        <URI xmlns="">http://acs.amazonaws.com/groups/s3/LogDelivery</URI>
      </Grantee>
      <Permission xmlns="">WRITE</Permission>
    </Grant>
    <Grant>
      <Grantee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xsi:type="AmazonCustomerByEmail">
        <EmailAddress xmlns="">xyz@amazon.com</EmailAddress>
      </Grantee>
      <Permission xmlns="">WRITE_ACP</Permission>
    </Grant>
    <Grant>
      <Grantee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xsi:type="CanonicalUser">
        <ID
 xmlns="">f30716ab7115dcb44a5ef76e9d74b8e20567f63TestAccountCanonicalUserID</ID>
      </Grantee>
      <Permission xmlns="">READ_ACP</Permission>
    </Grant>
  </AccessControlList>
</AccessControlPolicy>
```

Sample Response

This example illustrates one usage of PutBucketAcl.

```
HTTP/1.1 200 OK
x-amz-id-2: NxqO3PNiMHXXGwjgv15LLgUoAmPVmG0xtZw2sxePXLhpIvcyouXDrcQUaWWXcOK0
x-amz-request-id: C651BC9B4E1BD401
Date: Thu, 12 Apr 2012 20:04:28 GMT
Content-Length: 0
Server: AmazonS3
```

Sample Request: Access permissions specified using headers

The following request uses ACL-specific request headers to grant the following permissions:

- Write permission to the Amazon S3 `LogDelivery` group and an AWS account identified by the email `xyz@amazon.com`.
- Read permission to the Amazon S3 `AllUsers` group

```
PUT ?acl HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
x-amz-date: Sun, 29 Apr 2012 22:00:57 GMT
x-amz-grant-write: uri="http://acs.amazonaws.com/groups/s3/LogDelivery",
 emailAddress="xyz@amazon.com"
x-amz-grant-read: uri="http://acs.amazonaws.com/groups/global/AllUsers"
Accept: */*
Authorization: authorization string
```

Sample Response

This example illustrates one usage of PutBucketAcl.

```
HTTP/1.1 200 OK
x-amz-id-2: 0w9iImt23VF9s6QofOTDzelF7mrryz7d04Mw23FQCi4O205Zw28Zn+d340/RytoQ
x-amz-request-id: A6A8F01A38EC7138
```

```
Date: Sun, 29 Apr 2012 22:01:10 GMT
Content-Length: 0
Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutBucketAnalyticsConfiguration

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Sets an analytics configuration for the bucket (specified by the analytics configuration ID). You can have up to 1,000 analytics configurations per bucket.

You can choose to have storage class analysis export analysis reports sent to a comma-separated values (CSV) flat file. See the `DataExport` request element. Reports are updated daily and are based on the object filters that you configure. When selecting data export, you specify a destination bucket and an optional destination prefix where the file is written. You can export the data to a destination bucket in a different account. However, the destination bucket must be in the same Region as the bucket that you are making the PUT analytics configuration to. For more information, see Amazon S3 Analytics – Storage Class Analysis.

> **Important**
>
> You must create a bucket policy on the destination bucket where the exported file is written to grant permissions to Amazon S3 to write objects to the bucket. For an example policy, see Granting Permissions for Amazon S3 Inventory and Storage Class Analysis.

To use this operation, you must have permissions to perform the `s3:PutAnalyticsConfiguration` action. The bucket owner has this permission by default. The bucket owner can grant this permission to others. For more information about permissions, see Permissions Related to Bucket Subresource Operations and Managing Access Permissions to Your Amazon S3 Resources.

`PutBucketAnalyticsConfiguration` has the following special errors:

- • *HTTP Error: HTTP 400 Bad Request*
  - *Code: InvalidArgument*
  - *Cause: Invalid argument.*
- • *HTTP Error: HTTP 400 Bad Request*

- *Code: TooManyConfigurations*
- *Cause: You are attempting to create a new configuration but have already reached the 1,000-configuration limit.*
- *HTTP Error: HTTP 403 Forbidden*
- *Code: AccessDenied*
- *Cause: You are not the owner of the specified bucket, or you do not have the s3:PutAnalyticsConfiguration bucket permission to set the configuration on the bucket.*

The following operations are related to `PutBucketAnalyticsConfiguration`:

- GetBucketAnalyticsConfiguration
- DeleteBucketAnalyticsConfiguration
- ListBucketAnalyticsConfigurations

Request Syntax

```
PUT /?analytics&id=Id HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
<?xml version="1.0" encoding="UTF-8"?>
<AnalyticsConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <Id>string</Id>
   <Filter>
      <And>
         <Prefix>string</Prefix>
         <Tag>
            <Key>string</Key>
            <Value>string</Value>
         </Tag>
         ...
      </And>
      <Prefix>string</Prefix>
      <Tag>
         <Key>string</Key>
         <Value>string</Value>
      </Tag>
   </Filter>
   <StorageClassAnalysis>
      <DataExport>
```

```
          <Destination>
             <S3BucketDestination>
                <Bucket>string</Bucket>
                <BucketAccountId>string</BucketAccountId>
                <Format>string</Format>
                <Prefix>string</Prefix>
             </S3BucketDestination>
          </Destination>
          <OutputSchemaVersion>string</OutputSchemaVersion>
       </DataExport>
    </StorageClassAnalysis>
</AnalyticsConfiguration>
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket to which an analytics configuration is stored.

Required: Yes

id

The ID that identifies the analytics configuration.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request accepts the following data in XML format.

AnalyticsConfiguration

Root level tag for the AnalyticsConfiguration parameters.

Required: Yes

Filter

The filter used to describe a set of objects for analyses. A filter must have exactly one prefix, one tag, or one conjunction (AnalyticsAndOperator). If no filter is provided, all objects will be considered in any analysis.

Type: AnalyticsFilter data type

Required: No

Id

The ID that identifies the analytics configuration.

Type: String

Required: Yes

StorageClassAnalysis

Contains data related to access patterns to be collected and made available to analyze the tradeoffs between different storage classes.

Type: StorageClassAnalysis data type

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

Example 1: Creating an analytics configuration

The following PUT request for the bucket `examplebucket` creates a new or replaces an existing analytics configuration with the ID `report1`. The configuration is defined in the request body.

```
PUT /?analytics&id=report1 HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
Date: Mon, 31 Oct 2016 12:00:00 GMT
Authorization: authorization string
Content-Length: length

<?xml version="1.0" encoding="UTF-8"?>
<AnalyticsConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Id>report1</Id>
  <Filter>
    <And>
      <Prefix>images/</Prefix>
      <Tag>
        <Key>dog</Key>
        <Value>corgi</Value>
      </Tag>
    </And>
  </Filter>
  <StorageClassAnalysis>
    <DataExport>
      <OutputSchemaVersion>V_1</OutputSchemaVersion>
      <Destination>
        <S3BucketDestination>
          <Format>CSV</Format>
          <BucketAccountId>123456789012</BucketAccountId>
          <Bucket>arn:aws:s3:::destination-bucket</Bucket>
          <Prefix>destination-prefix</Prefix>
        </S3BucketDestination>
      </Destination>
    </DataExport>
  </StorageClassAnalysis>
</AnalyticsConfiguration>
```

Sample Response

This example illustrates one usage of PutBucketAnalyticsConfiguration.

```
HTTP/1.1 200 OK
x-amz-id-2: YgIPIfBiKa2bj0KMg95r/0zo3emzU4dzsD4rcKCHQUAdQkf3ShJTOOpXUueF6QKo
x-amz-request-id: 236A8905248E5A01
Date: Mon, 31 Oct 2016 12:00:00 GMT
```

```
Content-Length: 0
Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutBucketCors

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Sets the `cors` configuration for your bucket. If the configuration exists, Amazon S3 replaces it.

To use this operation, you must be allowed to perform the `s3:PutBucketCORS` action. By default, the bucket owner has this permission and can grant it to others.

You set this configuration on a bucket so that the bucket can service cross-origin requests. For example, you might want to enable a request whose origin is `http://www.example.com` to access your Amazon S3 bucket at `my.example.bucket.com` by using the browser's `XMLHttpRequest` capability.

To enable cross-origin resource sharing (CORS) on a bucket, you add the `cors` subresource to the bucket. The `cors` subresource is an XML document in which you configure rules that identify origins and the HTTP methods that can be executed on your bucket. The document is limited to 64 KB in size.

When Amazon S3 receives a cross-origin request (or a pre-flight OPTIONS request) against a bucket, it evaluates the `cors` configuration on the bucket and uses the first `CORSRule` rule that matches the incoming browser request to enable a cross-origin request. For a rule to match, the following conditions must be met:

- The request's `Origin` header must match `AllowedOrigin` elements.
- The request method (for example, GET, PUT, HEAD, and so on) or the `Access-Control-Request-Method` header in case of a pre-flight `OPTIONS` request must be one of the `AllowedMethod` elements.
- Every header specified in the `Access-Control-Request-Headers` request header of a pre-flight request must match an `AllowedHeader` element.

For more information about CORS, go to Enabling Cross-Origin Resource Sharing in the *Amazon S3 User Guide*.

The following operations are related to `PutBucketCors`:

- GetBucketCors
- DeleteBucketCors
- RESTOPTIONSobject

Request Syntax

```
PUT /?cors HTTP/1.1
Host: Bucket.s3.amazonaws.com
Content-MD5: ContentMD5
x-amz-sdk-checksum-algorithm: ChecksumAlgorithm
x-amz-expected-bucket-owner: ExpectedBucketOwner
<?xml version="1.0" encoding="UTF-8"?>
<CORSConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <CORSRule>
      <AllowedHeader>string</AllowedHeader>
      ...
      <AllowedMethod>string</AllowedMethod>
      ...
      <AllowedOrigin>string</AllowedOrigin>
      ...
      <ExposeHeader>string</ExposeHeader>
      ...
      <ID>string</ID>
      <MaxAgeSeconds>integer</MaxAgeSeconds>
   </CORSRule>
   ...
</CORSConfiguration>
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

Specifies the bucket impacted by the `cors`configuration.

Required: Yes

Content-MD5

The base64-encoded 128-bit MD5 digest of the data. This header must be used as a message integrity check to verify that the request body was not corrupted in transit. For more information, go to RFC 1864.

For requests made using the AWS Command Line Interface (CLI) or AWS SDKs, this field is calculated automatically.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-sdk-checksum-algorithm

Indicates the algorithm used to create the checksum for the object when you use the SDK. This header will not provide any additional functionality if you don't use the SDK. When you send this header, there must be a corresponding `x-amz-checksum` or `x-amz-trailer` header sent. Otherwise, Amazon S3 fails the request with the HTTP status code `400 Bad Request`. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

If you provide an individual checksum, Amazon S3 ignores any provided `ChecksumAlgorithm` parameter.

Valid Values: `CRC32 | CRC32C | SHA1 | SHA256`

Request Body

The request accepts the following data in XML format.

CORSConfiguration

Root level tag for the CORSConfiguration parameters.

Required: Yes

CORSRule

A set of origins and methods (cross-origin access that you want to allow). You can add up to 100 rules to the configuration.

Type: Array of CORSRule data types

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

Example: CORS configuration on a bucket with two rules

- The first `CORSRule` allows cross-origin PUT, POST, and DELETE requests whose origin is `http://www.example.com` origins. The rule also allows all headers in a pre-flight OPTIONS request through the `Access-Control-Request-Headers` header. Therefore, in response to any pre-flight OPTIONS request, Amazon S3 will return any requested headers.
- The second rule allows cross-origin GET requests from all the origins. The '*' wildcard character refers to all origins.

```
<CORSConfiguration>
 <CORSRule>
   <AllowedOrigin>http://www.example.com</AllowedOrigin>

   <AllowedMethod>PUT</AllowedMethod>
   <AllowedMethod>POST</AllowedMethod>
   <AllowedMethod>DELETE</AllowedMethod>

   <AllowedHeader>*</AllowedHeader>
 </CORSRule>
 <CORSRule>
   <AllowedOrigin>*</AllowedOrigin>
   <AllowedMethod>GET</AllowedMethod>
 </CORSRule>
</CORSConfiguration>
```

Example: CORS configuration allows cross-origin PUT and POST requests from http://www.example.com

The `cors` configuration also allows additional optional configuration parameters as shown in the following cors configuration on a bucket. For example,

In the preceding configuration, `CORSRule` includes the following additional optional parameters:

- `MaxAgeSeconds`—Specifies the time in seconds that the browser will cache an Amazon S3 response to a pre-flight OPTIONS request for the specified resource. In this example, this parameter is 3000 seconds. Caching enables the browsers to avoid sending pre-flight OPTIONS request to Amazon S3 for repeated requests.
- `ExposeHeader`—Identifies the response header (in this case `x-amz-server-side-encryption`) that you want customers to be able to access from their applications (for example, from a JavaScript `XMLHttpRequest` object).

```
<CORSConfiguration>
 <CORSRule>
   <AllowedOrigin>http://www.example.com</AllowedOrigin>
   <AllowedMethod>PUT</AllowedMethod>
   <AllowedMethod>POST</AllowedMethod>
   <AllowedMethod>DELETE</AllowedMethod>
   <AllowedHeader>*</AllowedHeader>
   <MaxAgeSeconds>3000</MaxAgeSeconds>
   <ExposeHeader>x-amz-server-side-encryption</ExposeHeader>
 </CORSRule>
</CORSConfiguration>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2

- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutBucketEncryption

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

This action uses the `encryption` subresource to configure default encryption and Amazon S3 Bucket Keys for an existing bucket.

By default, all buckets have a default encryption configuration that uses server-side encryption with Amazon S3 managed keys (SSE-S3). You can optionally configure default encryption for a bucket by using server-side encryption with AWS Key Management Service (AWS KMS) keys (SSE-KMS) or dual-layer server-side encryption with AWS KMS keys (DSSE-KMS). If you specify default encryption by using SSE-KMS, you can also configure Amazon S3 Bucket Keys. If you use PutBucketEncryption to set your default bucket encryption to SSE-KMS, you should verify that your KMS key ID is correct. Amazon S3 does not validate the KMS key ID provided in PutBucketEncryption requests.

> **Important**
>
> This action requires AWS Signature Version 4. For more information, see Authenticating Requests (AWS Signature Version 4).

To use this operation, you must have permission to perform the `s3:PutEncryptionConfiguration` action. The bucket owner has this permission by default. The bucket owner can grant this permission to others. For more information about permissions, see Permissions Related to Bucket Subresource Operations and Managing Access Permissions to Your Amazon S3 Resources in the *Amazon S3 User Guide*.

The following operations are related to `PutBucketEncryption`:

- GetBucketEncryption
- DeleteBucketEncryption

Request Syntax

```
PUT /?encryption HTTP/1.1
Host: Bucket.s3.amazonaws.com
Content-MD5: ContentMD5
x-amz-sdk-checksum-algorithm: ChecksumAlgorithm
x-amz-expected-bucket-owner: ExpectedBucketOwner
<?xml version="1.0" encoding="UTF-8"?>
<ServerSideEncryptionConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <Rule>
      <ApplyServerSideEncryptionByDefault>
         <KMSMasterKeyID>string</KMSMasterKeyID>
         <SSEAlgorithm>string</SSEAlgorithm>
      </ApplyServerSideEncryptionByDefault>
      <BucketKeyEnabled>boolean</BucketKeyEnabled>
   </Rule>
   ...
</ServerSideEncryptionConfiguration>
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

Specifies default encryption for a bucket using server-side encryption with different key options. By default, all buckets have a default encryption configuration that uses server-side encryption with Amazon S3 managed keys (SSE-S3). You can optionally configure default encryption for a bucket by using server-side encryption with an AWS KMS key (SSE-KMS) or a customer-provided key (SSE-C). For information about the bucket default encryption feature, see Amazon S3 Bucket Default Encryption in the *Amazon S3 User Guide*.

Required: Yes

Content-MD5

The base64-encoded 128-bit MD5 digest of the server-side encryption configuration.

For requests made using the AWS Command Line Interface (CLI) or AWS SDKs, this field is calculated automatically.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-sdk-checksum-algorithm

Indicates the algorithm used to create the checksum for the object when you use the SDK. This header will not provide any additional functionality if you don't use the SDK. When you send this header, there must be a corresponding `x-amz-checksum` or `x-amz-trailer` header sent. Otherwise, Amazon S3 fails the request with the HTTP status code `400 Bad Request`. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

If you provide an individual checksum, Amazon S3 ignores any provided `ChecksumAlgorithm` parameter.

Valid Values: `CRC32 | CRC32C | SHA1 | SHA256`

Request Body

The request accepts the following data in XML format.

ServerSideEncryptionConfiguration

Root level tag for the ServerSideEncryptionConfiguration parameters.

Required: Yes

Rule

Container for information about a particular server-side encryption configuration rule.

Type: Array of ServerSideEncryptionRule data types

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

In the request, you specify the encryption configuration in the request body. The encryption configuration is specified as XML, as shown in the following examples that show setting encryption using SSE-S3, SSE-KMS, or DSSE-KMS.

Request Body for Setting SSE-S3

This example illustrates one usage of PutBucketEncryption.

```
          <ServerSideEncryptionConfiguration xmlns="http://s3.amazonaws.com/
doc/2006-03-01/">
              <Rule>
                 <ApplyServerSideEncryptionByDefault>
                    <SSEAlgorithm>AES256</SSEAlgorithm>
                 </ApplyServerSideEncryptionByDefault>
              </Rule>
           </ServerSideEncryptionConfiguration>
```

Request Body for Setting SSE-KMS

This example illustrates one usage of PutBucketEncryption.

```
          <ServerSideEncryptionConfiguration xmlns="http://s3.amazonaws.com/
doc/2006-03-01/">
              <Rule>
                 <ApplyServerSideEncryptionByDefault>
                     <SSEAlgorithm>aws:kms:dsse</SSEAlgorithm>
                     <KMSKeyID>arn:aws:kms:us-east-1:1234/5678example</KMSKeyID>
                 </ApplyServerSideEncryptionByDefault>
              </Rule>
           </ServerSideEncryptionConfiguration>
```

Set the Default Encryption Configuration for an S3 Bucket

The following is an example of a PUT /? encryption request that specifies to use SSE-KMS encryption.

```
PUT /?encryption HTTP/1.1
Host: examplebucket.<Region>s3.amazonaws.com
Date: Wed, 06 Sep 2017 12:00:00 GMT
Authorization: authorization
Content-Length: length

<ServerSideEncryptionConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Rule>
    <ApplyServerSideEncryptionByDefault>
        <SSEAlgorithm>aws:kms</SSEAlgorithm>
        <KMSKeyID>arn:aws:kms:us-east-1:1234/5678example</KMSKeyID>
    </ApplyServerSideEncryptionByDefault>
</Rule>
</ServerSideEncryptionConfiguration>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutBucketIntelligentTieringConfiguration

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Puts a S3 Intelligent-Tiering configuration to the specified bucket. You can have up to 1,000 S3 Intelligent-Tiering configurations per bucket.

The S3 Intelligent-Tiering storage class is designed to optimize storage costs by automatically moving data to the most cost-effective storage access tier, without performance impact or operational overhead. S3 Intelligent-Tiering delivers automatic cost savings in three low latency and high throughput access tiers. To get the lowest storage cost on data that can be accessed in minutes to hours, you can choose to activate additional archiving capabilities.

The S3 Intelligent-Tiering storage class is the ideal storage class for data with unknown, changing, or unpredictable access patterns, independent of object size or retention period. If the size of an object is less than 128 KB, it is not monitored and not eligible for auto-tiering. Smaller objects can be stored, but they are always charged at the Frequent Access tier rates in the S3 Intelligent-Tiering storage class.

For more information, see Storage class for automatically optimizing frequently and infrequently accessed objects.

Operations related to `PutBucketIntelligentTieringConfiguration` include:

- DeleteBucketIntelligentTieringConfiguration
- GetBucketIntelligentTieringConfiguration
- ListBucketIntelligentTieringConfigurations

> **Note**
>
> You only need S3 Intelligent-Tiering enabled on a bucket if you want to automatically move objects stored in the S3 Intelligent-Tiering storage class to the Archive Access or Deep Archive Access tier.

`PutBucketIntelligentTieringConfiguration` has the following special errors:

HTTP 400 Bad Request Error

Code: InvalidArgument

Cause: Invalid Argument

HTTP 400 Bad Request Error

Code: TooManyConfigurations

Cause: You are attempting to create a new configuration but have already reached the 1,000-configuration limit.

HTTP 403 Forbidden Error

Cause: You are not the owner of the specified bucket, or you do not have the `s3:PutIntelligentTieringConfiguration` bucket permission to set the configuration on the bucket.

Request Syntax

```
PUT /?intelligent-tiering&id=Id HTTP/1.1
Host: Bucket.s3.amazonaws.com
<?xml version="1.0" encoding="UTF-8"?>
<IntelligentTieringConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <Id>string</Id>
   <Filter>
      <And>
         <Prefix>string</Prefix>
         <Tag>
            <Key>string</Key>
            <Value>string</Value>
         </Tag>
         ...
      </And>
      <Prefix>string</Prefix>
      <Tag>
         <Key>string</Key>
         <Value>string</Value>
      </Tag>
   </Filter>
   <Status>string</Status>
```

```
    <Tiering>
       <AccessTier>string</AccessTier>
       <Days>integer</Days>
    </Tiering>
    ...
</IntelligentTieringConfiguration>
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the Amazon S3 bucket whose configuration you want to modify or retrieve.

Required: Yes

id

The ID used to identify the S3 Intelligent-Tiering configuration.

Required: Yes

Request Body

The request accepts the following data in XML format.

IntelligentTieringConfiguration

Root level tag for the IntelligentTieringConfiguration parameters.

Required: Yes

Filter

Specifies a bucket filter. The configuration only includes objects that meet the filter's criteria.

Type: IntelligentTieringFilter data type

Required: No

Id

The ID used to identify the S3 Intelligent-Tiering configuration.

Type: String

Required: Yes

Status

Specifies the status of the configuration.

Type: String

Valid Values: `Enabled | Disabled`

Required: Yes

Tiering

Specifies the S3 Intelligent-Tiering storage class tier of the configuration.

Type: Array of Tiering data types

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutBucketInventoryConfiguration

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

This implementation of the PUT action adds an inventory configuration (identified by the inventory ID) to the bucket. You can have up to 1,000 inventory configurations per bucket.

Amazon S3 inventory generates inventories of the objects in the bucket on a daily or weekly basis, and the results are published to a flat file. The bucket that is inventoried is called the *source* bucket, and the bucket where the inventory flat file is stored is called the *destination* bucket. The *destination* bucket must be in the same AWS Region as the *source* bucket.

When you configure an inventory for a *source* bucket, you specify the *destination* bucket where you want the inventory to be stored, and whether to generate the inventory daily or weekly. You can also configure what object metadata to include and whether to inventory all object versions or only current versions. For more information, see Amazon S3 Inventory in the Amazon S3 User Guide.

> **Important**
>
> You must create a bucket policy on the *destination* bucket to grant permissions to Amazon S3 to write objects to the bucket in the defined location. For an example policy, see Granting Permissions for Amazon S3 Inventory and Storage Class Analysis.

Permissions

To use this operation, you must have permission to perform the `s3:PutInventoryConfiguration` action. The bucket owner has this permission by default and can grant this permission to others.

The `s3:PutInventoryConfiguration` permission allows a user to create an S3 Inventory report that includes all object metadata fields available and to specify the destination bucket to store the inventory. A user with read access to objects in the destination bucket can also access all object metadata fields that are available in the inventory report.

To restrict access to an inventory report, see Restricting access to an Amazon S3 Inventory report in the *Amazon S3 User Guide*. For more information about the metadata fields available in S3 Inventory, see Amazon S3 Inventory lists in the *Amazon S3 User Guide*. For more information about permissions, see Permissions related to bucket subresource operations and Identity and access management in Amazon S3 in the *Amazon S3 User Guide*.

`PutBucketInventoryConfiguration` has the following special errors:

HTTP 400 Bad Request Error

Code: InvalidArgument

Cause: Invalid Argument

HTTP 400 Bad Request Error

Code: TooManyConfigurations

Cause: You are attempting to create a new configuration but have already reached the 1,000-configuration limit.

HTTP 403 Forbidden Error

Cause: You are not the owner of the specified bucket, or you do not have the `s3:PutInventoryConfiguration` bucket permission to set the configuration on the bucket.

The following operations are related to `PutBucketInventoryConfiguration`:

- GetBucketInventoryConfiguration
- DeleteBucketInventoryConfiguration
- ListBucketInventoryConfigurations

Request Syntax

```
PUT /?inventory&id=Id HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
<?xml version="1.0" encoding="UTF-8"?>
<InventoryConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
```

```
   <Destination>
      <S3BucketDestination>
         <AccountId>string</AccountId>
         <Bucket>string</Bucket>
         <Encryption>
            <SSE-KMS>
               <KeyId>string</KeyId>
            </SSE-KMS>
            <SSE-S3>
            </SSE-S3>
         </Encryption>
         <Format>string</Format>
         <Prefix>string</Prefix>
      </S3BucketDestination>
   </Destination>
   <IsEnabled>boolean</IsEnabled>
   <Filter>
      <Prefix>string</Prefix>
   </Filter>
   <Id>string</Id>
   <IncludedObjectVersions>string</IncludedObjectVersions>
   <OptionalFields>
      <Field>string</Field>
   </OptionalFields>
   <Schedule>
      <Frequency>string</Frequency>
   </Schedule>
</InventoryConfiguration>
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket where the inventory configuration will be stored.

Required: Yes

id

The ID used to identify the inventory configuration.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request accepts the following data in XML format.

InventoryConfiguration

Root level tag for the InventoryConfiguration parameters.

Required: Yes

Destination

Contains information about where to publish the inventory results.

Type: InventoryDestination data type

Required: Yes

Filter

Specifies an inventory filter. The inventory only includes objects that meet the filter's criteria.

Type: InventoryFilter data type

Required: No

Id

The ID used to identify the inventory configuration.

Type: String

Required: Yes

IncludedObjectVersions

Object versions to include in the inventory list. If set to `All`, the list includes all the object versions, which adds the version-related fields `VersionId`, `IsLatest`, and `DeleteMarker` to the list. If set to `Current`, the list does not contain these version-related fields.

Type: String

Valid Values: `All | Current`

Required: Yes

IsEnabled

Specifies whether the inventory is enabled or disabled. If set to `True`, an inventory list is generated. If set to `False`, no inventory list is generated.

Type: Boolean

Required: Yes

OptionalFields

Contains the optional fields that are included in the inventory results.

Type: Array of strings

Valid Values: `Size | LastModifiedDate | StorageClass | ETag | IsMultipartUploaded | ReplicationStatus | EncryptionStatus | ObjectLockRetainUntilDate | ObjectLockMode | ObjectLockLegalHoldStatus | IntelligentTieringAccessTier | BucketKeyStatus | ChecksumAlgorithm | ObjectAccessControlList | ObjectOwner`

Required: No

Schedule

Specifies the schedule for generating inventory results.

Type: InventorySchedule data type

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

Example: Create an inventory configuration

The following PUT request and response for the bucket `examplebucket` creates a new or replaces an existing inventory configuration with the ID `report1`. The configuration is defined in the request body.

```
PUT /?inventory&id=report1 HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
Date: Mon, 31 Oct 2016 12:00:00 GMT
Authorization: authorization string
Content-Length: length

<?xml version="1.0" encoding="UTF-8"?>
<InventoryConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <Id>report1</Id>
   <IsEnabled>true</IsEnabled>
   <Filter>
      <Prefix>filterPrefix</Prefix>
   </Filter>
   <Destination>
      <S3BucketDestination>
         <Format>CSV</Format>
         <AccountId>123456789012</AccountId>
         <Bucket>arn:aws:s3:::destination-bucket</Bucket>
         <Prefix>prefix1</Prefix>
         <Encryption>
            <SSE-KMS>
               <KeyId>arn:aws:kms:us-
west-2:111122223333:key/1234abcd-12ab-34cd-56ef-1234567890ab</KeyId>
            </SSE-KMS>
         </Encryption>
      </S3BucketDestination>
   </Destination>
   <Schedule>
      <Frequency>Daily</Frequency>
   </Schedule>
   <IncludedObjectVersions>All</IncludedObjectVersions>
   <OptionalFields>
      <Field>Size</Field>
      <Field>LastModifiedDate</Field>
      <Field>ETag</Field>
```

```
      <Field>StorageClass</Field>
      <Field>IsMultipartUploaded</Field>
      <Field>ReplicationStatus</Field>
      <Field>EncryptionStatus</Field>
      <Field>ObjectLockRetainUntilDate</Field>
      <Field>ObjectLockMode</Field>
      <Field>ObjectLockLegalHoldStatus</Field>
   </OptionalFields>
</InventoryConfiguration>
```

```
HTTP/1.1 200 OK
x-amz-id-2: YgIPIfBiKa2bj0KMg95r/0zo3emzU4dzsD4rcKCHQUAdQkf3ShJTOOpXUueF6QKo
x-amz-request-id: 236A8905248E5A01
Date: Mon, 31 Oct 2016 12:00:00 GMT
Content-Length: 0
Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutBucketLifecycle

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

> **Important**
>
> For an updated version of this API, see PutBucketLifecycleConfiguration. This version has been deprecated. Existing lifecycle configurations will work. For new lifecycle configurations, use the updated API.

Creates a new lifecycle configuration for the bucket or replaces an existing lifecycle configuration. For information about lifecycle configuration, see Object Lifecycle Management in the *Amazon S3 User Guide*.

By default, all Amazon S3 resources, including buckets, objects, and related subresources (for example, lifecycle configuration and website configuration) are private. Only the resource owner, the AWS account that created the resource, can access it. The resource owner can optionally grant access permissions to others by writing an access policy. For this operation, users must get the `s3:PutLifecycleConfiguration` permission.

You can also explicitly deny permissions. Explicit denial also supersedes any other permissions. If you want to prevent users or accounts from removing or deleting objects from your bucket, you must deny them permissions for the following actions:

- `s3:DeleteObject`
- `s3:DeleteObjectVersion`
- `s3:PutLifecycleConfiguration`

For more information about permissions, see Managing Access Permissions to your Amazon S3 Resources in the *Amazon S3 User Guide*.

For more examples of transitioning objects to storage classes such as STANDARD_IA or ONEZONE_IA, see Examples of Lifecycle Configuration.

The following operations are related to `PutBucketLifecycle`:

- GetBucketLifecycle(Deprecated)
- GetBucketLifecycleConfiguration
- RestoreObject
- By default, a resource owner—in this case, a bucket owner, which is the AWS account that created the bucket—can perform any of the operations. A resource owner can also grant others permission to perform the operation. For more information, see the following topics in the Amazon S3 User Guide:
  - Specifying Permissions in a Policy
  - Managing Access Permissions to your Amazon S3 Resources

Request Syntax

```
PUT /?lifecycle HTTP/1.1
Host: Bucket.s3.amazonaws.com
Content-MD5: ContentMD5
x-amz-sdk-checksum-algorithm: ChecksumAlgorithm
x-amz-expected-bucket-owner: ExpectedBucketOwner
<?xml version="1.0" encoding="UTF-8"?>
<LifecycleConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <Rule>
      <AbortIncompleteMultipartUpload>
         <DaysAfterInitiation>integer</DaysAfterInitiation>
      </AbortIncompleteMultipartUpload>
      <Expiration>
         <Date>timestamp</Date>
         <Days>integer</Days>
         <ExpiredObjectDeleteMarker>boolean</ExpiredObjectDeleteMarker>
      </Expiration>
      <ID>string</ID>
      <NoncurrentVersionExpiration>
         <NewerNoncurrentVersions>integer</NewerNoncurrentVersions>
         <NoncurrentDays>integer</NoncurrentDays>
      </NoncurrentVersionExpiration>
      <NoncurrentVersionTransition>
         <NewerNoncurrentVersions>integer</NewerNoncurrentVersions>
         <NoncurrentDays>integer</NoncurrentDays>
         <StorageClass>string</StorageClass>
      </NoncurrentVersionTransition>
```

```
      <Prefix>string</Prefix>
      <Status>string</Status>
      <Transition>
         <Date>timestamp</Date>
         <Days>integer</Days>
         <StorageClass>string</StorageClass>
      </Transition>
   </Rule>
   ...
</LifecycleConfiguration>
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

Required: Yes

Content-MD5

For requests made using the AWS Command Line Interface (CLI) or AWS SDKs, this field is calculated automatically.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-sdk-checksum-algorithm

Indicates the algorithm used to create the checksum for the object when you use the SDK. This header will not provide any additional functionality if you don't use the SDK. When you send this header, there must be a corresponding `x-amz-checksum` or `x-amz-trailer` header sent. Otherwise, Amazon S3 fails the request with the HTTP status code `400 Bad Request`. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

If you provide an individual checksum, Amazon S3 ignores any provided `ChecksumAlgorithm` parameter.

Valid Values: `CRC32 | CRC32C | SHA1 | SHA256`

Request Body

The request accepts the following data in XML format.

LifecycleConfiguration

Root level tag for the LifecycleConfiguration parameters.

Required: Yes

Rule

Specifies lifecycle configuration rules for an Amazon S3 bucket.

Type: Array of Rule data types

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

Sample Request: Body of a basic lifecycle configuration

In the request, you specify the lifecycle configuration in the request body. The lifecycle configuration is specified as XML. The following is an example of a basic lifecycle configuration. It specifies one rule. The `Prefix` in the rule identifies objects to which the rule applies. The rule also specifies two actions (`Transition` and `Expiration`). Each action specifies a time line when Amazon S3 should perform the action. The Status indicates whether the rule is enabled or disabled.

```
<LifecycleConfiguration>
    <Rule>
        <ID>sample-rule</ID>
        <Prefix>key-prefix</Prefix>
```

```
        <Status>rule-status</Status>
        <Transition>
           <Date>value</Date>
           <StorageClass>storage class</StorageClass>
        </Transition>
        <Expiration>
           <Days>value</Days>
        </Expiration>
    </Rule>
</LifecycleConfiguration>
```

Sample Request: Body of a lifecycle configuration specifying noncurrent versions

If the state of your bucket is versioning-enabled or versioning-suspended, you can have many versions of the same object: one current version and zero or more noncurrent versions. The following lifecycle configuration specifies the actions (`NoncurrentVersionTransition`, `NoncurrentVersionExpiration`) that are specific to noncurrent object versions.

```
<LifecycleConfiguration>
    <Rule>
        <ID>sample-rule</ID>
        <Prefix>key-prefix</Prefix>
        <Status>rule-status</Status>
        <NoncurrentVersionTransition>
           <NoncurrentDays>value</NoncurrentDays>
           <StorageClass>storage class</StorageClass>
        </NoncurrentVersionTransition>
        <NoncurrentVersionExpiration>
           <NoncurrentDays>value</NoncurrentDays>
        </NoncurrentVersionExpiration>
    </Rule>
</LifecycleConfiguration>
```

Sample Request: Body of a lifecycle configuration that specifies a rule with AbortIncompleteMultipartUpload

You can use the multipart upload to upload large objects in parts. For more information about multipart uploads, see Multipart Upload Overview in the *Amazon S3 User Guide*. With lifecycle configuration, you can tell Amazon S3 to abort incomplete multipart uploads, which are identified

by the key name prefix specified in the rule, if they don't complete within a specified number of days. When Amazon S3 aborts a multipart upload, it deletes all parts associated with the upload. This ensures that you don't have incomplete multipart uploads that have left parts stored in Amazon S3, so you don't have to pay storage costs for them. The following is an example lifecycle configuration that specifies a rule with the `AbortIncompleteMultipartUpload` action. This action tells Amazon S3 to abort incomplete multipart uploads seven days after initiation.

```
<LifecycleConfiguration>
    <Rule>
        <ID>sample-rule</ID>
        <Prefix>SomeKeyPrefix</Prefix>
        <Status>rule-status</Status>
        <AbortIncompleteMultipartUpload>
           <DaysAfterInitiation>7</DaysAfterInitiation>
        </AbortIncompleteMultipartUpload>
    </Rule>
</LifecycleConfiguration>
```

Add lifecycle configuration to a bucket that is not versioning-enabled

The following is a sample `PUT /?lifecycle` request that adds the lifecycle configuration to the `examplebucket` bucket. The lifecycle configuration specifies two rules, each with one action:

- The `Transition` action tells Amazon S3 to transition objects with the "documents/" prefix to the GLACIER storage class 30 days after creation.
- The `Expiration` action tells Amazon S3 to delete objects with the "logs/" prefix 365 days after creation.

The sample response follows the sample request.

```
PUT /?lifecycle HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
x-amz-date: Wed, 14 May 2014 02:11:21 GMT
Content-MD5: q6yJDlIkcBaGGfb3QLY69A==
Authorization: authorization string
Content-Length: 415
<LifecycleConfiguration>
  <Rule>
```

```
    <ID>id1</ID>
    <Prefix>documents/</Prefix>
    <Status>Enabled</Status>
    <Transition>
      <Days>30</Days>
      <StorageClass>GLACIER</StorageClass>
    </Transition>
  </Rule>
  <Rule>
    <ID>id2</ID>
    <Prefix>logs/</Prefix>
    <Status>Enabled</Status>
    <Expiration>
      <Days>365</Days>
    </Expiration>
  </Rule>
</LifecycleConfiguration>
```

```
HTTP/1.1 200 OK
x-amz-id-2: r+qR7+nhXtJDDIJ0JJYcd+1j5nM/rUFiiiZ/fNbDOsd3JUE8NWMLNHXmvPfwMpdc
x-amz-request-id: 9E26D08072A8EF9E
Date: Wed, 14 May 2014 02:11:22 GMT
Content-Length: 0
Server: AmazonS3
```

Add lifecycle configuration to a bucket that is versioning-enabled

The following is a sample PUT /?lifecycle request that adds the lifecycle configuration to the `examplebucket` bucket. The lifecycle configuration specifies two rules, each with one action. You specify these actions when your bucket is versioning-enabled or versioning is suspended:

- The `NoncurrentVersionExpiration` action tells Amazon S3 to expire noncurrent versions of objects with the "logs/" prefix 100 days after the objects become noncurrent.
- The `NoncurrentVersionTransition` action tells Amazon S3 to transition noncurrent versions of objects with the "documents/" prefix to the GLACIER storage class 30 days after they become noncurrent.

The sample response follows the sample request.

```
PUT /?lifecycle HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
x-amz-date: Wed, 14 May 2014 02:21:48 GMT
Content-MD5: 96rxH9mDqVNKkaZDddgnw==
Authorization: authorization string
Content-Length: 598
<LifecycleConfiguration>
  <Rule>
    <ID>id1</ID>
    <Prefix>logs/</Prefix>
    <Status>Enabled</Status>
    <NoncurrentVersionExpiration>
      <NoncurrentDays>1</NoncurrentDays>
    </NoncurrentVersionExpiration>
  </Rule>
  <Rule>
    <ID>TransitionSoonAfterBecomingNonCurrent</ID>
    <Prefix>documents/</Prefix>
    <Status>Enabled</Status>
    <NoncurrentVersionTransition>
      <NoncurrentDays>0</NoncurrentDays>
      <StorageClass>GLACIER</StorageClass>
    </NoncurrentVersionTransition>
  </Rule>
</LifecycleConfiguration>
```

```
HTTP/1.1 200 OK
x-amz-id-2: aXQ+KbIrmMmoO//3bMdDTw/CnjArwje+J49Hf+j44yRb/VmbIkgIO5A+PT98Cp/6k07hf
+LD2mY=
x-amz-request-id: 02D7EC4C10381EB1
Date: Wed, 14 May 2014 02:21:50 GMT
Content-Length: 0
Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface

- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutBucketLifecycleConfiguration

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Creates a new lifecycle configuration for the bucket or replaces an existing lifecycle configuration. Keep in mind that this will overwrite an existing lifecycle configuration, so if you want to retain any configuration details, they must be included in the new lifecycle configuration. For information about lifecycle configuration, see Managing your storage lifecycle.

> **Note**
>
> Bucket lifecycle configuration now supports specifying a lifecycle rule using an object key name prefix, one or more object tags, object size, or any combination of these. Accordingly, this section describes the latest API. The previous version of the API supported filtering based only on an object key name prefix, which is supported for backward compatibility. For the related API description, see PutBucketLifecycle.

> **Important**
>
> When making a request using the REST API, you must include the `Content-MD5` header.

Rules

You specify the lifecycle configuration in your request body. The lifecycle configuration is specified as XML consisting of one or more rules. An Amazon S3 Lifecycle configuration can have up to 1,000 rules. This limit is not adjustable. Each rule consists of the following:

- A filter identifying a subset of objects to which the rule applies. The filter can be based on a key name prefix, object tags, object size, or any combination of these.
- A status indicating whether the rule is in effect.
- One or more lifecycle transition and expiration actions that you want Amazon S3 to perform on the objects identified by the filter. If the state of your bucket is versioning-enabled or

versioning-suspended, you can have many versions of the same object (one current version and zero or more noncurrent versions). Amazon S3 provides predefined actions that you can specify for current and noncurrent object versions.

For more information, see Object Lifecycle Management and Lifecycle Configuration Elements.

Permissions

By default, all Amazon S3 resources are private, including buckets, objects, and related subresources (for example, lifecycle configuration and website configuration). Only the resource owner (that is, the AWS account that created it) can access the resource. The resource owner can optionally grant access permissions to others by writing an access policy. For this operation, a user must get the `s3:PutLifecycleConfiguration` permission.

You can also explicitly deny permissions. An explicit deny also supersedes any other permissions. If you want to block users or accounts from removing or deleting objects from your bucket, you must deny them permissions for the following actions:

- `s3:DeleteObject`
- `s3:DeleteObjectVersion`
- `s3:PutLifecycleConfiguration`

For more information about permissions, see Managing Access Permissions to Your Amazon S3 Resources.

The following operations are related to `PutBucketLifecycleConfiguration`:

- Examples of Lifecycle Configuration
- GetBucketLifecycleConfiguration
- DeleteBucketLifecycle

Request Syntax

```
PUT /?lifecycle HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-sdk-checksum-algorithm: ChecksumAlgorithm
x-amz-expected-bucket-owner: ExpectedBucketOwner
<?xml version="1.0" encoding="UTF-8"?>
<LifecycleConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <Rule>
```

```
<AbortIncompleteMultipartUpload>
   <DaysAfterInitiation>integer</DaysAfterInitiation>
</AbortIncompleteMultipartUpload>
<Expiration>
   <Date>timestamp</Date>
   <Days>integer</Days>
   <ExpiredObjectDeleteMarker>boolean</ExpiredObjectDeleteMarker>
</Expiration>
<Filter>
   <And>
      <ObjectSizeGreaterThan>long</ObjectSizeGreaterThan>
      <ObjectSizeLessThan>long</ObjectSizeLessThan>
      <Prefix>string</Prefix>
      <Tag>
         <Key>string</Key>
         <Value>string</Value>
      </Tag>
      ...
   </And>
   <ObjectSizeGreaterThan>long</ObjectSizeGreaterThan>
   <ObjectSizeLessThan>long</ObjectSizeLessThan>
   <Prefix>string</Prefix>
   <Tag>
      <Key>string</Key>
      <Value>string</Value>
   </Tag>
</Filter>
<ID>string</ID>
<NoncurrentVersionExpiration>
   <NewerNoncurrentVersions>integer</NewerNoncurrentVersions>
   <NoncurrentDays>integer</NoncurrentDays>
</NoncurrentVersionExpiration>
<NoncurrentVersionTransition>
   <NewerNoncurrentVersions>integer</NewerNoncurrentVersions>
   <NoncurrentDays>integer</NoncurrentDays>
   <StorageClass>string</StorageClass>
</NoncurrentVersionTransition>
...
<Prefix>string</Prefix>
<Status>string</Status>
<Transition>
   <Date>timestamp</Date>
   <Days>integer</Days>
   <StorageClass>string</StorageClass>
```

```
      </Transition>
      ...
   </Rule>
   ...
</LifecycleConfiguration>
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket for which to set the configuration.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-sdk-checksum-algorithm

Indicates the algorithm used to create the checksum for the object when you use the SDK. This header will not provide any additional functionality if you don't use the SDK. When you send this header, there must be a corresponding `x-amz-checksum` or `x-amz-trailer` header sent. Otherwise, Amazon S3 fails the request with the HTTP status code `400 Bad Request`. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

If you provide an individual checksum, Amazon S3 ignores any provided `ChecksumAlgorithm` parameter.

Valid Values: `CRC32 | CRC32C | SHA1 | SHA256`

Request Body

The request accepts the following data in XML format.

LifecycleConfiguration

Root level tag for the LifecycleConfiguration parameters.

Required: Yes

Rule

A lifecycle rule for individual objects in an Amazon S3 bucket.

Type: Array of LifecycleRule data types

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

Example 1: Add lifecycle configuration - bucket not versioning-enabled

The following lifecycle configuration specifies two rules, each with one action.

- The `Transition` action requests Amazon S3 to transition objects with the "documents/" prefix to the GLACIER storage class 30 days after creation.
- The `Expiration` action requests Amazon S3 to delete objects with the "logs/" prefix 365 days after creation.

```
<LifecycleConfiguration>
  <Rule>
    <ID>id1</ID>
    <Filter>
       <Prefix>documents/</Prefix>
    </Filter>
    <Status>Enabled</Status>
    <Transition>
      <Days>30</Days>
```

```
      <StorageClass>GLACIER</StorageClass>
    </Transition>
  </Rule>
  <Rule>
    <ID>id2</ID>
    <Filter>
       <Prefix>logs/</Prefix>
    </Filter>
    <Status>Enabled</Status>
    <Expiration>
      <Days>365</Days>
    </Expiration>
  </Rule>
</LifecycleConfiguration>
```

Example

The following is a sample `PUT /?lifecycle` request that adds the preceding lifecycle configuration to the `examplebucket` bucket.

```
PUT /?lifecycle HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
x-amz-date: Wed, 14 May 2014 02:11:21 GMT
Content-MD5: q6yJDlIkcBaGGfb3QLY69A==
Authorization: authorization string
Content-Length: 415

<LifecycleConfiguration>
  <Rule>
    <ID>id1</ID>
    <Filter>
       <Prefix>documents/</Prefix>
    </Filter>
    <Status>Enabled</Status>
    <Transition>
      <Days>30</Days>
      <StorageClass>GLACIER</StorageClass>
    </Transition>
  </Rule>
  <Rule>
    <ID>id2</ID>
```

```
    <Filter>
       <Prefix>logs/</Prefix>
    </Filter>
    <Status>Enabled</Status>
    <Expiration>
      <Days>365</Days>
    </Expiration>
  </Rule>
</LifecycleConfiguration>
```

Sample Response

This example illustrates one usage of PutBucketLifecycleConfiguration.

```
HTTP/1.1 200 OK
x-amz-id-2: r+qR7+nhXtJDDIJ0JJYcd+1j5nM/rUFiiiZ/fNbDOsd3JUE8NWMLNHXmvPfwMpdc
x-amz-request-id: 9E26D08072A8EF9E
Date: Wed, 14 May 2014 02:11:22 GMT
Content-Length: 0
Server: AmazonS3
```

Example 2: Add lifecycle configuration - bucket is versioning-enabled

The following lifecycle configuration specifies two rules, each with one action for Amazon S3 to perform. You specify these actions when your bucket is versioning-enabled or versioning is suspended:

- The `NoncurrentVersionExpiration` action requests Amazon S3 to expire noncurrent versions of objects with the "logs/" prefix 100 days after the objects become noncurrent.
- The `NoncurrentVersionTransition` action requests Amazon S3 to transition noncurrent versions of objects with the "documents/" prefix to the GLACIER storage class 30 days after they become noncurrent.

```
<LifeCycleConfiguration>
  <Rule>
    <ID>DeleteAfterBecomingNonCurrent</ID>
```

```
    <Filter>
       <Prefix>logs/</Prefix>
    </Filter>
    <Status>Enabled</Status>
    <NoncurrentVersionExpiration>
      <NoncurrentDays>100</NoncurrentDays>
    </NoncurrentVersionExpiration>
  </Rule>
  <Rule>
    <ID>TransitionAfterBecomingNonCurrent</ID>
    <Filter>
       <Prefix>documents/</Prefix>
    </Filter>
    <Status>Enabled</Status>
    <NoncurrentVersionTransition>
      <NoncurrentDays>30</NoncurrentDays>
      <StorageClass>GLACIER</StorageClass>
    </NoncurrentVersionTransition>
  </Rule>
</LifeCycleConfiguration>
```

Example

The following is a sample PUT /?lifecycle request that adds the preceding lifecycle configuration to the examplebucket bucket.

```
PUT /?lifecycle HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
x-amz-date: Wed, 14 May 2014 02:21:48 GMT
Content-MD5: 96rxH9mDqVNKkaZDddgnw==
Authorization: authorization string
Content-Length: 598

<LifeCycleConfiguration>
  <Rule>
    <ID>DeleteAfterBecomingNonCurrent</ID>
    <Filter>
       <Prefix>logs/</Prefix>
    </Filter>
    <Status>Enabled</Status>
    <NoncurrentVersionExpiration>
```

```
      <NoncurrentDays>1</NoncurrentDays>
    </NoncurrentVersionExpiration>
  </Rule>
  <Rule>
    <ID>TransitionSoonAfterBecomingNonCurrent</ID>
    <Filter>
       <Prefix>documents/</Prefix>
    </Filter>
    <Status>Enabled</Status>
    <NoncurrentVersionTransition>
      <NoncurrentDays>0</NoncurrentDays>
      <StorageClass>GLACIER</StorageClass>
    </NoncurrentVersionTransition>
  </Rule>
</LifeCycleConfiguration>
```

Sample Response

This example illustrates one usage of PutBucketLifecycleConfiguration.

```
HTTP/1.1 200 OK
x-amz-id-2: aXQ+KbIrmMmoO//3bMdDTw/CnjArwje+J49Hf+j44yRb/VmbIkgIO5A+PT98Cp/6k07hf
+LD2mY=
x-amz-request-id: 02D7EC4C10381EB1
Date: Wed, 14 May 2014 02:21:50 GMT
Content-Length: 0
Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2

- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutBucketLogging

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Set the logging parameters for a bucket and to specify permissions for who can view and modify the logging parameters. All logs are saved to buckets in the same AWS Region as the source bucket. To set the logging status of a bucket, you must be the bucket owner.

The bucket owner is automatically granted FULL_CONTROL to all logs. You use the `Grantee` request element to grant access to other people. The `Permissions` request element specifies the kind of access the grantee has to the logs.

> **Important**
>
> If the target bucket for log delivery uses the bucket owner enforced setting for S3 Object Ownership, you can't use the `Grantee` request element to grant access to others. Permissions can only be granted using policies. For more information, see Permissions for server access log delivery in the *Amazon S3 User Guide*.

Grantee Values

You can specify the person (grantee) to whom you're assigning access rights (by using request elements) in the following ways:

- By the person's ID:

  ```
  <Grantee xmlns:xsi="http://www.w3.org/2001/XMLSchema-
  instance" xsi:type="CanonicalUser"><ID><>ID<></
  ID><DisplayName><>GranteesEmail<></DisplayName> </Grantee>
  ```

  `DisplayName` is optional and ignored in the request.

- By Email address:

```
<Grantee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:type="AmazonCustomerByEmail"><EmailAddress><>Grantees@email.com<></
EmailAddress></Grantee>
```

The grantee is resolved to the `CanonicalUser` and, in a response to a `GETObjectAcl` request, appears as the CanonicalUser.

- By URI:

```
<Grantee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:type="Group"><URI><>http://acs.amazonaws.com/groups/global/
AuthenticatedUsers<></URI></Grantee>
```

To enable logging, you use `LoggingEnabled` and its children request elements. To disable logging, you use an empty `BucketLoggingStatus` request element:

```
<BucketLoggingStatus xmlns="http://doc.s3.amazonaws.com/2006-03-01" />
```

For more information about server access logging, see Server Access Logging in the *Amazon S3 User Guide*.

For more information about creating a bucket, see CreateBucket. For more information about returning the logging status of a bucket, see GetBucketLogging.

The following operations are related to `PutBucketLogging`:

- PutObject
- DeleteBucket
- CreateBucket
- GetBucketLogging

Request Syntax

```
PUT /?logging HTTP/1.1
Host: Bucket.s3.amazonaws.com
Content-MD5: ContentMD5
x-amz-sdk-checksum-algorithm: ChecksumAlgorithm
x-amz-expected-bucket-owner: ExpectedBucketOwner
<?xml version="1.0" encoding="UTF-8"?>
```

```
<BucketLoggingStatus xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <LoggingEnabled>
      <TargetBucket>string</TargetBucket>
      <TargetGrants>
         <Grant>
            <Grantee>
               <DisplayName>string</DisplayName>
               <EmailAddress>string</EmailAddress>
               <ID>string</ID>
               <xsi:type>string</xsi:type>
               <URI>string</URI>
            </Grantee>
            <Permission>string</Permission>
         </Grant>
      </TargetGrants>
      <TargetObjectKeyFormat>
         <PartitionedPrefix>
            <PartitionDateSource>string</PartitionDateSource>
         </PartitionedPrefix>
         <SimplePrefix>
         </SimplePrefix>
      </TargetObjectKeyFormat>
      <TargetPrefix>string</TargetPrefix>
   </LoggingEnabled>
</BucketLoggingStatus>
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket for which to set the logging parameters.

Required: Yes

Content-MD5

The MD5 hash of the `PutBucketLogging` request body.

For requests made using the AWS Command Line Interface (CLI) or AWS SDKs, this field is calculated automatically.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-sdk-checksum-algorithm

Indicates the algorithm used to create the checksum for the object when you use the SDK. This header will not provide any additional functionality if you don't use the SDK. When you send this header, there must be a corresponding `x-amz-checksum` or `x-amz-trailer` header sent. Otherwise, Amazon S3 fails the request with the HTTP status code `400 Bad Request`. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

If you provide an individual checksum, Amazon S3 ignores any provided `ChecksumAlgorithm` parameter.

Valid Values: `CRC32 | CRC32C | SHA1 | SHA256`

Request Body

The request accepts the following data in XML format.

BucketLoggingStatus

Root level tag for the BucketLoggingStatus parameters.

Required: Yes

LoggingEnabled

Describes where logs are stored and the prefix that Amazon S3 assigns to all log object keys for a bucket. For more information, see PUT Bucket logging in the *Amazon S3 API Reference*.

Type: LoggingEnabled data type

Required: No

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

Sample Request

This request enables logging and gives the grantee of the bucket READ access to the logs.

Buckets that use the bucket owner enforced setting for Object Ownership to disable ACLs don't support target grants. For more information, see Permissions for server access log delivery in the *Amazon S3 User Guide*.

```
PUT ?logging HTTP/1.1
Host: quotes.s3.<Region>.amazonaws.com
Content-Length: 214
Date: Wed, 25 Nov 2009 12:00:00 GMT
Authorization: authorization string

<?xml version="1.0" encoding="UTF-8"?>
<BucketLoggingStatus xmlns="http://doc.s3.amazonaws.com/2006-03-01">
  <LoggingEnabled>
    <TargetBucket>mybucketlogs</TargetBucket>
    <TargetPrefix>mybucket-access_log-/</TargetPrefix>
    <TargetGrants>
      <Grant>
        <Grantee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
          xsi:type="AmazonCustomerByEmail">
          <EmailAddress>user@company.com</EmailAddress>
        </Grantee>
        <Permission>READ</Permission>
      </Grant>
    </TargetGrants>
  </LoggingEnabled>
</BucketLoggingStatus>
```

Sample Response

This example illustrates one usage of PutBucketLogging.

```
HTTP/1.1 200 OK
x-amz-id-2: YgIPIfBiKa2bj0KMg95r/0zo3emzU4dzsD4rcKCHQUAdQkf3ShJTOOpXUueF6QKo
x-amz-request-id: 236A8905248E5A01
Date: Wed, 01 Mar  2006 12:00:00 GMT
```

Sample Request: Disabling logging

This request disables logging on the bucket `quotes`.

```
PUT ?logging HTTP/1.1
Host: quotes.s3.<Region>.amazonaws.com
Content-Length: 214
Date: Wed, 25 Nov 2009 12:00:00 GMT
Authorization: authorization string

<?xml version="1.0" encoding="UTF-8"?>
<BucketLoggingStatus xmlns="http://doc.s3.amazonaws.com/2006-03-01" />
```

Sample Response

This example illustrates one usage of PutBucketLogging.

```
HTTP/1.1 200 OK
x-amz-id-2: YgIPIfBiKa2bj0KMg95r/0zo3emzU4dzsD4rcKCHQUAdQkf3ShJTOOpXUueF6QKo
x-amz-request-id: 236A8905248E5A01
Date: Wed, 01 Mar  2006 12:00:00 GMT
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET

- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutBucketMetricsConfiguration

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Sets a metrics configuration (specified by the metrics configuration ID) for the bucket. You can have up to 1,000 metrics configurations per bucket. If you're updating an existing metrics configuration, note that this is a full replacement of the existing metrics configuration. If you don't include the elements you want to keep, they are erased.

To use this operation, you must have permissions to perform the `s3:PutMetricsConfiguration` action. The bucket owner has this permission by default. The bucket owner can grant this permission to others. For more information about permissions, see Permissions Related to Bucket Subresource Operations and Managing Access Permissions to Your Amazon S3 Resources.

For information about CloudWatch request metrics for Amazon S3, see Monitoring Metrics with Amazon CloudWatch.

The following operations are related to `PutBucketMetricsConfiguration`:

- DeleteBucketMetricsConfiguration
- GetBucketMetricsConfiguration
- ListBucketMetricsConfigurations

`PutBucketMetricsConfiguration` has the following special error:

- Error code: `TooManyConfigurations`
  - Description: You are attempting to create a new configuration but have already reached the 1,000-configuration limit.
  - HTTP Status Code: HTTP 400 Bad Request

Request Syntax

```
PUT /?metrics&id=Id HTTP/1.1
```

```
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
<?xml version="1.0" encoding="UTF-8"?>
<MetricsConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <Id>string</Id>
   <Filter>
      <AccessPointArn>string</AccessPointArn>
      <And>
         <AccessPointArn>string</AccessPointArn>
         <Prefix>string</Prefix>
         <Tag>
            <Key>string</Key>
            <Value>string</Value>
         </Tag>
         ...
      </And>
      <Prefix>string</Prefix>
      <Tag>
         <Key>string</Key>
         <Value>string</Value>
      </Tag>
   </Filter>
</MetricsConfiguration>
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket for which the metrics configuration is set.

Required: Yes

id

The ID used to identify the metrics configuration. The ID has a 64 character limit and can only contain letters, numbers, periods, dashes, and underscores.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request accepts the following data in XML format.

MetricsConfiguration

Root level tag for the MetricsConfiguration parameters.

Required: Yes

Filter

Specifies a metrics configuration filter. The metrics configuration will only include objects that meet the filter's criteria. A filter must be a prefix, an object tag, an access point ARN, or a conjunction (MetricsAndOperator).

Type: MetricsFilter data type

Required: No

Id

The ID used to identify the metrics configuration. The ID has a 64 character limit and can only contain letters, numbers, periods, dashes, and underscores.

Type: String

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

First Sample Request

Put a metric configuration that enables metrics for an entire bucket.

```
PUT /?metrics&id=EntireBucket HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
x-amz-date: Thu, 15 Nov 2016 00:17:21 GMT
Authorization: signatureValue
Content-Length: 159

<?xml version="1.0" encoding="UTF-8"?>
<MetricsConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
    <Id>EntireBucket</Id>
</MetricsConfiguration>
```

First Sample Response

This example illustrates one usage of PutBucketMetricsConfiguration.

```
HTTP/1.1 204 No Content
x-amz-id-2: ITnGT1y4REXAMPLEPi4hklTXouTf0hccUjo0iCPEXAMPLEutBj3M7fPGlWO2SEWp
x-amz-request-id: 51991EXAMPLE5321
Date: Thu, 15 Nov 2016 00:17:22 GMT
Server: AmazonS3
```

Second Sample Request

Put a metrics configuration that enables metrics for objects that start with a particular prefix and also have specific tags applied.

```
PUT /?metrics&id=ImportantBlueDocuments HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
x-amz-date: Thu, 15 Nov 2016 00:17:29 GMT
Authorization: signatureValue
Content-Length: 480
```

```
<?xml version="1.0" encoding="UTF-8"?>
<MetricsConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
    <Id>ImportantBlueDocuments</Id>
    <Filter>
        <And>
            <Prefix>documents/</Prefix>
            <Tag>
                <Key>priority</Key>
                <Value>high</Value>
            </Tag>
            <Tag>
                <Key>class</Key>
                <Value>blue</Value>
            </Tag>
        </And>
    </Filter>
</MetricsConfiguration>
```

Second Sample Response

This example illustrates one usage of PutBucketMetricsConfiguration.

```
HTTP/1.1 204 No Content
x-amz-id-2: ITnGT1y4REXAMPLEPi4hklTXouTf0hccUjo0iCPEXAMPLEutBj3M7fPGlWO2SEWp
x-amz-request-id: 51991EXAMPLE5321
Date: Thu, 15 Nov 2016 00:17:29 GMT
Server: AmazonS3
```

Third Sample Request

Put a metrics configuration that enables metrics for a specific access point.

```
PUT /?metrics&id=ImportantDocumentsAccessPoint HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
x-amz-date: Thu, 26 Aug 2021 00:17:29 GMT
Authorization: signatureValue
Content-Length: 480
```

```
<?xml version="1.0" encoding="UTF-8"?>
<MetricsConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
    <Id>ImportantDocumentsAccessPoint</Id>
    <Filter>
        <AccessPointArn>arn:aws:s3:us-west-2:123456789012:accesspoint/test</
AccessPointArn>
    </Filter>
</MetricsConfiguration>
```

Thirds Sample Response

This example illustrates one usage of PutBucketMetricsConfiguration.

```
HTTP/1.1 204 No Content
x-amz-id-2: ITnGT1y4REXAMPLEPi4hklTXouTf0hccUjo0iCPEXAMPLEutBj3M7fPGlWO2SEWp
x-amz-request-id: 51991EXAMPLE5321
Date: Thu, 26 Aug 2021 00:17:29 GMT
Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutBucketNotification

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

No longer used, see the PutBucketNotificationConfiguration operation.

Request Syntax

```
PUT /?notification HTTP/1.1
Host: Bucket.s3.amazonaws.com
Content-MD5: ContentMD5
x-amz-sdk-checksum-algorithm: ChecksumAlgorithm
x-amz-expected-bucket-owner: ExpectedBucketOwner
<?xml version="1.0" encoding="UTF-8"?>
<NotificationConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <TopicConfiguration>
      <Event>string</Event>
      <Event>string</Event>
      ...
      <Id>string</Id>
      <Topic>string</Topic>
   </TopicConfiguration>
   <QueueConfiguration>
      <Event>string</Event>
      <Event>string</Event>
      ...
      <Id>string</Id>
      <Queue>string</Queue>
   </QueueConfiguration>
   <CloudFunctionConfiguration>
      <CloudFunction>string</CloudFunction>
      <Event>string</Event>
      <Event>string</Event>
      ...
      <Id>string</Id>
      <InvocationRole>string</InvocationRole>
   </CloudFunctionConfiguration>
</NotificationConfiguration>
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket.

Required: Yes

Content-MD5

The MD5 hash of the `PutPublicAccessBlock` request body.

For requests made using the AWS Command Line Interface (CLI) or AWS SDKs, this field is calculated automatically.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-sdk-checksum-algorithm

Indicates the algorithm used to create the checksum for the object when you use the SDK. This header will not provide any additional functionality if you don't use the SDK. When you send this header, there must be a corresponding `x-amz-checksum` or `x-amz-trailer` header sent. Otherwise, Amazon S3 fails the request with the HTTP status code `400 Bad Request`. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

If you provide an individual checksum, Amazon S3 ignores any provided `ChecksumAlgorithm` parameter.

Valid Values: `CRC32 | CRC32C | SHA1 | SHA256`

Request Body

The request accepts the following data in XML format.

NotificationConfiguration

Root level tag for the NotificationConfiguration parameters.

Required: Yes

CloudFunctionConfiguration

Container for specifying the AWS Lambda notification configuration.

Type: CloudFunctionConfiguration data type

Required: No

QueueConfiguration

This data type is deprecated. This data type specifies the configuration for publishing messages to an Amazon Simple Queue Service (Amazon SQS) queue when Amazon S3 detects specified events.

Type: QueueConfigurationDeprecated data type

Required: No

TopicConfiguration

This data type is deprecated. A container for specifying the configuration for publication of messages to an Amazon Simple Notification Service (Amazon SNS) topic when Amazon S3 detects specified events.

Type: TopicConfigurationDeprecated data type

Required: No

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface

- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutBucketNotificationConfiguration

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Enables notifications of specified events for a bucket. For more information about event notifications, see Configuring Event Notifications.

Using this API, you can replace an existing notification configuration. The configuration is an XML file that defines the event types that you want Amazon S3 to publish and the destination where you want Amazon S3 to publish an event notification when it detects an event of the specified type.

By default, your bucket has no event notifications configured. That is, the notification configuration will be an empty `NotificationConfiguration`.

```
<NotificationConfiguration>

</NotificationConfiguration>
```

This action replaces the existing notification configuration with the configuration you include in the request body.

After Amazon S3 receives this request, it first verifies that any Amazon Simple Notification Service (Amazon SNS) or Amazon Simple Queue Service (Amazon SQS) destination exists, and that the bucket owner has permission to publish to it by sending a test notification. In the case of AWS Lambda destinations, Amazon S3 verifies that the Lambda function permissions grant Amazon S3 permission to invoke the function from the Amazon S3 bucket. For more information, see Configuring Notifications for Amazon S3 Events.

You can disable notifications by adding the empty NotificationConfiguration element.

For more information about the number of event notification configurations that you can create per bucket, see Amazon S3 service quotas in *AWS General Reference*.

By default, only the bucket owner can configure notifications on a bucket. However, bucket owners can use a bucket policy to grant permission to other users to set this configuration with the required `s3:PutBucketNotification` permission.

Note

The PUT notification is an atomic operation. For example, suppose your notification configuration includes SNS topic, SQS queue, and Lambda function configurations. When you send a PUT request with this configuration, Amazon S3 sends test messages to your SNS topic. If the message fails, the entire PUT action will fail, and Amazon S3 will not add the configuration to your bucket.

If the configuration in the request body includes only one `TopicConfiguration` specifying only the `s3:ReducedRedundancyLostObject` event type, the response will also include the `x-amz-sns-test-message-id` header containing the message ID of the test notification sent to the topic.

The following action is related to `PutBucketNotificationConfiguration`:

- GetBucketNotificationConfiguration

Request Syntax

```
PUT /?notification HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-expected-bucket-owner: ExpectedBucketOwner
x-amz-skip-destination-validation: SkipDestinationValidation
<?xml version="1.0" encoding="UTF-8"?>
<NotificationConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <TopicConfiguration>
      <Event>string</Event>
      ...
      <Filter>
         <S3Key>
            <FilterRule>
               <Name>string</Name>
               <Value>string</Value>
            </FilterRule>
            ...
         </S3Key>
      </Filter>
      <Id>string</Id>
      <Topic>string</Topic>
   </TopicConfiguration>
```

```
   ...
   <QueueConfiguration>
      <Event>string</Event>
      ...
      <Filter>
         <S3Key>
            <FilterRule>
               <Name>string</Name>
               <Value>string</Value>
            </FilterRule>
            ...
         </S3Key>
      </Filter>
      <Id>string</Id>
      <Queue>string</Queue>
   </QueueConfiguration>
   ...
   <CloudFunctionConfiguration>
      <Event>string</Event>
      ...
      <Filter>
         <S3Key>
            <FilterRule>
               <Name>string</Name>
               <Value>string</Value>
            </FilterRule>
            ...
         </S3Key>
      </Filter>
      <Id>string</Id>
      <CloudFunction>string</CloudFunction>
   </CloudFunctionConfiguration>
   ...
   <EventBridgeConfiguration>
   </EventBridgeConfiguration>
</NotificationConfiguration>
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-skip-destination-validation

Skips validation of Amazon SQS, Amazon SNS, and AWS Lambda destinations. True or false value.

Request Body

The request accepts the following data in XML format.

NotificationConfiguration

Root level tag for the NotificationConfiguration parameters.

Required: Yes

CloudFunctionConfiguration

Describes the AWS Lambda functions to invoke and the events for which to invoke them.

Type: Array of LambdaFunctionConfiguration data types

Required: No

EventBridgeConfiguration

Enables delivery of events to Amazon EventBridge.

Type: EventBridgeConfiguration data type

Required: No

QueueConfiguration

The Amazon Simple Queue Service queues to publish messages to and the events for which to publish messages.

Type: Array of QueueConfiguration data types

Required: No

TopicConfiguration

The topic to which notifications are sent and the events for which notifications are generated.

Type: Array of TopicConfiguration data types

Required: No

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

Example 1: Configure notification to invoke a cloud function in Lambda

The following notification configuration includes CloudFunctionConfiguration, which identifies the event type for which Amazon S3 can invoke a cloud function and the name of the cloud function to invoke.

```
<NotificationConfiguration>
  <CloudFunctionConfiguration>
    <Id>ObjectCreatedEvents</Id>
    <CloudFunction>arn:aws:lambda:us-west-2:35667example:function:CreateThumbnail</
CloudFunction>
    <Event>s3:ObjectCreated:*</Event>
  </CloudFunctionConfiguration>
</NotificationConfiguration>
```

Example

The following PUT uploads the notification configuration. The action replaces the existing notification configuration.

```
PUT http://s3.<Region>.amazonaws.com/examplebucket?notification= HTTP/1.1
User-Agent: s3curl 2.0
Host: s3.amazonaws.com
Pragma: no-cache
Accept: */*
Proxy-Connection: Keep-Alive
Authorization: authorization string
Date: Mon, 13 Oct 2014 23:14:52 +0000
Content-Length: length

[request body]
```

Sample Response

This example illustrates one usage of PutBucketNotificationConfiguration.

```
HTTP/1.1 200 OK
x-amz-id-2: 8+FlwagBSoT2qpMaGlfCUkRkFR5W3OeS7UhhoBb17j+kqvpS2cSFlgJ5coLd53d2
x-amz-request-id: E5BA4600A3937335
Date: Fri, 31 Oct 2014 01:49:50 GMT
Content-Length: 0
Server: AmazonS3
```

Example 2: Configure a notification with multiple destinations

The following notification configuration includes the topic and queue configurations:

- A topic configuration identifying an SNS topic for Amazon S3 to publish events of the `s3:ReducedRedundancyLostObject` type.
- A queue configuration identifying an SQS queue for Amazon S3 to publish events of the `s3:ObjectCreated:*` type.

```
<NotificationConfiguration>
  <TopicConfiguration>
```

```
    <Topic>arn:aws:sns:us-east-1:356671443308:s3notificationtopic2</Topic>
    <Event>s3:ReducedRedundancyLostObject</Event>
  </TopicConfiguration>
  <QueueConfiguration>
    <Queue>arn:aws:sqs:us-east-1:356671443308:s3notificationqueue</Queue>
    <Event>s3:ObjectCreated:*</Event>
  </QueueConfiguration>
</NotificationConfiguration>
```

Example

The following PUT request against the notification subresource of the `examplebucket` bucket sends the preceding notification configuration in the request body. The action replaces the existing notification configuration on the bucket.

```
PUT http://s3.<Region>.amazonaws.com/examplebucket?notification= HTTP/1.1
User-Agent: s3curl 2.0
Host: s3.amazonaws.com
Pragma: no-cache
Accept: */*
Proxy-Connection: Keep-Alive
Authorization: authorization string
Date: Mon, 13 Oct 2014 22:58:43 +0000
Content-Length: 391
Expect: 100-continue
```

Example 3: Configure a notification with object key name filtering

The following notification configuration contains a queue configuration identifying an Amazon SQS queue for Amazon S3 to publish events to of the `s3:ObjectCreated:Put` type. The events will be published whenever an object that has a prefix of `images/` and a `.jpg` suffix is PUT to a bucket. For more examples of notification configurations that use filtering, see Configuring Event Notifications.

```
<NotificationConfiguration>
  <QueueConfiguration>
```

```
      <Id>1</Id>
      <Filter>
          <S3Key>
              <FilterRule>
                  <Name>prefix</Name>
                  <Value>images/</Value>
              </FilterRule>
              <FilterRule>
                  <Name>suffix</Name>
                  <Value>.jpg</Value>
              </FilterRule>
          </S3Key>
     </Filter>
     <Queue>arn:aws:sqs:us-west-2:444455556666:s3notificationqueue</Queue>
     <Event>s3:ObjectCreated:Put</Event>
  </QueueConfiguration>
</NotificationConfiguration>
```

Example

The following PUT request against the notification subresource of the `examplebucket` bucket sends the preceding notification configuration in the request body. The action replaces the existing notification configuration on the bucket.

```
PUT http://s3.<Region>.amazonaws.com/examplebucket?notification= HTTP/1.1
User-Agent: s3curl 2.0
Host: s3.amazonaws.com
Pragma: no-cache
Accept: */*
Proxy-Connection: Keep-Alive
Authorization: authorization string
Date: Mon, 13 Oct 2014 22:58:43 +0000
Content-Length: length
Expect: 100-continue
```

Sample Response

This example illustrates one usage of PutBucketNotificationConfiguration.

```
HTTP/1.1 200 OK
x-amz-id-2: SlvJLkfunoAGILZK3KqHSSUq4kwbudkrROmESoHOpDacULy+cxRoR1Svrfoyvg2A
x-amz-request-id: BB1BA8E12D6A80B7
Date: Mon, 13 Oct 2014 22:58:44 GMT
Content-Length: 0
Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutBucketOwnershipControls

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Creates or modifies `OwnershipControls` for an Amazon S3 bucket. To use this operation, you must have the `s3:PutBucketOwnershipControls` permission. For more information about Amazon S3 permissions, see Specifying permissions in a policy.

For information about Amazon S3 Object Ownership, see Using object ownership.

The following operations are related to `PutBucketOwnershipControls`:

- GetBucketOwnershipControls
- DeleteBucketOwnershipControls

Request Syntax

```
PUT /?ownershipControls HTTP/1.1
Host: Bucket.s3.amazonaws.com
Content-MD5: ContentMD5
x-amz-expected-bucket-owner: ExpectedBucketOwner
<?xml version="1.0" encoding="UTF-8"?>
<OwnershipControls xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <Rule>
      <ObjectOwnership>string</ObjectOwnership>
   </Rule>
   ...
</OwnershipControls>
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the Amazon S3 bucket whose `OwnershipControls` you want to set.

Required: Yes

Content-MD5

The MD5 hash of the `OwnershipControls` request body.

For requests made using the AWS Command Line Interface (CLI) or AWS SDKs, this field is calculated automatically.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request accepts the following data in XML format.

OwnershipControls

Root level tag for the OwnershipControls parameters.

Required: Yes

Rule

The container element for an ownership control rule.

Type: Array of OwnershipControlsRule data types

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

Sample Request with BucketOwnerEnforced OwnershipControls

The following request puts a bucket `OwnershipControls` that specifies BucketOwnerEnforced.

```
          PUT /DOC-EXAMPLE-BUCKET?ownershipControls= HTTP/1.1
          Host:DOC-EXAMPLE-BUCKET.s3.<Region>.amazonaws.com
          x-amz-date: 20211130T230132Z
          x-amz-content-sha256:
 bafb46c18574a73704c8227aef060df1c12ea0d964e19b949d06e9f763805fe2
          Authorization: authorization string

          <?xml version="1.0" encoding="UTF-8"?>
          <OwnershipControls xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
            <Rule>
              <ObjectOwnership>BucketOwnerEnforced</ObjectOwnership>
            </Rule>
          </OwnershipControls>
```

Sample Response with BucketOwnerEnforced OwnershipControls

This example illustrates one usage of PutBucketOwnershipControls.

```
          HTTP/1.1 200 OK
          x-amz-id-2: zkDVX0gbz8oKcjNz7GPz8XhXkhNArHtA8/
WOf5hyEj6SbisSRdqITZvSuAMik7HK4PY+izDZZI0=
          x-amz-request-id: BK7Y8M3G7Z0RFRCP
          Date: Tue, 30 Nov 2021 23:01:33 GMT
          Content-Length: 0
          Server: AmazonS3
```

Sample Request with BucketOwnerPreferred OwnershipControls

The following request puts a bucket `OwnershipControls` that specifies BucketOwnerPreferred.

```
          PUT /DOC-EXAMPLE-BUCKET?ownershipControls= HTTP/1.1
```

```
          Host:DOC-EXAMPLE-BUCKET.s3.<Region>.amazonaws.com
          x-amz-date: 20200618T230132Z
          x-amz-content-sha256:
 bafb46c18574a73704c8227aef060df1c12ea0d964e19b949d06e9f763805fe2
          Authorization: authorization string

          <?xml version="1.0" encoding="UTF-8"?>
          <OwnershipControls xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
            <Rule>
              <ObjectOwnership>BucketOwnerPreferred</ObjectOwnership>
            </Rule>
          </OwnershipControls>
```

Sample Response with BucketOwnerPreferred OwnershipControls

This example illustrates one usage of PutBucketOwnershipControls.

```
          HTTP/1.1 200 OK
          x-amz-id-2: zkDVX0gbz8oKcjNz7GPz8XhXkhNArHtA8/
WOf5hyEj6SbisSRdqITZvSuAMik7HK4PY+izDZZI0=
          x-amz-request-id: BK7Y8M3G7Z0RFRCP
          Date: Thu, 18 Jun 2020 23:01:33 GMT
          Content-Length: 0
          Server: AmazonS3
```

Sample Request with ObjectWriter OwnershipControls

The following request puts a bucket `OwnershipControls` that specifies ObjectWriter.

```
          PUT /DOC-EXAMPLE-BUCKET?ownershipControls= HTTP/1.1
          Host:DOC-EXAMPLE-BUCKET.s3.<Region>.amazonaws.com
          x-amz-date: 20200618T230132Z
          x-amz-content-sha256:
 bafb46c18574a73704c8227aef060df1c12ea0d964e19b949d06e9f763805fe2
          Authorization: authorization string

          <?xml version="1.0" encoding="UTF-8"?>
          <OwnershipControls xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
            <Rule>
```

```
            <ObjectOwnership>ObjectWriter</ObjectOwnership>
          </Rule>
        </OwnershipControls>
```

Sample Response with ObjectWriter OwnershipControls

This example illustrates one usage of PutBucketOwnershipControls.

```
        HTTP/1.1 200 OK
        x-amz-id-2: zkDVX0gbz8oKcjNz7GPz8XhXkhNArHtA8/
WOf5hyEj6SbisSRdqITZvSuAMik7HK4PY+izDZZI0=
        x-amz-request-id: BK7Y8M3G7Z0RFRCP
        Date: Thu, 18 Jun 2020 23:01:33 GMT
        Content-Length: 0
        Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutBucketPolicy

Service: Amazon S3

Applies an Amazon S3 bucket policy to an Amazon S3 bucket.

> **Note**
>
> **Directory buckets** - For directory buckets, you must make requests for this API operation to the Regional endpoint. These endpoints support path-style requests in the format `https://s3express-control.region_code.amazonaws.com/bucket-name` . Virtual-hosted-style requests aren't supported. For more information, see Regional and Zonal endpoints in the *Amazon S3 User Guide*.

Permissions

If you are using an identity other than the root user of the AWS account that owns the bucket, the calling identity must both have the `PutBucketPolicy` permissions on the specified bucket and belong to the bucket owner's account in order to use this operation.

If you don't have `PutBucketPolicy` permissions, Amazon S3 returns a `403 Access Denied` error. If you have the correct permissions, but you're not using an identity that belongs to the bucket owner's account, Amazon S3 returns a `405 Method Not Allowed` error.

> **Important**
>
> To ensure that bucket owners don't inadvertently lock themselves out of their own buckets, the root principal in a bucket owner's AWS account can perform the `GetBucketPolicy`, `PutBucketPolicy`, and `DeleteBucketPolicy` API actions, even if their bucket policy explicitly denies the root principal's access. Bucket owner root principals can only be blocked from performing these API actions by VPC endpoint policies and AWS Organizations policies.

- **General purpose bucket permissions** - The `s3:PutBucketPolicy` permission is required in a policy. For more information about general purpose buckets bucket policies, see Using Bucket Policies and User Policies in the *Amazon S3 User Guide*.
- **Directory bucket permissions** - To grant access to this API operation, you must have the `s3express:PutBucketPolicy` permission in an IAM identity-based policy instead of a

bucket policy. Cross-account access to this API operation isn't supported. This operation can only be performed by the AWS account that owns the resource. For more information about directory bucket policies and permissions, see AWS Identity and Access Management (IAM) for S3 Express One Zone in the *Amazon S3 User Guide*.

Example bucket policies

General purpose buckets example bucket policies - See Bucket policy examples in the *Amazon S3 User Guide*.

Directory bucket example bucket policies - See Example bucket policies for S3 Express One Zone in the *Amazon S3 User Guide*.

HTTP Host header syntax

Directory buckets - The HTTP Host header syntax is `s3express-control.region.amazonaws.com`.

The following operations are related to `PutBucketPolicy`:

- CreateBucket
- DeleteBucket

Request Syntax

```
PUT /?policy HTTP/1.1
Host: Bucket.s3.amazonaws.com
Content-MD5: ContentMD5
x-amz-sdk-checksum-algorithm: ChecksumAlgorithm
x-amz-confirm-remove-self-bucket-access: ConfirmRemoveSelfBucketAccess
x-amz-expected-bucket-owner: ExpectedBucketOwner

{ Policy in JSON format }
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket.

Directory buckets - When you use this operation with a directory bucket, you must use path-style requests in the format `https://s3express-control.region_code.amazonaws.com/bucket-name` . Virtual-hosted-style requests aren't supported. Directory bucket names must be unique in the chosen Availability Zone. Bucket names must also follow the format `bucket_base_name--az_id--x-s3` (for example, `DOC-EXAMPLE-BUCKET--usw2-az1--x-s3`). For information about bucket naming restrictions, see Directory bucket naming rules in the *Amazon S3 User Guide*

Required: Yes

Content-MD5

The MD5 hash of the request body.

For requests made using the AWS Command Line Interface (CLI) or AWS SDKs, this field is calculated automatically.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-confirm-remove-self-bucket-access

Set this parameter to true to confirm that you want to remove your permissions to change this bucket policy in the future.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

> **Note**
>
> For directory buckets, this header is not supported in this API operation. If you specify this header, the request fails with the HTTP status code `501 Not Implemented`.

x-amz-sdk-checksum-algorithm

Indicates the algorithm used to create the checksum for the object when you use the SDK. This header will not provide any additional functionality if you don't use the SDK. When you send this header, there must be a corresponding `x-amz-checksum-`*`algorithm`* or `x-amz-trailer` header sent. Otherwise, Amazon S3 fails the request with the HTTP status code `400 Bad Request`.

For the `x-amz-checksum-`*`algorithm`* header, replace *`algorithm`* with the supported algorithm from the following list:

- CRC32
- CRC32C
- SHA1
- SHA256

For more information, see Checking object integrity in the *Amazon S3 User Guide*.

If the individual checksum value you provide through `x-amz-checksum-`*`algorithm`* doesn't match the checksum algorithm you set through `x-amz-sdk-checksum-algorithm`, Amazon S3 ignores any provided `ChecksumAlgorithm` parameter and uses the checksum algorithm that matches the provided value in `x-amz-checksum-`*`algorithm`* .

> **Note**
>
> For directory buckets, when you use AWS SDKs, CRC32 is the default checksum algorithm that's used for performance.

Valid Values: `CRC32` | `CRC32C` | `SHA1` | `SHA256`

Request Body

The request accepts the following data in JSON format.

Policy

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

Sample Request for general purpose buckets

The following request shows the PUT individual policy request for the bucket.

```
PUT /?policy HTTP/1.1
Host: bucket.s3.<Region>.amazonaws.com
Date: Tue, 04 Apr 2010 20:34:56 GMT
Authorization: authorization string

{
"Version":"2008-10-17",
"Id":"aaaa-bbbb-cccc-dddd",
"Statement" : [
    {
        "Effect":"Allow",
        "Sid":"1",
        "Principal" : {
            "AWS":["111122223333","444455556666"]
        },
        "Action":["s3:*"],
        "Resource":"arn:aws:s3:::bucket/*"
    }
 ]
}
```

Sample Response for general purpose buckets

This example illustrates one usage of PutBucketPolicy.

```
HTTP/1.1 204 No Content
x-amz-id-2: Uuag1LuByR5Onimru9SAMPLEAtRPfTaOFg==
x-amz-request-id: 656c76696e6727732SAMPLE7374
Date: Tue, 04 Apr 2010 20:34:56 GMT
Connection: keep-alive
Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutBucketReplication

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Creates a replication configuration or replaces an existing one. For more information, see Replication in the *Amazon S3 User Guide*.

Specify the replication configuration in the request body. In the replication configuration, you provide the name of the destination bucket or buckets where you want Amazon S3 to replicate objects, the IAM role that Amazon S3 can assume to replicate objects on your behalf, and other relevant information. You can invoke this request for a specific AWS Region by using the `aws:RequestedRegion` condition key.

A replication configuration must include at least one rule, and can contain a maximum of 1,000. Each rule identifies a subset of objects to replicate by filtering the objects in the source bucket. To choose additional subsets of objects to replicate, add a rule for each subset.

To specify a subset of the objects in the source bucket to apply a replication rule to, add the Filter element as a child of the Rule element. You can filter objects based on an object key prefix, one or more object tags, or both. When you add the Filter element in the configuration, you must also add the following elements: `DeleteMarkerReplication`, `Status`, and `Priority`.

> **Note**
>
> If you are using an earlier version of the replication configuration, Amazon S3 handles replication of delete markers differently. For more information, see Backward Compatibility.

For information about enabling versioning on a bucket, see Using Versioning.

Handling Replication of Encrypted Objects

By default, Amazon S3 doesn't replicate objects that are stored at rest using server-side encryption with KMS keys. To replicate AWS KMS-encrypted objects, add the following: `SourceSelectionCriteria`, `SseKmsEncryptedObjects`, `Status`,

`EncryptionConfiguration`, and `ReplicaKmsKeyID`. For information about replication configuration, see Replicating Objects Created with SSE Using KMS keys.

For information on `PutBucketReplication` errors, see List of replication-related error codes

Permissions

To create a `PutBucketReplication` request, you must have `s3:PutReplicationConfiguration` permissions for the bucket.

By default, a resource owner, in this case the AWS account that created the bucket, can perform this operation. The resource owner can also grant others permissions to perform the operation. For more information about permissions, see Specifying Permissions in a Policy and Managing Access Permissions to Your Amazon S3 Resources.

> **Note**
>
> To perform this operation, the user or role performing the action must have the iam:PassRole permission.

The following operations are related to `PutBucketReplication`:

- GetBucketReplication
- DeleteBucketReplication

Request Syntax

```
PUT /?replication HTTP/1.1
Host: Bucket.s3.amazonaws.com
Content-MD5: ContentMD5
x-amz-sdk-checksum-algorithm: ChecksumAlgorithm
x-amz-bucket-object-lock-token: Token
x-amz-expected-bucket-owner: ExpectedBucketOwner
<?xml version="1.0" encoding="UTF-8"?>
<ReplicationConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <Role>string</Role>
   <Rule>
      <DeleteMarkerReplication>
         <Status>string</Status>
      </DeleteMarkerReplication>
```

```
      <Destination>
         <AccessControlTranslation>
            <Owner>string</Owner>
         </AccessControlTranslation>
         <Account>string</Account>
         <Bucket>string</Bucket>
         <EncryptionConfiguration>
            <ReplicaKmsKeyID>string</ReplicaKmsKeyID>
         </EncryptionConfiguration>
         <Metrics>
            <EventThreshold>
               <Minutes>integer</Minutes>
            </EventThreshold>
            <Status>string</Status>
         </Metrics>
         <ReplicationTime>
            <Status>string</Status>
            <Time>
               <Minutes>integer</Minutes>
            </Time>
         </ReplicationTime>
         <StorageClass>string</StorageClass>
      </Destination>
      <ExistingObjectReplication>
         <Status>string</Status>
      </ExistingObjectReplication>
      <Filter>
         <And>
            <Prefix>string</Prefix>
            <Tag>
               <Key>string</Key>
               <Value>string</Value>
            </Tag>
            ...
         </And>
         <Prefix>string</Prefix>
         <Tag>
            <Key>string</Key>
            <Value>string</Value>
         </Tag>
      </Filter>
      <ID>string</ID>
      <Prefix>string</Prefix>
      <Priority>integer</Priority>
```

```
      <SourceSelectionCriteria>
         <ReplicaModifications>
            <Status>string</Status>
         </ReplicaModifications>
         <SseKmsEncryptedObjects>
            <Status>string</Status>
         </SseKmsEncryptedObjects>
      </SourceSelectionCriteria>
      <Status>string</Status>
   </Rule>
   ...
</ReplicationConfiguration>
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket

Required: Yes

Content-MD5

The base64-encoded 128-bit MD5 digest of the data. You must use this header as a message integrity check to verify that the request body was not corrupted in transit. For more information, see RFC 1864.

For requests made using the AWS Command Line Interface (CLI) or AWS SDKs, this field is calculated automatically.

x-amz-bucket-object-lock-token

A token to allow Object Lock to be enabled for an existing bucket.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-sdk-checksum-algorithm

Indicates the algorithm used to create the checksum for the object when you use the SDK. This header will not provide any additional functionality if you don't use the SDK. When you send

this header, there must be a corresponding `x-amz-checksum` or `x-amz-trailer` header sent. Otherwise, Amazon S3 fails the request with the HTTP status code `400 Bad Request`. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

If you provide an individual checksum, Amazon S3 ignores any provided `ChecksumAlgorithm` parameter.

Valid Values: `CRC32 | CRC32C | SHA1 | SHA256`

Request Body

The request accepts the following data in XML format.

ReplicationConfiguration

Root level tag for the ReplicationConfiguration parameters.

Required: Yes

Role

The Amazon Resource Name (ARN) of the AWS Identity and Access Management (IAM) role that Amazon S3 assumes when replicating objects. For more information, see How to Set Up Replication in the *Amazon S3 User Guide*.

Type: String

Required: Yes

Rule

A container for one or more replication rules. A replication configuration must have at least one rule and can contain a maximum of 1,000 rules.

Type: Array of ReplicationRule data types

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

Sample Request: Add a replication configuration

The following is a sample PUT request that creates a replication subresource on the specified bucket and saves the replication configuration in it. The replication configuration specifies a rule to replicate objects to the DOC-EXAMPLE-BUCKET bucket. The rule includes a filter to replicate only the objects created with the key name prefix TaxDocs and that have two specific tags.

After you add a replication configuration to your bucket, Amazon S3 assumes the AWS Identity and Access Management (IAM) role specified in the configuration to replicate objects on behalf of the bucket owner. The bucket owner is the AWS account that created the bucket.

Filtering using the <Filter> element is supported in the latest XML configuration. If you are using an earlier version of the XML configuration, you can filter only on key prefix. In that case, you add the <Prefix> element as a child of the <Rule>.

For more examples of replication configuration, see Replication Configuration Overview in the *Amazon S3 User Guide.*

```
PUT /?replication HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
Date: Wed, 11 Feb 2015 02:11:21 GMT
Content-MD5: q6yJDlIkcBaGGfb3QLY69A==
Authorization: authorization string
Content-Length: length

<ReplicationConfiguration>
  <Role>arn:aws:iam::35667example:role/CrossRegionReplicationRoleForS3</Role>
  <Rule>
    <ID>rule1</ID>
    <Status>Enabled</Status>
    <Priority>1</Priority>
    <DeleteMarkerReplication>
       <Status>Disabled</Status>
    </DeleteMarkerReplication>
    <Filter>
       <And>
```

```
            <Prefix>TaxDocs</Prefix>
            <Tag>
              <Key>key1</Key>
              <Value>value1</Value>
            </Tag>
            <Tag>
              <Key>key1</Key>
              <Value>value1</Value>
            </Tag>
        </And>
    </Filter>
    <Destination>
      <Bucket>arn:aws:s3:::DOC-EXAMPLE-BUCKET</Bucket>
    </Destination>
  </Rule>
</ReplicationConfiguration>
```

Sample Response

This example illustrates one usage of PutBucketReplication.

```
HTTP/1.1 200 OK
x-amz-id-2: r+qR7+nhXtJDDIJ0JJYcd+1j5nM/rUFiiiZ/fNbDOsd3JUE8NWMLNHXmvPfwMpdc
x-amz-request-id: 9E26D08072A8EF9E
Date: Wed, 11 Feb 2015 02:11:22 GMT
Content-Length: 0
Server: AmazonS3
```

Sample Request: Add a Replication Configuration with Amazon S3 Replication Time Control Enabled

You can use S3 Replication Time Control (S3 RTC) to replicate your data in the same AWS Region or across different AWS Regions in a predictable time frame. S3 RTC replicates 99.99 percent of new objects stored in Amazon S3 within 15 minutes. For more information, see Replicating objects using Replication Time Control.

```
PUT /?replication HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
```

```
Date: Wed, 11 Feb 2015 02:11:21 GMT
Content-MD5: q6yJDlIkcBaGGfb3QLY69A==
Authorization: authorization string
Content-Length: length
x-amz-bucket-object-lock-token: Token
<?xml version="1.0" encoding="UTF-8"?>

<ReplicationConfiguration>
  <Role>arn:aws:iam::35667example:role/CrossRegionReplicationRoleForS3</Role>
  <Rule>
    <ID>rule1</ID>
    <Status>Enabled</Status>
    <Priority>1</Priority>
    <Filter>
       <And>
           <Prefix>TaxDocs</Prefix>
           <Tag>
             <Key>key1</Key>
             <Value>value1</Value>
           </Tag>
           <Tag>
             <Key>key1</Key>
             <Value>value1</Value>
           </Tag>
       </And>
    </Filter>
    <Destination>
      <Bucket>arn:aws:s3:::DOC-EXAMPLE-BUCKET</Bucket>
      <Metrics>
         <Status>Enabled</Status>
         <EventThreshold>
            <Minutes>15</Minutes>
         </EventThreshold>
      </Metrics>
      <ReplicationTime>
         <Status>Enabled</Status>
         <Time>
            <Minutes>15</Minutes>
         </Time>
      </ReplicationTime>
    </Destination>
  </Rule>
</ReplicationConfiguration>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutBucketRequestPayment

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Sets the request payment configuration for a bucket. By default, the bucket owner pays for downloads from the bucket. This configuration parameter enables the bucket owner (only) to specify that the person requesting the download will be charged for the download. For more information, see Requester Pays Buckets.

The following operations are related to `PutBucketRequestPayment`:

- CreateBucket
- GetBucketRequestPayment

Request Syntax

```
PUT /?requestPayment HTTP/1.1
Host: Bucket.s3.amazonaws.com
Content-MD5: ContentMD5
x-amz-sdk-checksum-algorithm: ChecksumAlgorithm
x-amz-expected-bucket-owner: ExpectedBucketOwner
<?xml version="1.0" encoding="UTF-8"?>
<RequestPaymentConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <Payer>string</Payer>
</RequestPaymentConfiguration>
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name.

Required: Yes

Content-MD5

The base64-encoded 128-bit MD5 digest of the data. You must use this header as a message integrity check to verify that the request body was not corrupted in transit. For more information, see RFC 1864.

For requests made using the AWS Command Line Interface (CLI) or AWS SDKs, this field is calculated automatically.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-sdk-checksum-algorithm

Indicates the algorithm used to create the checksum for the object when you use the SDK. This header will not provide any additional functionality if you don't use the SDK. When you send this header, there must be a corresponding `x-amz-checksum` or `x-amz-trailer` header sent. Otherwise, Amazon S3 fails the request with the HTTP status code `400 Bad Request`. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

If you provide an individual checksum, Amazon S3 ignores any provided `ChecksumAlgorithm` parameter.

Valid Values: `CRC32 | CRC32C | SHA1 | SHA256`

Request Body

The request accepts the following data in XML format.

RequestPaymentConfiguration

Root level tag for the RequestPaymentConfiguration parameters.

Required: Yes

Payer

Specifies who pays for the download and request fees.

Type: String

Valid Values: `Requester | BucketOwner`

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

Sample Request

This request creates a Requester Pays bucket named `colorpictures`.

```
PUT ?requestPayment HTTP/1.1
Host: colorpictures.s3.<Region>.amazonaws.com
Content-Length: 173
Date: Wed, 01 Mar  2006 12:00:00 GMT
Authorization: authorization string

<RequestPaymentConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Payer>Requester</Payer>
</RequestPaymentConfiguration>
```

Sample Response

Delete the metric configuration with a specified ID, which disables the CloudWatch metrics with the `ExampleMetrics` value for the `FilterId` dimension.

```
HTTP/1.1 200 OK
x-amz-id-2: YgIPIfBiKa2bj0KMg95r/0zo3emzU4dzsD4rcKCHQUAdQkf3ShJTOOpXUueF6QKo
x-amz-request-id: 236A8905248E5A01
Date: Wed, 01 Mar  2006 12:00:00 GMT
```

```
Location: /colorpictures
Content-Length: 0
Connection: close
Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutBucketTagging

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Sets the tags for a bucket.

Use tags to organize your AWS bill to reflect your own cost structure. To do this, sign up to get your AWS account bill with tag key values included. Then, to see the cost of combined resources, organize your billing information according to resources with the same tag key values. For example, you can tag several resources with a specific application name, and then organize your billing information to see the total cost of that application across several services. For more information, see Cost Allocation and Tagging and Using Cost Allocation in Amazon S3 Bucket Tags.

> **Note**
>
> When this operation sets the tags for a bucket, it will overwrite any current tags the bucket already has. You cannot use this operation to add tags to an existing list of tags.

To use this operation, you must have permissions to perform the `s3:PutBucketTagging` action. The bucket owner has this permission by default and can grant this permission to others. For more information about permissions, see Permissions Related to Bucket Subresource Operations and Managing Access Permissions to Your Amazon S3 Resources.

`PutBucketTagging` has the following special errors. For more Amazon S3 errors see, Error Responses.

- `InvalidTag` - The tag provided was not a valid tag. This error can occur if the tag did not pass input validation. For more information, see Using Cost Allocation in Amazon S3 Bucket Tags.
- `MalformedXML` - The XML provided does not match the schema.
- `OperationAborted` - A conflicting conditional action is currently in progress against this resource. Please try again.
- `InternalError` - The service was unable to apply the provided tag to the bucket.

The following operations are related to `PutBucketTagging`:

- GetBucketTagging
- DeleteBucketTagging

Request Syntax

```
PUT /?tagging HTTP/1.1
Host: Bucket.s3.amazonaws.com
Content-MD5: ContentMD5
x-amz-sdk-checksum-algorithm: ChecksumAlgorithm
x-amz-expected-bucket-owner: ExpectedBucketOwner
<?xml version="1.0" encoding="UTF-8"?>
<Tagging xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <TagSet>
      <Tag>
         <Key>string</Key>
         <Value>string</Value>
      </Tag>
   </TagSet>
</Tagging>
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name.

Required: Yes

Content-MD5

The base64-encoded 128-bit MD5 digest of the data. You must use this header as a message integrity check to verify that the request body was not corrupted in transit. For more information, see RFC 1864.

For requests made using the AWS Command Line Interface (CLI) or AWS SDKs, this field is calculated automatically.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-sdk-checksum-algorithm

Indicates the algorithm used to create the checksum for the object when you use the SDK. This header will not provide any additional functionality if you don't use the SDK. When you send this header, there must be a corresponding `x-amz-checksum` or `x-amz-trailer` header sent. Otherwise, Amazon S3 fails the request with the HTTP status code `400 Bad Request`. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

If you provide an individual checksum, Amazon S3 ignores any provided `ChecksumAlgorithm` parameter.

Valid Values: `CRC32 | CRC32C | SHA1 | SHA256`

Request Body

The request accepts the following data in XML format.

Tagging

Root level tag for the Tagging parameters.

Required: Yes

TagSet

A collection for a set of tags

Type: Array of Tag data types

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

Sample Request: Add tag set to a bucket

The following request adds a tag set to the existing `examplebucket` bucket.

```
PUT ?tagging HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
Content-Length: 1660
x-amz-date: Thu, 12 Apr 2012 20:04:21 GMT
Authorization: authorization string

<Tagging>
  <TagSet>
    <Tag>
      <Key>Project</Key>
      <Value>Project One</Value>
    </Tag>
    <Tag>
      <Key>User</Key>
      <Value>jsmith</Value>
    </Tag>
  </TagSet>
</Tagging>
```

Sample Response

This example illustrates one usage of PutBucketTagging.

```
HTTP/1.1 204 No Content
x-amz-id-2: YgIPIfBiKa2bj0KMgUAdQkf3ShJTOOpXUueF6QKo
x-amz-request-id: 236A8905248E5A01
Date: Wed, 01 Oct  2012 12:00:00 GMT
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutBucketVersioning

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Sets the versioning state of an existing bucket.

You can set the versioning state with one of the following values:

Enabled—Enables versioning for the objects in the bucket. All objects added to the bucket receive a unique version ID.

Suspended—Disables versioning for the objects in the bucket. All objects added to the bucket receive the version ID null.

If the versioning state has never been set on a bucket, it has no versioning state; a GetBucketVersioning request does not return a versioning state value.

In order to enable MFA Delete, you must be the bucket owner. If you are the bucket owner and want to enable MFA Delete in the bucket versioning configuration, you must include the `x-amz-mfa request` header and the `Status` and the `MfaDelete` request elements in a request to set the versioning state of the bucket.

> **Important**
>
> If you have an object expiration lifecycle configuration in your non-versioned bucket and you want to maintain the same permanent delete behavior when you enable versioning, you must add a noncurrent expiration policy. The noncurrent expiration lifecycle configuration will manage the deletes of the noncurrent object versions in the version-enabled bucket. (A version-enabled bucket maintains one current and zero or more noncurrent object versions.) For more information, see Lifecycle and Versioning.

The following operations are related to `PutBucketVersioning`:

- CreateBucket

- DeleteBucket
- GetBucketVersioning

Request Syntax

```
PUT /?versioning HTTP/1.1
Host: Bucket.s3.amazonaws.com
Content-MD5: ContentMD5
x-amz-sdk-checksum-algorithm: ChecksumAlgorithm
x-amz-mfa: MFA
x-amz-expected-bucket-owner: ExpectedBucketOwner
<?xml version="1.0" encoding="UTF-8"?>
<VersioningConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <MfaDelete>string</MfaDelete>
   <Status>string</Status>
</VersioningConfiguration>
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name.

Required: Yes

Content-MD5

>The base64-encoded 128-bit MD5 digest of the data. You must use this header as a message integrity check to verify that the request body was not corrupted in transit. For more information, see RFC 1864.

For requests made using the AWS Command Line Interface (CLI) or AWS SDKs, this field is calculated automatically.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-mfa

The concatenation of the authentication device's serial number, a space, and the value that is displayed on your authentication device.

x-amz-sdk-checksum-algorithm

Indicates the algorithm used to create the checksum for the object when you use the SDK. This header will not provide any additional functionality if you don't use the SDK. When you send this header, there must be a corresponding `x-amz-checksum` or `x-amz-trailer` header sent. Otherwise, Amazon S3 fails the request with the HTTP status code `400 Bad Request`. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

If you provide an individual checksum, Amazon S3 ignores any provided `ChecksumAlgorithm` parameter.

Valid Values: `CRC32 | CRC32C | SHA1 | SHA256`

Request Body

The request accepts the following data in XML format.

VersioningConfiguration

Root level tag for the VersioningConfiguration parameters.

Required: Yes

MFADelete

Specifies whether MFA delete is enabled in the bucket versioning configuration. This element is only returned if the bucket has been configured with MFA delete. If the bucket has never been so configured, this element is not returned.

Type: String

Valid Values: `Enabled | Disabled`

Required: No

Status

The versioning state of the bucket.

Type: String

Valid Values: `Enabled` | `Suspended`

Required: No

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

Sample Request

The following request enables versioning for the specified bucket.

```
PUT /?versioning HTTP/1.1
Host: bucket.s3.<Region>.amazonaws.com
Date: Wed, 01 Mar  2006 12:00:00 GMT
Authorization: authorization string
Content-Type: text/plain
Content-Length: 124

<VersioningConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Status>Enabled</Status>
</VersioningConfiguration>
```

Sample Response

This example illustrates one usage of PutBucketVersioning.

```
HTTP/1.1 200 OK
x-amz-id-2: YgIPIfBiKa2bj0KMg95r/0zo3emzU4dzsD4rcKCHQUAdQkf3ShJTOOpXUueF6QKo
x-amz-request-id: 236A8905248E5A01
Date: Wed, 01 Mar  2006 12:00:00 GMT3
```

Sample Request

The following request suspends versioning for the specified bucket.

```
PUT /?versioning HTTP/1.1
Host: bucket.s3.<Region>.amazonaws.com
Date: Wed, 12 Oct 2009 17:50:00 GMT
Authorization: authorization string
Content-Type: text/plain
Content-Length: 124

<VersioningConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <Status>Suspended</Status>
</VersioningConfiguration>
```

Sample Response

This example illustrates one usage of PutBucketVersioning.

```
HTTP/1.1 200 OK
x-amz-id-2: YgIPIfBiKa2bj0KMg95r/0zo3emzU4dzsD4rcKCHQUAdQkf3ShJTOOpXUueF6QKo
x-amz-request-id: 236A8905248E5A01
Date: Wed, 01 Mar  2006 12:00:00 GMT
```

Sample Request

The following request enables versioning and MFA Delete on a bucket. Note the space between `[SerialNumber]` and `[TokenCode]` and that you must include `Status` whenever you use `MfaDelete`.

```
PUT /?versioning HTTP/1.1
Host: bucket.s3.<Region>.amazonaws.com
Date: Wed, 12 Oct 2009 17:50:00 GMT
x-amz-mfa:[SerialNumber] [TokenCode]
Authorization: authorization string
```

```
Content-Type: text/plain
Content-Length: 124

<VersioningConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <Status>Enabled</Status>
   <MfaDelete>Enabled</MfaDelete>
</VersioningConfiguration>
```

Sample Response

This example illustrates one usage of PutBucketVersioning.

```
HTTPS/1.1 200 OK
x-amz-id-2: YgIPIfBiKa2bj0KMg95r/0zo3emzU4dzsD4rcKCHQUAdQkf3ShJTOOpXUueF6QKo
x-amz-request-id: 236A8905248E5A01
Date: Wed, 01 Mar  2006 12:00:00 GMT

Location: /colorpictures
Content-Length: 0
Connection: close
Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutBucketWebsite

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Sets the configuration of the website that is specified in the `website` subresource. To configure a bucket as a website, you can add this subresource on the bucket with website configuration information such as the file name of the index document and any redirect rules. For more information, see Hosting Websites on Amazon S3.

This PUT action requires the `S3:PutBucketWebsite` permission. By default, only the bucket owner can configure the website attached to a bucket; however, bucket owners can allow other users to set the website configuration by writing a bucket policy that grants them the `S3:PutBucketWebsite` permission.

To redirect all website requests sent to the bucket's website endpoint, you add a website configuration with the following elements. Because all requests are sent to another website, you don't need to provide index document name for the bucket.

- `WebsiteConfiguration`
- `RedirectAllRequestsTo`
- `HostName`
- `Protocol`

If you want granular control over redirects, you can use the following elements to add routing rules that describe conditions for redirecting requests and information about the redirect destination. In this case, the website configuration must provide an index document for the bucket, because some requests might not be redirected.

- `WebsiteConfiguration`
- `IndexDocument`
- `Suffix`
- `ErrorDocument`

- Key
- RoutingRules
- RoutingRule
- Condition
- HttpErrorCodeReturnedEquals
- KeyPrefixEquals
- Redirect
- Protocol
- HostName
- ReplaceKeyPrefixWith
- ReplaceKeyWith
- HttpRedirectCode

Amazon S3 has a limitation of 50 routing rules per website configuration. If you require more than 50 routing rules, you can use object redirect. For more information, see Configuring an Object Redirect in the *Amazon S3 User Guide*.

The maximum request length is limited to 128 KB.

Request Syntax

```
PUT /?website HTTP/1.1
Host: Bucket.s3.amazonaws.com
Content-MD5: ContentMD5
x-amz-sdk-checksum-algorithm: ChecksumAlgorithm
x-amz-expected-bucket-owner: ExpectedBucketOwner
<?xml version="1.0" encoding="UTF-8"?>
<WebsiteConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <ErrorDocument>
      <Key>string</Key>
   </ErrorDocument>
   <IndexDocument>
      <Suffix>string</Suffix>
   </IndexDocument>
   <RedirectAllRequestsTo>
      <HostName>string</HostName>
```

```
      <Protocol>string</Protocol>
   </RedirectAllRequestsTo>
   <RoutingRules>
      <RoutingRule>
         <Condition>
            <HttpErrorCodeReturnedEquals>string</HttpErrorCodeReturnedEquals>
            <KeyPrefixEquals>string</KeyPrefixEquals>
         </Condition>
         <Redirect>
            <HostName>string</HostName>
            <HttpRedirectCode>string</HttpRedirectCode>
            <Protocol>string</Protocol>
            <ReplaceKeyPrefixWith>string</ReplaceKeyPrefixWith>
            <ReplaceKeyWith>string</ReplaceKeyWith>
         </Redirect>
      </RoutingRule>
   </RoutingRules>
</WebsiteConfiguration>
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name.

Required: Yes

Content-MD5

The base64-encoded 128-bit MD5 digest of the data. You must use this header as a message integrity check to verify that the request body was not corrupted in transit. For more information, see RFC 1864.

For requests made using the AWS Command Line Interface (CLI) or AWS SDKs, this field is calculated automatically.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-sdk-checksum-algorithm

Indicates the algorithm used to create the checksum for the object when you use the SDK. This header will not provide any additional functionality if you don't use the SDK. When you send this header, there must be a corresponding `x-amz-checksum` or `x-amz-trailer` header sent. Otherwise, Amazon S3 fails the request with the HTTP status code `400 Bad Request`. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

If you provide an individual checksum, Amazon S3 ignores any provided `ChecksumAlgorithm` parameter.

Valid Values: `CRC32 | CRC32C | SHA1 | SHA256`

Request Body

The request accepts the following data in XML format.

WebsiteConfiguration

Root level tag for the WebsiteConfiguration parameters.

Required: Yes

ErrorDocument

The name of the error document for the website.

Type: ErrorDocument data type

Required: No

IndexDocument

The name of the index document for the website.

Type: IndexDocument data type

Required: No

RedirectAllRequestsTo

The redirect behavior for every request to this bucket's website endpoint.

> **Important**
>
> If you specify this property, you can't specify any other property.

Type: RedirectAllRequestsTo data type

Required: No

RoutingRules

Rules that define when a redirect is applied and the redirect behavior.

Type: Array of RoutingRule data types

Required: No

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

Example 1: Configure bucket as a website (add website configuration)

The following request configures a bucket example.com as a website. The configuration in the request specifies index.html as the index document. It also specifies the optional error document, SomeErrorDocument.html.

```
PUT ?website HTTP/1.1
Host: example.com.s3.<Region>.amazonaws.com
Content-Length: 256
Date: Thu, 27 Jan 2011 12:00:00 GMT
Authorization: signatureValue

<WebsiteConfiguration xmlns='http://s3.amazonaws.com/doc/2006-03-01/'>
```

```
    <IndexDocument>
        <Suffix>index.html</Suffix>
    </IndexDocument>
    <ErrorDocument>
        <Key>SomeErrorDocument.html</Key>
    </ErrorDocument>
</WebsiteConfiguration>
```

Sample Response

This example illustrates one usage of PutBucketWebsite.

```
HTTP/1.1 200 OK
x-amz-id-2: YgIPIfBiKa2bj0KMgUAdQkf3ShJTOOpXUueF6QKo
x-amz-request-id: 80CD4368BD211111
Date: Thu, 27 Jan 2011 00:00:00 GMT
Content-Length: 0
Server: AmazonS3
```

Example 2: Configure bucket as a website but redirect all requests

The following request configures a bucket `www.example.com` as a website. However, the configuration specifies that all GET requests for the www.example.com bucket's website endpoint will be redirected to host example.com. This redirect can be useful when you want to serve requests for both `http://www.example.com` and `http://example.com`, but you want to maintain the website content in only one bucket, in this case, `example.com`.

```
PUT ?website HTTP/1.1
Host: www.example.com.s3.<Region>.amazonaws.com
Content-Length: length-value
Date: Thu, 27 Jan 2011 12:00:00 GMT
Authorization: signatureValue

<WebsiteConfiguration xmlns='http://s3.amazonaws.com/doc/2006-03-01/'>
   <RedirectAllRequestsTo>
      <HostName>example.com</HostName>
    </RedirectAllRequestsTo>
</WebsiteConfiguration>
```

Example 3: Configure bucket as a website and specify optional redirection rules

Example 1 is the simplest website configuration. It configures a bucket as a website by providing only an index document and an error document. You can further customize the website configuration by adding routing rules that redirect requests for one or more objects. For example, suppose that your bucket contained the following objects:

- index.html
- docs/article1.html
- docs/article2.html

If you decided to rename the folder from `docs/` to `documents/`, you would need to redirect requests for prefix `/docs` to `documents/`. For example, a request for docs/article1.html will need to be redirected to documents/article1.html.

In this case, you update the website configuration and add a routing rule as shown in the following request.

```
PUT ?website HTTP/1.1
Host: www.example.com.s3.<Region>.amazonaws.com
Content-Length: length-value
Date: Thu, 27 Jan 2011 12:00:00 GMT
Authorization: signatureValue

<WebsiteConfiguration xmlns='http://s3.amazonaws.com/doc/2006-03-01/'>
  <IndexDocument>
    <Suffix>index.html</Suffix>
  </IndexDocument>
  <ErrorDocument>
    <Key>Error.html</Key>
  </ErrorDocument>

  <RoutingRules>
    <RoutingRule>
    <Condition>
      <KeyPrefixEquals>docs/</KeyPrefixEquals>
    </Condition>
    <Redirect>
```

```
      <ReplaceKeyPrefixWith>documents/</ReplaceKeyPrefixWith>
    </Redirect>
    </RoutingRule>
  </RoutingRules>
</WebsiteConfiguration>
```

Example 4: Configure a bucket as a website and redirect errors

You can use a routing rule to specify a condition that checks for a specific HTTP error code. When a page request results in this error, you can optionally reroute requests. For example, you might route requests to another host and optionally process the error. The routing rule in the following requests redirects requests to an EC2 instance in the event of an HTTP error 404. For illustration, the redirect also inserts an object key prefix `report-404/` in the redirect. For example, if you request a page `ExamplePage.html` and it results in an HTTP 404 error, the request is routed to a page `report-404/testPage.html` on the specified EC2 instance. If there is no routing rule and the HTTP error 404 occurred, then `Error.html` would be returned.

```
PUT ?website HTTP/1.1
Host: www.example.com.s3.<Region>.amazonaws.com
Content-Length: 580
Date: Thu, 27 Jan 2011 12:00:00 GMT
Authorization: signatureValue

<WebsiteConfiguration xmlns='http://s3.amazonaws.com/doc/2006-03-01/'>
  <IndexDocument>
    <Suffix>index.html</Suffix>
  </IndexDocument>
  <ErrorDocument>
    <Key>Error.html</Key>
  </ErrorDocument>

  <RoutingRules>
    <RoutingRule>
    <Condition>
      <HttpErrorCodeReturnedEquals>404</HttpErrorCodeReturnedEquals >
    </Condition>
    <Redirect>
      <HostName>ec2-11-22-333-44.compute-1.amazonaws.com</HostName>
      <ReplaceKeyPrefixWith>report-404/</ReplaceKeyPrefixWith>
    </Redirect>
```

```
    </RoutingRule>
  </RoutingRules>
</WebsiteConfiguration>
```

Example 5: Configure a bucket as a website and redirect folder requests to a page

Suppose you have the following pages in your bucket:

- images/photo1.jpg
- images/photo2.jpg
- images/photo3.jpg

Now you want to route requests for all pages with the images/ prefix to go to a single page, errorpage.html. You can add a website configuration to your bucket with the routing rule shown in the following request.

```
PUT ?website HTTP/1.1
Host: www.example.com.s3.<Region>.amazonaws.com
Content-Length: 481
Date: Thu, 27 Jan 2011 12:00:00 GMT
Authorization: signatureValue

<WebsiteConfiguration xmlns='http://s3.amazonaws.com/doc/2006-03-01/'>
  <IndexDocument>
    <Suffix>index.html</Suffix>
  </IndexDocument>
  <ErrorDocument>
    <Key>Error.html</Key>
  </ErrorDocument>

  <RoutingRules>
    <RoutingRule>
    <Condition>
      <KeyPrefixEquals>images/</KeyPrefixEquals>
    </Condition>
    <Redirect>
      <ReplaceKeyWith>errorpage.html</ReplaceKeyWith>
    </Redirect>
    </RoutingRule>
```

```
  </RoutingRules>
</WebsiteConfiguration>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutObject

Service: Amazon S3

Adds an object to a bucket.

> **Note**
>
> - Amazon S3 never adds partial objects; if you receive a success response, Amazon S3 added the entire object to the bucket. You cannot use `PutObject` to only update a single piece of metadata for an existing object. You must put the entire object with updated metadata if you want to update some values.
> - If your bucket uses the bucket owner enforced setting for Object Ownership, ACLs are disabled and no longer affect permissions. All objects written to the bucket by any account will be owned by the bucket owner.
> - **Directory buckets** - For directory buckets, you must make requests for this API operation to the Zonal endpoint. These endpoints support virtual-hosted-style requests in the format `https://bucket_name.s3express-az_id.region.amazonaws.com/key-name` . Path-style requests are not supported. For more information, see Regional and Zonal endpoints in the *Amazon S3 User Guide*.

Amazon S3 is a distributed system. If it receives multiple write requests for the same object simultaneously, it overwrites all but the last object written. However, Amazon S3 provides features that can modify this behavior:

- **S3 Object Lock** - To prevent objects from being deleted or overwritten, you can use Amazon S3 Object Lock in the *Amazon S3 User Guide*.

  > **Note**
  >
  > This functionality is not supported for directory buckets.

- **S3 Versioning** - When you enable versioning for a bucket, if Amazon S3 receives multiple write requests for the same object simultaneously, it stores all versions of the objects. For each write request that is made to the same object, Amazon S3 automatically generates a unique version ID of that object being stored in Amazon S3. You can retrieve, replace, or delete any version of the object. For more information about versioning, see Adding Objects to Versioning-Enabled

Buckets in the *Amazon S3 User Guide*. For information about returning the versioning state of a bucket, see GetBucketVersioning.

> **Note**
>
> This functionality is not supported for directory buckets.

Permissions

- **General purpose bucket permissions** - The following permissions are required in your policies when your `PutObject` request includes specific headers.
  - **`s3:PutObject`** - To successfully complete the `PutObject` request, you must always have the `s3:PutObject` permission on a bucket to add an object to it.
  - **`s3:PutObjectAcl`** - To successfully change the objects ACL of your `PutObject` request, you must have the `s3:PutObjectAcl`.
  - **`s3:PutObjectTagging`** - To successfully set the tag-set with your `PutObject` request, you must have the `s3:PutObjectTagging`.
- **Directory bucket permissions** - To grant access to this API operation on a directory bucket, we recommend that you use the `CreateSession` API operation for session-based authorization. Specifically, you grant the `s3express:CreateSession` permission to the directory bucket in a bucket policy or an IAM identity-based policy. Then, you make the `CreateSession` API call on the bucket to obtain a session token. With the session token in your request header, you can make API requests to this operation. After the session token expires, you make another `CreateSession` API call to generate a new session token for use. AWS CLI or SDKs create session and refresh the session token automatically to avoid service interruptions when a session expires. For more information about authorization, see `CreateSession`.

Data integrity with Content-MD5

- **General purpose bucket** - To ensure that data is not corrupted traversing the network, use the `Content-MD5` header. When you use this header, Amazon S3 checks the object against the provided MD5 value and, if they do not match, Amazon S3 returns an error. Alternatively, when the object's ETag is its MD5 digest, you can calculate the MD5 while putting the object to Amazon S3 and compare the returned ETag to the calculated MD5 value.
- **Directory bucket** - This functionality is not supported for directory buckets.

HTTP Host header syntax

Directory buckets - The HTTP Host header syntax is *Bucket_name*.s3express-*az_id*.*region*.amazonaws.com.

For more information about related Amazon S3 APIs, see the following:

- CopyObject
- DeleteObject

Request Syntax

```
PUT /Key+ HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-acl: ACL
Cache-Control: CacheControl
Content-Disposition: ContentDisposition
Content-Encoding: ContentEncoding
Content-Language: ContentLanguage
Content-Length: ContentLength
Content-MD5: ContentMD5
Content-Type: ContentType
x-amz-sdk-checksum-algorithm: ChecksumAlgorithm
x-amz-checksum-crc32: ChecksumCRC32
x-amz-checksum-crc32c: ChecksumCRC32C
x-amz-checksum-sha1: ChecksumSHA1
x-amz-checksum-sha256: ChecksumSHA256
Expires: Expires
x-amz-grant-full-control: GrantFullControl
x-amz-grant-read: GrantRead
x-amz-grant-read-acp: GrantReadACP
x-amz-grant-write-acp: GrantWriteACP
x-amz-server-side-encryption: ServerSideEncryption
x-amz-storage-class: StorageClass
x-amz-website-redirect-location: WebsiteRedirectLocation
x-amz-server-side-encryption-customer-algorithm: SSECustomerAlgorithm
x-amz-server-side-encryption-customer-key: SSECustomerKey
x-amz-server-side-encryption-customer-key-MD5: SSECustomerKeyMD5
x-amz-server-side-encryption-aws-kms-key-id: SSEKMSKeyId
x-amz-server-side-encryption-context: SSEKMSEncryptionContext
x-amz-server-side-encryption-bucket-key-enabled: BucketKeyEnabled
```

```
x-amz-request-payer: RequestPayer
x-amz-tagging: Tagging
x-amz-object-lock-mode: ObjectLockMode
x-amz-object-lock-retain-until-date: ObjectLockRetainUntilDate
x-amz-object-lock-legal-hold: ObjectLockLegalHoldStatus
x-amz-expected-bucket-owner: ExpectedBucketOwner

Body
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name to which the PUT action was initiated.

Directory buckets - When you use this operation with a directory bucket, you must use virtual-hosted-style requests in the format *Bucket_name*.s3express-*az_id*.*region*.amazonaws.com. Path-style requests are not supported. Directory bucket names must be unique in the chosen Availability Zone. Bucket names must follow the format *bucket_base_name*--*az-id*--x-s3 (for example, *DOC-EXAMPLE-BUCKET*--*usw2-az1*--x-s3). For information about bucket naming restrictions, see Directory bucket naming rules in the *Amazon S3 User Guide*.

Access points - When you use this action with an access point, you must provide the alias of the access point in place of the bucket name or specify the access point ARN. When using the access point ARN, you must direct requests to the access point hostname. The access point hostname takes the form *AccessPointName-AccountId*.s3-accesspoint.*Region*.amazonaws.com. When using this action with an access point through the AWS SDKs, you provide the access point ARN in place of the bucket name. For more information about access point ARNs, see Using access points in the *Amazon S3 User Guide*.

> **Note**
>
> Access points and Object Lambda access points are not supported by directory buckets.

S3 on Outposts - When you use this action with Amazon S3 on Outposts, you must direct requests to the S3 on Outposts hostname. The S3 on Outposts hostname takes the form *AccessPointName-AccountId*.*outpostID*.s3-outposts.*Region*.amazonaws.com.

When you use this action with S3 on Outposts through the AWS SDKs, you provide the Outposts access point ARN in place of the bucket name. For more information about S3 on Outposts ARNs, see What is S3 on Outposts? in the *Amazon S3 User Guide*.

Required: Yes

Cache-Control

Can be used to specify caching behavior along the request/reply chain. For more information, see http://www.w3.org/Protocols/rfc2616/rfc2616-sec14.html#sec14.9.

Content-Disposition

Specifies presentational information for the object. For more information, see https://www.rfc-editor.org/rfc/rfc6266#section-4.

Content-Encoding

Specifies what content encodings have been applied to the object and thus what decoding mechanisms must be applied to obtain the media-type referenced by the Content-Type header field. For more information, see https://www.rfc-editor.org/rfc/rfc9110.html#field.content-encoding.

Content-Language

The language the content is in.

Content-Length

Size of the body in bytes. This parameter is useful when the size of the body cannot be determined automatically. For more information, see https://www.rfc-editor.org/rfc/rfc9110.html#name-content-length.

Content-MD5

The base64-encoded 128-bit MD5 digest of the message (without the headers) according to RFC 1864. This header can be used as a message integrity check to verify that the data is the same data that was originally sent. Although it is optional, we recommend using the Content-MD5 mechanism as an end-to-end integrity check. For more information about REST request authentication, see REST Authentication.

> **Note**
>
> The `Content-MD5` header is required for any request to upload an object with a retention period configured using Amazon S3 Object Lock. For more information about

Amazon S3 Object Lock, see Amazon S3 Object Lock Overview in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Content-Type

A standard MIME type describing the format of the contents. For more information, see https://www.rfc-editor.org/rfc/rfc9110.html#name-content-type.

Expires

The date and time at which the object is no longer cacheable. For more information, see https://www.rfc-editor.org/rfc/rfc7234#section-5.3.

Key

Object key for which the PUT action was initiated.

Length Constraints: Minimum length of 1.

Required: Yes

x-amz-acl

The canned ACL to apply to the object. For more information, see Canned ACL in the *Amazon S3 User Guide*.

When adding a new object, you can use headers to grant ACL-based permissions to individual AWS accounts or to predefined groups defined by Amazon S3. These permissions are then added to the ACL on the object. By default, all objects are private. Only the owner has full access control. For more information, see Access Control List (ACL) Overview and Managing ACLs Using the REST API in the *Amazon S3 User Guide*.

If the bucket that you're uploading objects to uses the bucket owner enforced setting for S3 Object Ownership, ACLs are disabled and no longer affect permissions. Buckets that use this setting only accept PUT requests that don't specify an ACL or PUT requests that specify

bucket owner full control ACLs, such as the `bucket-owner-full-control` canned ACL or an equivalent form of this ACL expressed in the XML format. PUT requests that contain other ACLs (for example, custom grants to certain AWS accounts) fail and return a `400` error with the error code `AccessControlListNotSupported`. For more information, see Controlling ownership of objects and disabling ACLs in the *Amazon S3 User Guide*.

> **Note**
>
> - This functionality is not supported for directory buckets.
> - This functionality is not supported for Amazon S3 on Outposts.

Valid Values: `private | public-read | public-read-write | authenticated-read | aws-exec-read | bucket-owner-read | bucket-owner-full-control`

x-amz-checksum-crc32

This header can be used as a data integrity check to verify that the data received is the same data that was originally sent. This header specifies the base64-encoded, 32-bit CRC32 checksum of the object. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

x-amz-checksum-crc32c

This header can be used as a data integrity check to verify that the data received is the same data that was originally sent. This header specifies the base64-encoded, 32-bit CRC32C checksum of the object. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

x-amz-checksum-sha1

This header can be used as a data integrity check to verify that the data received is the same data that was originally sent. This header specifies the base64-encoded, 160-bit SHA-1 digest of the object. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

x-amz-checksum-sha256

This header can be used as a data integrity check to verify that the data received is the same data that was originally sent. This header specifies the base64-encoded, 256-bit SHA-256 digest of the object. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-grant-full-control

Gives the grantee READ, READ_ACP, and WRITE_ACP permissions on the object.

> **Note**
>
> - This functionality is not supported for directory buckets.
> - This functionality is not supported for Amazon S3 on Outposts.

x-amz-grant-read

Allows grantee to read the object data and its metadata.

> **Note**
>
> - This functionality is not supported for directory buckets.
> - This functionality is not supported for Amazon S3 on Outposts.

x-amz-grant-read-acp

Allows grantee to read the object ACL.

> **Note**
>
> - This functionality is not supported for directory buckets.
> - This functionality is not supported for Amazon S3 on Outposts.

x-amz-grant-write-acp

Allows grantee to write the ACL for the applicable object.

> **Note**
>
> - This functionality is not supported for directory buckets.
> - This functionality is not supported for Amazon S3 on Outposts.

x-amz-object-lock-legal-hold

Specifies whether a legal hold will be applied to this object. For more information about S3 Object Lock, see Object Lock in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `ON` | `OFF`

x-amz-object-lock-mode

The Object Lock mode that you want to apply to this object.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `GOVERNANCE` | `COMPLIANCE`

x-amz-object-lock-retain-until-date

The date and time when you want this object's Object Lock to expire. Must be formatted as a timestamp parameter.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-request-payer

Confirms that the requester knows that they will be charged for the request. Bucket owners need not specify this parameter in their requests. If either the source or destination S3 bucket has Requester Pays enabled, the requester will pay for corresponding charges to copy the object. For information about downloading objects from Requester Pays buckets, see Downloading Objects in Requester Pays Buckets in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

x-amz-sdk-checksum-algorithm

Indicates the algorithm used to create the checksum for the object when you use the SDK. This header will not provide any additional functionality if you don't use the SDK. When you send this header, there must be a corresponding `x-amz-checksum-`*`algorithm`* or `x-amz-trailer` header sent. Otherwise, Amazon S3 fails the request with the HTTP status code `400 Bad Request`.

For the `x-amz-checksum-`*`algorithm`* header, replace *`algorithm`* with the supported algorithm from the following list:

- CRC32
- CRC32C
- SHA1
- SHA256

For more information, see Checking object integrity in the *Amazon S3 User Guide*.

If the individual checksum value you provide through `x-amz-checksum-`*`algorithm`* doesn't match the checksum algorithm you set through `x-amz-sdk-checksum-algorithm`, Amazon S3 ignores any provided `ChecksumAlgorithm` parameter and uses the checksum algorithm that matches the provided value in `x-amz-checksum-`*`algorithm`* .

> **Note**
>
> For directory buckets, when you use AWS SDKs, CRC32 is the default checksum algorithm that's used for performance.

Valid Values: `CRC32` | `CRC32C` | `SHA1` | `SHA256`

x-amz-server-side-encryption

The server-side encryption algorithm that was used when you store this object in Amazon S3 (for example, `AES256`, `aws:kms`, `aws:kms:dsse`).

General purpose buckets - You have four mutually exclusive options to protect data using server-side encryption in Amazon S3, depending on how you choose to manage the encryption keys. Specifically, the encryption key options are Amazon S3 managed keys (SSE-S3), AWS KMS keys (SSE-KMS or DSSE-KMS), and customer-provided keys (SSE-C). Amazon S3 encrypts data with server-side encryption by using Amazon S3 managed keys (SSE-S3) by default. You can optionally tell Amazon S3 to encrypt data at rest by using server-side encryption with other key options. For more information, see Using Server-Side Encryption in the *Amazon S3 User Guide*.

Directory buckets - For directory buckets, only the server-side encryption with Amazon S3 managed keys (SSE-S3) (`AES256`) value is supported.

Valid Values: `AES256` | `aws:kms` | `aws:kms:dsse`

x-amz-server-side-encryption-aws-kms-key-id

If `x-amz-server-side-encryption` has a valid value of `aws:kms` or `aws:kms:dsse`, this header specifies the ID (Key ID, Key ARN, or Key Alias) of the AWS Key Management Service (AWS KMS) symmetric encryption customer managed key that was used for the object. If you specify `x-amz-server-side-encryption:aws:kms` or `x-amz-server-side-encryption:aws:kms:dsse`, but do not provide `x-amz-server-side-encryption-aws-kms-key-id`, Amazon S3 uses the AWS managed key (`aws/s3`) to protect the data. If the KMS key does not exist in the same account that's issuing the command, you must use the full ARN and not just the ID.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-bucket-key-enabled

Specifies whether Amazon S3 should use an S3 Bucket Key for object encryption with server-side encryption using AWS Key Management Service (AWS KMS) keys (SSE-KMS). Setting this header to `true` causes Amazon S3 to use an S3 Bucket Key for object encryption with SSE-KMS.

Specifying this header with a PUT action doesn't affect bucket-level settings for S3 Bucket Key.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-context

Specifies the AWS KMS Encryption Context to use for object encryption. The value of this header is a base64-encoded UTF-8 string holding JSON with the encryption context key-value pairs. This value is stored as object metadata and automatically gets passed on to AWS KMS for future `GetObject` or `CopyObject` operations on this object. This value must be explicitly added during `CopyObject` operations.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-algorithm

Specifies the algorithm to use when encrypting the object (for example, `AES256`).

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-key

Specifies the customer-provided encryption key for Amazon S3 to use in encrypting data. This value is used to store the object and then it is discarded; Amazon S3 does not store the encryption key. The key must be appropriate for use with the algorithm specified in the `x-amz-server-side-encryption-customer-algorithm` header.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-key-MD5

Specifies the 128-bit MD5 digest of the encryption key according to RFC 1321. Amazon S3 uses this header for a message integrity check to ensure that the encryption key was transmitted without error.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-storage-class

By default, Amazon S3 uses the STANDARD Storage Class to store newly created objects. The STANDARD storage class provides high durability and high availability. Depending on performance needs, you can specify a different Storage Class. For more information, see Storage Classes in the *Amazon S3 User Guide*.

> **Note**
>
> - For directory buckets, only the S3 Express One Zone storage class is supported to store newly created objects.
> - Amazon S3 on Outposts only uses the OUTPOSTS Storage Class.

Valid Values: `STANDARD | REDUCED_REDUNDANCY | STANDARD_IA | ONEZONE_IA | INTELLIGENT_TIERING | GLACIER | DEEP_ARCHIVE | OUTPOSTS | GLACIER_IR | SNOW | EXPRESS_ONEZONE`

x-amz-tagging

The tag-set for the object. The tag-set must be encoded as URL Query parameters. (For example, "Key1=Value1")

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-website-redirect-location

If the bucket is configured as a website, redirects requests for this object to another object in the same bucket or to an external URL. Amazon S3 stores the value of this header in the object metadata. For information about object metadata, see Object Key and Metadata in the *Amazon S3 User Guide*.

In the following example, the request header sets the redirect to an object (anotherPage.html) in the same bucket:

```
x-amz-website-redirect-location: /anotherPage.html
```

In the following example, the request header sets the object redirect to another website:

```
x-amz-website-redirect-location: http://www.example.com/
```

For more information about website hosting in Amazon S3, see Hosting Websites on Amazon S3 and How to Configure Website Page Redirects in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Request Body

The request accepts the following binary data.

Body

Response Syntax

```
HTTP/1.1 200
x-amz-expiration: Expiration
ETag: ETag
x-amz-checksum-crc32: ChecksumCRC32
```

```
x-amz-checksum-crc32c: ChecksumCRC32C
x-amz-checksum-sha1: ChecksumSHA1
x-amz-checksum-sha256: ChecksumSHA256
x-amz-server-side-encryption: ServerSideEncryption
x-amz-version-id: VersionId
x-amz-server-side-encryption-customer-algorithm: SSECustomerAlgorithm
x-amz-server-side-encryption-customer-key-MD5: SSECustomerKeyMD5
x-amz-server-side-encryption-aws-kms-key-id: SSEKMSKeyId
x-amz-server-side-encryption-context: SSEKMSEncryptionContext
x-amz-server-side-encryption-bucket-key-enabled: BucketKeyEnabled
x-amz-request-charged: RequestCharged
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The response returns the following HTTP headers.

ETag

Entity tag for the uploaded object.

General purpose buckets - To ensure that data is not corrupted traversing the network, for objects where the ETag is the MD5 digest of the object, you can calculate the MD5 while putting an object to Amazon S3 and compare the returned ETag to the calculated MD5 value.

Directory buckets - The ETag for the object in a directory bucket isn't the MD5 digest of the object.

x-amz-checksum-crc32

The base64-encoded, 32-bit CRC32 checksum of the object. This will only be present if it was uploaded with the object. When you use an API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

x-amz-checksum-crc32c

The base64-encoded, 32-bit CRC32C checksum of the object. This will only be present if it was uploaded with the object. When you use an API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead,

it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

x-amz-checksum-sha1

The base64-encoded, 160-bit SHA-1 digest of the object. This will only be present if it was uploaded with the object. When you use the API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

x-amz-checksum-sha256

The base64-encoded, 256-bit SHA-256 digest of the object. This will only be present if it was uploaded with the object. When you use an API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

x-amz-expiration

If the expiration is configured for the object (see PutBucketLifecycleConfiguration) in the *Amazon S3 User Guide*, the response includes this header. It includes the `expiry-date` and `rule-id` key-value pairs that provide information about object expiration. The value of the `rule-id` is URL-encoded.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-request-charged

If present, indicates that the requester was successfully charged for the request.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

x-amz-server-side-encryption

The server-side encryption algorithm used when you store this object in Amazon S3 (for example, `AES256`, `aws:kms`, `aws:kms:dsse`).

> **Note**
>
> For directory buckets, only server-side encryption with Amazon S3 managed keys (SSE-S3) (`AES256`) is supported.

Valid Values: `AES256` | `aws:kms` | `aws:kms:dsse`

x-amz-server-side-encryption-aws-kms-key-id

If `x-amz-server-side-encryption` has a valid value of `aws:kms` or `aws:kms:dsse`, this header indicates the ID of the AWS Key Management Service (AWS KMS) symmetric encryption customer managed key that was used for the object.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-bucket-key-enabled

Indicates whether the uploaded object uses an S3 Bucket Key for server-side encryption with AWS Key Management Service (AWS KMS) keys (SSE-KMS).

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-context

If present, indicates the AWS KMS Encryption Context to use for object encryption. The value of this header is a base64-encoded UTF-8 string holding JSON with the encryption context key-

value pairs. This value is stored as object metadata and automatically gets passed on to AWS KMS for future `GetObject` or `CopyObject` operations on this object.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-algorithm

If server-side encryption with a customer-provided encryption key was requested, the response will include this header to confirm the encryption algorithm that's used.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-key-MD5

If server-side encryption with a customer-provided encryption key was requested, the response will include this header to provide the round-trip message integrity verification of the customer-provided encryption key.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-version-id

Version ID of the object.

If you enable versioning for a bucket, Amazon S3 automatically generates a unique version ID for the object being stored. Amazon S3 returns this ID in the response. When you enable versioning for a bucket, if Amazon S3 receives multiple write requests for the same object simultaneously, it stores all of the objects. For more information about versioning, see Adding Objects to Versioning-Enabled Buckets in the *Amazon S3 User Guide*. For information about returning the versioning state of a bucket, see GetBucketVersioning.

> **Note**
>
> This functionality is not supported for directory buckets.

Examples

Example 1 for general purpose buckets: Upload an object

The following request stores the `my-image.jpg` file in the `myBucket` bucket.

```
PUT /my-image.jpg HTTP/1.1
Host: myBucket.s3.<Region>.amazonaws.com
Date: Wed, 12 Oct 2009 17:50:00 GMT
Authorization: authorization string
Content-Type: text/plain
Content-Length: 11434
x-amz-meta-author: Janet
Expect: 100-continue
[11434 bytes of object data]
```

Sample Response for general purpose buckets: Versioning suspended

This example illustrates one usage of PutObject.

```
HTTP/1.1 100 Continue

HTTP/1.1 200 OK
x-amz-id-2: LriYPLdmOdAiIfgSm/F1YsViT1LW94/xUQxMsF7xiEb1a0wiIOIxl+zbwZ163pt7
x-amz-request-id: 0A49CE4060975EAC
Date: Wed, 12 Oct 2009 17:50:00 GMT
ETag: "1b2cf535f27731c974343645a3985328"
Content-Length: 0
Connection: close
Server: AmazonS3
```

Sample Response for general purpose buckets: Expiration rule created using lifecycle configuration

If an expiration rule that was created on the bucket using lifecycle configuration applies to the object, you get a response with an `x-amz-expiration` header, as shown in the following response. For more information, see Transitioning Objects: General Considerations.

```
HTTP/1.1 100 Continue

HTTP/1.1 200 OK
x-amz-id-2: LriYPLdmOdAiIfgSm/F1YsViT1LW94/xUQxMsF7xiEb1a0wiIOIxl+zbwZ163pt7
x-amz-request-id: 0A49CE4060975EAC
Date: Wed, 12 Oct 2009 17:50:00 GMT
x-amz-expiration: expiry-date="Fri, 23 Dec 2012 00:00:00 GMT", rule-id="1"
ETag: "1b2cf535f27731c974343645a3985328"
Content-Length: 0
Connection: close
Server: AmazonS3
```

Sample Response for general purpose buckets: Versioning enabled

If the bucket has versioning enabled, the response includes the `x-amz-version-id` header.

```
HTTP/1.1 100 Continue

HTTP/1.1 200 OK
x-amz-id-2: LriYPLdmOdAiIfgSm/F1YsViT1LW94/xUQxMsF7xiEb1a0wiIOIxl+zbwZ163pt7
x-amz-request-id: 0A49CE4060975EAC
x-amz-version-id: 43jfkodU8493jnFJD9fjj3HHNVfdsQUIFDNsidf038jfdsjGFDSIRp
Date: Wed, 12 Oct 2009 17:50:00 GMT
ETag: "fbacf535f27731c9771645a39863328"
Content-Length: 0
Connection: close
Server: AmazonS3
```

Example 2 for general purpose buckets: Specifying the Reduced Redundancy Storage Class

The following request stores the image, `my-image.jpg`, in the `myBucket` bucket. The request specifies the `x-amz-storage-class` header to request that the object is stored using the REDUCED_REDUNDANCY storage class.

```
PUT /my-image.jpg HTTP/1.1
Host: myBucket.s3.<Region>.amazonaws.com
Date: Wed, 12 Oct 2009 17:50:00 GMT
Authorization: authorization string
Content-Type: image/jpeg
Content-Length: 11434
Expect: 100-continue
x-amz-storage-class: REDUCED_REDUNDANCY
```

Sample Response for general purpose buckets

This example illustrates one usage of PutObject.

```
HTTP/1.1 100 Continue

HTTP/1.1 200 OK
x-amz-id-2: LriYPLdmOdAiIfgSm/F1YsViT1LW94/xUQxMsF7xiEb1a0wiIOIxl+zbwZ163pt7
x-amz-request-id: 0A49CE4060975EAC
Date: Wed, 12 Oct 2009 17:50:00 GMT
ETag: "1b2cf535f27731c974343645a3985328"
Content-Length: 0
Connection: close
Server: AmazonS3
```

Example 3 for general purpose buckets: Uploading an object and specifying access permissions explicitly

The following request stores the `TestObject.txt` file in the `myBucket` bucket. The request specifies various ACL headers to grant permission to AWS accounts that are specified with a canonical user ID and an email address.

```
PUT TestObject.txt HTTP/1.1
Host: myBucket.s3.<Region>.amazonaws.com
x-amz-date: Fri, 13 Apr 2012 05:40:14 GMT
Authorization: authorization string
x-amz-grant-write-acp: id=8a6925ce4adf588a4532142d3f74dd8c71fa124ExampleCanonicalUserID
x-amz-grant-full-control: emailAddress="ExampleUser@amazon.com"
x-amz-grant-write: emailAddress="ExampleUser1@amazon.com",
 emailAddress="ExampleUser2@amazon.com"
Content-Length: 300
Expect: 100-continue
Connection: Keep-Alive

...Object data in the body...
```

Sample Response for general purpose buckets

This example illustrates one usage of PutObject.

```
HTTP/1.1 200 OK
x-amz-id-2: RUxG2sZJUfS+ezeAS2i0Xj6w/ST6xqF/8pFNHjTjTrECW56SCAUWGg+7QLVoj1GH
x-amz-request-id: 8D017A90827290BA
Date: Fri, 13 Apr 2012 05:40:25 GMT
ETag: "dd038b344cf9553547f8b395a814b274"
Content-Length: 0
Server: AmazonS3
```

Example 4 for general purpose buckets: Using a canned ACL to set access permissions

The following request stores the `TestObject.txt` file in the myBucket bucket. The request uses an `x-amz-acl` header to specify a canned ACL that grants READ permission to the public.

```
PUT TestObject.txt HTTP/1.1
Host: myBucket.s3.<Region>.amazonaws.com
x-amz-date: Fri, 13 Apr 2012 05:54:57 GMT
x-amz-acl: public-read
Authorization: authorization string
Content-Length: 300
Expect: 100-continue
Connection: Keep-Alive
```

```
...Object data in the body...
```

Sample Response for general purpose buckets

This example illustrates one usage of PutObject.

```
HTTP/1.1 200 OK
x-amz-id-2: Yd6PSJxJFQeTYJ/3dDO7miqJfVMXXW0S2Hijo3WFs4bz6oe2QCVXasxXLZdMfASd
x-amz-request-id: 80DF413BB3D28A25
Date: Fri, 13 Apr 2012 05:54:59 GMT
ETag: "dd038b344cf9553547f8b395a814b274"
Content-Length: 0
Server: AmazonS3
```

Example 5 for general purpose buckets: Upload an object (Request server-side encryption using a customer-provided encryption key)

This example of an upload object requests server-side encryption and provides an encryption key.

```
PUT /example-object HTTP/1.1
Host: example-bucket.s3.<Region>.amazonaws.com
Accept: */*
Authorization:authorization string
Date: Wed, 28 May 2014 19:31:11 +0000
x-amz-server-side-encryption-customer-key:g0lCfA3Dv40jZz5SQJ1ZukLRFqtI5WorC/8SEEXAMPLE

x-amz-server-side-encryption-customer-key-MD5:ZjQrne1X/iTcskbY2example
x-amz-server-side-encryption-customer-algorithm:AES256
```

Sample Response for general purpose buckets

In the response, Amazon S3 returns the encryption algorithm and MD5 of the encryption key that you specified when uploading the object. The ETag that is returned is not the MD5 of the object.

```
HTTP/1.1 200 OK
x-amz-id-2: 7qoYGN7uMuFuYS6m7a4lszH6in+hccE+4DXPmDZ7C9KqucjnZC1gI5mshai6fbMG
x-amz-request-id: 06437EDD40C407C7
Date: Wed, 28 May 2014 19:31:12 GMT
x-amz-server-side-encryption-customer-algorithm: AES256
x-amz-server-side-encryption-customer-key-MD5: ZjQrne1X/iTcskbY2example
ETag: "ae89237c20e759c5f479ece02c642f59"
```

Example 6 for general purpose buckets: Upload an object and specify tags

This example of an upload object request specifies the optional `x-amz-tagging` header to add tags to the object.

After the object is created, Amazon S3 stores the specified object tags in the tagging subresource that is associated with the object. For more information about tagging, see Object Tagging and Access Control Policies in the *Amazon S3 User Guide*.

```
PUT /example-object HTTP/1.1
Host: example-bucket.s3.<Region>.amazonaws.com
Accept: */*
Authorization:authorization string
Date: Thu, 22 Sep 2016 21:58:13 GMT
x-amz-tagging: tag1=value1&tag2=value2

[... bytes of object data]
```

Sample Response for general purpose buckets

This example illustrates one usage of PutObject.

```
HTTP/1.1 200 OK
x-amz-id-2: 7qoYGN7uMuFuYS6m7a4lszH6in+hccE+4DXPmDZ7C9KqucjnZC1gI5mshai6fbMG
x-amz-request-id: 06437EDD40C407C7
Date: Thu, 22 Sep 2016 21:58:17 GMT
```

Example 7 for general purpose buckets: Upload an object and specify the checksum algorithm

This example of an upload object request specifies the additional checksum algorithm to use to verify the content of the object. For more information about using additional checksums, see Checking object integrity in the *Amazon S3 User Guide*.

```
PUT /example-object HTTP/1.1
Host: example-bucket.s3.<Region>.amazonaws.com
x-amz-date: Mon, 22 Mar 2021 23:00:00 GMT
Authorization: authorization string
Content-Length: 268435456
x-amz-checksum-sha256: 0ea4be78f6c3948588172edc6d8789ffe3cec461f385e0ac447e581731c429b5
[268435456 bytes of object data in the body]
```

Sample Response for general purpose buckets

This example illustrates one usage of PutObject.

```
HTTP/1.1 200 OK
x-amz-id-2: 7qoYGN7uMuFuYS6m7a4lszH6in+hccE+4DXPmDZ7C9KqucjnZC1gI5mshai6fbMG
x-amz-request-id: 49CFA2051300FBE9
Date: Mon, 22 Mar 2021 23:00:12 GMT
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3

- AWS SDK for Python
- AWS SDK for Ruby V3

PutObjectAcl

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Uses the `acl` subresource to set the access control list (ACL) permissions for a new or existing object in an S3 bucket. You must have the `WRITE_ACP` permission to set the ACL of an object. For more information, see What permissions can I grant? in the *Amazon S3 User Guide*.

This functionality is not supported for Amazon S3 on Outposts.

Depending on your application needs, you can choose to set the ACL on an object using either the request body or the headers. For example, if you have an existing application that updates a bucket ACL using the request body, you can continue to use that approach. For more information, see Access Control List (ACL) Overview in the *Amazon S3 User Guide*.

> **Important**
>
> If your bucket uses the bucket owner enforced setting for S3 Object Ownership, ACLs are disabled and no longer affect permissions. You must use policies to grant access to your bucket and the objects in it. Requests to set ACLs or update ACLs fail and return the `AccessControlListNotSupported` error code. Requests to read ACLs are still supported. For more information, see Controlling object ownership in the *Amazon S3 User Guide*.

Permissions

You can set access permissions using one of the following methods:

- Specify a canned ACL with the `x-amz-acl` request header. Amazon S3 supports a set of predefined ACLs, known as canned ACLs. Each canned ACL has a predefined set of grantees and permissions. Specify the canned ACL name as the value of `x-amz-acl`. If you use this header, you cannot use other access control-specific headers in your request. For more information, see Canned ACL.

- Specify access permissions explicitly with the `x-amz-grant-read`, `x-amz-grant-read-acp`, `x-amz-grant-write-acp`, and `x-amz-grant-full-control` headers. When using these headers, you specify explicit access permissions and grantees (AWS accounts or Amazon S3 groups) who will receive the permission. If you use these ACL-specific headers, you cannot use `x-amz-acl` header to set a canned ACL. These parameters map to the set of permissions that Amazon S3 supports in an ACL. For more information, see Access Control List (ACL) Overview.

  You specify each grantee as a type=value pair, where the type is one of the following:

  - `id` – if the value specified is the canonical user ID of an AWS account
  - `uri` – if you are granting permissions to a predefined group
  - `emailAddress` – if the value specified is the email address of an AWS account

  > **Note**
  >
  > Using email addresses to specify a grantee is only supported in the following AWS Regions:
  >
  > - US East (N. Virginia)
  > - US West (N. California)
  > - US West (Oregon)
  > - Asia Pacific (Singapore)
  > - Asia Pacific (Sydney)
  > - Asia Pacific (Tokyo)
  > - Europe (Ireland)
  > - South America (São Paulo)
  >
  > For a list of all the Amazon S3 supported Regions and endpoints, see Regions and Endpoints in the AWS General Reference.

  For example, the following `x-amz-grant-read` header grants list objects permission to the two AWS accounts identified by their email addresses.

  ```
  x-amz-grant-read: emailAddress="xyz@amazon.com",
  emailAddress="abc@amazon.com"
  ```

~~You can use either a canned ACL or specify access permissions explicitly. You cannot do both.~~

Grantee Values

You can specify the person (grantee) to whom you're assigning access rights (using request elements) in the following ways:

- By the person's ID:

  ```
  <Grantee xmlns:xsi="http://www.w3.org/2001/XMLSchema-
  instance" xsi:type="CanonicalUser"><ID><>ID<></
  ID><DisplayName><>GranteesEmail<></DisplayName> </Grantee>
  ```

  DisplayName is optional and ignored in the request.

- By URI:

  ```
  <Grantee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:type="Group"><URI><>http://acs.amazonaws.com/groups/global/
  AuthenticatedUsers<></URI></Grantee>
  ```

- By Email address:

  ```
  <Grantee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:type="AmazonCustomerByEmail"><EmailAddress><>Grantees@email.com<></
  EmailAddress>lt;/Grantee>
  ```

  The grantee is resolved to the CanonicalUser and, in a response to a GET Object acl request, appears as the CanonicalUser.

  Note

  Using email addresses to specify a grantee is only supported in the following AWS Regions:

  - US East (N. Virginia)
  - US West (N. California)
  - US West (Oregon)
  - Asia Pacific (Singapore)
  - Asia Pacific (Sydney)
  - Asia Pacific (Tokyo)
  - Europe (Ireland)
  - South America (São Paulo)

For a list of all the Amazon S3 supported Regions and endpoints, see Regions and Endpoints in the AWS General Reference.

Versioning

The ACL of an object is set at the object version level. By default, PUT sets the ACL of the current version of an object. To set the ACL of a different version, use the `versionId` subresource.

The following operations are related to `PutObjectAcl`:

- CopyObject
- GetObject

Request Syntax

```
PUT /{Key+}?acl&versionId=VersionId HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-acl: ACL
Content-MD5: ContentMD5
x-amz-sdk-checksum-algorithm: ChecksumAlgorithm
x-amz-grant-full-control: GrantFullControl
x-amz-grant-read: GrantRead
x-amz-grant-read-acp: GrantReadACP
x-amz-grant-write: GrantWrite
x-amz-grant-write-acp: GrantWriteACP
x-amz-request-payer: RequestPayer
x-amz-expected-bucket-owner: ExpectedBucketOwner
<?xml version="1.0" encoding="UTF-8"?>
<AccessControlPolicy xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <AccessControlList>
      <Grant>
         <Grantee>
            <DisplayName>string</DisplayName>
            <EmailAddress>string</EmailAddress>
            <ID>string</ID>
            <xsi:type>string</xsi:type>
            <URI>string</URI>
         </Grantee>
         <Permission>string</Permission>
      </Grant>
```

```
    </AccessControlList>
    <Owner>
       <DisplayName>string</DisplayName>
       <ID>string</ID>
    </Owner>
</AccessControlPolicy>
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name that contains the object to which you want to attach the ACL.

Access points - When you use this action with an access point, you must provide the alias of the access point in place of the bucket name or specify the access point ARN. When using the access point ARN, you must direct requests to the access point hostname. The access point hostname takes the form *AccessPointName-AccountId*.s3-accesspoint.*Region*.amazonaws.com. When using this action with an access point through the AWS SDKs, you provide the access point ARN in place of the bucket name. For more information about access point ARNs, see Using access points in the *Amazon S3 User Guide*.

S3 on Outposts - When you use this action with Amazon S3 on Outposts, you must direct requests to the S3 on Outposts hostname. The S3 on Outposts hostname takes the form *AccessPointName-AccountId*.*outpostID*.s3-outposts.*Region*.amazonaws.com. When you use this action with S3 on Outposts through the AWS SDKs, you provide the Outposts access point ARN in place of the bucket name. For more information about S3 on Outposts ARNs, see What is S3 on Outposts? in the *Amazon S3 User Guide*.

Required: Yes

Content-MD5

The base64-encoded 128-bit MD5 digest of the data. This header must be used as a message integrity check to verify that the request body was not corrupted in transit. For more information, go to RFC 1864.>

For requests made using the AWS Command Line Interface (CLI) or AWS SDKs, this field is calculated automatically.

Key

Key for which the PUT action was initiated.

Length Constraints: Minimum length of 1.

Required: Yes

versionId

Version ID used to reference a specific version of the object.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-acl

The canned ACL to apply to the object. For more information, see Canned ACL.

Valid Values: `private | public-read | public-read-write | authenticated-read | aws-exec-read | bucket-owner-read | bucket-owner-full-control`

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-grant-full-control

Allows grantee the read, write, read ACP, and write ACP permissions on the bucket.

This functionality is not supported for Amazon S3 on Outposts.

x-amz-grant-read

Allows grantee to list the objects in the bucket.

This functionality is not supported for Amazon S3 on Outposts.

x-amz-grant-read-acp

Allows grantee to read the bucket ACL.

This functionality is not supported for Amazon S3 on Outposts.

x-amz-grant-write

Allows grantee to create new objects in the bucket.

For the bucket and object owners of existing objects, also allows deletions and overwrites of those objects.

x-amz-grant-write-acp

Allows grantee to write the ACL for the applicable bucket.

This functionality is not supported for Amazon S3 on Outposts.

x-amz-request-payer

Confirms that the requester knows that they will be charged for the request. Bucket owners need not specify this parameter in their requests. If either the source or destination S3 bucket has Requester Pays enabled, the requester will pay for corresponding charges to copy the object. For information about downloading objects from Requester Pays buckets, see Downloading Objects in Requester Pays Buckets in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

x-amz-sdk-checksum-algorithm

Indicates the algorithm used to create the checksum for the object when you use the SDK. This header will not provide any additional functionality if you don't use the SDK. When you send this header, there must be a corresponding `x-amz-checksum` or `x-amz-trailer` header sent. Otherwise, Amazon S3 fails the request with the HTTP status code `400 Bad Request`. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

If you provide an individual checksum, Amazon S3 ignores any provided `ChecksumAlgorithm` parameter.

Valid Values: `CRC32 | CRC32C | SHA1 | SHA256`

Request Body

The request accepts the following data in XML format.

AccessControlPolicy

Root level tag for the AccessControlPolicy parameters.

Required: Yes

Grants

A list of grants.

Type: Array of Grant data types

Required: No

Owner

Container for the bucket owner's display name and ID.

Type: Owner data type

Required: No

Response Syntax

```
HTTP/1.1 200
x-amz-request-charged: RequestCharged
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The response returns the following HTTP headers.

x-amz-request-charged

If present, indicates that the requester was successfully charged for the request.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

Errors

NoSuchKey

The specified key does not exist.

HTTP Status Code: 404

Examples

Sample Request

The following request grants access permission to an existing object. The request specifies the ACL in the body. In addition to granting full control to the object owner, the XML specifies full control to an AWS account identified by its canonical user ID.

```
PUT /my-image.jpg?acl HTTP/1.1
Host: bucket.s3.<Region>.amazonaws.com
Date: Wed, 28 Oct 2009 22:32:00 GMT
Authorization: authorization string
Content-Length: 124

<AccessControlPolicy>
  <Owner>
    <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
    <DisplayName>CustomersName@amazon.com</DisplayName>
  </Owner>
  <AccessControlList>
    <Grant>
      <Grantee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xsi:type="CanonicalUser">
        <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeeExampleCanonicalUserID</ID>
        <DisplayName>CustomerName@amazon.com</DisplayName>
      </Grantee>
      <Permission>FULL_CONTROL</Permission>
    </Grant>
  </AccessControlList>
</AccessControlPolicy>
```

Sample Response

The following shows a sample response when versioning on the bucket is enabled.

```
HTTP/1.1 200 OK
x-amz-id-2: eftixk72aD6Ap51T9AS1ed4OpIszj7UDNEHGran
x-amz-request-id: 318BC8BC148832E5
x-amz-version-id: 3/L4kqtJlcpXrof3vjVBH40Nr8X8gdRQBpUMLUo
Date: Wed, 28 Oct 2009 22:32:00 GMT
Last-Modified: Sun, 1 Jan 2006 12:00:00 GMT
Content-Length: 0
Connection: close
Server: AmazonS3
```

Sample Request: Setting the ACL of a specified object version

The following request sets the ACL on the specified version of the object.

```
PUT /my-image.jpg?acl&versionId=3HL4kqtJlcpXroDTDmJ+rmSpXd3dIbrHY+MTRCxf3vjVBH40Nrjfkd
 HTTP/1.1
Host: bucket.s3.<Region>.amazonaws.com
Date: Wed, 28 Oct 2009 22:32:00 GMT
Authorization: authorization string
Content-Length: 124

<AccessControlPolicy>
  <Owner>
    <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
    <DisplayName>mtd@amazon.com</DisplayName>
  </Owner>
  <AccessControlList>
    <Grant>
      <Grantee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
 xsi:type="CanonicalUser">
        <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
        <DisplayName>mtd@amazon.com</DisplayName>
      </Grantee>
      <Permission>FULL_CONTROL</Permission>
    </Grant>
  </AccessControlList>
```

```
</AccessControlPolicy>
```

Sample Response

This example illustrates one usage of PutObjectAcl.

```
HTTP/1.1 200 OK
x-amz-id-2: eftixk72aD6Ap51u8yU9AS1ed4OpIszj7UDNEHGran
x-amz-request-id: 318BC8BC148832E5
x-amz-version-id: 3/L4kqtJlcpXro3vjVBH40Nr8X8gdRQBpUMLUo
Date: Wed, 28 Oct 2009 22:32:00 GMT
Last-Modified: Sun, 1 Jan 2006 12:00:00 GMT
Content-Length: 0
Connection: close
Server: AmazonS3
```

Sample Request: Access permissions specified using headers

The following request sets the ACL on the specified version of the object.

```
PUT ExampleObject.txt?acl HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
x-amz-acl: public-read
Accept: */*
Authorization: authorization string
Host: s3.amazonaws.com
Connection: Keep-Alive
```

Sample Response

This example illustrates one usage of PutObjectAcl.

```
HTTP/1.1 200 OK
x-amz-id-2: w5YegkbG6ZDsje4WK56RWPxNQHIQ0CjrjyRVFZhEJI9E3kbabXnBO9w5G7Dmxsgk
x-amz-request-id: C13B2827BD8455B1
Date: Sun, 29 Apr 2012 23:24:12 GMT
```

```
Content-Length: 0
Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutObjectLegalHold

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Applies a legal hold configuration to the specified object. For more information, see Locking Objects.

This functionality is not supported for Amazon S3 on Outposts.

Request Syntax

```
PUT /{Key+}?legal-hold&versionId=VersionId HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-request-payer: RequestPayer
Content-MD5: ContentMD5
x-amz-sdk-checksum-algorithm: ChecksumAlgorithm
x-amz-expected-bucket-owner: ExpectedBucketOwner
<?xml version="1.0" encoding="UTF-8"?>
<LegalHold xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <Status>string</Status>
</LegalHold>
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name containing the object that you want to place a legal hold on.

Access points - When you use this action with an access point, you must provide the alias of the access point in place of the bucket name or specify the access point ARN. When using the access point ARN, you must direct requests to the access point hostname. The access point hostname takes the form *AccessPointName-AccountId*.s3-accesspoint.*Region*.amazonaws.com. When using this action with an access point through the AWS SDKs, you provide the access point ARN in place of the bucket name. For more information about access point ARNs, see Using access points in the *Amazon S3 User Guide*.

Required: Yes

Content-MD5

The MD5 hash for the request body.

For requests made using the AWS Command Line Interface (CLI) or AWS SDKs, this field is calculated automatically.

Key

The key name for the object that you want to place a legal hold on.

Length Constraints: Minimum length of 1.

Required: Yes

versionId

The version ID of the object that you want to place a legal hold on.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-request-payer

Confirms that the requester knows that they will be charged for the request. Bucket owners need not specify this parameter in their requests. If either the source or destination S3 bucket has Requester Pays enabled, the requester will pay for corresponding charges to copy the object. For information about downloading objects from Requester Pays buckets, see Downloading Objects in Requester Pays Buckets in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

x-amz-sdk-checksum-algorithm

Indicates the algorithm used to create the checksum for the object when you use the SDK. This header will not provide any additional functionality if you don't use the SDK. When you send

this header, there must be a corresponding `x-amz-checksum` or `x-amz-trailer` header sent. Otherwise, Amazon S3 fails the request with the HTTP status code `400 Bad Request`. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

If you provide an individual checksum, Amazon S3 ignores any provided `ChecksumAlgorithm` parameter.

Valid Values: `CRC32 | CRC32C | SHA1 | SHA256`

Request Body

The request accepts the following data in XML format.

LegalHold

Root level tag for the LegalHold parameters.

Required: Yes

Status

Indicates whether the specified object has a legal hold in place.

Type: String

Valid Values: `ON | OFF`

Required: No

Response Syntax

```
HTTP/1.1 200
x-amz-request-charged: RequestCharged
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The response returns the following HTTP headers.

x-amz-request-charged

If present, indicates that the requester was successfully charged for the request.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutObjectLockConfiguration

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Places an Object Lock configuration on the specified bucket. The rule specified in the Object Lock configuration will be applied by default to every new object placed in the specified bucket. For more information, see Locking Objects.

> **Note**
>
> - The `DefaultRetention` settings require both a mode and a period.
> - The `DefaultRetention` period can be either `Days` or `Years` but you must select one. You cannot specify `Days` and `Years` at the same time.
> - You can enable Object Lock for new or existing buckets. For more information, see Configuring Object Lock.

Request Syntax

```
PUT /?object-lock HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-request-payer: RequestPayer
x-amz-bucket-object-lock-token: Token
Content-MD5: ContentMD5
x-amz-sdk-checksum-algorithm: ChecksumAlgorithm
x-amz-expected-bucket-owner: ExpectedBucketOwner
<?xml version="1.0" encoding="UTF-8"?>
<ObjectLockConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <ObjectLockEnabled>string</ObjectLockEnabled>
   <Rule>
      <DefaultRetention>
         <Days>integer</Days>
         <Mode>string</Mode>
         <Years>integer</Years>
      </DefaultRetention>
```

```
    </Rule>
</ObjectLockConfiguration>
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket whose Object Lock configuration you want to create or replace.

Required: Yes

Content-MD5

The MD5 hash for the request body.

For requests made using the AWS Command Line Interface (CLI) or AWS SDKs, this field is calculated automatically.

x-amz-bucket-object-lock-token

A token to allow Object Lock to be enabled for an existing bucket.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-request-payer

Confirms that the requester knows that they will be charged for the request. Bucket owners need not specify this parameter in their requests. If either the source or destination S3 bucket has Requester Pays enabled, the requester will pay for corresponding charges to copy the object. For information about downloading objects from Requester Pays buckets, see Downloading Objects in Requester Pays Buckets in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

x-amz-sdk-checksum-algorithm

Indicates the algorithm used to create the checksum for the object when you use the SDK. This header will not provide any additional functionality if you don't use the SDK. When you send this header, there must be a corresponding `x-amz-checksum` or `x-amz-trailer` header sent. Otherwise, Amazon S3 fails the request with the HTTP status code `400 Bad Request`. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

If you provide an individual checksum, Amazon S3 ignores any provided `ChecksumAlgorithm` parameter.

Valid Values: `CRC32 | CRC32C | SHA1 | SHA256`

Request Body

The request accepts the following data in XML format.

ObjectLockConfiguration

Root level tag for the ObjectLockConfiguration parameters.

Required: Yes

ObjectLockEnabled

Indicates whether this bucket has an Object Lock configuration enabled. Enable `ObjectLockEnabled` when you apply `ObjectLockConfiguration` to a bucket.

Type: String

Valid Values: `Enabled`

Required: No

Rule

Specifies the Object Lock rule for the specified object. Enable the this rule when you apply `ObjectLockConfiguration` to a bucket. Bucket settings require both a mode and a period. The period can be either `Days` or `Years` but you must select one. You cannot specify `Days` and `Years` at the same time.

Type: ObjectLockRule data type

Required: No

Response Syntax

```
HTTP/1.1 200
x-amz-request-charged: RequestCharged
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The response returns the following HTTP headers.

x-amz-request-charged

If present, indicates that the requester was successfully charged for the request.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python

- AWS SDK for Ruby V3

PutObjectRetention

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Places an Object Retention configuration on an object. For more information, see Locking Objects. Users or accounts require the `s3:PutObjectRetention` permission in order to place an Object Retention configuration on objects. Bypassing a Governance Retention configuration requires the `s3:BypassGovernanceRetention` permission.

This functionality is not supported for Amazon S3 on Outposts.

Request Syntax

```
PUT /{Key+}?retention&versionId=VersionId HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-request-payer: RequestPayer
x-amz-bypass-governance-retention: BypassGovernanceRetention
Content-MD5: ContentMD5
x-amz-sdk-checksum-algorithm: ChecksumAlgorithm
x-amz-expected-bucket-owner: ExpectedBucketOwner
<?xml version="1.0" encoding="UTF-8"?>
<Retention xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <Mode>string</Mode>
   <RetainUntilDate>timestamp</RetainUntilDate>
</Retention>
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name that contains the object you want to apply this Object Retention configuration to.

Access points - When you use this action with an access point, you must provide the alias of the access point in place of the bucket name or specify the access point ARN. When using the access

point ARN, you must direct requests to the access point hostname. The access point hostname takes the form *AccessPointName-AccountId*.s3-accesspoint.*Region*.amazonaws.com. When using this action with an access point through the AWS SDKs, you provide the access point ARN in place of the bucket name. For more information about access point ARNs, see Using access points in the *Amazon S3 User Guide*.

Required: Yes

Content-MD5

The MD5 hash for the request body.

For requests made using the AWS Command Line Interface (CLI) or AWS SDKs, this field is calculated automatically.

Key

The key name for the object that you want to apply this Object Retention configuration to.

Length Constraints: Minimum length of 1.

Required: Yes

versionId

The version ID for the object that you want to apply this Object Retention configuration to.

x-amz-bypass-governance-retention

Indicates whether this action should bypass Governance-mode restrictions.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-request-payer

Confirms that the requester knows that they will be charged for the request. Bucket owners need not specify this parameter in their requests. If either the source or destination S3 bucket has Requester Pays enabled, the requester will pay for corresponding charges to copy the object. For information about downloading objects from Requester Pays buckets, see Downloading Objects in Requester Pays Buckets in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

x-amz-sdk-checksum-algorithm

Indicates the algorithm used to create the checksum for the object when you use the SDK. This header will not provide any additional functionality if you don't use the SDK. When you send this header, there must be a corresponding `x-amz-checksum` or `x-amz-trailer` header sent. Otherwise, Amazon S3 fails the request with the HTTP status code `400 Bad Request`. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

If you provide an individual checksum, Amazon S3 ignores any provided `ChecksumAlgorithm` parameter.

Valid Values: `CRC32 | CRC32C | SHA1 | SHA256`

Request Body

The request accepts the following data in XML format.

Retention

Root level tag for the Retention parameters.

Required: Yes

Mode

Indicates the Retention mode for the specified object.

Type: String

Valid Values: `GOVERNANCE | COMPLIANCE`

Required: No

RetainUntilDate

The date on which this Object Lock Retention will expire.

Type: Timestamp

Required: No

Response Syntax

```
HTTP/1.1 200
x-amz-request-charged: RequestCharged
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The response returns the following HTTP headers.

x-amz-request-charged

If present, indicates that the requester was successfully charged for the request.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3

- AWS SDK for Python
- AWS SDK for Ruby V3

PutObjectTagging

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Sets the supplied tag-set to an object that already exists in a bucket. A tag is a key-value pair. For more information, see Object Tagging.

You can associate tags with an object by sending a PUT request against the tagging subresource that is associated with the object. You can retrieve tags by sending a GET request. For more information, see GetObjectTagging.

For tagging-related restrictions related to characters and encodings, see Tag Restrictions. Note that Amazon S3 limits the maximum number of tags to 10 tags per object.

To use this operation, you must have permission to perform the `s3:PutObjectTagging` action. By default, the bucket owner has this permission and can grant this permission to others.

To put tags of any other version, use the `versionId` query parameter. You also need permission for the `s3:PutObjectVersionTagging` action.

`PutObjectTagging` has the following special errors. For more Amazon S3 errors see, Error Responses.

- `InvalidTag` - The tag provided was not a valid tag. This error can occur if the tag did not pass input validation. For more information, see Object Tagging.
- `MalformedXML` - The XML provided does not match the schema.
- `OperationAborted` - A conflicting conditional action is currently in progress against this resource. Please try again.
- `InternalError` - The service was unable to apply the provided tag to the object.

The following operations are related to `PutObjectTagging`:

- GetObjectTagging
- DeleteObjectTagging

Request Syntax

```
PUT /{Key+}?tagging&versionId=VersionId HTTP/1.1
Host: Bucket.s3.amazonaws.com
Content-MD5: ContentMD5
x-amz-sdk-checksum-algorithm: ChecksumAlgorithm
x-amz-expected-bucket-owner: ExpectedBucketOwner
x-amz-request-payer: RequestPayer
<?xml version="1.0" encoding="UTF-8"?>
<Tagging xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <TagSet>
      <Tag>
         <Key>string</Key>
         <Value>string</Value>
      </Tag>
   </TagSet>
</Tagging>
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name containing the object.

Access points - When you use this action with an access point, you must provide the alias of the access point in place of the bucket name or specify the access point ARN. When using the access point ARN, you must direct requests to the access point hostname. The access point hostname takes the form *AccessPointName-AccountId*.s3-accesspoint.*Region*.amazonaws.com. When using this action with an access point through the AWS SDKs, you provide the access point ARN in place of the bucket name. For more information about access point ARNs, see Using access points in the *Amazon S3 User Guide*.

S3 on Outposts - When you use this action with Amazon S3 on Outposts, you must direct requests to the S3 on Outposts hostname. The S3 on Outposts hostname takes the form *AccessPointName-AccountId.outpostID*.s3-outposts.*Region*.amazonaws.com. When you use this action with S3 on Outposts through the AWS SDKs, you provide the Outposts access point ARN in place of the bucket name. For more information about S3 on Outposts ARNs, see What is S3 on Outposts? in the *Amazon S3 User Guide*.

Required: Yes

Content-MD5

The MD5 hash for the request body.

For requests made using the AWS Command Line Interface (CLI) or AWS SDKs, this field is calculated automatically.

Key

Name of the object key.

Length Constraints: Minimum length of 1.

Required: Yes

versionId

The versionId of the object that the tag-set will be added to.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-request-payer

Confirms that the requester knows that they will be charged for the request. Bucket owners need not specify this parameter in their requests. If either the source or destination S3 bucket has Requester Pays enabled, the requester will pay for corresponding charges to copy the object. For information about downloading objects from Requester Pays buckets, see Downloading Objects in Requester Pays Buckets in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

x-amz-sdk-checksum-algorithm

Indicates the algorithm used to create the checksum for the object when you use the SDK. This header will not provide any additional functionality if you don't use the SDK. When you send

this header, there must be a corresponding `x-amz-checksum` or `x-amz-trailer` header sent. Otherwise, Amazon S3 fails the request with the HTTP status code `400 Bad Request`. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

If you provide an individual checksum, Amazon S3 ignores any provided `ChecksumAlgorithm` parameter.

Valid Values: `CRC32 | CRC32C | SHA1 | SHA256`

Request Body

The request accepts the following data in XML format.

Tagging

Root level tag for the Tagging parameters.

Required: Yes

TagSet

A collection for a set of tags

Type: Array of Tag data types

Required: Yes

Response Syntax

```
HTTP/1.1 200
x-amz-version-id: VersionId
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The response returns the following HTTP headers.

x-amz-version-id

The versionId of the object the tag-set was added to.

Examples

Sample Request: Add tag set to an object

The following request adds a tag set to the existing object object-key in the `examplebucket` bucket.

```
PUT object-key?tagging HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
Content-Length: length
Content-MD5: pUNXr/BjKK5G2UKExample==
x-amz-date: 20160923T001956Z
Authorization: authorization string
<Tagging>
   <TagSet>
      <Tag>
         <Key>tag1</Key>
         <Value>val1</Value>
      </Tag>
      <Tag>
         <Key>tag2</Key>
         <Value>val2</Value>
      </Tag>
   </TagSet>
</Tagging>
```

Sample Response

This example illustrates one usage of PutObjectTagging.

```
HTTP/1.1 200 OK
x-amz-id-2: YgIPIfBiKa2bj0KMgUAdQkf3ShJTOOpXUueF6QKo
x-amz-request-id: 236A8905248E5A01
Date: Fri, 23 Sep 2016 00:20:19 GMT
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutPublicAccessBlock

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Creates or modifies the `PublicAccessBlock` configuration for an Amazon S3 bucket. To use this operation, you must have the `s3:PutBucketPublicAccessBlock` permission. For more information about Amazon S3 permissions, see Specifying Permissions in a Policy.

> **Important**
>
> When Amazon S3 evaluates the `PublicAccessBlock` configuration for a bucket or an object, it checks the `PublicAccessBlock` configuration for both the bucket (or the bucket that contains the object) and the bucket owner's account. If the `PublicAccessBlock` configurations are different between the bucket and the account, Amazon S3 uses the most restrictive combination of the bucket-level and account-level settings.

For more information about when Amazon S3 considers a bucket or an object public, see The Meaning of "Public".

The following operations are related to `PutPublicAccessBlock`:

- GetPublicAccessBlock
- DeletePublicAccessBlock
- GetBucketPolicyStatus
- Using Amazon S3 Block Public Access

Request Syntax

```
PUT /?publicAccessBlock HTTP/1.1
Host: Bucket.s3.amazonaws.com
Content-MD5: ContentMD5
x-amz-sdk-checksum-algorithm: ChecksumAlgorithm
x-amz-expected-bucket-owner: ExpectedBucketOwner
```

```
<?xml version="1.0" encoding="UTF-8"?>
<PublicAccessBlockConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <BlockPublicAcls>boolean</BlockPublicAcls>
   <IgnorePublicAcls>boolean</IgnorePublicAcls>
   <BlockPublicPolicy>boolean</BlockPublicPolicy>
   <RestrictPublicBuckets>boolean</RestrictPublicBuckets>
</PublicAccessBlockConfiguration>
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the Amazon S3 bucket whose `PublicAccessBlock` configuration you want to set.

Required: Yes

Content-MD5

The MD5 hash of the `PutPublicAccessBlock` request body.

For requests made using the AWS Command Line Interface (CLI) or AWS SDKs, this field is calculated automatically.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-sdk-checksum-algorithm

Indicates the algorithm used to create the checksum for the object when you use the SDK. This header will not provide any additional functionality if you don't use the SDK. When you send this header, there must be a corresponding `x-amz-checksum` or `x-amz-trailer` header sent. Otherwise, Amazon S3 fails the request with the HTTP status code `400 Bad Request`. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

If you provide an individual checksum, Amazon S3 ignores any provided `ChecksumAlgorithm` parameter.

Valid Values: `CRC32 | CRC32C | SHA1 | SHA256`

Request Body

The request accepts the following data in XML format.

PublicAccessBlockConfiguration

Root level tag for the PublicAccessBlockConfiguration parameters.

Required: Yes

BlockPublicAcls

Specifies whether Amazon S3 should block public access control lists (ACLs) for this bucket and objects in this bucket. Setting this element to TRUE causes the following behavior:

- PUT Bucket ACL and PUT Object ACL calls fail if the specified ACL is public.
- PUT Object calls fail if the request includes a public ACL.
- PUT Bucket calls fail if the request includes a public ACL.

Enabling this setting doesn't affect existing policies or ACLs.

Type: Boolean

Required: No

BlockPublicPolicy

Specifies whether Amazon S3 should block public bucket policies for this bucket. Setting this element to TRUE causes Amazon S3 to reject calls to PUT Bucket policy if the specified bucket policy allows public access.

Enabling this setting doesn't affect existing bucket policies.

Type: Boolean

Required: No

IgnorePublicAcls

Specifies whether Amazon S3 should ignore public ACLs for this bucket and objects in this bucket. Setting this element to TRUE causes Amazon S3 to ignore all public ACLs on this bucket and objects in this bucket.

Enabling this setting doesn't affect the persistence of any existing ACLs and doesn't prevent new public ACLs from being set.

Type: Boolean

Required: No

RestrictPublicBuckets

Specifies whether Amazon S3 should restrict public bucket policies for this bucket. Setting this element to TRUE restricts access to this bucket to only AWS service principals and authorized users within this account if the bucket has a public policy.

Enabling this setting doesn't affect previously stored bucket policies, except that public and cross-account access within any public bucket policy, including non-public delegation to specific accounts, is blocked.

Type: Boolean

Required: No

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

First Sample Request

The following request puts a bucket `PublicAccessBlock` configuration that rejects public ACLs.

```
PUT /?publicAccessBlock HTTP/1.1
Host: <bucket-name>.s3.<Region>.amazonaws.com
x-amz-date: <Thu, 15 Nov 2016 00:17:21 GMT>
Authorization: <signatureValue>

<?xml version="1.0" encoding="UTF-8"?>
<PublicAccessBlockConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
      <BlockPublicAcls>TRUE</BlockPublicAcls>
      <IgnorePublicAcls>FALSE</IgnorePublicAcls>
      <BlockPublicPolicy>FALSE</BlockPublicPolicy>
```

```
      <RestrictPublicBuckets>FALSE</RestrictPublicBuckets>
</PublicAccessBlockConfiguration>
```

First Sample Response

This example illustrates one usage of PutPublicAccessBlock.

```
HTTP/1.1 200 OK
x-amz-id-2: ITnGT1y4REXAMPLEPi4hklTXouTf0hccUjo0iCPEXAMPLEutBj3M7fPGlWO2SEWp
x-amz-request-id: 51991EXAMPLE5321
Date: Thu, 15 Nov 2016 00:17:22 GMT
Server: AmazonS3
Content-Length: 0
```

Second Sample Request

The following request puts a bucket PublicAccessBlock configuration that ignores public ACLs and restricts access to public buckets.

```
PUT /?publicAccessBlock HTTP/1.1
Host: <bucket-name>.s3.<Region>.amazonaws.com
x-amz-date: <Thu, 15 Nov 2016 00:17:21 GMT>
Authorization: <signatureValue>

<?xml version="1.0" encoding="UTF-8"?>
<PublicAccessBlockConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
      <BlockPublicAcls>FALSE</BlockPublicAcls>
      <IgnorePublicAcls>TRUE</IgnorePublicAcls>
      <BlockPublicPolicy>FALSE</BlockPublicPolicy>
      <RestrictPublicBuckets>TRUE</RestrictPublicBuckets>
</PublicAccessBlockConfiguration>
```

Second Sample Response

This example illustrates one usage of PutPublicAccessBlock.

```
HTTP/1.1 200 OK
x-amz-id-2: ITnGT1y4REXAMPLEPi4hklTXouTf0hccUjo0iCPEXAMPLEutBj3M7fPGlWO2SEWp
x-amz-request-id: 51991EXAMPLE5321
Date: Thu, 15 Nov 2016 00:17:22 GMT
Server: AmazonS3
Content-Length: 0
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

RestoreObject

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Restores an archived copy of an object back into Amazon S3

This functionality is not supported for Amazon S3 on Outposts.

This action performs the following types of requests:

- `restore an archive` - Restore an archived object

For more information about the S3 structure in the request body, see the following:

- PutObject
- Managing Access with ACLs in the *Amazon S3 User Guide*
- Protecting Data Using Server-Side Encryption in the *Amazon S3 User Guide*

Permissions

To use this operation, you must have permissions to perform the `s3:RestoreObject` action. The bucket owner has this permission by default and can grant this permission to others. For more information about permissions, see Permissions Related to Bucket Subresource Operations and Managing Access Permissions to Your Amazon S3 Resources in the *Amazon S3 User Guide*.

Restoring objects

Objects that you archive to the S3 Glacier Flexible Retrieval Flexible Retrieval or S3 Glacier Deep Archive storage class, and S3 Intelligent-Tiering Archive or S3 Intelligent-Tiering Deep Archive tiers, are not accessible in real time. For objects in the S3 Glacier Flexible Retrieval Flexible Retrieval or S3 Glacier Deep Archive storage classes, you must first initiate a restore request, and then wait until a temporary copy of the object is available. If you want a permanent copy of the object, create a copy of it in the Amazon S3 Standard storage class in your S3 bucket. To access an archived object, you must restore the object for the duration (number of days)

that you specify. For objects in the Archive Access or Deep Archive Access tiers of S3 Intelligent-Tiering, you must first initiate a restore request, and then wait until the object is moved into the Frequent Access tier.

To restore a specific object version, you can provide a version ID. If you don't provide a version ID, Amazon S3 restores the current version.

When restoring an archived object, you can specify one of the following data access tier options in the `Tier` element of the request body:

- `Expedited` - Expedited retrievals allow you to quickly access your data stored in the S3 Glacier Flexible Retrieval Flexible Retrieval storage class or S3 Intelligent-Tiering Archive tier when occasional urgent requests for restoring archives are required. For all but the largest archived objects (250 MB+), data accessed using Expedited retrievals is typically made available within 1–5 minutes. Provisioned capacity ensures that retrieval capacity for Expedited retrievals is available when you need it. Expedited retrievals and provisioned capacity are not available for objects stored in the S3 Glacier Deep Archive storage class or S3 Intelligent-Tiering Deep Archive tier.
- `Standard` - Standard retrievals allow you to access any of your archived objects within several hours. This is the default option for retrieval requests that do not specify the retrieval option. Standard retrievals typically finish within 3–5 hours for objects stored in the S3 Glacier Flexible Retrieval Flexible Retrieval storage class or S3 Intelligent-Tiering Archive tier. They typically finish within 12 hours for objects stored in the S3 Glacier Deep Archive storage class or S3 Intelligent-Tiering Deep Archive tier. Standard retrievals are free for objects stored in S3 Intelligent-Tiering.
- `Bulk` - Bulk retrievals free for objects stored in the S3 Glacier Flexible Retrieval and S3 Intelligent-Tiering storage classes, enabling you to retrieve large amounts, even petabytes, of data at no cost. Bulk retrievals typically finish within 5–12 hours for objects stored in the S3 Glacier Flexible Retrieval Flexible Retrieval storage class or S3 Intelligent-Tiering Archive tier. Bulk retrievals are also the lowest-cost retrieval option when restoring objects from S3 Glacier Deep Archive. They typically finish within 48 hours for objects stored in the S3 Glacier Deep Archive storage class or S3 Intelligent-Tiering Deep Archive tier.

For more information about archive retrieval options and provisioned capacity for `Expedited` data access, see Restoring Archived Objects in the *Amazon S3 User Guide*.

You can use Amazon S3 restore speed upgrade to change the restore speed to a faster speed while it is in progress. For more information, see Upgrading the speed of an in-progress restore in the *Amazon S3 User Guide*.

To get the status of object restoration, you can send a HEAD request. Operations return the `x-amz-restore` header, which provides information about the restoration status, in the response. You can use Amazon S3 event notifications to notify you when a restore is initiated or completed. For more information, see Configuring Amazon S3 Event Notifications in the *Amazon S3 User Guide*.

After restoring an archived object, you can update the restoration period by reissuing the request with a new period. Amazon S3 updates the restoration period relative to the current time and charges only for the request-there are no data transfer charges. You cannot update the restoration period when Amazon S3 is actively processing your current restore request for the object.

If your bucket has a lifecycle configuration with a rule that includes an expiration action, the object expiration overrides the life span that you specify in a restore request. For example, if you restore an object copy for 10 days, but the object is scheduled to expire in 3 days, Amazon S3 deletes the object in 3 days. For more information about lifecycle configuration, see PutBucketLifecycleConfiguration and Object Lifecycle Management in *Amazon S3 User Guide*.

Responses

A successful action returns either the `200 OK` or `202 Accepted` status code.

- If the object is not previously restored, then Amazon S3 returns `202 Accepted` in the response.
- If the object is previously restored, Amazon S3 returns `200 OK` in the response.
- Special errors:
  - *Code: RestoreAlreadyInProgress*
  - *Cause: Object restore is already in progress.*
  - *HTTP Status Code: 409 Conflict*
  - *SOAP Fault Code Prefix: Client*
- - *Code: GlacierExpeditedRetrievalNotAvailable*
  - *Cause: expedited retrievals are currently not available. Try again later. (Returned if there is insufficient capacity to process the Expedited request. This error applies only to Expedited retrievals and not to S3 Standard or Bulk retrievals.)*
  - *HTTP Status Code: 503*
  - *SOAP Fault Code Prefix: N/A*

The following operations are related to `RestoreObject`:

- PutBucketLifecycleConfiguration
- GetBucketNotificationConfiguration

Request Syntax

```
POST /{Key+}?restore&versionId=VersionId HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-request-payer: RequestPayer
x-amz-sdk-checksum-algorithm: ChecksumAlgorithm
x-amz-expected-bucket-owner: ExpectedBucketOwner
<?xml version="1.0" encoding="UTF-8"?>
<RestoreRequest xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <Days>integer</Days>
   <GlacierJobParameters>
      <Tier>string</Tier>
   </GlacierJobParameters>
   <Type>string</Type>
   <Tier>string</Tier>
   <Description>string</Description>
   <SelectParameters>
      <Expression>string</Expression>
      <ExpressionType>string</ExpressionType>
      <InputSerialization>
         <CompressionType>string</CompressionType>
         <CSV>
            <AllowQuotedRecordDelimiter>boolean</AllowQuotedRecordDelimiter>
            <Comments>string</Comments>
            <FieldDelimiter>string</FieldDelimiter>
            <FileHeaderInfo>string</FileHeaderInfo>
            <QuoteCharacter>string</QuoteCharacter>
            <QuoteEscapeCharacter>string</QuoteEscapeCharacter>
            <RecordDelimiter>string</RecordDelimiter>
         </CSV>
         <JSON>
            <Type>string</Type>
         </JSON>
         <Parquet>
         </Parquet>
      </InputSerialization>
      <OutputSerialization>
```

```
         <CSV>
            <FieldDelimiter>string</FieldDelimiter>
            <QuoteCharacter>string</QuoteCharacter>
            <QuoteEscapeCharacter>string</QuoteEscapeCharacter>
            <QuoteFields>string</QuoteFields>
            <RecordDelimiter>string</RecordDelimiter>
         </CSV>
         <JSON>
            <RecordDelimiter>string</RecordDelimiter>
         </JSON>
      </OutputSerialization>
   </SelectParameters>
   <OutputLocation>
      <S3>
         <AccessControlList>
            <Grant>
               <Grantee>
                  <DisplayName>string</DisplayName>
                  <EmailAddress>string</EmailAddress>
                  <ID>string</ID>
                  <xsi:type>string</xsi:type>
                  <URI>string</URI>
               </Grantee>
               <Permission>string</Permission>
            </Grant>
         </AccessControlList>
         <BucketName>string</BucketName>
         <CannedACL>string</CannedACL>
         <Encryption>
            <EncryptionType>string</EncryptionType>
            <KMSContext>string</KMSContext>
            <KMSKeyId>string</KMSKeyId>
         </Encryption>
         <Prefix>string</Prefix>
         <StorageClass>string</StorageClass>
         <Tagging>
            <TagSet>
               <Tag>
                  <Key>string</Key>
                  <Value>string</Value>
               </Tag>
            </TagSet>
         </Tagging>
         <UserMetadata>
```

```
            <MetadataEntry>
               <Name>string</Name>
               <Value>string</Value>
            </MetadataEntry>
         </UserMetadata>
      </S3>
   </OutputLocation>
</RestoreRequest>
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name containing the object to restore.

Access points - When you use this action with an access point, you must provide the alias of the access point in place of the bucket name or specify the access point ARN. When using the access point ARN, you must direct requests to the access point hostname. The access point hostname takes the form *AccessPointName-AccountId*.s3-accesspoint.*Region*.amazonaws.com. When using this action with an access point through the AWS SDKs, you provide the access point ARN in place of the bucket name. For more information about access point ARNs, see Using access points in the *Amazon S3 User Guide*.

S3 on Outposts - When you use this action with Amazon S3 on Outposts, you must direct requests to the S3 on Outposts hostname. The S3 on Outposts hostname takes the form *AccessPointName-AccountId*.*outpostID*.s3-outposts.*Region*.amazonaws.com. When you use this action with S3 on Outposts through the AWS SDKs, you provide the Outposts access point ARN in place of the bucket name. For more information about S3 on Outposts ARNs, see What is S3 on Outposts? in the *Amazon S3 User Guide*.

Required: Yes

Key

Object key for which the action was initiated.

Length Constraints: Minimum length of 1.

Required: Yes

versionId

VersionId used to reference a specific version of the object.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-request-payer

Confirms that the requester knows that they will be charged for the request. Bucket owners need not specify this parameter in their requests. If either the source or destination S3 bucket has Requester Pays enabled, the requester will pay for corresponding charges to copy the object. For information about downloading objects from Requester Pays buckets, see Downloading Objects in Requester Pays Buckets in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

x-amz-sdk-checksum-algorithm

Indicates the algorithm used to create the checksum for the object when you use the SDK. This header will not provide any additional functionality if you don't use the SDK. When you send this header, there must be a corresponding `x-amz-checksum` or `x-amz-trailer` header sent. Otherwise, Amazon S3 fails the request with the HTTP status code `400 Bad Request`. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

If you provide an individual checksum, Amazon S3 ignores any provided `ChecksumAlgorithm` parameter.

Valid Values: `CRC32 | CRC32C | SHA1 | SHA256`

Request Body

The request accepts the following data in XML format.

RestoreRequest

Root level tag for the RestoreRequest parameters.

Required: Yes

Days

Lifetime of the active copy in days. Do not use with restores that specify `OutputLocation`.

The Days element is required for regular restores, and must not be provided for select requests.

Type: Integer

Required: No

Description

The optional description for the job.

Type: String

Required: No

GlacierJobParameters

S3 Glacier related parameters pertaining to this job. Do not use with restores that specify `OutputLocation`.

Type: GlacierJobParameters data type

Required: No

OutputLocation

Describes the location where the restore job's output is stored.

Type: OutputLocation data type

Required: No

SelectParameters

Describes the parameters for Select job types.

Type: SelectParameters data type

Required: No

Tier

Retrieval tier at which the restore will be processed.

Type: String

Valid Values: `Standard | Bulk | Expedited`

Required: No

Type

Type of restore request.

Type: String

Valid Values: `SELECT`

Required: No

Response Syntax

```
HTTP/1.1 200
x-amz-request-charged: RequestCharged
x-amz-restore-output-path: RestoreOutputPath
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The response returns the following HTTP headers.

x-amz-request-charged

If present, indicates that the requester was successfully charged for the request.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

x-amz-restore-output-path

Indicates the path in the provided S3 output location where Select results will be restored to.

Errors

ObjectAlreadyInActiveTierError

This action is not allowed against this storage tier.

HTTP Status Code: 403

Examples

Example: Restore an object for 2 days using the expedited retrieval option

The following restore request restores a copy of the `photo1.jpg` object from S3 Glacier for a period of two days using the expedited retrieval option.

```
POST /photo1.jpg?restore HTTP/1.1
Host: examplebucket.dummy value
Date: Mon, 22 Oct 2012 01:49:52 GMT
Authorization: authorization string
Content-Length: content length
<RestoreRequest>
  <Days>2</Days>
  <GlacierJobParameters>
    <Tier>Expedited</Tier>
  </GlacierJobParameters>
</RestoreRequest>
```

Sample response

If the `examplebucket` does not have a restored copy of the object, Amazon S3 returns the following `202 Accepted` response.

Note

If a copy of the object is already restored, Amazon S3 returns a `200 OK` response, and updates only the restored copy's expiry time.

```
HTTP/1.1 202 Accepted
x-amz-id-2: GFihv3y6+kE7KG11GEkQhU7/2/cHR3Yb2fCb2S04nxI423Dqwg2XiQ0B/
UZlzYQvPiBlZNRcovw=
x-amz-request-id: 9F341CD3C4BA79E0
Date: Sat, 20 Oct 2012 23:54:05 GMT
Content-Length: 0
Server: AmazonS3
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

SelectObjectContent

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

This action filters the contents of an Amazon S3 object based on a simple structured query language (SQL) statement. In the request, along with the SQL expression, you must also specify a data serialization format (JSON, CSV, or Apache Parquet) of the object. Amazon S3 uses this format to parse object data into records, and returns only records that match the specified SQL expression. You must also specify the data serialization format for the response.

This functionality is not supported for Amazon S3 on Outposts.

For more information about Amazon S3 Select, see Selecting Content from Objects and SELECT Command in the *Amazon S3 User Guide*.

Permissions

You must have the `s3:GetObject` permission for this operation. Amazon S3 Select does not support anonymous access. For more information about permissions, see Specifying Permissions in a Policy in the *Amazon S3 User Guide*.

Object Data Formats

You can use Amazon S3 Select to query objects that have the following format properties:

- *CSV, JSON, and Parquet* - Objects must be in CSV, JSON, or Parquet format.
- *UTF-8* - UTF-8 is the only encoding type Amazon S3 Select supports.
- *GZIP or BZIP2* - CSV and JSON files can be compressed using GZIP or BZIP2. GZIP and BZIP2 are the only compression formats that Amazon S3 Select supports for CSV and JSON files. Amazon S3 Select supports columnar compression for Parquet using GZIP or Snappy. Amazon S3 Select does not support whole-object compression for Parquet objects.
- *Server-side encryption* - Amazon S3 Select supports querying objects that are protected with server-side encryption.

  For objects that are encrypted with customer-provided encryption keys (SSE-C), you must use HTTPS, and you must use the headers that are documented in the GetObject. For more

information about SSE-C, see Server-Side Encryption (Using Customer-Provided Encryption Keys) in the *Amazon S3 User Guide*.

For objects that are encrypted with Amazon S3 managed keys (SSE-S3) and AWS KMS keys (SSE-KMS), server-side encryption is handled transparently, so you don't need to specify anything. For more information about server-side encryption, including SSE-S3 and SSE-KMS, see Protecting Data Using Server-Side Encryption in the *Amazon S3 User Guide*.

Working with the Response Body

Given the response size is unknown, Amazon S3 Select streams the response as a series of messages and includes a `Transfer-Encoding` header with `chunked` as its value in the response. For more information, see Appendix: SelectObjectContent Response.

GetObject Support

The `SelectObjectContent` action does not support the following `GetObject` functionality. For more information, see GetObject.

- `Range`: Although you can specify a scan range for an Amazon S3 Select request (see SelectObjectContentRequest - ScanRange in the request parameters), you cannot specify the range of bytes of an object to return.
- The `GLACIER`, `DEEP_ARCHIVE`, and `REDUCED_REDUNDANCY` storage classes, or the `ARCHIVE_ACCESS` and `DEEP_ARCHIVE_ACCESS` access tiers of the `INTELLIGENT_TIERING` storage class: You cannot query objects in the `GLACIER`, `DEEP_ARCHIVE`, or `REDUCED_REDUNDANCY` storage classes, nor objects in the `ARCHIVE_ACCESS` or `DEEP_ARCHIVE_ACCESS` access tiers of the `INTELLIGENT_TIERING` storage class. For more information about storage classes, see Using Amazon S3 storage classes in the *Amazon S3 User Guide*.

Special Errors

For a list of special errors for this operation, see List of SELECT Object Content Error Codes

The following operations are related to `SelectObjectContent`:

- GetObject
- GetBucketLifecycleConfiguration
- PutBucketLifecycleConfiguration

Request Syntax

```
POST /{Key+}?select&select-type=2 HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-server-side-encryption-customer-algorithm: SSECustomerAlgorithm
x-amz-server-side-encryption-customer-key: SSECustomerKey
x-amz-server-side-encryption-customer-key-MD5: SSECustomerKeyMD5
x-amz-expected-bucket-owner: ExpectedBucketOwner
<?xml version="1.0" encoding="UTF-8"?>
<SelectObjectContentRequest xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
   <Expression>string</Expression>
   <ExpressionType>string</ExpressionType>
   <RequestProgress>
      <Enabled>boolean</Enabled>
   </RequestProgress>
   <InputSerialization>
      <CompressionType>string</CompressionType>
      <CSV>
         <AllowQuotedRecordDelimiter>boolean</AllowQuotedRecordDelimiter>
         <Comments>string</Comments>
         <FieldDelimiter>string</FieldDelimiter>
         <FileHeaderInfo>string</FileHeaderInfo>
         <QuoteCharacter>string</QuoteCharacter>
         <QuoteEscapeCharacter>string</QuoteEscapeCharacter>
         <RecordDelimiter>string</RecordDelimiter>
      </CSV>
      <JSON>
         <Type>string</Type>
      </JSON>
      <Parquet>
      </Parquet>
   </InputSerialization>
   <OutputSerialization>
      <CSV>
         <FieldDelimiter>string</FieldDelimiter>
         <QuoteCharacter>string</QuoteCharacter>
         <QuoteEscapeCharacter>string</QuoteEscapeCharacter>
         <QuoteFields>string</QuoteFields>
         <RecordDelimiter>string</RecordDelimiter>
      </CSV>
      <JSON>
         <RecordDelimiter>string</RecordDelimiter>
      </JSON>
   </OutputSerialization>
```

```
    <ScanRange>
       <End>long</End>
       <Start>long</Start>
    </ScanRange>
</SelectObjectContentRequest>
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The S3 bucket.

Required: Yes

Key

The object key.

Length Constraints: Minimum length of 1.

Required: Yes

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-server-side-encryption-customer-algorithm

The server-side encryption (SSE) algorithm used to encrypt the object. This parameter is needed only when the object was created using a checksum algorithm. For more information, see Protecting data using SSE-C keys in the *Amazon S3 User Guide*.

x-amz-server-side-encryption-customer-key

The server-side encryption (SSE) customer managed key. This parameter is needed only when the object was created using a checksum algorithm. For more information, see Protecting data using SSE-C keys in the *Amazon S3 User Guide*.

x-amz-server-side-encryption-customer-key-MD5

The MD5 server-side encryption (SSE) customer managed key. This parameter is needed only when the object was created using a checksum algorithm. For more information, see Protecting data using SSE-C keys in the *Amazon S3 User Guide*.

Request Body

The request accepts the following data in XML format.

SelectObjectContentRequest

Root level tag for the SelectObjectContentRequest parameters.

Required: Yes

Expression

The expression that is used to query the object.

Type: String

Required: Yes

ExpressionType

The type of the provided expression (for example, SQL).

Type: String

Valid Values: SQL

Required: Yes

InputSerialization

Describes the format of the data in the object that is being queried.

Type: InputSerialization data type

Required: Yes

OutputSerialization

Describes the format of the data that you want Amazon S3 to return in response.

Type: OutputSerialization data type

Required: Yes

RequestProgress

Specifies if periodic request progress information should be enabled.

Type: RequestProgress data type

Required: No

ScanRange

Specifies the byte range of the object to get the records from. A record is processed when its first byte is contained by the range. This parameter is optional, but when specified, it must not be empty. See RFC 2616, Section 14.35.1 about how to specify the start and end of the range.

ScanRangemay be used in the following ways:

- `<scanrange><start>50</start><end>100</end></scanrange>` - process only the records starting between the bytes 50 and 100 (inclusive, counting from zero)
- `<scanrange><start>50</start></scanrange>` - process only the records starting after the byte 50
- `<scanrange><end>50</end></scanrange>` - process only the records within the last 50 bytes of the file.

Type: ScanRange data type

Required: No

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<Payload>
   <Records>
      <Payload>blob</Payload>
   </Records>
   <Stats>
      <Details>
         <BytesProcessed>long</BytesProcessed>
         <BytesReturned>long</BytesReturned>
         <BytesScanned>long</BytesScanned>
      </Details>
```

```
    </Stats>
    <Progress>
       <Details>
          <BytesProcessed>long</BytesProcessed>
          <BytesReturned>long</BytesReturned>
          <BytesScanned>long</BytesScanned>
       </Details>
    </Progress>
    <Cont>
    </Cont>
    <End>
    </End>
</Payload>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

Payload

Root level tag for the Payload parameters.

Required: Yes

Cont

The Continuation Event.

Type: ContinuationEvent data type

End

The End Event.

Type: EndEvent data type

Progress

The Progress Event.

Type: ProgressEvent data type

Records

The Records Event.

Type: RecordsEvent data type

Stats

The Stats Event.

Type: StatsEvent data type

Examples

Example 1: CSV object

The following select request retrieves all records from an object with data stored in CSV format. The OutputSerialization element directs Amazon S3 to return results in CSV.

You can try different queries in the `Expression` element:

- Assuming that you are not using column headers, you can identify columns using positional headers:

  ```
  SELECT s._1, s._2 FROM S3Object s WHERE s._3 > 100
  ```

- If you have column headers and you set the `FileHeaderInfo` to `Use`, you can identify columns by name in the expression:

  ```
  SELECT s.Id, s.FirstName, s.SSN FROM S3Object s
  ```

- You can specify functions in the SQL expression:

  ```
  SELECT count(*) FROM S3Object s WHERE s._1 < 1
  ```

```
POST /exampleobject.csv?select&select-type=2 HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
Date: Tue, 17 Oct 2017 01:49:52 GMT
Authorization: authorization string
Content-Length: content length

<?xml version="1.0" encoding="UTF-8"?>
<SelectRequest>
    <Expression>Select * from S3Object</Expression>
    <ExpressionType>SQL</ExpressionType>
```

```
    <InputSerialization>
        <CompressionType>GZIP</CompressionType>
        <CSV>
            <FileHeaderInfo>IGNORE</FileHeaderInfo>
            <RecordDelimiter>\n</RecordDelimiter>
            <FieldDelimiter>,</FieldDelimiter>
            <QuoteCharacter>"</QuoteCharacter>
            <QuoteEscapeCharacter>"</QuoteEscapeCharacter>
            <Comments>#</Comments>
        </CSV>
    </InputSerialization>
    <OutputSerialization>
        <CSV>
            <QuoteFields>ASNEEDED</QuoteFields>
            <RecordDelimiter>\n</RecordDelimiter>
            <FieldDelimiter>,</FieldDelimiter>
            <QuoteCharacter>"</QuoteCharacter>
            <QuoteEscapeCharacter>"</QuoteEscapeCharacter>
        </CSV>
    </OutputSerialization>
</SelectRequest>
```

Example

The following is a sample response.

```
HTTP/1.1 200 OK
x-amz-id-2: GFihv3y6+kE7KG11GEkQhU7/2/cHR3Yb2fCb2S04nxI423Dqwg2XiQ0B/
UZlzYQvPiBlZNRcovw=
x-amz-request-id: 9F341CD3C4BA79E0
Date: Tue, 17 Oct 2017 23:54:05 GMT

A series of messages
```

Example 2: JSON object

The following select request retrieves all records from an object with data stored in JSON format. The OutputSerialization directs Amazon S3 to return results in CSV.

You can try different queries in the `Expression` element:

- You can filter by string comparison using record keys:

```
SELECT s.country, s.city from S3Object s where s.city = 'Seattle'
```

- You can specify functions in the SQL expression:

```
SELECT count(*) FROM S3Object s
```

```
POST /exampleobject.json?select&select-type=2 HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
Date: Tue, 17 Oct 2017 01:49:52 GMT
Authorization: authorization string
Content-Length: content length

<?xml version="1.0" encoding="UTF-8"?>
<SelectRequest>
    <Expression>Select * from S3Object</Expression>
    <ExpressionType>SQL</ExpressionType>
    <InputSerialization>
        <CompressionType>GZIP</CompressionType>
        <JSON>
            <Type>DOCUMENT</Type>
        </JSON>
    </InputSerialization>
    <OutputSerialization>
        <CSV>
            <QuoteFields>ASNEEDED</QuoteFields>
            <RecordDelimiter>\n</RecordDelimiter>
            <FieldDelimiter>,</FieldDelimiter>
            <QuoteCharacter>"</QuoteCharacter>
            <QuoteEscapeCharacter>"</QuoteEscapeCharacter>
        </CSV>
    </OutputSerialization>
</SelectRequest>
```

Example

The following is a sample response.

```
HTTP/1.1 200 OK
x-amz-id-2: GFihv3y6+kE7KG11GEkQhU7/2/cHR3Yb2fCb2S04nxI423Dqwg2XiQ0B/
UZlzYQvPiBlZNRcovw=
x-amz-request-id: 9F341CD3C4BA79E0
Date: Tue, 17 Oct 2017 23:54:05 GMT

A series of messages
```

Example 3: Parquet object

- The `InputSerialization` element describes the format of the data in the object that is being queried. It must specify `CSV`, `JSON`, or `Parquet`.
- The `OutputSerialization` element describes the format of the data that you want Amazon S3 to return in response to the query. It must specify `CSV`, `JSON`. Amazon S3 doesn't support outputting data in the `Parquet` format.
- The format of the `InputSerialization` doesn't need to match the format of the `OutputSerialization`. So, for example, you can specify `JSON` in the `InputSerialization` and `CSV` in the `OutputSerialization`.

```
POST /exampleobject.parquet?select&select-type=2 HTTP/1.1
Host: examplebucket.s3.<Region>.amazonaws.com
Date: Tue, 17 Oct 2017 01:49:52 GMT
Authorization: authorization string
Content-Length: content length

<?xml version="1.0" encoding="UTF-8"?>
<SelectRequest>
    <Expression>Select * from S3Object</Expression>
    <ExpressionType>SQL</ExpressionType>
    <InputSerialization>
        <CompressionType>NONE</CompressionType>
        <Parquet>
        </Parquet>
    </InputSerialization>
    <OutputSerialization>
        <CSV>
            <QuoteFields>ASNEEDED</QuoteFields>
            <RecordDelimiter>\n</RecordDelimiter>
```

```
            <FieldDelimiter>,</FieldDelimiter>
            <QuoteCharacter>"</QuoteCharacter>
            <QuoteEscapeCharacter>"</QuoteEscapeCharacter>
        </CSV>
    </OutputSerialization>
</SelectRequest>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UploadPart

Service: Amazon S3

Uploads a part in a multipart upload.

> **Note**
>
> In this operation, you provide new data as a part of an object in your request. However, you have an option to specify your existing Amazon S3 object as a data source for the part you are uploading. To upload a part from an existing object, you use the UploadPartCopy operation.

You must initiate a multipart upload (see CreateMultipartUpload) before you can upload any part. In response to your initiate request, Amazon S3 returns an upload ID, a unique identifier that you must include in your upload part request.

Part numbers can be any number from 1 to 10,000, inclusive. A part number uniquely identifies a part and also defines its position within the object being created. If you upload a new part using the same part number that was used with a previous part, the previously uploaded part is overwritten.

For information about maximum and minimum part sizes and other multipart upload specifications, see Multipart upload limits in the *Amazon S3 User Guide*.

> **Note**
>
> After you initiate multipart upload and upload one or more parts, you must either complete or abort multipart upload in order to stop getting charged for storage of the uploaded parts. Only after you either complete or abort multipart upload, Amazon S3 frees up the parts storage and stops charging you for the parts storage.

For more information on multipart uploads, go to Multipart Upload Overview in the *Amazon S3 User Guide* .

> **Note**
>
> **Directory buckets** - For directory buckets, you must make requests for this API operation to the Zonal endpoint. These endpoints support virtual-hosted-style requests in the format `https://bucket_name.s3express-az_id.region.amazonaws.com/key-name`. Path-style requests are not supported. For more information, see Regional and Zonal endpoints in the *Amazon S3 User Guide*.

Permissions

- **General purpose bucket permissions** - For information on the permissions required to use the multipart upload API, see Multipart Upload and Permissions in the *Amazon S3 User Guide*.
- **Directory bucket permissions** - To grant access to this API operation on a directory bucket, we recommend that you use the `CreateSession` API operation for session-based authorization. Specifically, you grant the `s3express:CreateSession` permission to the directory bucket in a bucket policy or an IAM identity-based policy. Then, you make the `CreateSession` API call on the bucket to obtain a session token. With the session token in your request header, you can make API requests to this operation. After the session token expires, you make another `CreateSession` API call to generate a new session token for use. AWS CLI or SDKs create session and refresh the session token automatically to avoid service interruptions when a session expires. For more information about authorization, see `CreateSession`.

Data integrity

General purpose bucket - To ensure that data is not corrupted traversing the network, specify the `Content-MD5` header in the upload part request. Amazon S3 checks the part data against the provided MD5 value. If they do not match, Amazon S3 returns an error. If the upload request is signed with Signature Version 4, then AWS S3 uses the `x-amz-content-sha256` header as a checksum instead of `Content-MD5`. For more information see Authenticating Requests: Using the Authorization Header (AWS Signature Version 4).

> **Note**
>
> **Directory buckets** - MD5 is not supported by directory buckets. You can use checksum algorithms to check object integrity.

Encryption

- **General purpose bucket** - Server-side encryption is for data encryption at rest. Amazon S3 encrypts your data as it writes it to disks in its data centers and decrypts it when you access it. You have mutually exclusive options to protect data using server-side encryption in Amazon S3, depending on how you choose to manage the encryption keys. Specifically, the encryption key options are Amazon S3 managed keys (SSE-S3), AWS KMS keys (SSE-KMS), and Customer-Provided Keys (SSE-C). Amazon S3 encrypts data with server-side encryption using Amazon S3 managed keys (SSE-S3) by default. You can optionally tell Amazon S3 to encrypt data at rest using server-side encryption with other key options. The option you use depends on whether you want to use KMS keys (SSE-KMS) or provide your own encryption key (SSE-C).

  Server-side encryption is supported by the S3 Multipart Upload operations. Unless you are using a customer-provided encryption key (SSE-C), you don't need to specify the encryption parameters in each UploadPart request. Instead, you only need to specify the server-side encryption parameters in the initial Initiate Multipart request. For more information, see CreateMultipartUpload.

  If you request server-side encryption using a customer-provided encryption key (SSE-C) in your initiate multipart upload request, you must provide identical encryption information in each part upload using the following request headers.

  - x-amz-server-side-encryption-customer-algorithm
  - x-amz-server-side-encryption-customer-key
  - x-amz-server-side-encryption-customer-key-MD5
- **Directory bucket** - For directory buckets, only server-side encryption with Amazon S3 managed keys (SSE-S3) (`AES256`) is supported.

For more information, see Using Server-Side Encryption in the *Amazon S3 User Guide*.

Special errors

- Error Code: `NoSuchUpload`
  - Description: The specified multipart upload does not exist. The upload ID might be invalid, or the multipart upload might have been aborted or completed.
  - HTTP Status Code: 404 Not Found
  - SOAP Fault Code Prefix: Client

HTTP Host header syntax

Directory buckets - The HTTP Host header syntax is *Bucket_name*.s3express-*az_id*.*region*.amazonaws.com.

The following operations are related to `UploadPart`:

- CreateMultipartUpload
- CompleteMultipartUpload
- AbortMultipartUpload
- ListParts
- ListMultipartUploads

Request Syntax

```
PUT /Key+?partNumber=PartNumber&uploadId=UploadId HTTP/1.1
Host: Bucket.s3.amazonaws.com
Content-Length: ContentLength
Content-MD5: ContentMD5
x-amz-sdk-checksum-algorithm: ChecksumAlgorithm
x-amz-checksum-crc32: ChecksumCRC32
x-amz-checksum-crc32c: ChecksumCRC32C
x-amz-checksum-sha1: ChecksumSHA1
x-amz-checksum-sha256: ChecksumSHA256
x-amz-server-side-encryption-customer-algorithm: SSECustomerAlgorithm
x-amz-server-side-encryption-customer-key: SSECustomerKey
x-amz-server-side-encryption-customer-key-MD5: SSECustomerKeyMD5
x-amz-request-payer: RequestPayer
x-amz-expected-bucket-owner: ExpectedBucketOwner

Body
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The name of the bucket to which the multipart upload was initiated.

Directory buckets - When you use this operation with a directory bucket, you must use virtual-hosted-style requests in the format *Bucket_name*.s3express-*az_id*.*region*.amazonaws.com. Path-style requests are not supported. Directory bucket names must be unique in the chosen Availability Zone. Bucket names must follow the format *bucket_base_name*--*az-id*--x-s3 (for example, *DOC-EXAMPLE-BUCKET*--*usw2-az1*--x-s3). For information about bucket naming restrictions, see Directory bucket naming rules in the *Amazon S3 User Guide*.

Access points - When you use this action with an access point, you must provide the alias of the access point in place of the bucket name or specify the access point ARN. When using the access point ARN, you must direct requests to the access point hostname. The access point hostname takes the form *AccessPointName-AccountId*.s3-accesspoint.*Region*.amazonaws.com. When using this action with an access point through the AWS SDKs, you provide the access point ARN in place of the bucket name. For more information about access point ARNs, see Using access points in the *Amazon S3 User Guide*.

> **Note**
>
> Access points and Object Lambda access points are not supported by directory buckets.

S3 on Outposts - When you use this action with Amazon S3 on Outposts, you must direct requests to the S3 on Outposts hostname. The S3 on Outposts hostname takes the form *AccessPointName-AccountId*.*outpostID*.s3-outposts.*Region*.amazonaws.com. When you use this action with S3 on Outposts through the AWS SDKs, you provide the Outposts access point ARN in place of the bucket name. For more information about S3 on Outposts ARNs, see What is S3 on Outposts? in the *Amazon S3 User Guide*.

Required: Yes

Content-Length

Size of the body in bytes. This parameter is useful when the size of the body cannot be determined automatically.

Content-MD5

The base64-encoded 128-bit MD5 digest of the part data. This parameter is auto-populated when using the command from the CLI. This parameter is required if object lock parameters are specified.

> **Note**
>
> This functionality is not supported for directory buckets.

Key

Object key for which the multipart upload was initiated.

Length Constraints: Minimum length of 1.

Required: Yes

partNumber

Part number of part being uploaded. This is a positive integer between 1 and 10,000.

Required: Yes

uploadId

Upload ID identifying the multipart upload whose part is being uploaded.

Required: Yes

x-amz-checksum-crc32

This header can be used as a data integrity check to verify that the data received is the same data that was originally sent. This header specifies the base64-encoded, 32-bit CRC32 checksum of the object. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

x-amz-checksum-crc32c

This header can be used as a data integrity check to verify that the data received is the same data that was originally sent. This header specifies the base64-encoded, 32-bit CRC32C checksum of the object. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

x-amz-checksum-sha1

This header can be used as a data integrity check to verify that the data received is the same data that was originally sent. This header specifies the base64-encoded, 160-bit SHA-1 digest of the object. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

x-amz-checksum-sha256

This header can be used as a data integrity check to verify that the data received is the same data that was originally sent. This header specifies the base64-encoded, 256-bit SHA-256 digest of the object. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

x-amz-expected-bucket-owner

The account ID of the expected bucket owner. If the account ID that you provide does not match the actual owner of the bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-request-payer

Confirms that the requester knows that they will be charged for the request. Bucket owners need not specify this parameter in their requests. If either the source or destination S3 bucket has Requester Pays enabled, the requester will pay for corresponding charges to copy the object. For information about downloading objects from Requester Pays buckets, see Downloading Objects in Requester Pays Buckets in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

x-amz-sdk-checksum-algorithm

Indicates the algorithm used to create the checksum for the object when you use the SDK. This header will not provide any additional functionality if you don't use the SDK. When you send this header, there must be a corresponding `x-amz-checksum` or `x-amz-trailer` header sent. Otherwise, Amazon S3 fails the request with the HTTP status code `400 Bad Request`. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

If you provide an individual checksum, Amazon S3 ignores any provided `ChecksumAlgorithm` parameter.

This checksum algorithm must be the same for all parts and it match the checksum value supplied in the `CreateMultipartUpload` request.

Valid Values: `CRC32 | CRC32C | SHA1 | SHA256`

x-amz-server-side-encryption-customer-algorithm

Specifies the algorithm to use when encrypting the object (for example, AES256).

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-key

Specifies the customer-provided encryption key for Amazon S3 to use in encrypting data. This value is used to store the object and then it is discarded; Amazon S3 does not store the encryption key. The key must be appropriate for use with the algorithm specified in the `x-amz-server-side-encryption-customer-algorithm header`. This must be the same encryption key specified in the initiate multipart upload request.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-key-MD5

Specifies the 128-bit MD5 digest of the encryption key according to RFC 1321. Amazon S3 uses this header for a message integrity check to ensure that the encryption key was transmitted without error.

> **Note**
>
> This functionality is not supported for directory buckets.

Request Body

The request accepts the following binary data.

Body

Response Syntax

```
HTTP/1.1 200
x-amz-server-side-encryption: ServerSideEncryption
ETag: ETag
x-amz-checksum-crc32: ChecksumCRC32
x-amz-checksum-crc32c: ChecksumCRC32C
x-amz-checksum-sha1: ChecksumSHA1
x-amz-checksum-sha256: ChecksumSHA256
x-amz-server-side-encryption-customer-algorithm: SSECustomerAlgorithm
x-amz-server-side-encryption-customer-key-MD5: SSECustomerKeyMD5
x-amz-server-side-encryption-aws-kms-key-id: SSEKMSKeyId
x-amz-server-side-encryption-bucket-key-enabled: BucketKeyEnabled
x-amz-request-charged: RequestCharged
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The response returns the following HTTP headers.

ETag

Entity tag for the uploaded object.

x-amz-checksum-crc32

The base64-encoded, 32-bit CRC32 checksum of the object. This will only be present if it was uploaded with the object. When you use an API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

x-amz-checksum-crc32c

The base64-encoded, 32-bit CRC32C checksum of the object. This will only be present if it was uploaded with the object. When you use an API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

x-amz-checksum-sha1

The base64-encoded, 160-bit SHA-1 digest of the object. This will only be present if it was uploaded with the object. When you use the API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

x-amz-checksum-sha256

The base64-encoded, 256-bit SHA-256 digest of the object. This will only be present if it was uploaded with the object. When you use an API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

x-amz-request-charged

If present, indicates that the requester was successfully charged for the request.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

x-amz-server-side-encryption

The server-side encryption algorithm used when you store this object in Amazon S3 (for example, `AES256`, `aws:kms`).

> **Note**
>
> For directory buckets, only server-side encryption with Amazon S3 managed keys (SSE-S3) (`AES256`) is supported.

Valid Values: `AES256` | `aws:kms` | `aws:kms:dsse`

x-amz-server-side-encryption-aws-kms-key-id

If present, indicates the ID of the AWS Key Management Service (AWS KMS) symmetric encryption customer managed key that was used for the object.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-bucket-key-enabled

Indicates whether the multipart upload uses an S3 Bucket Key for server-side encryption with AWS Key Management Service (AWS KMS) keys (SSE-KMS).

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-algorithm

If server-side encryption with a customer-provided encryption key was requested, the response will include this header to confirm the encryption algorithm that's used.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-key-MD5

If server-side encryption with a customer-provided encryption key was requested, the response will include this header to provide the round-trip message integrity verification of the customer-provided encryption key.

> **Note**
>
> This functionality is not supported for directory buckets.

Examples

Sample Request for general purpose buckets

The following PUT request uploads a part (part number 1) in a multipart upload. The request includes the upload ID that you get in response to your Initiate Multipart Upload request.

```
PUT /my-movie.m2ts?
partNumber=1&uploadId=VCVsb2FkIElEIGZvciBlbZZpbmcncyBteS1tb3ZpZS5tMnRzIHVwbG9hZR
 HTTP/1.1
Host: example-bucket.s3.<Region>.amazonaws.com
Date:  Mon, 1 Nov 2010 20:34:56 GMT
Content-Length: 10485760
Content-MD5: pUNXr/BjKK5G2UKvaRRrOA==
Authorization: authorization string

***part data omitted***
```

Sample Response for general purpose buckets

The response includes the ETag header. You need to retain this value for use when you send the Complete Multipart Upload request.

```
HTTP/1.1 200 OK
x-amz-id-2: Vvag1LuByRx9e6j5Onimru9pO4ZVKnJ2Qz7/C1NPcfTWAtRPfTaOFg==
x-amz-request-id: 656c76696e6727732072657175657374
Date:  Mon, 1 Nov 2010 20:34:56 GMT
ETag: "b54357faf0632cce46e942fa68356b38"
Content-Length: 0
Connection: keep-alive
Server: AmazonS3
```

Example for general purpose buckets: Upload a part with an encryption key in the request for server-side encryption

If you initiated a multipart upload with a request to save an object using server-side encryption with a customer-provided encryption key, each part upload must also include the same set of encryption-specific headers as shown in the following example request.

```
PUT /example-object?
partNumber=1&uploadId=EXAMPLEJZ6e0YupT2h66iePQCc9IEbYbDUy4RTpMeoSMLPRp8Z5o1u8feSRonpvnWsKKG35tI
 HTTP/1.1
Host: example-bucket.s3.<Region>.amazonaws.com
Authorization: authorization string
Date: Wed, 28 May 2014 19:40:11 +0000
x-amz-server-side-encryption-customer-key: g0lCfA3Dv40jZz5SQJ1ZukLRFqtI5WorC/8SEEXAMPLE

x-amz-server-side-encryption-customer-key-MD5: ZjQrne1X/iTcskbY2example
x-amz-server-side-encryption-customer-algorithm: AES256
```

Example for general purpose buckets

In the response, Amazon S3 returns encryption-specific headers providing the encryption algorithm used and MD5 digest of the encryption key you provided in the request.

```
HTTP/1.1 100 Continue   HTTP/1.1 200 OK
x-amz-id-2: Zn8bf8aEFQ+kBnGPBc/JaAf9SoWM68QDPS9+SyFwkIZOHUG2BiRLZi5oXw4cOCEt
x-amz-request-id: 5A37448A37622243
Date: Wed, 28 May 2014 19:40:12 GMT
ETag: "7e10e7d25dc4581d89b9285be5f384fd"
x-amz-server-side-encryption-customer-algorithm: AES256
x-amz-server-side-encryption-customer-key-MD5: ZjQrne1X/iTcskbY2example
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UploadPartCopy

Service: Amazon S3

Uploads a part by copying data from an existing object as data source. To specify the data source, you add the request header `x-amz-copy-source` in your request. To specify a byte range, you add the request header `x-amz-copy-source-range` in your request.

For information about maximum and minimum part sizes and other multipart upload specifications, see Multipart upload limits in the *Amazon S3 User Guide*.

> **Note**
>
> Instead of copying data from an existing object as part data, you might use the UploadPart action to upload new data as a part of an object in your request.

You must initiate a multipart upload before you can upload any part. In response to your initiate request, Amazon S3 returns the upload ID, a unique identifier that you must include in your upload part request.

For conceptual information about multipart uploads, see Uploading Objects Using Multipart Upload in the *Amazon S3 User Guide*. For information about copying objects using a single atomic action vs. a multipart upload, see Operations on Objects in the *Amazon S3 User Guide*.

> **Note**
>
> **Directory buckets** - For directory buckets, you must make requests for this API operation to the Zonal endpoint. These endpoints support virtual-hosted-style requests in the format `https://bucket_name.s3express-az_id.region.amazonaws.com/key-name`. Path-style requests are not supported. For more information, see Regional and Zonal endpoints in the *Amazon S3 User Guide*.

Authentication and authorization

All `UploadPartCopy` requests must be authenticated and signed by using IAM credentials (access key ID and secret access key for the IAM identities). All headers with the `x-amz-` prefix, including `x-amz-copy-source`, must be signed. For more information, see REST Authentication.

Directory buckets - You must use IAM credentials to authenticate and authorize your access to the `UploadPartCopy` API operation, instead of using the temporary security credentials through the `CreateSession` API operation.

AWS CLI or SDKs handles authentication and authorization on your behalf.

Permissions

You must have `READ` access to the source object and `WRITE` access to the destination bucket.

- **General purpose bucket permissions** - You must have the permissions in a policy based on the bucket types of your source bucket and destination bucket in an `UploadPartCopy` operation.
  - If the source object is in a general purpose bucket, you must have the **`s3:GetObject`** permission to read the source object that is being copied.
  - If the destination bucket is a general purpose bucket, you must have the **`s3:PutObject`** permission to write the object copy to the destination bucket.

  For information about permissions required to use the multipart upload API, see Multipart upload API and permissions in the *Amazon S3 User Guide*.
- **Directory bucket permissions** - You must have permissions in a bucket policy or an IAM identity-based policy based on the source and destination bucket types in an `UploadPartCopy` operation.
  - If the source object that you want to copy is in a directory bucket, you must have the **`s3express:CreateSession`** permission in the `Action` element of a policy to read the object. By default, the session is in the `ReadWrite` mode. If you want to restrict the access, you can explicitly set the `s3express:SessionMode` condition key to `ReadOnly` on the copy source bucket.
  - If the copy destination is a directory bucket, you must have the **`s3express:CreateSession`** permission in the `Action` element of a policy to write the object to the destination. The `s3express:SessionMode` condition key cannot be set to `ReadOnly` on the copy destination.

  For example policies, see Example bucket policies for S3 Express One Zone and AWS Identity and Access Management (IAM) identity-based policies for S3 Express One Zone in the *Amazon S3 User Guide*.

Encryption

- **General purpose buckets** - For information about using server-side encryption with customer-provided encryption keys with the `UploadPartCopy` operation, see CopyObject and UploadPart.
- **Directory buckets** - For directory buckets, only server-side encryption with Amazon S3 managed keys (SSE-S3) (`AES256`) is supported.

Special errors

- Error Code: `NoSuchUpload`
  - Description: The specified multipart upload does not exist. The upload ID might be invalid, or the multipart upload might have been aborted or completed.
  - HTTP Status Code: 404 Not Found
- Error Code: `InvalidRequest`
  - Description: The specified copy source is not supported as a byte-range copy source.
  - HTTP Status Code: 400 Bad Request

HTTP Host header syntax

> **Directory buckets** - The HTTP Host header syntax is *`Bucket_name`*`.s3express-`*`az_id`*`.`*`region`*`.amazonaws.com`.

The following operations are related to `UploadPartCopy`:

- CreateMultipartUpload
- UploadPart
- CompleteMultipartUpload
- AbortMultipartUpload
- ListParts
- ListMultipartUploads

Request Syntax

```
PUT /Key+?partNumber=PartNumber&uploadId=UploadId HTTP/1.1
Host: Bucket.s3.amazonaws.com
x-amz-copy-source: CopySource
x-amz-copy-source-if-match: CopySourceIfMatch
```

```
x-amz-copy-source-if-modified-since: CopySourceIfModifiedSince
x-amz-copy-source-if-none-match: CopySourceIfNoneMatch
x-amz-copy-source-if-unmodified-since: CopySourceIfUnmodifiedSince
x-amz-copy-source-range: CopySourceRange
x-amz-server-side-encryption-customer-algorithm: SSECustomerAlgorithm
x-amz-server-side-encryption-customer-key: SSECustomerKey
x-amz-server-side-encryption-customer-key-MD5: SSECustomerKeyMD5
x-amz-copy-source-server-side-encryption-customer-
algorithm: CopySourceSSECustomerAlgorithm
x-amz-copy-source-server-side-encryption-customer-key: CopySourceSSECustomerKey
x-amz-copy-source-server-side-encryption-customer-key-MD5: CopySourceSSECustomerKeyMD5
x-amz-request-payer: RequestPayer
x-amz-expected-bucket-owner: ExpectedBucketOwner
x-amz-source-expected-bucket-owner: ExpectedSourceBucketOwner
```

URI Request Parameters

The request uses the following URI parameters.

Bucket

The bucket name.

Directory buckets - When you use this operation with a directory bucket, you must use virtual-hosted-style requests in the format *Bucket_name*.s3express-*az_id*.*region*.amazonaws.com. Path-style requests are not supported. Directory bucket names must be unique in the chosen Availability Zone. Bucket names must follow the format *bucket_base_name*--*az-id*--x-s3 (for example, *DOC-EXAMPLE-BUCKET*--*usw2-az1*--x-s3). For information about bucket naming restrictions, see Directory bucket naming rules in the *Amazon S3 User Guide*.

Access points - When you use this action with an access point, you must provide the alias of the access point in place of the bucket name or specify the access point ARN. When using the access point ARN, you must direct requests to the access point hostname. The access point hostname takes the form *AccessPointName-AccountId*.s3-accesspoint.*Region*.amazonaws.com. When using this action with an access point through the AWS SDKs, you provide the access point ARN in place of the bucket name. For more information about access point ARNs, see Using access points in the *Amazon S3 User Guide*.

> **Note**
>
> Access points and Object Lambda access points are not supported by directory buckets.

S3 on Outposts - When you use this action with Amazon S3 on Outposts, you must direct requests to the S3 on Outposts hostname. The S3 on Outposts hostname takes the form *AccessPointName*-*AccountId*.*outpostID*.s3-outposts.*Region*.amazonaws.com. When you use this action with S3 on Outposts through the AWS SDKs, you provide the Outposts access point ARN in place of the bucket name. For more information about S3 on Outposts ARNs, see What is S3 on Outposts? in the *Amazon S3 User Guide*.

Required: Yes

Key

Object key for which the multipart upload was initiated.

Length Constraints: Minimum length of 1.

Required: Yes

partNumber

Part number of part being copied. This is a positive integer between 1 and 10,000.

Required: Yes

uploadId

Upload ID identifying the multipart upload whose part is being copied.

Required: Yes

x-amz-copy-source

Specifies the source object for the copy operation. You specify the value in one of two formats, depending on whether you want to access the source object through an access point:

- For objects not accessed through an access point, specify the name of the source bucket and key of the source object, separated by a slash (/). For example, to copy the object `reports/january.pdf` from the bucket `awsexamplebucket`, use `awsexamplebucket/reports/january.pdf`. The value must be URL-encoded.
- For objects accessed through access points, specify the Amazon Resource Name (ARN) of the object as accessed through the access point, in the format

`arn:aws:s3:<Region>:<account-id>:accesspoint/<access-point-name>/object/<key>`. For example, to copy the object `reports/january.pdf` through access point `my-access-point` owned by account `123456789012` in Region `us-west-2`, use the URL encoding of `arn:aws:s3:us-west-2:123456789012:accesspoint/my-access-point/object/reports/january.pdf`. The value must be URL encoded.

> **Note**
>
> - Amazon S3 supports copy operations using Access points only when the source and destination buckets are in the same AWS Region.
> - Access points are not supported by directory buckets.

Alternatively, for objects accessed through Amazon S3 on Outposts, specify the ARN of the object as accessed in the format `arn:aws:s3-outposts:<Region>:<account-id>:outpost/<outpost-id>/object/<key>`. For example, to copy the object `reports/january.pdf` through outpost `my-outpost` owned by account `123456789012` in Region `us-west-2`, use the URL encoding of `arn:aws:s3-outposts:us-west-2:123456789012:outpost/my-outpost/object/reports/january.pdf`. The value must be URL-encoded.

If your bucket has versioning enabled, you could have multiple versions of the same object. By default, `x-amz-copy-source` identifies the current version of the source object to copy. To copy a specific version of the source object to copy, append `?versionId=<version-id>` to the `x-amz-copy-source` request header (for example, `x-amz-copy-source: /awsexamplebucket/reports/january.pdf?versionId=QUpfdndhfd8438MNFDN93jdnJFkdmqnh893`).

If the current version is a delete marker and you don't specify a versionId in the `x-amz-copy-source` request header, Amazon S3 returns a `404 Not Found` error, because the object does not exist. If you specify versionId in the `x-amz-copy-source` and the versionId is a delete marker, Amazon S3 returns an HTTP `400 Bad Request` error, because you are not allowed to specify a delete marker as a version for the `x-amz-copy-source`.

> **Note**
>
> **Directory buckets** - S3 Versioning isn't enabled and supported for directory buckets.

Pattern: `\/.+\/.+`

Required: Yes

x-amz-copy-source-if-match

Copies the object if its entity tag (ETag) matches the specified tag.

If both of the `x-amz-copy-source-if-match` and `x-amz-copy-source-if-unmodified-since` headers are present in the request as follows:

`x-amz-copy-source-if-match` condition evaluates to `true`, and;

`x-amz-copy-source-if-unmodified-since` condition evaluates to `false`;

Amazon S3 returns `200 OK` and copies the data.

x-amz-copy-source-if-modified-since

Copies the object if it has been modified since the specified time.

If both of the `x-amz-copy-source-if-none-match` and `x-amz-copy-source-if-modified-since` headers are present in the request as follows:

`x-amz-copy-source-if-none-match` condition evaluates to `false`, and;

`x-amz-copy-source-if-modified-since` condition evaluates to `true`;

Amazon S3 returns `412 Precondition Failed` response code.

x-amz-copy-source-if-none-match

Copies the object if its entity tag (ETag) is different than the specified ETag.

If both of the `x-amz-copy-source-if-none-match` and `x-amz-copy-source-if-modified-since` headers are present in the request as follows:

`x-amz-copy-source-if-none-match` condition evaluates to `false`, and;

`x-amz-copy-source-if-modified-since` condition evaluates to `true`;

Amazon S3 returns `412 Precondition Failed` response code.

x-amz-copy-source-if-unmodified-since

Copies the object if it hasn't been modified since the specified time.

If both of the `x-amz-copy-source-if-match` and `x-amz-copy-source-if-unmodified-since` headers are present in the request as follows:

`x-amz-copy-source-if-match` condition evaluates to `true`, and;

`x-amz-copy-source-if-unmodified-since` condition evaluates to `false`;

Amazon S3 returns `200 OK` and copies the data.

x-amz-copy-source-range

The range of bytes to copy from the source object. The range value must use the form bytes=first-last, where the first and last are the zero-based byte offsets to copy. For example, bytes=0-9 indicates that you want to copy the first 10 bytes of the source. You can copy a range only if the source object is greater than 5 MB.

x-amz-copy-source-server-side-encryption-customer-algorithm

Specifies the algorithm to use when decrypting the source object (for example, `AES256`).

> **Note**
>
> This functionality is not supported when the source object is in a directory bucket.

x-amz-copy-source-server-side-encryption-customer-key

Specifies the customer-provided encryption key for Amazon S3 to use to decrypt the source object. The encryption key provided in this header must be one that was used when the source object was created.

> **Note**
>
> This functionality is not supported when the source object is in a directory bucket.

x-amz-copy-source-server-side-encryption-customer-key-MD5

Specifies the 128-bit MD5 digest of the encryption key according to RFC 1321. Amazon S3 uses this header for a message integrity check to ensure that the encryption key was transmitted without error.

> **Note**
>
> This functionality is not supported when the source object is in a directory bucket.

x-amz-expected-bucket-owner

The account ID of the expected destination bucket owner. If the account ID that you provide does not match the actual owner of the destination bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

x-amz-request-payer

Confirms that the requester knows that they will be charged for the request. Bucket owners need not specify this parameter in their requests. If either the source or destination S3 bucket has Requester Pays enabled, the requester will pay for corresponding charges to copy the object. For information about downloading objects from Requester Pays buckets, see Downloading Objects in Requester Pays Buckets in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

x-amz-server-side-encryption-customer-algorithm

Specifies the algorithm to use when encrypting the object (for example, AES256).

> **Note**
>
> This functionality is not supported when the destination bucket is a directory bucket.

x-amz-server-side-encryption-customer-key

Specifies the customer-provided encryption key for Amazon S3 to use in encrypting data. This value is used to store the object and then it is discarded; Amazon S3 does not store the encryption key. The key must be appropriate for use with the algorithm specified in the `x-`

`amz-server-side-encryption-customer-algorithm` header. This must be the same encryption key specified in the initiate multipart upload request.

> **Note**
>
> This functionality is not supported when the destination bucket is a directory bucket.

x-amz-server-side-encryption-customer-key-MD5

Specifies the 128-bit MD5 digest of the encryption key according to RFC 1321. Amazon S3 uses this header for a message integrity check to ensure that the encryption key was transmitted without error.

> **Note**
>
> This functionality is not supported when the destination bucket is a directory bucket.

x-amz-source-expected-bucket-owner

The account ID of the expected source bucket owner. If the account ID that you provide does not match the actual owner of the source bucket, the request fails with the HTTP status code `403 Forbidden` (access denied).

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
x-amz-copy-source-version-id: CopySourceVersionId
x-amz-server-side-encryption: ServerSideEncryption
x-amz-server-side-encryption-customer-algorithm: SSECustomerAlgorithm
x-amz-server-side-encryption-customer-key-MD5: SSECustomerKeyMD5
x-amz-server-side-encryption-aws-kms-key-id: SSEKMSKeyId
x-amz-server-side-encryption-bucket-key-enabled: BucketKeyEnabled
x-amz-request-charged: RequestCharged
```

```
<?xml version="1.0" encoding="UTF-8"?>
<CopyPartResult>
   <ETag>string</ETag>
   <LastModified>timestamp</LastModified>
   <ChecksumCRC32>string</ChecksumCRC32>
   <ChecksumCRC32C>string</ChecksumCRC32C>
   <ChecksumSHA1>string</ChecksumSHA1>
   <ChecksumSHA256>string</ChecksumSHA256>
</CopyPartResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The response returns the following HTTP headers.

x-amz-copy-source-version-id

The version of the source object that was copied, if you have enabled versioning on the source bucket.

> **Note**
>
> This functionality is not supported when the source object is in a directory bucket.

x-amz-request-charged

If present, indicates that the requester was successfully charged for the request.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

x-amz-server-side-encryption

The server-side encryption algorithm used when you store this object in Amazon S3 (for example, `AES256`, `aws:kms`).

> **Note**
>
> For directory buckets, only server-side encryption with Amazon S3 managed keys (SSE-S3) (AES256) is supported.

Valid Values: `AES256` | `aws:kms` | `aws:kms:dsse`

x-amz-server-side-encryption-aws-kms-key-id

If present, indicates the ID of the AWS Key Management Service (AWS KMS) symmetric encryption customer managed key that was used for the object.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-bucket-key-enabled

Indicates whether the multipart upload uses an S3 Bucket Key for server-side encryption with AWS Key Management Service (AWS KMS) keys (SSE-KMS).

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-algorithm

If server-side encryption with a customer-provided encryption key was requested, the response will include this header to confirm the encryption algorithm that's used.

> **Note**
>
> This functionality is not supported for directory buckets.

x-amz-server-side-encryption-customer-key-MD5

If server-side encryption with a customer-provided encryption key was requested, the response will include this header to provide the round-trip message integrity verification of the customer-provided encryption key.

> **Note**
>
> This functionality is not supported for directory buckets.

The following data is returned in XML format by the service.

CopyPartResult

Root level tag for the CopyPartResult parameters.

Required: Yes

ChecksumCRC32

The base64-encoded, 32-bit CRC32 checksum of the object. This will only be present if it was uploaded with the object. When you use an API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

ChecksumCRC32C

The base64-encoded, 32-bit CRC32C checksum of the object. This will only be present if it was uploaded with the object. When you use an API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

ChecksumSHA1

The base64-encoded, 160-bit SHA-1 digest of the object. This will only be present if it was uploaded with the object. When you use the API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

ChecksumSHA256

The base64-encoded, 256-bit SHA-256 digest of the object. This will only be present if it was uploaded with the object. When you use an API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

ETag

Entity tag of the object.

Type: String

LastModified

Date and time at which the object was uploaded.

Type: Timestamp

Examples

Sample Request for general purpose buckets

The following PUT request uploads a part (part number 2) in a multipart upload. The request specifies a byte range from an existing object as the source of this upload. The request includes the upload ID that you get in response to your Initiate Multipart Upload request.

```
PUT /newobject?
partNumber=2&uploadId=VCVsb2FkIElEIGZvciBlbZZpbmcncyBteS1tb3ZpZS5tMnRzIHVwbG9hZR
 HTTP/1.1
Host: target-bucket.s3.<Region>.amazonaws.com
Date:  Mon, 11 Apr 2011 20:34:56 GMT
x-amz-copy-source: /source-bucket/sourceobject
x-amz-copy-source-range:bytes=500-6291456
Authorization: authorization string
```

Sample Response for general purpose buckets

The response includes the ETag value. You need to retain this value to use when you send the Complete Multipart Upload request.

```
HTTP/1.1 200 OK
x-amz-id-2: Vvag1LuByRx9e6j5Onimru9pO4ZVKnJ2Qz7/C1NPcfTWAtRPfTaOFg==
x-amz-request-id: 656c76696e6727732072657175657374
Date:  Mon, 11 Apr 2011 20:34:56 GMT
Server: AmazonS3

<CopyPartResult>
   <LastModified>2011-04-11T20:34:56.000Z</LastModified>
   <ETag>"9b2cf535f27731c974343645a3985328"</ETag>
</CopyPartResult>
```

Sample Request for general purpose buckets

The following PUT request uploads a part (part number 2) in a multipart upload. The request does not specify the optional byte range header, but requests the entire source object copy as part 2. The request includes the upload ID that you got in response to your Initiate Multipart Upload request.

```
PUT /newobject?
partNumber=2&uploadId=VCVsb2FkIElEIGZvciBlbZZpbmcncyBteS1tb3ZpZS5tMnRzIHVwbG9hZR
 HTTP/1.1
Host: target-bucket.s3.<Region>.amazonaws.com
```

```
Date:  Mon, 11 Apr 2011 20:34:56 GMT
x-amz-copy-source: /source-bucket/sourceobject?versionId=3/L4kqtJlcpXroDTDmJ
+rmSpXd3dIbrHY+MTRCxf3vjVBH40Nr8X8gdRQBpUMLUo
Authorization: authorization string
```

Sample Response for general purpose buckets

The response includes the ETag value. You need to retain this value to use when you send the Complete Multipart Upload request.

```
HTTP/1.1 200 OK
x-amz-id-2: Vvag1LuByRx9e6j5Onimru9pO4ZVKnJ2Qz7/C1NPcfTWAtRPfTaOFg==
x-amz-request-id: 656c76696e6727732072657175657374
x-amz-copy-source-version-id: 3/L4kqtJlcpXroDTDmJ+rmSpXd3dIbrHY
+MTRCxf3vjVBH40Nr8X8gdRQBpUMLUo
Date:  Mon, 11 Apr 2011 20:34:56 GMT
Server: AmazonS3

<CopyPartResult>
   <LastModified>2011-04-11T20:34:56.000Z</LastModified>
   <ETag>"9b2cf535f27731c974343645a3985328"</ETag>
</CopyPartResult>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python

- AWS SDK for Ruby V3

WriteGetObjectResponse

Service: Amazon S3

> **Note**
>
> This operation is not supported by directory buckets.

Passes transformed objects to a `GetObject` operation when using Object Lambda access points. For information about Object Lambda access points, see Transforming objects with Object Lambda access points in the *Amazon S3 User Guide*.

This operation supports metadata that can be returned by GetObject, in addition to `RequestRoute`, `RequestToken`, `StatusCode`, `ErrorCode`, and `ErrorMessage`. The `GetObject` response metadata is supported so that the `WriteGetObjectResponse` caller, typically an AWS Lambda function, can provide the same metadata when it internally invokes `GetObject`. When `WriteGetObjectResponse` is called by a customer-owned Lambda function, the metadata returned to the end user `GetObject` call might differ from what Amazon S3 would normally return.

You can include any number of metadata headers. When including a metadata header, it should be prefaced with `x-amz-meta`. For example, `x-amz-meta-my-custom-header: MyCustomValue`. The primary use case for this is to forward `GetObject` metadata.

AWS provides some prebuilt Lambda functions that you can use with S3 Object Lambda to detect and redact personally identifiable information (PII) and decompress S3 objects. These Lambda functions are available in the AWS Serverless Application Repository, and can be selected through the AWS Management Console when you create your Object Lambda access point.

Example 1: PII Access Control - This Lambda function uses Amazon Comprehend, a natural language processing (NLP) service using machine learning to find insights and relationships in text. It automatically detects personally identifiable information (PII) such as names, addresses, dates, credit card numbers, and social security numbers from documents in your Amazon S3 bucket.

Example 2: PII Redaction - This Lambda function uses Amazon Comprehend, a natural language processing (NLP) service using machine learning to find insights and relationships in text. It automatically redacts personally identifiable information (PII) such as names, addresses, dates, credit card numbers, and social security numbers from documents in your Amazon S3 bucket.

Example 3: Decompression - The Lambda function S3ObjectLambdaDecompression, is equipped to decompress objects stored in S3 in one of six compressed file formats including bzip2, gzip, snappy, zlib, zstandard and ZIP.

For information on how to view and use these functions, see Using AWS built Lambda functions in the *Amazon S3 User Guide*.

Request Syntax

```
POST /WriteGetObjectResponse HTTP/1.1
Host: s3.amazonaws.com
x-amz-request-route: RequestRoute
x-amz-request-token: RequestToken
x-amz-fwd-status: StatusCode
x-amz-fwd-error-code: ErrorCode
x-amz-fwd-error-message: ErrorMessage
x-amz-fwd-header-accept-ranges: AcceptRanges
x-amz-fwd-header-Cache-Control: CacheControl
x-amz-fwd-header-Content-Disposition: ContentDisposition
x-amz-fwd-header-Content-Encoding: ContentEncoding
x-amz-fwd-header-Content-Language: ContentLanguage
Content-Length: ContentLength
x-amz-fwd-header-Content-Range: ContentRange
x-amz-fwd-header-Content-Type: ContentType
x-amz-fwd-header-x-amz-checksum-crc32: ChecksumCRC32
x-amz-fwd-header-x-amz-checksum-crc32c: ChecksumCRC32C
x-amz-fwd-header-x-amz-checksum-sha1: ChecksumSHA1
x-amz-fwd-header-x-amz-checksum-sha256: ChecksumSHA256
x-amz-fwd-header-x-amz-delete-marker: DeleteMarker
x-amz-fwd-header-ETag: ETag
x-amz-fwd-header-Expires: Expires
x-amz-fwd-header-x-amz-expiration: Expiration
x-amz-fwd-header-Last-Modified: LastModified
x-amz-fwd-header-x-amz-missing-meta: MissingMeta
x-amz-fwd-header-x-amz-object-lock-mode: ObjectLockMode
x-amz-fwd-header-x-amz-object-lock-legal-hold: ObjectLockLegalHoldStatus
x-amz-fwd-header-x-amz-object-lock-retain-until-date: ObjectLockRetainUntilDate
x-amz-fwd-header-x-amz-mp-parts-count: PartsCount
x-amz-fwd-header-x-amz-replication-status: ReplicationStatus
x-amz-fwd-header-x-amz-request-charged: RequestCharged
x-amz-fwd-header-x-amz-restore: Restore
x-amz-fwd-header-x-amz-server-side-encryption: ServerSideEncryption
x-amz-fwd-header-x-amz-server-side-encryption-customer-algorithm: SSECustomerAlgorithm
```

```
x-amz-fwd-header-x-amz-server-side-encryption-aws-kms-key-id: SSEKMSKeyId
x-amz-fwd-header-x-amz-server-side-encryption-customer-key-MD5: SSECustomerKeyMD5
x-amz-fwd-header-x-amz-storage-class: StorageClass
x-amz-fwd-header-x-amz-tagging-count: TagCount
x-amz-fwd-header-x-amz-version-id: VersionId
x-amz-fwd-header-x-amz-server-side-encryption-bucket-key-enabled: BucketKeyEnabled

Body
```

URI Request Parameters

The request uses the following URI parameters.

Content-Length

The size of the content body in bytes.

x-amz-fwd-error-code

A string that uniquely identifies an error condition. Returned in the <Code> tag of the error XML response for a corresponding `GetObject` call. Cannot be used with a successful `StatusCode` header or when the transformed object is provided in the body. All error codes from S3 are sentence-cased. The regular expression (regex) value is `"^[A-Z][a-zA-Z]+$"`.

x-amz-fwd-error-message

Contains a generic description of the error condition. Returned in the <Message> tag of the error XML response for a corresponding `GetObject` call. Cannot be used with a successful `StatusCode` header or when the transformed object is provided in body.

x-amz-fwd-header-accept-ranges

Indicates that a range of bytes was specified.

x-amz-fwd-header-Cache-Control

Specifies caching behavior along the request/reply chain.

x-amz-fwd-header-Content-Disposition

Specifies presentational information for the object.

x-amz-fwd-header-Content-Encoding

Specifies what content encodings have been applied to the object and thus what decoding mechanisms must be applied to obtain the media-type referenced by the Content-Type header field.

x-amz-fwd-header-Content-Language

The language the content is in.

x-amz-fwd-header-Content-Range

The portion of the object returned in the response.

x-amz-fwd-header-Content-Type

A standard MIME type describing the format of the object data.

x-amz-fwd-header-ETag

An opaque identifier assigned by a web server to a specific version of a resource found at a URL.

x-amz-fwd-header-Expires

The date and time at which the object is no longer cacheable.

x-amz-fwd-header-Last-Modified

The date and time that the object was last modified.

x-amz-fwd-header-x-amz-checksum-crc32

This header can be used as a data integrity check to verify that the data received is the same data that was originally sent. This specifies the base64-encoded, 32-bit CRC32 checksum of the object returned by the Object Lambda function. This may not match the checksum for the object stored in Amazon S3. Amazon S3 will perform validation of the checksum values only when the original `GetObject` request required checksum validation. For more information about checksums, see Checking object integrity in the *Amazon S3 User Guide*.

Only one checksum header can be specified at a time. If you supply multiple checksum headers, this request will fail.

x-amz-fwd-header-x-amz-checksum-crc32c

This header can be used as a data integrity check to verify that the data received is the same data that was originally sent. This specifies the base64-encoded, 32-bit CRC32C checksum of the object returned by the Object Lambda function. This may not match the checksum for the object stored in Amazon S3. Amazon S3 will perform validation of the checksum values only when the original `GetObject` request required checksum validation. For more information about checksums, see Checking object integrity in the *Amazon S3 User Guide*.

Only one checksum header can be specified at a time. If you supply multiple checksum headers, this request will fail.

x-amz-fwd-header-x-amz-checksum-sha1

This header can be used as a data integrity check to verify that the data received is the same data that was originally sent. This specifies the base64-encoded, 160-bit SHA-1 digest of the object returned by the Object Lambda function. This may not match the checksum for the object stored in Amazon S3. Amazon S3 will perform validation of the checksum values only when the original `GetObject` request required checksum validation. For more information about checksums, see Checking object integrity in the *Amazon S3 User Guide*.

Only one checksum header can be specified at a time. If you supply multiple checksum headers, this request will fail.

x-amz-fwd-header-x-amz-checksum-sha256

This header can be used as a data integrity check to verify that the data received is the same data that was originally sent. This specifies the base64-encoded, 256-bit SHA-256 digest of the object returned by the Object Lambda function. This may not match the checksum for the object stored in Amazon S3. Amazon S3 will perform validation of the checksum values only when the original `GetObject` request required checksum validation. For more information about checksums, see Checking object integrity in the *Amazon S3 User Guide*.

Only one checksum header can be specified at a time. If you supply multiple checksum headers, this request will fail.

x-amz-fwd-header-x-amz-delete-marker

Specifies whether an object stored in Amazon S3 is (`true`) or is not (`false`) a delete marker.

x-amz-fwd-header-x-amz-expiration

If the object expiration is configured (see PUT Bucket lifecycle), the response includes this header. It includes the `expiry-date` and `rule-id` key-value pairs that provide the object expiration information. The value of the `rule-id` is URL-encoded.

x-amz-fwd-header-x-amz-missing-meta

Set to the number of metadata entries not returned in `x-amz-meta` headers. This can happen if you create metadata using an API like SOAP that supports more flexible metadata than the REST API. For example, using SOAP, you can create metadata whose values are not legal HTTP headers.

x-amz-fwd-header-x-amz-mp-parts-count

The count of parts this object has.

x-amz-fwd-header-x-amz-object-lock-legal-hold

Indicates whether an object stored in Amazon S3 has an active legal hold.

Valid Values: `ON | OFF`

x-amz-fwd-header-x-amz-object-lock-mode

Indicates whether an object stored in Amazon S3 has Object Lock enabled. For more information about S3 Object Lock, see Object Lock.

Valid Values: `GOVERNANCE | COMPLIANCE`

x-amz-fwd-header-x-amz-object-lock-retain-until-date

The date and time when Object Lock is configured to expire.

x-amz-fwd-header-x-amz-replication-status

Indicates if request involves bucket that is either a source or destination in a Replication rule. For more information about S3 Replication, see Replication.

Valid Values: `COMPLETE | PENDING | FAILED | REPLICA | COMPLETED`

x-amz-fwd-header-x-amz-request-charged

If present, indicates that the requester was successfully charged for the request.

> **Note**
>
> This functionality is not supported for directory buckets.

Valid Values: `requester`

x-amz-fwd-header-x-amz-restore

Provides information about object restoration operation and expiration time of the restored object copy.

x-amz-fwd-header-x-amz-server-side-encryption

The server-side encryption algorithm used when storing requested object in Amazon S3 (for example, AES256, `aws:kms`).

Valid Values: `AES256 | aws:kms | aws:kms:dsse`

x-amz-fwd-header-x-amz-server-side-encryption-aws-kms-key-id

If present, specifies the ID (Key ID, Key ARN, or Key Alias) of the AWS Key Management Service (AWS KMS) symmetric encryption customer managed key that was used for stored in Amazon S3 object.

x-amz-fwd-header-x-amz-server-side-encryption-bucket-key-enabled

Indicates whether the object stored in Amazon S3 uses an S3 bucket key for server-side encryption with AWS KMS (SSE-KMS).

x-amz-fwd-header-x-amz-server-side-encryption-customer-algorithm

Encryption algorithm used if server-side encryption with a customer-provided encryption key was specified for object stored in Amazon S3.

x-amz-fwd-header-x-amz-server-side-encryption-customer-key-MD5

128-bit MD5 digest of customer-provided encryption key used in Amazon S3 to encrypt data stored in S3. For more information, see Protecting data using server-side encryption with customer-provided encryption keys (SSE-C).

x-amz-fwd-header-x-amz-storage-class

Provides storage class information of the object. Amazon S3 returns this header for all objects except for S3 Standard storage class objects.

For more information, see Storage Classes.

Valid Values: `STANDARD | REDUCED_REDUNDANCY | STANDARD_IA | ONEZONE_IA | INTELLIGENT_TIERING | GLACIER | DEEP_ARCHIVE | OUTPOSTS | GLACIER_IR | SNOW | EXPRESS_ONEZONE`

x-amz-fwd-header-x-amz-tagging-count

The number of tags, if any, on the object.

x-amz-fwd-header-x-amz-version-id

An ID used to reference a specific version of the object.

x-amz-fwd-status

The integer status code for an HTTP response of a corresponding `GetObject` request. The following is a list of status codes.

- 200 - OK
- 206 - Partial Content
- 304 - Not Modified
- 400 - Bad Request
- 401 - Unauthorized
- 403 - Forbidden
- 404 - Not Found
- 405 - Method Not Allowed
- 409 - Conflict
- 411 - Length Required
- 412 - Precondition Failed
- 416 - Range Not Satisfiable
- 500 - Internal Server Error
- 503 - Service Unavailable

x-amz-request-route

Route prefix to the HTTP URL generated.

Required: Yes

x-amz-request-token

A single use encrypted token that maps `WriteGetObjectResponse` to the end user `GetObject` request.

Required: Yes

Request Body

The request accepts the following binary data.

Body

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

Sample Response

The following illustrates a sample response.

```
HTTP/1.1 200 OK
x-amz-request-id: 19684529-d1aa-413e-9382-9ff490962d12
Date: Wed, 24 Feb 2021 10:57:53 GMT
Content-Length: 0
```

Sample Request

The following illustrates a sample request from a POST.

```
POST /WriteGetObjectResponse HTTP/1.1
Host: <RequestRoute>.s3-object-lambda.<Region>.amazonaws.com
x-amz-request-token: <RequestToken>
Authorization: authorization string
Content-Type: text/plain
Content-Length: 16
[16 bytes of object data]
```

Sample Error Response

The following response returns a `ValidationError` error because the RequestToken could not be decrypted.

```
<?xml version="1.0" encoding="UTF-8"?>
<Error>
<Code>ValidationError</Code>
<Message>Invalid token</Message>
<RequestId>fcd2cd5e-def0-4001-8030-1fd1d61d2c9d</RequestId>
</Error>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

Amazon S3 Control

The following actions are supported by Amazon S3 Control:

- AssociateAccessGrantsIdentityCenter
- CreateAccessGrant
- CreateAccessGrantsInstance
- CreateAccessGrantsLocation
- CreateAccessPoint
- CreateAccessPointForObjectLambda
- CreateBucket
- CreateJob
- CreateMultiRegionAccessPoint
- CreateStorageLensGroup
- DeleteAccessGrant
- DeleteAccessGrantsInstance
- DeleteAccessGrantsInstanceResourcePolicy
- DeleteAccessGrantsLocation

- DeleteAccessPoint
- DeleteAccessPointForObjectLambda
- DeleteAccessPointPolicy
- DeleteAccessPointPolicyForObjectLambda
- DeleteBucket
- DeleteBucketLifecycleConfiguration
- DeleteBucketPolicy
- DeleteBucketReplication
- DeleteBucketTagging
- DeleteJobTagging
- DeleteMultiRegionAccessPoint
- DeletePublicAccessBlock
- DeleteStorageLensConfiguration
- DeleteStorageLensConfigurationTagging
- DeleteStorageLensGroup
- DescribeJob
- DescribeMultiRegionAccessPointOperation
- DissociateAccessGrantsIdentityCenter
- GetAccessGrant
- GetAccessGrantsInstance
- GetAccessGrantsInstanceForPrefix
- GetAccessGrantsInstanceResourcePolicy
- GetAccessGrantsLocation
- GetAccessPoint
- GetAccessPointConfigurationForObjectLambda
- GetAccessPointForObjectLambda
- GetAccessPointPolicy
- GetAccessPointPolicyForObjectLambda
- GetAccessPointPolicyStatus
- GetAccessPointPolicyStatusForObjectLambda

- GetBucket
- GetBucketLifecycleConfiguration
- GetBucketPolicy
- GetBucketReplication
- GetBucketTagging
- GetBucketVersioning
- GetDataAccess
- GetJobTagging
- GetMultiRegionAccessPoint
- GetMultiRegionAccessPointPolicy
- GetMultiRegionAccessPointPolicyStatus
- GetMultiRegionAccessPointRoutes
- GetPublicAccessBlock
- GetStorageLensConfiguration
- GetStorageLensConfigurationTagging
- GetStorageLensGroup
- ListAccessGrants
- ListAccessGrantsInstances
- ListAccessGrantsLocations
- ListAccessPoints
- ListAccessPointsForObjectLambda
- ListJobs
- ListMultiRegionAccessPoints
- ListRegionalBuckets
- ListStorageLensConfigurations
- ListStorageLensGroups
- ListTagsForResource
- PutAccessGrantsInstanceResourcePolicy
- PutAccessPointConfigurationForObjectLambda
- PutAccessPointPolicy

- PutAccessPointPolicyForObjectLambda
- PutBucketLifecycleConfiguration
- PutBucketPolicy
- PutBucketReplication
- PutBucketTagging
- PutBucketVersioning
- PutJobTagging
- PutMultiRegionAccessPointPolicy
- PutPublicAccessBlock
- PutStorageLensConfiguration
- PutStorageLensConfigurationTagging
- SubmitMultiRegionAccessPointRoutes
- TagResource
- UntagResource
- UpdateAccessGrantsLocation
- UpdateJobPriority
- UpdateJobStatus
- UpdateStorageLensGroup

AssociateAccessGrantsIdentityCenter

Service: Amazon S3 Control

Associate your S3 Access Grants instance with an AWS IAM Identity Center instance. Use this action if you want to create access grants for users or groups from your corporate identity directory. First, you must add your corporate identity directory to AWS IAM Identity Center. Then, you can associate this IAM Identity Center instance with your S3 Access Grants instance.

Permissions

You must have the `s3:AssociateAccessGrantsIdentityCenter` permission to use this operation.

Additional Permissions

You must also have the following permissions: `sso:CreateApplication`, `sso:PutApplicationGrant`, and `sso:PutApplicationAuthenticationMethod`.

Request Syntax

```
POST /v20180820/accessgrantsinstance/identitycenter HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
<?xml version="1.0" encoding="UTF-8"?>
<AssociateAccessGrantsIdentityCenterRequest xmlns="http://awss3control.amazonaws.com/
doc/2018-08-20/">
   <IdentityCenterArn>string</IdentityCenterArn>
</AssociateAccessGrantsIdentityCenterRequest>
```

URI Request Parameters

The request uses the following URI parameters.

x-amz-account-id

The ID of the AWS account that is making this request.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request accepts the following data in XML format.

AssociateAccessGrantsIdentityCenterRequest

Root level tag for the AssociateAccessGrantsIdentityCenterRequest parameters.

Required: Yes

IdentityCenterArn

The Amazon Resource Name (ARN) of the AWS IAM Identity Center instance that you are associating with your S3 Access Grants instance. An IAM Identity Center instance is your corporate identity directory that you added to the IAM Identity Center. You can use the ListInstances API operation to retrieve a list of your Identity Center instances and their ARNs.

Type: String

Length Constraints: Minimum length of 10. Maximum length of 1224.

Pattern: `arn:[^:]+:sso::(\d{12}){0,1}:instance/.*$`

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++

- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateAccessGrant

Service: Amazon S3 Control

Creates an access grant that gives a grantee access to your S3 data. The grantee can be an IAM user or role or a directory user, or group. Before you can create a grant, you must have an S3 Access Grants instance in the same Region as the S3 data. You can create an S3 Access Grants instance using the CreateAccessGrantsInstance. You must also have registered at least one S3 data location in your S3 Access Grants instance using CreateAccessGrantsLocation.

Permissions

You must have the `s3:CreateAccessGrant` permission to use this operation.

Additional Permissions

For any directory identity - `sso:DescribeInstance` and `sso:DescribeApplication`

For directory users - `identitystore:DescribeUser`

For directory groups - `identitystore:DescribeGroup`

Request Syntax

```
POST /v20180820/accessgrantsinstance/grant HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
<?xml version="1.0" encoding="UTF-8"?>
<CreateAccessGrantRequest xmlns="http://awss3control.amazonaws.com/doc/2018-08-20/">
   <AccessGrantsLocationId>string</AccessGrantsLocationId>
   <AccessGrantsLocationConfiguration>
      <S3SubPrefix>string</S3SubPrefix>
   </AccessGrantsLocationConfiguration>
   <Grantee>
      <GranteeIdentifier>string</GranteeIdentifier>
      <GranteeType>string</GranteeType>
   </Grantee>
   <Permission>string</Permission>
   <ApplicationArn>string</ApplicationArn>
   <S3PrefixType>string</S3PrefixType>
   <Tags>
      <Tag>
         <Key>string</Key>
```

```
            <Value>string</Value>
         </Tag>
      </Tags>
</CreateAccessGrantRequest>
```

URI Request Parameters

The request uses the following URI parameters.

x-amz-account-id

The ID of the AWS account that is making this request.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request accepts the following data in XML format.

CreateAccessGrantRequest

Root level tag for the CreateAccessGrantRequest parameters.

Required: Yes

AccessGrantsLocationConfiguration

The configuration options of the grant location. The grant location is the S3 path to the data to which you are granting access. It contains the `S3SubPrefix` field. The grant scope is the result of appending the subprefix to the location scope of the registered location.

Type: AccessGrantsLocationConfiguration data type

Required: No

AccessGrantsLocationId

The ID of the registered location to which you are granting access. S3 Access Grants assigns this ID when you register the location. S3 Access Grants assigns the ID `default` to the default location `s3://` and assigns an auto-generated ID to other locations that you register.

If you are passing the `default` location, you cannot create an access grant for the entire default location. You must also specify a bucket or a bucket and prefix in the `Subprefix` field.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-]+`

Required: Yes

ApplicationArn

The Amazon Resource Name (ARN) of an AWS IAM Identity Center application associated with your Identity Center instance. If an application ARN is included in the request to create an access grant, the grantee can only access the S3 data through this application.

Type: String

Length Constraints: Minimum length of 10. Maximum length of 1224.

Pattern: `arn:[^:]+:sso:.*$`

Required: No

Grantee

The user, group, or role to which you are granting access. You can grant access to an IAM user or role. If you have added your corporate directory to AWS IAM Identity Center and associated your Identity Center instance with your S3 Access Grants instance, the grantee can also be a corporate directory user or group.

Type: Grantee data type

Required: Yes

Permission

The type of access that you are granting to your S3 data, which can be set to one of the following values:

- `READ` – Grant read-only access to the S3 data.
- `WRITE` – Grant write-only access to the S3 data.
- `READWRITE` – Grant both read and write access to the S3 data.

Type: String

Valid Values: `READ | WRITE | READWRITE`

Required: Yes

S3PrefixType

The type of `S3SubPrefix`. The only possible value is `Object`. Pass this value if the access grant scope is an object. Do not pass this value if the access grant scope is a bucket or a bucket and a prefix.

Type: String

Valid Values: `Object`

Required: No

Tags

The AWS resource tags that you are adding to the access grant. Each tag is a label consisting of a user-defined key and value. Tags can help you manage, identify, organize, search for, and filter resources.

Type: Array of Tag data types

Array Members: Minimum number of 0 items. Maximum number of 50 items.

Required: No

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<CreateAccessGrantResult>
   <CreatedAt>timestamp</CreatedAt>
   <AccessGrantId>string</AccessGrantId>
   <AccessGrantArn>string</AccessGrantArn>
   <Grantee>
      <GranteeIdentifier>string</GranteeIdentifier>
      <GranteeType>string</GranteeType>
   </Grantee>
   <AccessGrantsLocationId>string</AccessGrantsLocationId>
   <AccessGrantsLocationConfiguration>
```

```
      <S3SubPrefix>string</S3SubPrefix>
   </AccessGrantsLocationConfiguration>
   <Permission>string</Permission>
   <ApplicationArn>string</ApplicationArn>
   <GrantScope>string</GrantScope>
</CreateAccessGrantResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

CreateAccessGrantResult

Root level tag for the CreateAccessGrantResult parameters.

Required: Yes

AccessGrantArn

The Amazon Resource Name (ARN) of the access grant.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `arn:[a-z\-]+:s3:[a-z0-9\-]+:\d{12}:access\-grants\/grant/[a-zA-Z0-9\-]+`

AccessGrantId

The ID of the access grant. S3 Access Grants auto-generates this ID when you create the access grant.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-]+`

AccessGrantsLocationConfiguration

The configuration options of the grant location. The grant location is the S3 path to the data to which you are granting access.

Type: AccessGrantsLocationConfiguration data type

AccessGrantsLocationId

The ID of the registered location to which you are granting access. S3 Access Grants assigns this ID when you register the location. S3 Access Grants assigns the ID `default` to the default location `s3://` and assigns an auto-generated ID to other locations that you register.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-]+`

ApplicationArn

The Amazon Resource Name (ARN) of an AWS IAM Identity Center application associated with your Identity Center instance. If the grant includes an application ARN, the grantee can only access the S3 data through this application.

Type: String

Length Constraints: Minimum length of 10. Maximum length of 1224.

Pattern: `arn:[^:]+:sso:.*$`

CreatedAt

The date and time when you created the access grant.

Type: Timestamp

Grantee

The user, group, or role to which you are granting access. You can grant access to an IAM user or role. If you have added your corporate directory to AWS IAM Identity Center and associated your Identity Center instance with your S3 Access Grants instance, the grantee can also be a corporate directory user or group.

Type: Grantee data type

GrantScope

The S3 path of the data to which you are granting access. It is the result of appending the `Subprefix` to the location scope.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2000.

Pattern: `^.+$`

Permission

The type of access that you are granting to your S3 data, which can be set to one of the following values:

- `READ` – Grant read-only access to the S3 data.
- `WRITE` – Grant write-only access to the S3 data.
- `READWRITE` – Grant both read and write access to the S3 data.

Type: String

Valid Values: `READ | WRITE | READWRITE`

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateAccessGrantsInstance

Service: Amazon S3 Control

Creates an S3 Access Grants instance, which serves as a logical grouping for access grants. You can create one S3 Access Grants instance per Region per account.

Permissions

You must have the `s3:CreateAccessGrantsInstance` permission to use this operation.

Additional Permissions

To associate an IAM Identity Center instance with your S3 Access Grants instance, you must also have the `sso:DescribeInstance`, `sso:CreateApplication`, `sso:PutApplicationGrant`, and `sso:PutApplicationAuthenticationMethod` permissions.

Request Syntax

```
POST /v20180820/accessgrantsinstance HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
<?xml version="1.0" encoding="UTF-8"?>
<CreateAccessGrantsInstanceRequest xmlns="http://awss3control.amazonaws.com/
doc/2018-08-20/">
   <IdentityCenterArn>string</IdentityCenterArn>
   <Tags>
      <Tag>
         <Key>string</Key>
         <Value>string</Value>
      </Tag>
   </Tags>
</CreateAccessGrantsInstanceRequest>
```

URI Request Parameters

The request uses the following URI parameters.

x-amz-account-id

The ID of the AWS account that is making this request.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request accepts the following data in XML format.

CreateAccessGrantsInstanceRequest

Root level tag for the CreateAccessGrantsInstanceRequest parameters.

Required: Yes

IdentityCenterArn

If you would like to associate your S3 Access Grants instance with an AWS IAM Identity Center instance, use this field to pass the Amazon Resource Name (ARN) of the AWS IAM Identity Center instance that you are associating with your S3 Access Grants instance. An IAM Identity Center instance is your corporate identity directory that you added to the IAM Identity Center. You can use the ListInstances API operation to retrieve a list of your Identity Center instances and their ARNs.

Type: String

Length Constraints: Minimum length of 10. Maximum length of 1224.

Pattern: `arn:[^:]+:sso::(\d{12}){0,1}:instance/.*$`

Required: No

Tags

The AWS resource tags that you are adding to the S3 Access Grants instance. Each tag is a label consisting of a user-defined key and value. Tags can help you manage, identify, organize, search for, and filter resources.

Type: Array of Tag data types

Array Members: Minimum number of 0 items. Maximum number of 50 items.

Required: No

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<CreateAccessGrantsInstanceResult>
   <CreatedAt>timestamp</CreatedAt>
   <AccessGrantsInstanceId>string</AccessGrantsInstanceId>
   <AccessGrantsInstanceArn>string</AccessGrantsInstanceArn>
   <IdentityCenterArn>string</IdentityCenterArn>
</CreateAccessGrantsInstanceResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

CreateAccessGrantsInstanceResult

Root level tag for the CreateAccessGrantsInstanceResult parameters.

Required: Yes

AccessGrantsInstanceArn

The Amazon Resource Name (ARN) of the S3 Access Grants instance.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `arn:[a-z\-]+:s3:[a-z0-9\-]+:\d{12}:access\-grants\/[a-zA-Z0-9\-]+`

AccessGrantsInstanceId

The ID of the S3 Access Grants instance. The ID is `default`. You can have one S3 Access Grants instance per Region per account.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-]+`

CreatedAt

The date and time when you created the S3 Access Grants instance.

Type: Timestamp

IdentityCenterArn

If you associated your S3 Access Grants instance with an AWS IAM Identity Center instance, this field returns the Amazon Resource Name (ARN) of the IAM Identity Center instance application; a subresource of the original Identity Center instance passed in the request. S3 Access Grants creates this Identity Center application for this specific S3 Access Grants instance.

Type: String

Length Constraints: Minimum length of 10. Maximum length of 1224.

Pattern: `arn:[^:]+:sso::(\d{12}){0,1}:instance/.*$`

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateAccessGrantsLocation

Service: Amazon S3 Control

The S3 data location that you would like to register in your S3 Access Grants instance. Your S3 data must be in the same Region as your S3 Access Grants instance. The location can be one of the following:

- The default S3 location `s3://`
- A bucket - `S3://<bucket-name>`
- A bucket and prefix - `S3://<bucket-name>/<prefix>`

When you register a location, you must include the IAM role that has permission to manage the S3 location that you are registering. Give S3 Access Grants permission to assume this role using a policy. S3 Access Grants assumes this role to manage access to the location and to vend temporary credentials to grantees or client applications.

Permissions

You must have the `s3:CreateAccessGrantsLocation` permission to use this operation.

Additional Permissions

You must also have the following permission for the specified IAM role: `iam:PassRole`

Request Syntax

```
POST /v20180820/accessgrantsinstance/location HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
<?xml version="1.0" encoding="UTF-8"?>
<CreateAccessGrantsLocationRequest xmlns="http://awss3control.amazonaws.com/
doc/2018-08-20/">
   <LocationScope>string</LocationScope>
   <IAMRoleArn>string</IAMRoleArn>
   <Tags>
      <Tag>
         <Key>string</Key>
         <Value>string</Value>
      </Tag>
   </Tags>
```

```
</CreateAccessGrantsLocationRequest>
```

URI Request Parameters

The request uses the following URI parameters.

x-amz-account-id

The ID of the AWS account that is making this request.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request accepts the following data in XML format.

CreateAccessGrantsLocationRequest

Root level tag for the CreateAccessGrantsLocationRequest parameters.

Required: Yes

IAMRoleArn

The Amazon Resource Name (ARN) of the IAM role for the registered location. S3 Access Grants assumes this role to manage access to the registered location.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `arn:[^:]+:iam::\d{12}:role/.*`

Required: Yes

LocationScope

The S3 path to the location that you are registering. The location scope can be the default S3 location `s3://`, the S3 path to a bucket `s3://<bucket>`, or the S3 path to a bucket and prefix

`s3://<bucket>/<prefix>`. A prefix in S3 is a string of characters at the beginning of an object key name used to organize the objects that you store in your S3 buckets. For example, object key names that start with the `engineering/` prefix or object key names that start with the `marketing/campaigns/` prefix.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2000.

Pattern: `^.+$`

Required: Yes

Tags

The AWS resource tags that you are adding to the S3 Access Grants location. Each tag is a label consisting of a user-defined key and value. Tags can help you manage, identify, organize, search for, and filter resources.

Type: Array of Tag data types

Array Members: Minimum number of 0 items. Maximum number of 50 items.

Required: No

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<CreateAccessGrantsLocationResult>
   <CreatedAt>timestamp</CreatedAt>
   <AccessGrantsLocationId>string</AccessGrantsLocationId>
   <AccessGrantsLocationArn>string</AccessGrantsLocationArn>
   <LocationScope>string</LocationScope>
   <IAMRoleArn>string</IAMRoleArn>
</CreateAccessGrantsLocationResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

CreateAccessGrantsLocationResult

Root level tag for the CreateAccessGrantsLocationResult parameters.

Required: Yes

AccessGrantsLocationArn

The Amazon Resource Name (ARN) of the location you are registering.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `arn:[a-z\-]+:s3:[a-z0-9\-]+:\d{12}:access\-grants\/location/[a-zA-Z0-9\-]+`

AccessGrantsLocationId

The ID of the registered location to which you are granting access. S3 Access Grants assigns this ID when you register the location. S3 Access Grants assigns the ID `default` to the default location `s3://` and assigns an auto-generated ID to other locations that you register.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-]+`

CreatedAt

The date and time when you registered the location.

Type: Timestamp

IAMRoleArn

The Amazon Resource Name (ARN) of the IAM role for the registered location. S3 Access Grants assumes this role to manage access to the registered location.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `arn:[^:]+:iam::\d{12}:role/.*`

LocationScope

The S3 URI path to the location that you are registering. The location scope can be the default S3 location `s3://`, the S3 path to a bucket, or the S3 path to a bucket and prefix. A prefix in S3 is a string of characters at the beginning of an object key name used to organize the objects that you store in your S3 buckets. For example, object key names that start with the `engineering/` prefix or object key names that start with the `marketing/campaigns/` prefix.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2000.

Pattern: `^.+$`

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateAccessPoint

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Creates an access point and associates it with the specified bucket. For more information, see Managing Data Access with Amazon S3 Access Points in the *Amazon S3 User Guide*.

> **Note**
>
> S3 on Outposts only supports VPC-style access points.
> For more information, see Accessing Amazon S3 on Outposts using virtual private cloud (VPC) only access points in the *Amazon S3 User Guide*.

All Amazon S3 on Outposts REST API requests for this action require an additional parameter of `x-amz-outpost-id` to be passed with the request. In addition, you must use an S3 on Outposts endpoint hostname prefix instead of `s3-control`. For an example of the request syntax for Amazon S3 on Outposts that uses the S3 on Outposts endpoint hostname prefix and the `x-amz-outpost-id` derived by using the access point ARN, see the Examples section.

The following actions are related to `CreateAccessPoint`:

- GetAccessPoint
- DeleteAccessPoint
- ListAccessPoints

Request Syntax

```
PUT /v20180820/accesspoint/name HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
<?xml version="1.0" encoding="UTF-8"?>
<CreateAccessPointRequest xmlns="http://awss3control.amazonaws.com/doc/2018-08-20/">
```

```
   <Bucket>string</Bucket>
   <VpcConfiguration>
      <VpcId>string</VpcId>
   </VpcConfiguration>
   <PublicAccessBlockConfiguration>
      <BlockPublicAcls>boolean</BlockPublicAcls>
      <BlockPublicPolicy>boolean</BlockPublicPolicy>
      <IgnorePublicAcls>boolean</IgnorePublicAcls>
      <RestrictPublicBuckets>boolean</RestrictPublicBuckets>
   </PublicAccessBlockConfiguration>
   <BucketAccountId>string</BucketAccountId>
</CreateAccessPointRequest>
```

URI Request Parameters

The request uses the following URI parameters.

name

The name you want to assign to this access point.

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: Yes

x-amz-account-id

The AWS account ID for the account that owns the specified access point.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request accepts the following data in XML format.

CreateAccessPointRequest

Root level tag for the CreateAccessPointRequest parameters.

Required: Yes

Bucket

The name of the bucket that you want to associate this access point with.

For using this parameter with Amazon S3 on Outposts with the REST API, you must specify the name and the x-amz-outpost-id as well.

For using this parameter with S3 on Outposts with the AWS SDK and CLI, you must specify the ARN of the bucket accessed in the format `arn:aws:s3-outposts:<Region>:<account-id>:outpost/<outpost-id>/bucket/<my-bucket-name>`. For example, to access the bucket `reports` through Outpost `my-outpost` owned by account `123456789012` in Region `us-west-2`, use the URL encoding of `arn:aws:s3-outposts:us-west-2:123456789012:outpost/my-outpost/bucket/reports`. The value must be URL encoded.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: Yes

BucketAccountId

The AWS account ID associated with the S3 bucket associated with this access point.

For same account access point when your bucket and access point belong to the same account owner, the `BucketAccountId` is not required. For cross-account access point when your bucket and access point are not in the same account, the `BucketAccountId` is required.

Type: String

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: No

PublicAccessBlockConfiguration

The `PublicAccessBlock` configuration that you want to apply to the access point.

Type: PublicAccessBlockConfiguration data type

Required: No

VpcConfiguration

If you include this field, Amazon S3 restricts access to this access point to requests from the specified virtual private cloud (VPC).

> **Note**
>
> This is required for creating an access point for Amazon S3 on Outposts buckets.

Type: VpcConfiguration data type

Required: No

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<CreateAccessPointResult>
   <AccessPointArn>string</AccessPointArn>
   <Alias>string</Alias>
</CreateAccessPointResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

CreateAccessPointResult

Root level tag for the CreateAccessPointResult parameters.

Required: Yes

AccessPointArn

The ARN of the access point.

> **Note**
>
> This is only supported by Amazon S3 on Outposts.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 128.

Alias

The name or alias of the access point.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[0-9a-z\\-]{63}`

Examples

Sample request for creating an access point for an Amazon S3 on Outposts bucket

This request creates an access point for S3 on Outposts bucket.

```
            PUT /v20180820/accesspoint/example-access-point HTTP/1.1
            Host:s3-outposts.<Region>.amazonaws.com
            x-amz-account-id: example-account-id
            x-amz-outpost-id: op-01ac5d28a6a232904
            <?xml version="1.0" encoding="UTF-8"?>
               <CreateAccessPointRequest xmlns="http://awss3control.amazonaws.com/
doc/2018-08-20/">
                  <Bucket>example-outpost-bucket </Bucket>
               </CreateAccessPointRequest>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2

- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateAccessPointForObjectLambda

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Creates an Object Lambda Access Point. For more information, see Transforming objects with Object Lambda Access Points in the *Amazon S3 User Guide*.

The following actions are related to `CreateAccessPointForObjectLambda`:

- DeleteAccessPointForObjectLambda
- GetAccessPointForObjectLambda
- ListAccessPointsForObjectLambda

Request Syntax

```
PUT /v20180820/accesspointforobjectlambda/name HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
<?xml version="1.0" encoding="UTF-8"?>
<CreateAccessPointForObjectLambdaRequest xmlns="http://awss3control.amazonaws.com/
doc/2018-08-20/">
   <Configuration>
      <AllowedFeatures>
         <AllowedFeature>string</AllowedFeature>
      </AllowedFeatures>
      <CloudWatchMetricsEnabled>boolean</CloudWatchMetricsEnabled>
      <SupportingAccessPoint>string</SupportingAccessPoint>
      <TransformationConfigurations>
         <TransformationConfiguration>
            <Actions>
               <Action>string</Action>
            </Actions>
            <ContentTransformation>
               <AwsLambda>
                  <FunctionArn>string</FunctionArn>
                  <FunctionPayload>string</FunctionPayload>
               </AwsLambda>
```

```
            </ContentTransformation>
         </TransformationConfiguration>
      </TransformationConfigurations>
   </Configuration>
</CreateAccessPointForObjectLambdaRequest>
```

URI Request Parameters

The request uses the following URI parameters.

name

The name you want to assign to this Object Lambda Access Point.

Length Constraints: Minimum length of 3. Maximum length of 45.

Pattern: `^[a-z0-9]([a-z0-9\-]*[a-z0-9])?$`

Required: Yes

x-amz-account-id

The AWS account ID for owner of the specified Object Lambda Access Point.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request accepts the following data in XML format.

CreateAccessPointForObjectLambdaRequest

Root level tag for the CreateAccessPointForObjectLambdaRequest parameters.

Required: Yes

Configuration

Object Lambda Access Point configuration as a JSON document.

Type: ObjectLambdaConfiguration data type

Required: Yes

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<CreateAccessPointForObjectLambdaResult>
   <ObjectLambdaAccessPointArn>string</ObjectLambdaAccessPointArn>
   <Alias>
      <Status>string</Status>
      <Value>string</Value>
   </Alias>
</CreateAccessPointForObjectLambdaResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

CreateAccessPointForObjectLambdaResult

Root level tag for the CreateAccessPointForObjectLambdaResult parameters.

Required: Yes

Alias

The alias of the Object Lambda Access Point.

Type: ObjectLambdaAccessPointAlias data type

ObjectLambdaAccessPointArn

Specifies the ARN for the Object Lambda Access Point.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `arn:[^:]+:s3-object-lambda:[^:]*:\d{12}:accesspoint/.*`

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateBucket

Service: Amazon S3 Control

> **Note**
>
> This action creates an Amazon S3 on Outposts bucket. To create an S3 bucket, see Create Bucket in the *Amazon S3 API Reference*.

Creates a new Outposts bucket. By creating the bucket, you become the bucket owner. To create an Outposts bucket, you must have S3 on Outposts. For more information, see Using Amazon S3 on Outposts in *Amazon S3 User Guide*.

Not every string is an acceptable bucket name. For information on bucket naming restrictions, see Working with Amazon S3 Buckets.

S3 on Outposts buckets support:

- Tags
- LifecycleConfigurations for deleting expired objects

For a complete list of restrictions and Amazon S3 feature limitations on S3 on Outposts, see Amazon S3 on Outposts Restrictions and Limitations.

For an example of the request syntax for Amazon S3 on Outposts that uses the S3 on Outposts endpoint hostname prefix and `x-amz-outpost-id` in your API request, see the Examples section.

The following actions are related to `CreateBucket` for Amazon S3 on Outposts:

- PutObject
- GetBucket
- DeleteBucket
- CreateAccessPoint
- PutAccessPointPolicy

Request Syntax

```
PUT /v20180820/bucket/name HTTP/1.1
```

```
Host: Bucket.s3-control.amazonaws.com
x-amz-acl: ACL
x-amz-grant-full-control: GrantFullControl
x-amz-grant-read: GrantRead
x-amz-grant-read-acp: GrantReadACP
x-amz-grant-write: GrantWrite
x-amz-grant-write-acp: GrantWriteACP
x-amz-bucket-object-lock-enabled: ObjectLockEnabledForBucket
x-amz-outpost-id: OutpostId
<?xml version="1.0" encoding="UTF-8"?>
<CreateBucketConfiguration xmlns="http://awss3control.amazonaws.com/doc/2018-08-20/">
   <LocationConstraint>string</LocationConstraint>
</CreateBucketConfiguration>
```

URI Request Parameters

The request uses the following URI parameters.

name

The name of the bucket.

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: Yes

x-amz-acl

The canned ACL to apply to the bucket.

> **Note**
>
> This is not supported by Amazon S3 on Outposts buckets.

Valid Values: `private | public-read | public-read-write | authenticated-read`

x-amz-bucket-object-lock-enabled

Specifies whether you want S3 Object Lock to be enabled for the new bucket.

> **Note**
>
> This is not supported by Amazon S3 on Outposts buckets.

x-amz-grant-full-control

Allows grantee the read, write, read ACP, and write ACP permissions on the bucket.

> **Note**
>
> This is not supported by Amazon S3 on Outposts buckets.

x-amz-grant-read

Allows grantee to list the objects in the bucket.

> **Note**
>
> This is not supported by Amazon S3 on Outposts buckets.

x-amz-grant-read-acp

Allows grantee to read the bucket ACL.

> **Note**
>
> This is not supported by Amazon S3 on Outposts buckets.

x-amz-grant-write

Allows grantee to create, overwrite, and delete any object in the bucket.

> **Note**
>
> This is not supported by Amazon S3 on Outposts buckets.

x-amz-grant-write-acp

Allows grantee to write the ACL for the applicable bucket.

> **Note**
>
> This is not supported by Amazon S3 on Outposts buckets.

x-amz-outpost-id

The ID of the Outposts where the bucket is being created.

> **Note**
>
> This ID is required by Amazon S3 on Outposts buckets.

Length Constraints: Minimum length of 1. Maximum length of 64.

Request Body

The request accepts the following data in XML format.

CreateBucketConfiguration

Root level tag for the CreateBucketConfiguration parameters.

Required: Yes

LocationConstraint

Specifies the Region where the bucket will be created. If you are creating a bucket on the US East (N. Virginia) Region (us-east-1), you do not need to specify the location.

> **Note**
>
> This is not supported by Amazon S3 on Outposts buckets.

Type: String

Valid Values: `EU | eu-west-1 | us-west-1 | us-west-2 | ap-south-1 | ap-southeast-1 | ap-southeast-2 | ap-northeast-1 | sa-east-1 | cn-north-1 | eu-central-1`

Required: No

Response Syntax

```
HTTP/1.1 200
Location: Location
<?xml version="1.0" encoding="UTF-8"?>
<CreateBucketResult>
   <BucketArn>string</BucketArn>
</CreateBucketResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The response returns the following HTTP headers.

Location

The location of the bucket.

The following data is returned in XML format by the service.

CreateBucketResult

Root level tag for the CreateBucketResult parameters.

Required: Yes

BucketArn

The Amazon Resource Name (ARN) of the bucket.

For using this parameter with Amazon S3 on Outposts with the REST API, you must specify the name and the x-amz-outpost-id as well.

For using this parameter with S3 on Outposts with the AWS SDK and CLI, you must specify the ARN of the bucket accessed in the format `arn:aws:s3-outposts:<Region>:<account-id>:outpost/<outpost-id>/bucket/<my-bucket-name>`. For example, to access the bucket `reports` through Outpost `my-outpost` owned by account `123456789012` in Region `us-west-2`, use the URL encoding of `arn:aws:s3-outposts:us-`

`west-2:123456789012:outpost/my-outpost/bucket/reports`. The value must be URL encoded.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 128.

Errors

BucketAlreadyExists

The requested Outposts bucket name is not available. The bucket namespace is shared by all users of the AWS Outposts in this Region. Select a different name and try again.

HTTP Status Code: 400

BucketAlreadyOwnedByYou

The Outposts bucket you tried to create already exists, and you own it.

HTTP Status Code: 400

Examples

Sample request to create an Amazon S3 on Outposts bucket

This request creates an Outposts bucket named `example-outpost-bucket`.

```
PUT /v20180820/bucket/example-outpost-bucket/  HTTP/1.1
Host:s3-outposts.<Region>.amazonaws.com
x-amz-outpost-id: op-01ac5d28a6a232904
Content-Length:
Date: Wed, 01 Mar  2006 12:00:00 GMT
Authorization: authorization string
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateJob

Service: Amazon S3 Control

This operation creates an S3 Batch Operations job.

You can use S3 Batch Operations to perform large-scale batch actions on Amazon S3 objects. Batch Operations can run a single action on lists of Amazon S3 objects that you specify. For more information, see S3 Batch Operations in the *Amazon S3 User Guide*.

Permissions

> For information about permissions required to use the Batch Operations, see Granting permissions for S3 Batch Operations in the *Amazon S3 User Guide*.

Related actions include:

- DescribeJob
- ListJobs
- UpdateJobPriority
- UpdateJobStatus
- JobOperation

Request Syntax

```
POST /v20180820/jobs HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
<?xml version="1.0" encoding="UTF-8"?>
<CreateJobRequest xmlns="http://awss3control.amazonaws.com/doc/2018-08-20/">
   <ConfirmationRequired>boolean</ConfirmationRequired>
   <Operation>
      <LambdaInvoke>
         <FunctionArn>string</FunctionArn>
         <InvocationSchemaVersion>string</InvocationSchemaVersion>
         <UserArguments>
            <entry>
               <key>string</key>
               <value>string</value>
            </entry>
```

```
      </UserArguments>
    </LambdaInvoke>
    <S3DeleteObjectTagging>
    </S3DeleteObjectTagging>
    <S3InitiateRestoreObject>
      <ExpirationInDays>integer</ExpirationInDays>
      <GlacierJobTier>string</GlacierJobTier>
    </S3InitiateRestoreObject>
    <S3PutObjectAcl>
      <AccessControlPolicy>
        <AccessControlList>
          <Grants>
            <S3Grant>
              <Grantee>
                <DisplayName>string</DisplayName>
                <Identifier>string</Identifier>
                <TypeIdentifier>string</TypeIdentifier>
              </Grantee>
              <Permission>string</Permission>
            </S3Grant>
          </Grants>
          <Owner>
            <DisplayName>string</DisplayName>
            <ID>string</ID>
          </Owner>
        </AccessControlList>
        <CannedAccessControlList>string</CannedAccessControlList>
      </AccessControlPolicy>
    </S3PutObjectAcl>
    <S3PutObjectCopy>
      <AccessControlGrants>
        <S3Grant>
          <Grantee>
            <DisplayName>string</DisplayName>
            <Identifier>string</Identifier>
            <TypeIdentifier>string</TypeIdentifier>
          </Grantee>
          <Permission>string</Permission>
        </S3Grant>
      </AccessControlGrants>
      <BucketKeyEnabled>boolean</BucketKeyEnabled>
      <CannedAccessControlList>string</CannedAccessControlList>
      <ChecksumAlgorithm>string</ChecksumAlgorithm>
      <MetadataDirective>string</MetadataDirective>
```

```
            <ModifiedSinceConstraint>timestamp</ModifiedSinceConstraint>
            <NewObjectMetadata>
               <CacheControl>string</CacheControl>
               <ContentDisposition>string</ContentDisposition>
               <ContentEncoding>string</ContentEncoding>
               <ContentLanguage>string</ContentLanguage>
               <ContentLength>long</ContentLength>
               <ContentMD5>string</ContentMD5>
               <ContentType>string</ContentType>
               <HttpExpiresDate>timestamp</HttpExpiresDate>
               <RequesterCharged>boolean</RequesterCharged>
               <SSEAlgorithm>string</SSEAlgorithm>
               <UserMetadata>
                  <entry>
                     <key>string</key>
                     <value>string</value>
                  </entry>
               </UserMetadata>
            </NewObjectMetadata>
            <NewObjectTagging>
               <S3Tag>
                  <Key>string</Key>
                  <Value>string</Value>
               </S3Tag>
            </NewObjectTagging>
            <ObjectLockLegalHoldStatus>string</ObjectLockLegalHoldStatus>
            <ObjectLockMode>string</ObjectLockMode>
            <ObjectLockRetainUntilDate>timestamp</ObjectLockRetainUntilDate>
            <RedirectLocation>string</RedirectLocation>
            <RequesterPays>boolean</RequesterPays>
            <SSEAwsKmsKeyId>string</SSEAwsKmsKeyId>
            <StorageClass>string</StorageClass>
            <TargetKeyPrefix>string</TargetKeyPrefix>
            <TargetResource>string</TargetResource>
            <UnModifiedSinceConstraint>timestamp</UnModifiedSinceConstraint>
         </S3PutObjectCopy>
         <S3PutObjectLegalHold>
            <LegalHold>
               <Status>string</Status>
            </LegalHold>
         </S3PutObjectLegalHold>
         <S3PutObjectRetention>
            <BypassGovernanceRetention>boolean</BypassGovernanceRetention>
            <Retention>
```

```
            <Mode>string</Mode>
            <RetainUntilDate>timestamp</RetainUntilDate>
         </Retention>
      </S3PutObjectRetention>
      <S3PutObjectTagging>
         <TagSet>
            <S3Tag>
               <Key>string</Key>
               <Value>string</Value>
            </S3Tag>
         </TagSet>
      </S3PutObjectTagging>
      <S3ReplicateObject>
      </S3ReplicateObject>
   </Operation>
   <Report>
      <Bucket>string</Bucket>
      <Enabled>boolean</Enabled>
      <Format>string</Format>
      <Prefix>string</Prefix>
      <ReportScope>string</ReportScope>
   </Report>
   <ClientRequestToken>string</ClientRequestToken>
   <Manifest>
      <Location>
         <ETag>string</ETag>
         <ObjectArn>string</ObjectArn>
         <ObjectVersionId>string</ObjectVersionId>
      </Location>
      <Spec>
         <Fields>
            <member>string</member>
         </Fields>
         <Format>string</Format>
      </Spec>
   </Manifest>
   <Description>string</Description>
   <Priority>integer</Priority>
   <RoleArn>string</RoleArn>
   <Tags>
      <S3Tag>
         <Key>string</Key>
         <Value>string</Value>
      </S3Tag>
```

```
    </Tags>
    <ManifestGenerator>
       <S3JobManifestGenerator>
          <EnableManifestOutput>boolean</EnableManifestOutput>
          <ExpectedBucketOwner>string</ExpectedBucketOwner>
          <Filter>
             <CreatedAfter>timestamp</CreatedAfter>
             <CreatedBefore>timestamp</CreatedBefore>
             <EligibleForReplication>boolean</EligibleForReplication>
             <KeyNameConstraint>
                <MatchAnyPrefix>
                   <member>string</member>
                </MatchAnyPrefix>
                <MatchAnySubstring>
                   <member>string</member>
                </MatchAnySubstring>
                <MatchAnySuffix>
                   <member>string</member>
                </MatchAnySuffix>
             </KeyNameConstraint>
             <MatchAnyStorageClass>
                <member>string</member>
             </MatchAnyStorageClass>
             <ObjectReplicationStatuses>
                <member>string</member>
             </ObjectReplicationStatuses>
             <ObjectSizeGreaterThanBytes>long</ObjectSizeGreaterThanBytes>
             <ObjectSizeLessThanBytes>long</ObjectSizeLessThanBytes>
          </Filter>
          <ManifestOutputLocation>
             <Bucket>string</Bucket>
             <ExpectedManifestBucketOwner>string</ExpectedManifestBucketOwner>
             <ManifestEncryption>
                <SSE-KMS>
                   <KeyId>string</KeyId>
                </SSE-KMS>
                <SSE-S3>
                </SSE-S3>
             </ManifestEncryption>
             <ManifestFormat>string</ManifestFormat>
             <ManifestPrefix>string</ManifestPrefix>
          </ManifestOutputLocation>
          <SourceBucket>string</SourceBucket>
       </S3JobManifestGenerator>
```

```
    </ManifestGenerator>
</CreateJobRequest>
```

URI Request Parameters

The request uses the following URI parameters.

x-amz-account-id

The AWS account ID that creates the job.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request accepts the following data in XML format.

CreateJobRequest

Root level tag for the CreateJobRequest parameters.

Required: Yes

ClientRequestToken

An idempotency token to ensure that you don't accidentally submit the same request twice. You can use any string up to the maximum length.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Required: Yes

ConfirmationRequired

Indicates whether confirmation is required before Amazon S3 runs the job. Confirmation is only required for jobs created through the Amazon S3 console.

Type: Boolean

Required: No

Description

A description for this job. You can use any string within the permitted length. Descriptions don't need to be unique and can be used for multiple jobs.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Required: No

Manifest

Configuration parameters for the manifest.

Type: JobManifest data type

Required: No

ManifestGenerator

The attribute container for the ManifestGenerator details. Jobs must be created with either a manifest file or a ManifestGenerator, but not both.

Type: JobManifestGenerator data type

Note: This object is a Union. Only one member of this object can be specified or returned.

Required: No

Operation

The action that you want this job to perform on every object listed in the manifest. For more information about the available actions, see Operations in the *Amazon S3 User Guide*.

Type: JobOperation data type

Required: Yes

Priority

The numerical priority for this job. Higher numbers indicate higher priority.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 2147483647.

Required: Yes

Report

Configuration parameters for the optional job-completion report.

Type: JobReport data type

Required: Yes

RoleArn

The Amazon Resource Name (ARN) for the AWS Identity and Access Management (IAM) role that Batch Operations will use to run this job's action on every object in the manifest.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `arn:[^:]+:iam::\d{12}:role/.*`

Required: Yes

Tags

A set of tags to associate with the S3 Batch Operations job. This is an optional parameter.

Type: Array of S3Tag data types

Required: No

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<CreateJobResult>
   <JobId>string</JobId>
</CreateJobResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

CreateJobResult

Root level tag for the CreateJobResult parameters.

Required: Yes

JobId

The ID for this job. Amazon S3 generates this ID automatically and returns it after a successful `Create Job` request.

Type: String

Length Constraints: Minimum length of 5. Maximum length of 36.

Pattern: `[a-zA-Z0-9\-\_]+`

Errors

BadRequestException

HTTP Status Code: 400

IdempotencyException

HTTP Status Code: 400

InternalServiceException

HTTP Status Code: 500

TooManyRequestsException

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateMultiRegionAccessPoint

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Creates a Multi-Region Access Point and associates it with the specified buckets. For more information about creating Multi-Region Access Points, see Creating Multi-Region Access Points in the *Amazon S3 User Guide*.

This action will always be routed to the US West (Oregon) Region. For more information about the restrictions around working with Multi-Region Access Points, see Multi-Region Access Point restrictions and limitations in the *Amazon S3 User Guide*.

This request is asynchronous, meaning that you might receive a response before the command has completed. When this request provides a response, it provides a token that you can use to monitor the status of the request with `DescribeMultiRegionAccessPointOperation`.

The following actions are related to `CreateMultiRegionAccessPoint`:

- DeleteMultiRegionAccessPoint
- DescribeMultiRegionAccessPointOperation
- GetMultiRegionAccessPoint
- ListMultiRegionAccessPoints

Request Syntax

```
POST /v20180820/async-requests/mrap/create HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
<?xml version="1.0" encoding="UTF-8"?>
<CreateMultiRegionAccessPointRequest xmlns="http://awss3control.amazonaws.com/
doc/2018-08-20/">
   <ClientToken>string</ClientToken>
   <Details>
      <Name>string</Name>
      <PublicAccessBlock>
```

```
            <BlockPublicAcls>boolean</BlockPublicAcls>
            <BlockPublicPolicy>boolean</BlockPublicPolicy>
            <IgnorePublicAcls>boolean</IgnorePublicAcls>
            <RestrictPublicBuckets>boolean</RestrictPublicBuckets>
         </PublicAccessBlock>
         <Regions>
            <Region>
               <Bucket>string</Bucket>
               <BucketAccountId>string</BucketAccountId>
            </Region>
         </Regions>
      </Details>
</CreateMultiRegionAccessPointRequest>
```

URI Request Parameters

The request uses the following URI parameters.

x-amz-account-id

The AWS account ID for the owner of the Multi-Region Access Point. The owner of the Multi-Region Access Point also must own the underlying buckets.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request accepts the following data in XML format.

CreateMultiRegionAccessPointRequest

Root level tag for the CreateMultiRegionAccessPointRequest parameters.

Required: Yes

ClientToken

An idempotency token used to identify the request and guarantee that requests are unique.

Type: String

Length Constraints: Maximum length of 64.

Pattern: \S+

Required: Yes

Details

A container element containing details about the Multi-Region Access Point.

Type: CreateMultiRegionAccessPointInput data type

Required: Yes

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<CreateMultiRegionAccessPointResult>
   <RequestTokenARN>string</RequestTokenARN>
</CreateMultiRegionAccessPointResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

CreateMultiRegionAccessPointResult

Root level tag for the CreateMultiRegionAccessPointResult parameters.

Required: Yes

RequestTokenARN

The request token associated with the request. You can use this token with DescribeMultiRegionAccessPointOperation to determine the status of asynchronous requests.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: arn:.+

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateStorageLensGroup

Service: Amazon S3 Control

Creates a new S3 Storage Lens group and associates it with the specified AWS account ID. An S3 Storage Lens group is a custom grouping of objects based on prefix, suffix, object tags, object size, object age, or a combination of these filters. For each Storage Lens group that you've created, you can also optionally add AWS resource tags. For more information about S3 Storage Lens groups, see Working with S3 Storage Lens groups.

To use this operation, you must have the permission to perform the `s3:CreateStorageLensGroup` action. If you're trying to create a Storage Lens group with AWS resource tags, you must also have permission to perform the `s3:TagResource` action. For more information about the required Storage Lens Groups permissions, see Setting account permissions to use S3 Storage Lens groups.

For information about Storage Lens groups errors, see List of Amazon S3 Storage Lens error codes.

Request Syntax

```
POST /v20180820/storagelensgroup HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
<?xml version="1.0" encoding="UTF-8"?>
<CreateStorageLensGroupRequest xmlns="http://awss3control.amazonaws.com/
doc/2018-08-20/">
   <StorageLensGroup>
      <Filter>
         <And>
            <MatchAnyPrefix>
               <Prefix>string</Prefix>
            </MatchAnyPrefix>
            <MatchAnySuffix>
               <Suffix>string</Suffix>
            </MatchAnySuffix>
            <MatchAnyTag>
               <Tag>
                  <Key>string</Key>
                  <Value>string</Value>
               </Tag>
            </MatchAnyTag>
            <MatchObjectAge>
               <DaysGreaterThan>integer</DaysGreaterThan>
```

```
            <DaysLessThan>integer</DaysLessThan>
         </MatchObjectAge>
         <MatchObjectSize>
            <BytesGreaterThan>long</BytesGreaterThan>
            <BytesLessThan>long</BytesLessThan>
         </MatchObjectSize>
      </And>
      <MatchAnyPrefix>
         <Prefix>string</Prefix>
      </MatchAnyPrefix>
      <MatchAnySuffix>
         <Suffix>string</Suffix>
      </MatchAnySuffix>
      <MatchAnyTag>
         <Tag>
            <Key>string</Key>
            <Value>string</Value>
         </Tag>
      </MatchAnyTag>
      <MatchObjectAge>
         <DaysGreaterThan>integer</DaysGreaterThan>
         <DaysLessThan>integer</DaysLessThan>
      </MatchObjectAge>
      <MatchObjectSize>
         <BytesGreaterThan>long</BytesGreaterThan>
         <BytesLessThan>long</BytesLessThan>
      </MatchObjectSize>
      <Or>
         <MatchAnyPrefix>
            <Prefix>string</Prefix>
         </MatchAnyPrefix>
         <MatchAnySuffix>
            <Suffix>string</Suffix>
         </MatchAnySuffix>
         <MatchAnyTag>
            <Tag>
               <Key>string</Key>
               <Value>string</Value>
            </Tag>
         </MatchAnyTag>
         <MatchObjectAge>
            <DaysGreaterThan>integer</DaysGreaterThan>
            <DaysLessThan>integer</DaysLessThan>
         </MatchObjectAge>
```

```
            <MatchObjectSize>
               <BytesGreaterThan>long</BytesGreaterThan>
               <BytesLessThan>long</BytesLessThan>
            </MatchObjectSize>
         </Or>
      </Filter>
      <Name>string</Name>
      <StorageLensGroupArn>string</StorageLensGroupArn>
   </StorageLensGroup>
   <Tags>
      <Tag>
         <Key>string</Key>
         <Value>string</Value>
      </Tag>
   </Tags>
</CreateStorageLensGroupRequest>
```

URI Request Parameters

The request uses the following URI parameters.

x-amz-account-id

The AWS account ID that the Storage Lens group is created from and associated with.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request accepts the following data in XML format.

CreateStorageLensGroupRequest

Root level tag for the CreateStorageLensGroupRequest parameters.

Required: Yes

StorageLensGroup

The Storage Lens group configuration.

Type: StorageLensGroup data type

Required: Yes

Tags

The AWS resource tags that you're adding to your Storage Lens group. This parameter is optional.

Type: Array of Tag data types

Array Members: Minimum number of 0 items. Maximum number of 50 items.

Required: No

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteAccessGrant

Service: Amazon S3 Control

Deletes the access grant from the S3 Access Grants instance. You cannot undo an access grant deletion and the grantee will no longer have access to the S3 data.

Permissions

You must have the `s3:DeleteAccessGrant` permission to use this operation.

Request Syntax

```
DELETE /v20180820/accessgrantsinstance/grant/id HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

id

The ID of the access grant. S3 Access Grants auto-generates this ID when you create the access grant.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-]+`

Required: Yes

x-amz-account-id

The ID of the AWS account that is making this request.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteAccessGrantsInstance

Service: Amazon S3 Control

Deletes your S3 Access Grants instance. You must first delete the access grants and locations before S3 Access Grants can delete the instance. See DeleteAccessGrant and DeleteAccessGrantsLocation. If you have associated an IAM Identity Center instance with your S3 Access Grants instance, you must first dissassociate the Identity Center instance from the S3 Access Grants instance before you can delete the S3 Access Grants instance. See AssociateAccessGrantsIdentityCenter and DissociateAccessGrantsIdentityCenter.

Permissions

You must have the `s3:DeleteAccessGrantsInstance` permission to use this operation.

Request Syntax

```
DELETE /v20180820/accessgrantsinstance HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

x-amz-account-id

The ID of the AWS account that is making this request.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteAccessGrantsInstanceResourcePolicy

Service: Amazon S3 Control

Deletes the resource policy of the S3 Access Grants instance. The resource policy is used to manage cross-account access to your S3 Access Grants instance. By deleting the resource policy, you delete any cross-account permissions to your S3 Access Grants instance.

Permissions

You must have the `s3:DeleteAccessGrantsInstanceResourcePolicy` permission to use this operation.

Request Syntax

```
DELETE /v20180820/accessgrantsinstance/resourcepolicy HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

x-amz-account-id

The ID of the AWS account that is making this request.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteAccessGrantsLocation

Service: Amazon S3 Control

Deregisters a location from your S3 Access Grants instance. You can only delete a location registration from an S3 Access Grants instance if there are no grants associated with this location. See Delete a grant for information on how to delete grants. You need to have at least one registered location in your S3 Access Grants instance in order to create access grants.

Permissions

You must have the `s3:DeleteAccessGrantsLocation` permission to use this operation.

Request Syntax

```
DELETE /v20180820/accessgrantsinstance/location/id HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

id

The ID of the registered location that you are deregistering from your S3 Access Grants instance. S3 Access Grants assigned this ID when you registered the location. S3 Access Grants assigns the ID `default` to the default location `s3://` and assigns an auto-generated ID to other locations that you register.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-]+`

Required: Yes

x-amz-account-id

The ID of the AWS account that is making this request.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteAccessPoint

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Deletes the specified access point.

All Amazon S3 on Outposts REST API requests for this action require an additional parameter of `x-amz-outpost-id` to be passed with the request. In addition, you must use an S3 on Outposts endpoint hostname prefix instead of `s3-control`. For an example of the request syntax for Amazon S3 on Outposts that uses the S3 on Outposts endpoint hostname prefix and the `x-amz-outpost-id` derived by using the access point ARN, see the Examples section.

The following actions are related to `DeleteAccessPoint`:

- CreateAccessPoint
- GetAccessPoint
- ListAccessPoints

Request Syntax

```
DELETE /v20180820/accesspoint/name HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

name

The name of the access point you want to delete.

For using this parameter with Amazon S3 on Outposts with the REST API, you must specify the name and the x-amz-outpost-id as well.

For using this parameter with S3 on Outposts with the AWS SDK and CLI, you must specify the ARN of the access point accessed in the format `arn:aws:s3-outposts:<Region>:<account-id>:outpost/<outpost-id>/accesspoint/<my-accesspoint-name>`. For example, to access the access point `reports-ap` through Outpost `my-outpost` owned by account `123456789012` in Region `us-west-2`, use the URL encoding of `arn:aws:s3-outposts:us-west-2:123456789012:outpost/my-outpost/accesspoint/reports-ap`. The value must be URL encoded.

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: Yes

x-amz-account-id

The AWS account ID for the account that owns the specified access point.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

DeleteAccessPoint syntax for Amazon S3 on Outposts

The following request deletes the access point of the specified Outpost.

```
DELETE  /v20180820/accesspoint/example-access-point  HTTP/1.1
```

```
Host: s3-outposts.<Region>.amazonaws.com
Date: Wed, 28 Oct 2020 22:32:00 GMT
x-amz-account-id: example-account-id
x-amz-outpost-id: op-01ac5d28a6a232904
Authorization: authorization string
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteAccessPointForObjectLambda

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Deletes the specified Object Lambda Access Point.

The following actions are related to `DeleteAccessPointForObjectLambda`:

- CreateAccessPointForObjectLambda
- GetAccessPointForObjectLambda
- ListAccessPointsForObjectLambda

Request Syntax

```
DELETE /v20180820/accesspointforobjectlambda/name HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

name

The name of the access point you want to delete.

Length Constraints: Minimum length of 3. Maximum length of 45.

Pattern: `^[a-z0-9]([a-z0-9\-]*[a-z0-9])?$`

Required: Yes

x-amz-account-id

The account ID for the account that owns the specified Object Lambda Access Point.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteAccessPointPolicy

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Deletes the access point policy for the specified access point.

All Amazon S3 on Outposts REST API requests for this action require an additional parameter of `x-amz-outpost-id` to be passed with the request. In addition, you must use an S3 on Outposts endpoint hostname prefix instead of `s3-control`. For an example of the request syntax for Amazon S3 on Outposts that uses the S3 on Outposts endpoint hostname prefix and the `x-amz-outpost-id` derived by using the access point ARN, see the Examples section.

The following actions are related to `DeleteAccessPointPolicy`:

- PutAccessPointPolicy
- GetAccessPointPolicy

Request Syntax

```
DELETE /v20180820/accesspoint/name/policy HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

name

The name of the access point whose policy you want to delete.

For using this parameter with Amazon S3 on Outposts with the REST API, you must specify the name and the x-amz-outpost-id as well.

For using this parameter with S3 on Outposts with the AWS SDK and CLI, you must specify the ARN of the access point accessed in the format `arn:aws:s3-`

outposts:<Region>:<account-id>:outpost/<outpost-id>/accesspoint/<my-accesspoint-name>. For example, to access the access point reports-ap through Outpost my-outpost owned by account 123456789012 in Region us-west-2, use the URL encoding of arn:aws:s3-outposts:us-west-2:123456789012:outpost/my-outpost/accesspoint/reports-ap. The value must be URL encoded.

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: Yes

x-amz-account-id

The account ID for the account that owns the specified access point.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

Sample request syntax for using the DeleteAccessPointPolicy action with Amazon S3 on Outposts access point

This example illustrates one usage of DeleteAccessPointPolicy.

```
DELETE  /v20180820/accesspoint/example-access-point/policy  HTTP/1.1
Host: s3-outposts.<Region>.amazonaws.com
```

```
Date: Wed, 28 Oct 2020 22:32:00 GMT
Authorization: authorization string
x-amz-account-id: example-account-id
x-amz-outpost-id: op-01ac5d28a6a232904
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteAccessPointPolicyForObjectLambda

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Removes the resource policy for an Object Lambda Access Point.

The following actions are related to `DeleteAccessPointPolicyForObjectLambda`:

- GetAccessPointPolicyForObjectLambda
- PutAccessPointPolicyForObjectLambda

Request Syntax

```
DELETE /v20180820/accesspointforobjectlambda/name/policy HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

name

The name of the Object Lambda Access Point you want to delete the policy for.

Length Constraints: Minimum length of 3. Maximum length of 45.

Pattern: `^[a-z0-9]([a-z0-9\-]*[a-z0-9])?$`

Required: Yes

x-amz-account-id

The account ID for the account that owns the specified Object Lambda Access Point.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteBucket

Service: Amazon S3 Control

> **Note**
>
> This action deletes an Amazon S3 on Outposts bucket. To delete an S3 bucket, see DeleteBucket in the *Amazon S3 API Reference*.

Deletes the Amazon S3 on Outposts bucket. All objects (including all object versions and delete markers) in the bucket must be deleted before the bucket itself can be deleted. For more information, see Using Amazon S3 on Outposts in *Amazon S3 User Guide*.

All Amazon S3 on Outposts REST API requests for this action require an additional parameter of `x-amz-outpost-id` to be passed with the request. In addition, you must use an S3 on Outposts endpoint hostname prefix instead of `s3-control`. For an example of the request syntax for Amazon S3 on Outposts that uses the S3 on Outposts endpoint hostname prefix and the `x-amz-outpost-id` derived by using the access point ARN, see the Examples section.

Related Resources

- CreateBucket
- GetBucket
- DeleteObject

Request Syntax

```
DELETE /v20180820/bucket/name HTTP/1.1
Host: Bucket.s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

name

Specifies the bucket being deleted.

For using this parameter with Amazon S3 on Outposts with the REST API, you must specify the name and the x-amz-outpost-id as well.

For using this parameter with S3 on Outposts with the AWS SDK and CLI, you must specify the ARN of the bucket accessed in the format `arn:aws:s3-outposts:<Region>:<account-id>:outpost/<outpost-id>/bucket/<my-bucket-name>`. For example, to access the bucket `reports` through Outpost `my-outpost` owned by account `123456789012` in Region `us-west-2`, use the URL encoding of `arn:aws:s3-outposts:us-west-2:123456789012:outpost/my-outpost/bucket/reports`. The value must be URL encoded.

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: Yes

x-amz-account-id

The account ID that owns the Outposts bucket.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

Sample request to delete an Amazon S3 on Outposts bucket

This request deletes the Outposts bucket named `example-outpost-bucket`.

```
DELETE /v20180820/bucket/example-outpost-bucket/ HTTP/1.1
Host: s3-outposts.<Region>.amazonaws.com
x-amz-outpost-id: op-01ac5d28a6a232904
x-amz-account-id:example-account-id
Date: Wed, 01 Mar  2006 12:00:00 GMT
Authorization: authorization string
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteBucketLifecycleConfiguration

Service: Amazon S3 Control

> **Note**
>
> This action deletes an Amazon S3 on Outposts bucket's lifecycle configuration. To delete an S3 bucket's lifecycle configuration, see DeleteBucketLifecycle in the *Amazon S3 API Reference*.

Deletes the lifecycle configuration from the specified Outposts bucket. Amazon S3 on Outposts removes all the lifecycle configuration rules in the lifecycle subresource associated with the bucket. Your objects never expire, and Amazon S3 on Outposts no longer automatically deletes any objects on the basis of rules contained in the deleted lifecycle configuration. For more information, see Using Amazon S3 on Outposts in *Amazon S3 User Guide*.

To use this operation, you must have permission to perform the `s3-outposts:PutLifecycleConfiguration` action. By default, the bucket owner has this permission and the Outposts bucket owner can grant this permission to others.

All Amazon S3 on Outposts REST API requests for this action require an additional parameter of `x-amz-outpost-id` to be passed with the request. In addition, you must use an S3 on Outposts endpoint hostname prefix instead of `s3-control`. For an example of the request syntax for Amazon S3 on Outposts that uses the S3 on Outposts endpoint hostname prefix and the `x-amz-outpost-id` derived by using the access point ARN, see the Examples section.

For more information about object expiration, see Elements to Describe Lifecycle Actions.

Related actions include:

- PutBucketLifecycleConfiguration
- GetBucketLifecycleConfiguration

Request Syntax

```
DELETE /v20180820/bucket/name/lifecycleconfiguration HTTP/1.1
Host: Bucket.s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

name

Specifies the bucket.

For using this parameter with Amazon S3 on Outposts with the REST API, you must specify the name and the x-amz-outpost-id as well.

For using this parameter with S3 on Outposts with the AWS SDK and CLI, you must specify the ARN of the bucket accessed in the format `arn:aws:s3-outposts:<Region>:<account-id>:outpost/<outpost-id>/bucket/<my-bucket-name>`. For example, to access the bucket `reports` through Outpost `my-outpost` owned by account `123456789012` in Region `us-west-2`, use the URL encoding of `arn:aws:s3-outposts:us-west-2:123456789012:outpost/my-outpost/bucket/reports`. The value must be URL encoded.

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: Yes

x-amz-account-id

The account ID of the lifecycle configuration to delete.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

Sample request to delete the lifecycle configuration of an Amazon S3 on Outposts bucket

This example illustrates one usage of DeleteBucketLifecycleConfiguration.

```
                  DELETE /v20180820/bucket/example-outpost-bucket/
lifecycleconfiguration HTTP/1.1
                  Host: s3-outposts.<Region>.amazonaws.com
                  x-amz-outpost-id: op-01ac5d28a6a232904
                  x-amz-account-id:example-account-id
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteBucketPolicy

Service: Amazon S3 Control

> **Note**
>
> This action deletes an Amazon S3 on Outposts bucket policy. To delete an S3 bucket policy, see DeleteBucketPolicy in the *Amazon S3 API Reference*.

This implementation of the DELETE action uses the policy subresource to delete the policy of a specified Amazon S3 on Outposts bucket. If you are using an identity other than the root user of the AWS account that owns the bucket, the calling identity must have the `s3-outposts:DeleteBucketPolicy` permissions on the specified Outposts bucket and belong to the bucket owner's account to use this action. For more information, see Using Amazon S3 on Outposts in *Amazon S3 User Guide*.

If you don't have `DeleteBucketPolicy` permissions, Amazon S3 returns a `403 Access Denied` error. If you have the correct permissions, but you're not using an identity that belongs to the bucket owner's account, Amazon S3 returns a `405 Method Not Allowed` error.

> **Important**
>
> As a security precaution, the root user of the AWS account that owns a bucket can always use this action, even if the policy explicitly denies the root user the ability to perform this action.

For more information about bucket policies, see Using Bucket Policies and User Policies.

All Amazon S3 on Outposts REST API requests for this action require an additional parameter of `x-amz-outpost-id` to be passed with the request. In addition, you must use an S3 on Outposts endpoint hostname prefix instead of `s3-control`. For an example of the request syntax for Amazon S3 on Outposts that uses the S3 on Outposts endpoint hostname prefix and the `x-amz-outpost-id` derived by using the access point ARN, see the Examples section.

The following actions are related to `DeleteBucketPolicy`:

- GetBucketPolicy
- PutBucketPolicy

Request Syntax

```
DELETE /v20180820/bucket/name/policy HTTP/1.1
Host: Bucket.s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

name

Specifies the bucket.

For using this parameter with Amazon S3 on Outposts with the REST API, you must specify the name and the x-amz-outpost-id as well.

For using this parameter with S3 on Outposts with the AWS SDK and CLI, you must specify the ARN of the bucket accessed in the format `arn:aws:s3-outposts:<Region>:<account-id>:outpost/<outpost-id>/bucket/<my-bucket-name>`. For example, to access the bucket `reports` through Outpost `my-outpost` owned by account `123456789012` in Region `us-west-2`, use the URL encoding of `arn:aws:s3-outposts:us-west-2:123456789012:outpost/my-outpost/bucket/reports`. The value must be URL encoded.

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: Yes

x-amz-account-id

The account ID of the Outposts bucket.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

Sample request for deleting a bucket policy for an Amazon S3 on Outposts bucket

This example illustrates one usage of DeleteBucketPolicy.

```
DELETE v20180820/bucket/example-outpost-bucket/policy  HTTP/1.1
Host: s3-outposts.<Region>.amazonaws.com
x-amz-account-id: example-account-id
x-amz-outpost-id: op-01ac5d28a6a232904
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteBucketReplication

Service: Amazon S3 Control

> **Note**
>
> This operation deletes an Amazon S3 on Outposts bucket's replication configuration. To delete an S3 bucket's replication configuration, see DeleteBucketReplication in the *Amazon S3 API Reference*.

Deletes the replication configuration from the specified S3 on Outposts bucket.

To use this operation, you must have permissions to perform the `s3-outposts:PutReplicationConfiguration` action. The Outposts bucket owner has this permission by default and can grant it to others. For more information about permissions, see Setting up IAM with S3 on Outposts and Managing access to S3 on Outposts buckets in the *Amazon S3 User Guide*.

> **Note**
>
> It can take a while to propagate `PUT` or `DELETE` requests for a replication configuration to all S3 on Outposts systems. Therefore, the replication configuration that's returned by a `GET` request soon after a `PUT` or `DELETE` request might return a more recent result than what's on the Outpost. If an Outpost is offline, the delay in updating the replication configuration on that Outpost can be significant.

All Amazon S3 on Outposts REST API requests for this action require an additional parameter of `x-amz-outpost-id` to be passed with the request. In addition, you must use an S3 on Outposts endpoint hostname prefix instead of `s3-control`. For an example of the request syntax for Amazon S3 on Outposts that uses the S3 on Outposts endpoint hostname prefix and the `x-amz-outpost-id` derived by using the access point ARN, see the Examples section.

For information about S3 replication on Outposts configuration, see Replicating objects for S3 on Outposts in the *Amazon S3 User Guide*.

The following operations are related to `DeleteBucketReplication`:

- PutBucketReplication

- GetBucketReplication

Request Syntax

```
DELETE /v20180820/bucket/name/replication HTTP/1.1
Host: Bucket.s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

name

Specifies the S3 on Outposts bucket to delete the replication configuration for.

For using this parameter with Amazon S3 on Outposts with the REST API, you must specify the name and the x-amz-outpost-id as well.

For using this parameter with S3 on Outposts with the AWS SDK and CLI, you must specify the ARN of the bucket accessed in the format `arn:aws:s3-outposts:<Region>:<account-id>:outpost/<outpost-id>/bucket/<my-bucket-name>`. For example, to access the bucket `reports` through Outpost `my-outpost` owned by account `123456789012` in Region `us-west-2`, use the URL encoding of `arn:aws:s3-outposts:us-west-2:123456789012:outpost/my-outpost/bucket/reports`. The value must be URL encoded.

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: Yes

x-amz-account-id

The AWS account ID of the Outposts bucket to delete the replication configuration for.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

Sample Request

The following `DELETE` request deletes the `replication` subresource from the specified S3 on Outposts bucket. This request removes the replication configuration that is set for the bucket.

```
DELETE /v20180820/bucket/example-outpost-bucket/replication HTTP/1.1
Host: s3-outposts.<Region>.amazonaws.com
x-amz-outpost-id: op-01ac5d28a6a232904
x-amz-account-id:example-account-id
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python

- AWS SDK for Ruby V3

DeleteBucketTagging

Service: Amazon S3 Control

> **Note**
>
> This action deletes an Amazon S3 on Outposts bucket's tags. To delete an S3 bucket tags, see DeleteBucketTagging in the *Amazon S3 API Reference*.

Deletes the tags from the Outposts bucket. For more information, see Using Amazon S3 on Outposts in *Amazon S3 User Guide*.

To use this action, you must have permission to perform the `PutBucketTagging` action. By default, the bucket owner has this permission and can grant this permission to others.

All Amazon S3 on Outposts REST API requests for this action require an additional parameter of `x-amz-outpost-id` to be passed with the request. In addition, you must use an S3 on Outposts endpoint hostname prefix instead of `s3-control`. For an example of the request syntax for Amazon S3 on Outposts that uses the S3 on Outposts endpoint hostname prefix and the `x-amz-outpost-id` derived by using the access point ARN, see the Examples section.

The following actions are related to `DeleteBucketTagging`:

- GetBucketTagging
- PutBucketTagging

Request Syntax

```
DELETE /v20180820/bucket/name/tagging HTTP/1.1
Host: Bucket.s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

name

The bucket ARN that has the tag set to be removed.

For using this parameter with Amazon S3 on Outposts with the REST API, you must specify the name and the x-amz-outpost-id as well.

For using this parameter with S3 on Outposts with the AWS SDK and CLI, you must specify the ARN of the bucket accessed in the format `arn:aws:s3-outposts:<Region>:<account-id>:outpost/<outpost-id>/bucket/<my-bucket-name>`. For example, to access the bucket `reports` through Outpost `my-outpost` owned by account `123456789012` in Region `us-west-2`, use the URL encoding of `arn:aws:s3-outposts:us-west-2:123456789012:outpost/my-outpost/bucket/reports`. The value must be URL encoded.

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: Yes

x-amz-account-id

The AWS account ID of the Outposts bucket tag set to be removed.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

Examples

Sample request to delete tags for Amazon S3 on Outposts bucket

The following DELETE request deletes the tag set from the Outposts bucket `example-outpost-bucket`.

```
DELETE v20180820/bucket/example-outpost-bucket/tagging HTTP/1.1
Host: s3-outposts.<Region>.amazonaws.com
x-amz-account-id: example-account-id
x-amz-outpost-id: op-01ac5d28a6a232904
Date: Wed, 14 Dec 2020 05:37:16 GMT
Authorization: signatureValue
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteJobTagging

Service: Amazon S3 Control

Removes the entire tag set from the specified S3 Batch Operations job.

Permissions

To use the `DeleteJobTagging` operation, you must have permission to perform the `s3:DeleteJobTagging` action. For more information, see Controlling access and labeling jobs using tags in the *Amazon S3 User Guide*.

Related actions include:

- CreateJob
- GetJobTagging
- PutJobTagging

Request Syntax

```
DELETE /v20180820/jobs/id/tagging HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

id

The ID for the S3 Batch Operations job whose tags you want to delete.

Length Constraints: Minimum length of 5. Maximum length of 36.

Pattern: `[a-zA-Z0-9\-\_]+`

Required: Yes

x-amz-account-id

The AWS account ID associated with the S3 Batch Operations job.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

InternalServiceException

HTTP Status Code: 500

NotFoundException

HTTP Status Code: 400

TooManyRequestsException

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++

- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteMultiRegionAccessPoint

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Deletes a Multi-Region Access Point. This action does not delete the buckets associated with the Multi-Region Access Point, only the Multi-Region Access Point itself.

This action will always be routed to the US West (Oregon) Region. For more information about the restrictions around working with Multi-Region Access Points, see Multi-Region Access Point restrictions and limitations in the *Amazon S3 User Guide*.

This request is asynchronous, meaning that you might receive a response before the command has completed. When this request provides a response, it provides a token that you can use to monitor the status of the request with `DescribeMultiRegionAccessPointOperation`.

The following actions are related to `DeleteMultiRegionAccessPoint`:

- CreateMultiRegionAccessPoint
- DescribeMultiRegionAccessPointOperation
- GetMultiRegionAccessPoint
- ListMultiRegionAccessPoints

Request Syntax

```
POST /v20180820/async-requests/mrap/delete HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
<?xml version="1.0" encoding="UTF-8"?>
<DeleteMultiRegionAccessPointRequest xmlns="http://awss3control.amazonaws.com/
doc/2018-08-20/">
   <ClientToken>string</ClientToken>
   <Details>
      <Name>string</Name>
   </Details>
</DeleteMultiRegionAccessPointRequest>
```

URI Request Parameters

The request uses the following URI parameters.

x-amz-account-id

The AWS account ID for the owner of the Multi-Region Access Point.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request accepts the following data in XML format.

DeleteMultiRegionAccessPointRequest

Root level tag for the DeleteMultiRegionAccessPointRequest parameters.

Required: Yes

ClientToken

An idempotency token used to identify the request and guarantee that requests are unique.

Type: String

Length Constraints: Maximum length of 64.

Pattern: \S+

Required: Yes

Details

A container element containing details about the Multi-Region Access Point.

Type: DeleteMultiRegionAccessPointInput data type

Required: Yes

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<DeleteMultiRegionAccessPointResult>
   <RequestTokenARN>string</RequestTokenARN>
</DeleteMultiRegionAccessPointResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

DeleteMultiRegionAccessPointResult

Root level tag for the DeleteMultiRegionAccessPointResult parameters.

Required: Yes

RequestTokenARN

The request token associated with the request. You can use this token with DescribeMultiRegionAccessPointOperation to determine the status of asynchronous requests.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `arn:.+`

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2

- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeletePublicAccessBlock

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Removes the `PublicAccessBlock` configuration for an AWS account. For more information, see Using Amazon S3 block public access.

Related actions include:

- GetPublicAccessBlock
- PutPublicAccessBlock

Request Syntax

```
DELETE /v20180820/configuration/publicAccessBlock HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

x-amz-account-id

The account ID for the AWS account whose `PublicAccessBlock` configuration you want to remove.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteStorageLensConfiguration

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Deletes the Amazon S3 Storage Lens configuration. For more information about S3 Storage Lens, see Assessing your storage activity and usage with Amazon S3 Storage Lens in the *Amazon S3 User Guide*.

> **Note**
>
> To use this action, you must have permission to perform the `s3:DeleteStorageLensConfiguration` action. For more information, see Setting permissions to use Amazon S3 Storage Lens in the *Amazon S3 User Guide*.

Request Syntax

```
DELETE /v20180820/storagelens/storagelensid HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

storagelensid

The ID of the S3 Storage Lens configuration.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-\_\.]+`

Required: Yes

x-amz-account-id

The account ID of the requester.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteStorageLensConfigurationTagging

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Deletes the Amazon S3 Storage Lens configuration tags. For more information about S3 Storage Lens, see Assessing your storage activity and usage with Amazon S3 Storage Lens in the *Amazon S3 User Guide*.

> **Note**
>
> To use this action, you must have permission to perform the `s3:DeleteStorageLensConfigurationTagging` action. For more information, see Setting permissions to use Amazon S3 Storage Lens in the *Amazon S3 User Guide*.

Request Syntax

```
DELETE /v20180820/storagelens/storagelensid/tagging HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

storagelensid

The ID of the S3 Storage Lens configuration.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-\_\.]+`

Required: Yes

x-amz-account-id

The account ID of the requester.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteStorageLensGroup

Service: Amazon S3 Control

Deletes an existing S3 Storage Lens group.

To use this operation, you must have the permission to perform the `s3:DeleteStorageLensGroup` action. For more information about the required Storage Lens Groups permissions, see Setting account permissions to use S3 Storage Lens groups.

For information about Storage Lens groups errors, see List of Amazon S3 Storage Lens error codes.

Request Syntax

```
DELETE /v20180820/storagelensgroup/name HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

name

The name of the Storage Lens group that you're trying to delete.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-\_]+`

Required: Yes

x-amz-account-id

The AWS account ID used to create the Storage Lens group that you're trying to delete.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DescribeJob

Service: Amazon S3 Control

Retrieves the configuration parameters and status for a Batch Operations job. For more information, see S3 Batch Operations in the *Amazon S3 User Guide*.

Permissions

To use the `DescribeJob` operation, you must have permission to perform the `s3:DescribeJob` action.

Related actions include:

- CreateJob
- ListJobs
- UpdateJobPriority
- UpdateJobStatus

Request Syntax

```
GET /v20180820/jobs/id HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

id

The ID for the job whose information you want to retrieve.

Length Constraints: Minimum length of 5. Maximum length of 36.

Pattern: `[a-zA-Z0-9\-\_]+`

Required: Yes

x-amz-account-id

The AWS account ID associated with the S3 Batch Operations job.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<DescribeJobResult>
   <Job>
      <ConfirmationRequired>boolean</ConfirmationRequired>
      <CreationTime>timestamp</CreationTime>
      <Description>string</Description>
      <FailureReasons>
         <JobFailure>
            <FailureCode>string</FailureCode>
            <FailureReason>string</FailureReason>
         </JobFailure>
      </FailureReasons>
      <GeneratedManifestDescriptor>
         <Format>string</Format>
         <Location>
            <ETag>string</ETag>
            <ObjectArn>string</ObjectArn>
            <ObjectVersionId>string</ObjectVersionId>
         </Location>
      </GeneratedManifestDescriptor>
      <JobArn>string</JobArn>
      <JobId>string</JobId>
      <Manifest>
         <Location>
            <ETag>string</ETag>
            <ObjectArn>string</ObjectArn>
            <ObjectVersionId>string</ObjectVersionId>
         </Location>
         <Spec>
            <Fields>
```

```
            <member>string</member>
         </Fields>
         <Format>string</Format>
      </Spec>
   </Manifest>
   <ManifestGenerator>
      <S3JobManifestGenerator>
         <EnableManifestOutput>boolean</EnableManifestOutput>
         <ExpectedBucketOwner>string</ExpectedBucketOwner>
         <Filter>
            <CreatedAfter>timestamp</CreatedAfter>
            <CreatedBefore>timestamp</CreatedBefore>
            <EligibleForReplication>boolean</EligibleForReplication>
            <KeyNameConstraint>
               <MatchAnyPrefix>
                  <member>string</member>
               </MatchAnyPrefix>
               <MatchAnySubstring>
                  <member>string</member>
               </MatchAnySubstring>
               <MatchAnySuffix>
                  <member>string</member>
               </MatchAnySuffix>
            </KeyNameConstraint>
            <MatchAnyStorageClass>
               <member>string</member>
            </MatchAnyStorageClass>
            <ObjectReplicationStatuses>
               <member>string</member>
            </ObjectReplicationStatuses>
            <ObjectSizeGreaterThanBytes>long</ObjectSizeGreaterThanBytes>
            <ObjectSizeLessThanBytes>long</ObjectSizeLessThanBytes>
         </Filter>
         <ManifestOutputLocation>
            <Bucket>string</Bucket>
            <ExpectedManifestBucketOwner>string</ExpectedManifestBucketOwner>
            <ManifestEncryption>
               <SSE-KMS>
                  <KeyId>string</KeyId>
               </SSE-KMS>
               <SSE-S3>
               </SSE-S3>
            </ManifestEncryption>
            <ManifestFormat>string</ManifestFormat>
```

```
            <ManifestPrefix>string</ManifestPrefix>
         </ManifestOutputLocation>
         <SourceBucket>string</SourceBucket>
      </S3JobManifestGenerator>
   </ManifestGenerator>
   <Operation>
      <LambdaInvoke>
         <FunctionArn>string</FunctionArn>
         <InvocationSchemaVersion>string</InvocationSchemaVersion>
         <UserArguments>
            <entry>
               <key>string</key>
               <value>string</value>
            </entry>
         </UserArguments>
      </LambdaInvoke>
      <S3DeleteObjectTagging>
      </S3DeleteObjectTagging>
      <S3InitiateRestoreObject>
         <ExpirationInDays>integer</ExpirationInDays>
         <GlacierJobTier>string</GlacierJobTier>
      </S3InitiateRestoreObject>
      <S3PutObjectAcl>
         <AccessControlPolicy>
            <AccessControlList>
               <Grants>
                  <S3Grant>
                     <Grantee>
                        <DisplayName>string</DisplayName>
                        <Identifier>string</Identifier>
                        <TypeIdentifier>string</TypeIdentifier>
                     </Grantee>
                     <Permission>string</Permission>
                  </S3Grant>
               </Grants>
               <Owner>
                  <DisplayName>string</DisplayName>
                  <ID>string</ID>
               </Owner>
            </AccessControlList>
            <CannedAccessControlList>string</CannedAccessControlList>
         </AccessControlPolicy>
      </S3PutObjectAcl>
      <S3PutObjectCopy>
```

```
<AccessControlGrants>
   <S3Grant>
      <Grantee>
         <DisplayName>string</DisplayName>
         <Identifier>string</Identifier>
         <TypeIdentifier>string</TypeIdentifier>
      </Grantee>
      <Permission>string</Permission>
   </S3Grant>
</AccessControlGrants>
<BucketKeyEnabled>boolean</BucketKeyEnabled>
<CannedAccessControlList>string</CannedAccessControlList>
<ChecksumAlgorithm>string</ChecksumAlgorithm>
<MetadataDirective>string</MetadataDirective>
<ModifiedSinceConstraint>timestamp</ModifiedSinceConstraint>
<NewObjectMetadata>
   <CacheControl>string</CacheControl>
   <ContentDisposition>string</ContentDisposition>
   <ContentEncoding>string</ContentEncoding>
   <ContentLanguage>string</ContentLanguage>
   <ContentLength>long</ContentLength>
   <ContentMD5>string</ContentMD5>
   <ContentType>string</ContentType>
   <HttpExpiresDate>timestamp</HttpExpiresDate>
   <RequesterCharged>boolean</RequesterCharged>
   <SSEAlgorithm>string</SSEAlgorithm>
   <UserMetadata>
      <entry>
         <key>string</key>
         <value>string</value>
      </entry>
   </UserMetadata>
</NewObjectMetadata>
<NewObjectTagging>
   <S3Tag>
      <Key>string</Key>
      <Value>string</Value>
   </S3Tag>
</NewObjectTagging>
<ObjectLockLegalHoldStatus>string</ObjectLockLegalHoldStatus>
<ObjectLockMode>string</ObjectLockMode>
<ObjectLockRetainUntilDate>timestamp</ObjectLockRetainUntilDate>
<RedirectLocation>string</RedirectLocation>
<RequesterPays>boolean</RequesterPays>
```

```
            <SSEAwsKmsKeyId>string</SSEAwsKmsKeyId>
            <StorageClass>string</StorageClass>
            <TargetKeyPrefix>string</TargetKeyPrefix>
            <TargetResource>string</TargetResource>
            <UnModifiedSinceConstraint>timestamp</UnModifiedSinceConstraint>
         </S3PutObjectCopy>
         <S3PutObjectLegalHold>
            <LegalHold>
               <Status>string</Status>
            </LegalHold>
         </S3PutObjectLegalHold>
         <S3PutObjectRetention>
            <BypassGovernanceRetention>boolean</BypassGovernanceRetention>
            <Retention>
               <Mode>string</Mode>
               <RetainUntilDate>timestamp</RetainUntilDate>
            </Retention>
         </S3PutObjectRetention>
         <S3PutObjectTagging>
            <TagSet>
               <S3Tag>
                  <Key>string</Key>
                  <Value>string</Value>
               </S3Tag>
            </TagSet>
         </S3PutObjectTagging>
         <S3ReplicateObject>
         </S3ReplicateObject>
      </Operation>
      <Priority>integer</Priority>
      <ProgressSummary>
         <NumberOfTasksFailed>long</NumberOfTasksFailed>
         <NumberOfTasksSucceeded>long</NumberOfTasksSucceeded>
         <Timers>
            <ElapsedTimeInActiveSeconds>long</ElapsedTimeInActiveSeconds>
         </Timers>
         <TotalNumberOfTasks>long</TotalNumberOfTasks>
      </ProgressSummary>
      <Report>
         <Bucket>string</Bucket>
         <Enabled>boolean</Enabled>
         <Format>string</Format>
         <Prefix>string</Prefix>
         <ReportScope>string</ReportScope>
```

```
        </Report>
        <RoleArn>string</RoleArn>
        <Status>string</Status>
        <StatusUpdateReason>string</StatusUpdateReason>
        <SuspendedCause>string</SuspendedCause>
        <SuspendedDate>timestamp</SuspendedDate>
        <TerminationDate>timestamp</TerminationDate>
    </Job>
</DescribeJobResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

DescribeJobResult

Root level tag for the DescribeJobResult parameters.

Required: Yes

Job

Contains the configuration parameters and status for the job specified in the `Describe Job` request.

Type: JobDescriptor data type

Errors

BadRequestException

HTTP Status Code: 400

InternalServiceException

HTTP Status Code: 500

NotFoundException

HTTP Status Code: 400

TooManyRequestsException

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DescribeMultiRegionAccessPointOperation

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Retrieves the status of an asynchronous request to manage a Multi-Region Access Point. For more information about managing Multi-Region Access Points and how asynchronous requests work, see Using Multi-Region Access Points in the *Amazon S3 User Guide*.

The following actions are related to `GetMultiRegionAccessPoint`:

- CreateMultiRegionAccessPoint
- DeleteMultiRegionAccessPoint
- GetMultiRegionAccessPoint
- ListMultiRegionAccessPoints

Request Syntax

```
GET /v20180820/async-requests/mrap/request_token+ HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

request_token

The request token associated with the request you want to know about. This request token is returned as part of the response when you make an asynchronous request. You provide this token to query about the status of the asynchronous action.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `arn:.+`

Required: Yes

x-amz-account-id

The AWS account ID for the owner of the Multi-Region Access Point.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<DescribeMultiRegionAccessPointOperationResult>
   <AsyncOperation>
      <CreationTime>timestamp</CreationTime>
      <Operation>string</Operation>
      <RequestParameters>
         <CreateMultiRegionAccessPointRequest>
            <Name>string</Name>
            <PublicAccessBlock>
               <BlockPublicAcls>boolean</BlockPublicAcls>
               <BlockPublicPolicy>boolean</BlockPublicPolicy>
               <IgnorePublicAcls>boolean</IgnorePublicAcls>
               <RestrictPublicBuckets>boolean</RestrictPublicBuckets>
            </PublicAccessBlock>
            <Regions>
               <Region>
                  <Bucket>string</Bucket>
                  <BucketAccountId>string</BucketAccountId>
               </Region>
            </Regions>
         </CreateMultiRegionAccessPointRequest>
         <DeleteMultiRegionAccessPointRequest>
            <Name>string</Name>
         </DeleteMultiRegionAccessPointRequest>
```

```
         <PutMultiRegionAccessPointPolicyRequest>
            <Name>string</Name>
            <Policy>string</Policy>
         </PutMultiRegionAccessPointPolicyRequest>
      </RequestParameters>
      <RequestStatus>string</RequestStatus>
      <RequestTokenARN>string</RequestTokenARN>
      <ResponseDetails>
         <ErrorDetails>
            <Code>string</Code>
            <Message>string</Message>
            <RequestId>string</RequestId>
            <Resource>string</Resource>
         </ErrorDetails>
         <MultiRegionAccessPointDetails>
            <Regions>
               <Region>
                  <Name>string</Name>
                  <RequestStatus>string</RequestStatus>
               </Region>
            </Regions>
         </MultiRegionAccessPointDetails>
      </ResponseDetails>
   </AsyncOperation>
</DescribeMultiRegionAccessPointOperationResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

DescribeMultiRegionAccessPointOperationResult

Root level tag for the DescribeMultiRegionAccessPointOperationResult parameters.

Required: Yes

AsyncOperation

A container element containing the details of the asynchronous operation.

Type: AsyncOperation data type

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DissociateAccessGrantsIdentityCenter

Service: Amazon S3 Control

Dissociates the AWS IAM Identity Center instance from the S3 Access Grants instance.

Permissions

You must have the `s3:DissociateAccessGrantsIdentityCenter` permission to use this operation.

Additional Permissions

You must have the `sso:DeleteApplication` permission to use this operation.

Request Syntax

```
DELETE /v20180820/accessgrantsinstance/identitycenter HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

x-amz-account-id

The ID of the AWS account that is making this request.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetAccessGrant

Service: Amazon S3 Control

Get the details of an access grant from your S3 Access Grants instance.

Permissions

You must have the `s3:GetAccessGrant` permission to use this operation.

Request Syntax

```
GET /v20180820/accessgrantsinstance/grant/id HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

id

The ID of the access grant. S3 Access Grants auto-generates this ID when you create the access grant.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-]+`

Required: Yes

x-amz-account-id

The ID of the AWS account that is making this request.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<GetAccessGrantResult>
   <CreatedAt>timestamp</CreatedAt>
   <AccessGrantId>string</AccessGrantId>
   <AccessGrantArn>string</AccessGrantArn>
   <Grantee>
      <GranteeIdentifier>string</GranteeIdentifier>
      <GranteeType>string</GranteeType>
   </Grantee>
   <Permission>string</Permission>
   <AccessGrantsLocationId>string</AccessGrantsLocationId>
   <AccessGrantsLocationConfiguration>
      <S3SubPrefix>string</S3SubPrefix>
   </AccessGrantsLocationConfiguration>
   <GrantScope>string</GrantScope>
   <ApplicationArn>string</ApplicationArn>
</GetAccessGrantResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

GetAccessGrantResult

Root level tag for the GetAccessGrantResult parameters.

Required: Yes

AccessGrantArn

The Amazon Resource Name (ARN) of the access grant.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `arn:[a-z\-]+:s3:[a-z0-9\-]+:\d{12}:access\-grants\/grant/[a-zA-Z0-9\-]+`

AccessGrantId

The ID of the access grant. S3 Access Grants auto-generates this ID when you create the access grant.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-]+`

AccessGrantsLocationConfiguration

The configuration options of the grant location. The grant location is the S3 path to the data to which you are granting access.

Type: AccessGrantsLocationConfiguration data type

AccessGrantsLocationId

The ID of the registered location to which you are granting access. S3 Access Grants assigns this ID when you register the location. S3 Access Grants assigns the ID `default` to the default location `s3://` and assigns an auto-generated ID to other locations that you register.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-]+`

ApplicationArn

The Amazon Resource Name (ARN) of an AWS IAM Identity Center application associated with your Identity Center instance. If the grant includes an application ARN, the grantee can only access the S3 data through this application.

Type: String

Length Constraints: Minimum length of 10. Maximum length of 1224.

Pattern: `arn:[^:]+:sso:.*$`

CreatedAt

The date and time when you created the access grant.

Type: Timestamp

Grantee

The user, group, or role to which you are granting access. You can grant access to an IAM user or role. If you have added a corporate directory to AWS IAM Identity Center and associated this Identity Center instance with the S3 Access Grants instance, the grantee can also be a corporate directory user or group.

Type: Grantee data type

GrantScope

The S3 path of the data to which you are granting access. It is the result of appending the `Subprefix` to the location scope.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2000.

Pattern: `^.+$`

Permission

The type of permission that was granted in the access grant. Can be one of the following values:

- `READ` – Grant read-only access to the S3 data.
- `WRITE` – Grant write-only access to the S3 data.
- `READWRITE` – Grant both read and write access to the S3 data.

Type: String

Valid Values: `READ | WRITE | READWRITE`

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++

- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetAccessGrantsInstance

Service: Amazon S3 Control

Retrieves the S3 Access Grants instance for a Region in your account.

Permissions

You must have the `s3:GetAccessGrantsInstance` permission to use this operation.

Request Syntax

```
GET /v20180820/accessgrantsinstance HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

x-amz-account-id

The ID of the AWS account that is making this request.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<GetAccessGrantsInstanceResult>
   <AccessGrantsInstanceArn>string</AccessGrantsInstanceArn>
   <AccessGrantsInstanceId>string</AccessGrantsInstanceId>
   <IdentityCenterArn>string</IdentityCenterArn>
```

```
    <CreatedAt>timestamp</CreatedAt>
</GetAccessGrantsInstanceResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

GetAccessGrantsInstanceResult

Root level tag for the GetAccessGrantsInstanceResult parameters.

Required: Yes

AccessGrantsInstanceArn

The Amazon Resource Name (ARN) of the S3 Access Grants instance.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `arn:[a-z\-]+:s3:[a-z0-9\-]+:\d{12}:access\-grants\/[a-zA-Z0-9\-]+`

AccessGrantsInstanceId

The ID of the S3 Access Grants instance. The ID is `default`. You can have one S3 Access Grants instance per Region per account.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-]+`

CreatedAt

The date and time when you created the S3 Access Grants instance.

Type: Timestamp

IdentityCenterArn

If you associated your S3 Access Grants instance with an AWS IAM Identity Center instance, this field returns the Amazon Resource Name (ARN) of the AWS IAM Identity Center instance

application; a subresource of the original Identity Center instance. S3 Access Grants creates this Identity Center application for the specific S3 Access Grants instance.

Type: String

Length Constraints: Minimum length of 10. Maximum length of 1224.

Pattern: `arn:[^:]+:sso::(\d{12}){0,1}:instance/.*$`

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetAccessGrantsInstanceForPrefix

Service: Amazon S3 Control

Retrieve the S3 Access Grants instance that contains a particular prefix.

Permissions

You must have the `s3:GetAccessGrantsInstanceForPrefix` permission for the caller account to use this operation.

Additional Permissions

The prefix owner account must grant you the following permissions to their S3 Access Grants instance: `s3:GetAccessGrantsInstanceForPrefix`.

Request Syntax

```
GET /v20180820/accessgrantsinstance/prefix?s3prefix=S3Prefix HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

s3prefix

The S3 prefix of the access grants that you would like to retrieve.

Length Constraints: Minimum length of 1. Maximum length of 2000.

Pattern: `^.+$`

Required: Yes

x-amz-account-id

The ID of the AWS account that is making this request.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<GetAccessGrantsInstanceForPrefixResult>
   <AccessGrantsInstanceArn>string</AccessGrantsInstanceArn>
   <AccessGrantsInstanceId>string</AccessGrantsInstanceId>
</GetAccessGrantsInstanceForPrefixResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

GetAccessGrantsInstanceForPrefixResult

Root level tag for the GetAccessGrantsInstanceForPrefixResult parameters.

Required: Yes

AccessGrantsInstanceArn

The Amazon Resource Name (ARN) of the S3 Access Grants instance.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `arn:[a-z\-]+:s3:[a-z0-9\-]+:\d{12}:access\-grants\/[a-zA-Z0-9\-]+`

AccessGrantsInstanceId

The ID of the S3 Access Grants instance. The ID is `default`. You can have one S3 Access Grants instance per Region per account.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-]+`

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetAccessGrantsInstanceResourcePolicy

Service: Amazon S3 Control

Returns the resource policy of the S3 Access Grants instance.

Permissions

You must have the `s3:GetAccessGrantsInstanceResourcePolicy` permission to use this operation.

Request Syntax

```
GET /v20180820/accessgrantsinstance/resourcepolicy HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

x-amz-account-id

The ID of the AWS account that is making this request.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<GetAccessGrantsInstanceResourcePolicyResult>
   <Policy>string</Policy>
   <Organization>string</Organization>
```

```
    <CreatedAt>timestamp</CreatedAt>
</GetAccessGrantsInstanceResourcePolicyResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

GetAccessGrantsInstanceResourcePolicyResult

Root level tag for the GetAccessGrantsInstanceResourcePolicyResult parameters.

Required: Yes

CreatedAt

The date and time when you created the S3 Access Grants instance resource policy.

Type: Timestamp

Organization

The Organization of the resource policy of the S3 Access Grants instance.

Type: String

Length Constraints: Minimum length of 12. Maximum length of 34.

Pattern: `^o-[a-z0-9]{10,32}$`

Policy

The resource policy of the S3 Access Grants instance.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 350000.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface

- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetAccessGrantsLocation

Service: Amazon S3 Control

Retrieves the details of a particular location registered in your S3 Access Grants instance.

Permissions

You must have the `s3:GetAccessGrantsLocation` permission to use this operation.

Request Syntax

```
GET /v20180820/accessgrantsinstance/location/id HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

id

The ID of the registered location that you are retrieving. S3 Access Grants assigns this ID when you register the location. S3 Access Grants assigns the ID `default` to the default location `s3://` and assigns an auto-generated ID to other locations that you register.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-]+`

Required: Yes

x-amz-account-id

The ID of the AWS account that is making this request.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<GetAccessGrantsLocationResult>
   <CreatedAt>timestamp</CreatedAt>
   <AccessGrantsLocationId>string</AccessGrantsLocationId>
   <AccessGrantsLocationArn>string</AccessGrantsLocationArn>
   <LocationScope>string</LocationScope>
   <IAMRoleArn>string</IAMRoleArn>
</GetAccessGrantsLocationResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

GetAccessGrantsLocationResult

Root level tag for the GetAccessGrantsLocationResult parameters.

Required: Yes

AccessGrantsLocationArn

The Amazon Resource Name (ARN) of the registered location.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `arn:[a-z\-]+:s3:[a-z0-9\-]+:\d{12}:access\-grants\/location/[a-zA-Z0-9\-]+`

AccessGrantsLocationId

The ID of the registered location to which you are granting access. S3 Access Grants assigns this ID when you register the location. S3 Access Grants assigns the ID `default` to the default location `s3://` and assigns an auto-generated ID to other locations that you register.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-]+`

CreatedAt

The date and time when you registered the location.

Type: Timestamp

IAMRoleArn

The Amazon Resource Name (ARN) of the IAM role for the registered location. S3 Access Grants assumes this role to manage access to the registered location.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `arn:[^:]+:iam::\d{12}:role/.*`

LocationScope

The S3 URI path to the registered location. The location scope can be the default S3 location `s3://`, the S3 path to a bucket, or the S3 path to a bucket and prefix. A prefix in S3 is a string of characters at the beginning of an object key name used to organize the objects that you store in your S3 buckets. For example, object key names that start with the `engineering/` prefix or object key names that start with the `marketing/campaigns/` prefix.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2000.

Pattern: `^.+$`

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface

- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetAccessPoint

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Returns configuration information about the specified access point.

All Amazon S3 on Outposts REST API requests for this action require an additional parameter of `x-amz-outpost-id` to be passed with the request. In addition, you must use an S3 on Outposts endpoint hostname prefix instead of `s3-control`. For an example of the request syntax for Amazon S3 on Outposts that uses the S3 on Outposts endpoint hostname prefix and the `x-amz-outpost-id` derived by using the access point ARN, see the Examples section.

The following actions are related to `GetAccessPoint`:

- CreateAccessPoint
- DeleteAccessPoint
- ListAccessPoints

Request Syntax

```
GET /v20180820/accesspoint/name HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

name

The name of the access point whose configuration information you want to retrieve.

For using this parameter with Amazon S3 on Outposts with the REST API, you must specify the name and the x-amz-outpost-id as well.

For using this parameter with S3 on Outposts with the AWS SDK and CLI, you must specify the ARN of the access point accessed in the format `arn:aws:s3-outposts:<Region>:<account-id>:outpost/<outpost-id>/accesspoint/<my-accesspoint-name>`. For example, to access the access point `reports-ap` through Outpost `my-outpost` owned by account `123456789012` in Region `us-west-2`, use the URL encoding of `arn:aws:s3-outposts:us-west-2:123456789012:outpost/my-outpost/accesspoint/reports-ap`. The value must be URL encoded.

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: Yes

x-amz-account-id

The AWS account ID for the account that owns the specified access point.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<GetAccessPointResult>
   <Name>string</Name>
   <Bucket>string</Bucket>
   <NetworkOrigin>string</NetworkOrigin>
   <VpcConfiguration>
      <VpcId>string</VpcId>
   </VpcConfiguration>
   <PublicAccessBlockConfiguration>
      <BlockPublicAcls>boolean</BlockPublicAcls>
      <BlockPublicPolicy>boolean</BlockPublicPolicy>
      <IgnorePublicAcls>boolean</IgnorePublicAcls>
      <RestrictPublicBuckets>boolean</RestrictPublicBuckets>
```

```
   </PublicAccessBlockConfiguration>
   <CreationDate>timestamp</CreationDate>
   <Alias>string</Alias>
   <AccessPointArn>string</AccessPointArn>
   <Endpoints>
      <entry>
         <key>string</key>
         <value>string</value>
      </entry>
   </Endpoints>
   <BucketAccountId>string</BucketAccountId>
</GetAccessPointResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

GetAccessPointResult

Root level tag for the GetAccessPointResult parameters.

Required: Yes

AccessPointArn

The ARN of the access point.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 128.

Alias

The name or alias of the access point.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[0-9a-z\\-]{63}`

Bucket

The name of the bucket associated with the specified access point.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 255.

BucketAccountId

The AWS account ID associated with the S3 bucket associated with this access point.

Type: String

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

CreationDate

The date and time when the specified access point was created.

Type: Timestamp

Endpoints

The VPC endpoint for the access point.

Type: String to string map

Key Length Constraints: Minimum length of 1. Maximum length of 64.

Value Length Constraints: Minimum length of 1. Maximum length of 1024.

Name

The name of the specified access point.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 255.

NetworkOrigin

Indicates whether this access point allows access from the public internet. If `VpcConfiguration` is specified for this access point, then `NetworkOrigin` is `VPC`, and the access point doesn't allow access from the public internet. Otherwise, `NetworkOrigin` is `Internet`, and the access point allows access from the public internet, subject to the access point and bucket access policies.

This will always be true for an Amazon S3 on Outposts access point

Type: String

Valid Values: `Internet | VPC`

PublicAccessBlockConfiguration

The `PublicAccessBlock` configuration that you want to apply to this Amazon S3 account. You can enable the configuration options in any combination. For more information about when Amazon S3 considers a bucket or object public, see The Meaning of "Public" in the *Amazon S3 User Guide*.

This data type is not supported for Amazon S3 on Outposts.

Type: PublicAccessBlockConfiguration data type

VpcConfiguration

Contains the virtual private cloud (VPC) configuration for the specified access point.

> **Note**
>
> This element is empty if this access point is an Amazon S3 on Outposts access point that is used by other AWS services.

Type: VpcConfiguration data type

Examples

Sample request syntax for getting an Amazon S3 on Outposts access point

The following request returns the access point of the specified S3 on Outposts access point.

```
GET /v20180820/accesspoint/example-access-point HTTP/1.1
Host: s3-outposts.<Region>.amazonaws.com
Date: Wed, 28 Oct 2020 22:32:00 GMT
Authorization: authorization string
x-amz-account-id: example-account-id
x-amz-outpost-id: op-01ac5d28a6a232904
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetAccessPointConfigurationForObjectLambda

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Returns configuration for an Object Lambda Access Point.

The following actions are related to `GetAccessPointConfigurationForObjectLambda`:

- PutAccessPointConfigurationForObjectLambda

Request Syntax

```
GET /v20180820/accesspointforobjectlambda/name/configuration HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

name

The name of the Object Lambda Access Point you want to return the configuration for.

Length Constraints: Minimum length of 3. Maximum length of 45.

Pattern: `^[a-z0-9]([a-z0-9\-]*[a-z0-9])?$`

Required: Yes

x-amz-account-id

The account ID for the account that owns the specified Object Lambda Access Point.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<GetAccessPointConfigurationForObjectLambdaResult>
   <Configuration>
      <AllowedFeatures>
         <AllowedFeature>string</AllowedFeature>
      </AllowedFeatures>
      <CloudWatchMetricsEnabled>boolean</CloudWatchMetricsEnabled>
      <SupportingAccessPoint>string</SupportingAccessPoint>
      <TransformationConfigurations>
         <TransformationConfiguration>
            <Actions>
               <Action>string</Action>
            </Actions>
            <ContentTransformation>
               <AwsLambda>
                  <FunctionArn>string</FunctionArn>
                  <FunctionPayload>string</FunctionPayload>
               </AwsLambda>
            </ContentTransformation>
         </TransformationConfiguration>
      </TransformationConfigurations>
   </Configuration>
</GetAccessPointConfigurationForObjectLambdaResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

GetAccessPointConfigurationForObjectLambdaResult

Root level tag for the GetAccessPointConfigurationForObjectLambdaResult parameters.

Required: Yes

Configuration

Object Lambda Access Point configuration document.

Type: ObjectLambdaConfiguration data type

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetAccessPointForObjectLambda

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Returns configuration information about the specified Object Lambda Access Point

The following actions are related to `GetAccessPointForObjectLambda`:

- CreateAccessPointForObjectLambda
- DeleteAccessPointForObjectLambda
- ListAccessPointsForObjectLambda

Request Syntax

```
GET /v20180820/accesspointforobjectlambda/name HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

name

The name of the Object Lambda Access Point.

Length Constraints: Minimum length of 3. Maximum length of 45.

Pattern: `^[a-z0-9]([a-z0-9\-]*[a-z0-9])?$`

Required: Yes

x-amz-account-id

The account ID for the account that owns the specified Object Lambda Access Point.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<GetAccessPointForObjectLambdaResult>
   <Name>string</Name>
   <PublicAccessBlockConfiguration>
      <BlockPublicAcls>boolean</BlockPublicAcls>
      <BlockPublicPolicy>boolean</BlockPublicPolicy>
      <IgnorePublicAcls>boolean</IgnorePublicAcls>
      <RestrictPublicBuckets>boolean</RestrictPublicBuckets>
   </PublicAccessBlockConfiguration>
   <CreationDate>timestamp</CreationDate>
   <Alias>
      <Status>string</Status>
      <Value>string</Value>
   </Alias>
</GetAccessPointForObjectLambdaResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

GetAccessPointForObjectLambdaResult

Root level tag for the GetAccessPointForObjectLambdaResult parameters.

Required: Yes

Alias

The alias of the Object Lambda Access Point.

Type: ObjectLambdaAccessPointAlias data type

CreationDate

The date and time when the specified Object Lambda Access Point was created.

Type: Timestamp

Name

The name of the Object Lambda Access Point.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 45.

Pattern: `^[a-z0-9]([a-z0-9\-]*[a-z0-9])?$`

PublicAccessBlockConfiguration

Configuration to block all public access. This setting is turned on and can not be edited.

Type: PublicAccessBlockConfiguration data type

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetAccessPointPolicy

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Returns the access point policy associated with the specified access point.

The following actions are related to `GetAccessPointPolicy`:

- PutAccessPointPolicy
- DeleteAccessPointPolicy

Request Syntax

```
GET /v20180820/accesspoint/name/policy HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

name

The name of the access point whose policy you want to retrieve.

For using this parameter with Amazon S3 on Outposts with the REST API, you must specify the name and the x-amz-outpost-id as well.

For using this parameter with S3 on Outposts with the AWS SDK and CLI, you must specify the ARN of the access point accessed in the format `arn:aws:s3-outposts:<Region>:<account-id>:outpost/<outpost-id>/accesspoint/<my-accesspoint-name>`. For example, to access the access point `reports-ap` through Outpost `my-outpost` owned by account `123456789012` in Region `us-west-2`, use the URL encoding of `arn:aws:s3-outposts:us-west-2:123456789012:outpost/my-outpost/accesspoint/reports-ap`. The value must be URL encoded.

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: Yes

x-amz-account-id

The account ID for the account that owns the specified access point.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<GetAccessPointPolicyResult>
   <Policy>string</Policy>
</GetAccessPointPolicyResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

GetAccessPointPolicyResult

Root level tag for the GetAccessPointPolicyResult parameters.

Required: Yes

Policy

The access point policy associated with the specified access point.

Type: String

Examples

Sample request

The following request returns the access point of the specified Amazon S3 on Outposts.

```
GET /v20180820/accesspoint/example-access-point/policy  HTTP/1.1
Host: s3-outposts.<Region>.amazonaws.com
Date: Wed, 28 Oct 2020 22:32:00 GMT
Authorization: authorization string
x-amz-account-id: 123456789012
x-amz-outpost-id: op-123456
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetAccessPointPolicyForObjectLambda

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Returns the resource policy for an Object Lambda Access Point.

The following actions are related to `GetAccessPointPolicyForObjectLambda`:

- DeleteAccessPointPolicyForObjectLambda
- PutAccessPointPolicyForObjectLambda

Request Syntax

```
GET /v20180820/accesspointforobjectlambda/name/policy HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

name

The name of the Object Lambda Access Point.

Length Constraints: Minimum length of 3. Maximum length of 45.

Pattern: `^[a-z0-9]([a-z0-9\-]*[a-z0-9])?$`

Required: Yes

x-amz-account-id

The account ID for the account that owns the specified Object Lambda Access Point.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<GetAccessPointPolicyForObjectLambdaResult>
   <Policy>string</Policy>
</GetAccessPointPolicyForObjectLambdaResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

GetAccessPointPolicyForObjectLambdaResult

Root level tag for the GetAccessPointPolicyForObjectLambdaResult parameters.

Required: Yes

Policy

Object Lambda Access Point resource policy document.

Type: String

Examples

Sample resource policy

The following illustrates a sample resource policy.

```
{
    "Version" : "2008-10-17",
    "Statement":[{
        "Sid": "Grant account 123456789012 GetObject access",
```

```
        "Effect":"Allow",
        "Principal" : {
            "AWS": "arn:aws:iam::123456789012:root"
        },
        "Action":["s3-object-lambda:GetObject"],
        "Resource":["arn:aws:s3-object-lambda:us-east-1:123456789012:accesspoint/my-
object-lambda-ap"]
        },
        {
        "Sid": "Grant account 444455556666 GetObject access",
        "Effect":"Allow",
        "Principal" : {
            "AWS": "arn:aws:iam::444455556666:root"
        },
        "Action":["s3-object-lambda:GetObject"],
        "Resource":["arn:aws:s3-object-lambda:us-east-1:123456789012:accesspoint/my-
object-lambda-ap"]
        }
    ]
}
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetAccessPointPolicyStatus

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Indicates whether the specified access point currently has a policy that allows public access. For more information about public access through access points, see Managing Data Access with Amazon S3 access points in the *Amazon S3 User Guide*.

Request Syntax

```
GET /v20180820/accesspoint/name/policyStatus HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

name

The name of the access point whose policy status you want to retrieve.

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: Yes

x-amz-account-id

The account ID for the account that owns the specified access point.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<GetAccessPointPolicyStatusResult>
   <PolicyStatus>
      <IsPublic>boolean</IsPublic>
   </PolicyStatus>
</GetAccessPointPolicyStatusResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

GetAccessPointPolicyStatusResult

Root level tag for the GetAccessPointPolicyStatusResult parameters.

Required: Yes

PolicyStatus

Indicates the current policy status of the specified access point.

Type: PolicyStatus data type

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3

- AWS SDK for Python
- AWS SDK for Ruby V3

GetAccessPointPolicyStatusForObjectLambda

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Returns the status of the resource policy associated with an Object Lambda Access Point.

Request Syntax

```
GET /v20180820/accesspointforobjectlambda/name/policyStatus HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

name

The name of the Object Lambda Access Point.

Length Constraints: Minimum length of 3. Maximum length of 45.

Pattern: `^[a-z0-9]([a-z0-9\-]*[a-z0-9])?$`

Required: Yes

x-amz-account-id

The account ID for the account that owns the specified Object Lambda Access Point.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<GetAccessPointPolicyStatusForObjectLambdaResult>
   <PolicyStatus>
      <IsPublic>boolean</IsPublic>
   </PolicyStatus>
</GetAccessPointPolicyStatusForObjectLambdaResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

GetAccessPointPolicyStatusForObjectLambdaResult

Root level tag for the GetAccessPointPolicyStatusForObjectLambdaResult parameters.

Required: Yes

PolicyStatus

Indicates whether this access point policy is public. For more information about how Amazon S3 evaluates policies to determine whether they are public, see The Meaning of "Public" in the *Amazon S3 User Guide*.

Type: PolicyStatus data type

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2

- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetBucket

Service: Amazon S3 Control

Gets an Amazon S3 on Outposts bucket. For more information, see Using Amazon S3 on Outposts in the *Amazon S3 User Guide*.

If you are using an identity other than the root user of the AWS account that owns the Outposts bucket, the calling identity must have the `s3-outposts:GetBucket` permissions on the specified Outposts bucket and belong to the Outposts bucket owner's account in order to use this action. Only users from Outposts bucket owner account with the right permissions can perform actions on an Outposts bucket.

If you don't have `s3-outposts:GetBucket` permissions or you're not using an identity that belongs to the bucket owner's account, Amazon S3 returns a `403 Access Denied` error.

The following actions are related to `GetBucket` for Amazon S3 on Outposts:

All Amazon S3 on Outposts REST API requests for this action require an additional parameter of `x-amz-outpost-id` to be passed with the request. In addition, you must use an S3 on Outposts endpoint hostname prefix instead of `s3-control`. For an example of the request syntax for Amazon S3 on Outposts that uses the S3 on Outposts endpoint hostname prefix and the `x-amz-outpost-id` derived by using the access point ARN, see the Examples section.

- PutObject
- CreateBucket
- DeleteBucket

Request Syntax

```
GET /v20180820/bucket/name HTTP/1.1
Host: Bucket.s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

name

Specifies the bucket.

For using this parameter with Amazon S3 on Outposts with the REST API, you must specify the name and the x-amz-outpost-id as well.

For using this parameter with S3 on Outposts with the AWS SDK and CLI, you must specify the ARN of the bucket accessed in the format `arn:aws:s3-outposts:<Region>:<account-id>:outpost/<outpost-id>/bucket/<my-bucket-name>`. For example, to access the bucket `reports` through Outpost `my-outpost` owned by account `123456789012` in Region `us-west-2`, use the URL encoding of `arn:aws:s3-outposts:us-west-2:123456789012:outpost/my-outpost/bucket/reports`. The value must be URL encoded.

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: Yes

x-amz-account-id

The AWS account ID of the Outposts bucket.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<GetBucketResult>
   <Bucket>string</Bucket>
   <PublicAccessBlockEnabled>boolean</PublicAccessBlockEnabled>
   <CreationDate>timestamp</CreationDate>
</GetBucketResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

GetBucketResult

Root level tag for the GetBucketResult parameters.

Required: Yes

Bucket

The Outposts bucket requested.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 255.

CreationDate

The creation date of the Outposts bucket.

Type: Timestamp

PublicAccessBlockEnabled

Type: Boolean

Examples

Sample request for getting Amazon S3 on Outposts bucket

This example illustrates one usage of GetBucket.

```
GET /v20180820/bucket/example-outpost-bucket/ HTTP/1.1
Host: s3-outposts.<Region>.amazonaws.com
            x-amz-account-id: example-account-id
            x-amz-outpost-id: op-01ac5d28a6a232904
            x-amz-Date: 20200928T203757Z
            Authorization: authorization string
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetBucketLifecycleConfiguration

Service: Amazon S3 Control

> **Note**
>
> This action gets an Amazon S3 on Outposts bucket's lifecycle configuration. To get an S3 bucket's lifecycle configuration, see GetBucketLifecycleConfiguration in the *Amazon S3 API Reference*.

Returns the lifecycle configuration information set on the Outposts bucket. For more information, see Using Amazon S3 on Outposts and for information about lifecycle configuration, see Object Lifecycle Management in *Amazon S3 User Guide*.

To use this action, you must have permission to perform the `s3-outposts:GetLifecycleConfiguration` action. The Outposts bucket owner has this permission, by default. The bucket owner can grant this permission to others. For more information about permissions, see Permissions Related to Bucket Subresource Operations and Managing Access Permissions to Your Amazon S3 Resources.

All Amazon S3 on Outposts REST API requests for this action require an additional parameter of `x-amz-outpost-id` to be passed with the request. In addition, you must use an S3 on Outposts endpoint hostname prefix instead of `s3-control`. For an example of the request syntax for Amazon S3 on Outposts that uses the S3 on Outposts endpoint hostname prefix and the `x-amz-outpost-id` derived by using the access point ARN, see the Examples section.

`GetBucketLifecycleConfiguration` has the following special error:

- Error code: `NoSuchLifecycleConfiguration`
  - Description: The lifecycle configuration does not exist.
  - HTTP Status Code: 404 Not Found
  - SOAP Fault Code Prefix: Client

The following actions are related to `GetBucketLifecycleConfiguration`:

- PutBucketLifecycleConfiguration
- DeleteBucketLifecycleConfiguration

Request Syntax

```
GET /v20180820/bucket/name/lifecycleconfiguration HTTP/1.1
Host: Bucket.s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

name

The Amazon Resource Name (ARN) of the bucket.

For using this parameter with Amazon S3 on Outposts with the REST API, you must specify the name and the x-amz-outpost-id as well.

For using this parameter with S3 on Outposts with the AWS SDK and CLI, you must specify the ARN of the bucket accessed in the format `arn:aws:s3-outposts:<Region>:<account-id>:outpost/<outpost-id>/bucket/<my-bucket-name>`. For example, to access the bucket `reports` through Outpost `my-outpost` owned by account `123456789012` in Region `us-west-2`, use the URL encoding of `arn:aws:s3-outposts:us-west-2:123456789012:outpost/my-outpost/bucket/reports`. The value must be URL encoded.

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: Yes

x-amz-account-id

The AWS account ID of the Outposts bucket.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<GetBucketLifecycleConfigurationResult>
   <Rules>
      <Rule>
         <AbortIncompleteMultipartUpload>
            <DaysAfterInitiation>integer</DaysAfterInitiation>
         </AbortIncompleteMultipartUpload>
         <Expiration>
            <Date>timestamp</Date>
            <Days>integer</Days>
            <ExpiredObjectDeleteMarker>boolean</ExpiredObjectDeleteMarker>
         </Expiration>
         <Filter>
            <And>
               <ObjectSizeGreaterThan>long</ObjectSizeGreaterThan>
               <ObjectSizeLessThan>long</ObjectSizeLessThan>
               <Prefix>string</Prefix>
               <Tags>
                  <S3Tag>
                     <Key>string</Key>
                     <Value>string</Value>
                  </S3Tag>
               </Tags>
            </And>
            <ObjectSizeGreaterThan>long</ObjectSizeGreaterThan>
            <ObjectSizeLessThan>long</ObjectSizeLessThan>
            <Prefix>string</Prefix>
            <Tag>
               <Key>string</Key>
               <Value>string</Value>
            </Tag>
         </Filter>
         <ID>string</ID>
         <NoncurrentVersionExpiration>
            <NewerNoncurrentVersions>integer</NewerNoncurrentVersions>
            <NoncurrentDays>integer</NoncurrentDays>
         </NoncurrentVersionExpiration>
         <NoncurrentVersionTransitions>
            <NoncurrentVersionTransition>
               <NoncurrentDays>integer</NoncurrentDays>
               <StorageClass>string</StorageClass>
```

```
            </NoncurrentVersionTransition>
         </NoncurrentVersionTransitions>
         <Status>string</Status>
         <Transitions>
            <Transition>
               <Date>timestamp</Date>
               <Days>integer</Days>
               <StorageClass>string</StorageClass>
            </Transition>
         </Transitions>
      </Rule>
   </Rules>
</GetBucketLifecycleConfigurationResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

GetBucketLifecycleConfigurationResult

Root level tag for the GetBucketLifecycleConfigurationResult parameters.

Required: Yes

Rules

Container for the lifecycle rule of the Outposts bucket.

Type: Array of LifecycleRule data types

Examples

Sample request to get the lifecycle configuration of the Amazon S3 on Outposts bucket

The following example shows how to get the lifecycle configuration of the Outposts bucket.

```
            GET /v20180820/bucket/example-outpost-bucket/lifecycleconfiguration
HTTP/1.1
            Host: s3-outposts.<Region>.amazonaws.com
            x-amz-account-id: example-account-id
```

```
x-amz-outpost-id: op-01ac5d28a6a232904
x-amz-date: Thu, 15 Nov 2012 00:17:21 GMT
Authorization: signatureValue
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetBucketPolicy

Service: Amazon S3 Control

> **Note**
>
> This action gets a bucket policy for an Amazon S3 on Outposts bucket. To get a policy for an S3 bucket, see GetBucketPolicy in the *Amazon S3 API Reference*.

Returns the policy of a specified Outposts bucket. For more information, see Using Amazon S3 on Outposts in the *Amazon S3 User Guide*.

If you are using an identity other than the root user of the AWS account that owns the bucket, the calling identity must have the `GetBucketPolicy` permissions on the specified bucket and belong to the bucket owner's account in order to use this action.

Only users from Outposts bucket owner account with the right permissions can perform actions on an Outposts bucket. If you don't have `s3-outposts:GetBucketPolicy` permissions or you're not using an identity that belongs to the bucket owner's account, Amazon S3 returns a `403 Access Denied` error.

> **Important**
>
> As a security precaution, the root user of the AWS account that owns a bucket can always use this action, even if the policy explicitly denies the root user the ability to perform this action.

For more information about bucket policies, see Using Bucket Policies and User Policies.

All Amazon S3 on Outposts REST API requests for this action require an additional parameter of `x-amz-outpost-id` to be passed with the request. In addition, you must use an S3 on Outposts endpoint hostname prefix instead of `s3-control`. For an example of the request syntax for Amazon S3 on Outposts that uses the S3 on Outposts endpoint hostname prefix and the `x-amz-outpost-id` derived by using the access point ARN, see the Examples section.

The following actions are related to `GetBucketPolicy`:

- GetObject

- PutBucketPolicy
- DeleteBucketPolicy

Request Syntax

```
GET /v20180820/bucket/name/policy HTTP/1.1
Host: Bucket.s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

name

Specifies the bucket.

For using this parameter with Amazon S3 on Outposts with the REST API, you must specify the name and the x-amz-outpost-id as well.

For using this parameter with S3 on Outposts with the AWS SDK and CLI, you must specify the ARN of the bucket accessed in the format `arn:aws:s3-outposts:<Region>:<account-id>:outpost/<outpost-id>/bucket/<my-bucket-name>`. For example, to access the bucket `reports` through Outpost `my-outpost` owned by account `123456789012` in Region `us-west-2`, use the URL encoding of `arn:aws:s3-outposts:us-west-2:123456789012:outpost/my-outpost/bucket/reports`. The value must be URL encoded.

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: Yes

x-amz-account-id

The AWS account ID of the Outposts bucket.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<GetBucketPolicyResult>
   <Policy>string</Policy>
</GetBucketPolicyResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

GetBucketPolicyResult

Root level tag for the GetBucketPolicyResult parameters.

Required: Yes

Policy

The policy of the Outposts bucket.

Type: String

Examples

Sample GetBucketPolicy request for an Amazon S3 on Outposts bucket

The following request gets the policy of the specified Outposts bucket `example-outpost-bucket`.

```
GET /v20180820/bucket/example-outpost-bucket/policy HTTP/1.1
Host: s3-outposts.<Region>.amazonaws.com
Date: Wed, 28 Oct 2009 22:32:00 GMT
Authorization: authorization string
x-amz-account-id: example-account-id
```

```
            x-amz-outpost-id: op-01ac5d28a6a232904
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetBucketReplication

Service: Amazon S3 Control

> **Note**
>
> This operation gets an Amazon S3 on Outposts bucket's replication configuration. To get an S3 bucket's replication configuration, see GetBucketReplication in the *Amazon S3 API Reference*.

Returns the replication configuration of an S3 on Outposts bucket. For more information about S3 on Outposts, see Using Amazon S3 on Outposts in the *Amazon S3 User Guide*. For information about S3 replication on Outposts configuration, see Replicating objects for S3 on Outposts in the *Amazon S3 User Guide*.

> **Note**
>
> It can take a while to propagate PUT or DELETE requests for a replication configuration to all S3 on Outposts systems. Therefore, the replication configuration that's returned by a GET request soon after a PUT or DELETE request might return a more recent result than what's on the Outpost. If an Outpost is offline, the delay in updating the replication configuration on that Outpost can be significant.

This action requires permissions for the `s3-outposts:GetReplicationConfiguration` action. The Outposts bucket owner has this permission by default and can grant it to others. For more information about permissions, see Setting up IAM with S3 on Outposts and Managing access to S3 on Outposts bucket in the *Amazon S3 User Guide*.

All Amazon S3 on Outposts REST API requests for this action require an additional parameter of `x-amz-outpost-id` to be passed with the request. In addition, you must use an S3 on Outposts endpoint hostname prefix instead of `s3-control`. For an example of the request syntax for Amazon S3 on Outposts that uses the S3 on Outposts endpoint hostname prefix and the `x-amz-outpost-id` derived by using the access point ARN, see the Examples section.

If you include the `Filter` element in a replication configuration, you must also include the `DeleteMarkerReplication`, `Status`, and `Priority` elements. The response also returns those elements.

For information about S3 on Outposts replication failure reasons, see Replication failure reasons in the *Amazon S3 User Guide*.

The following operations are related to `GetBucketReplication`:

- PutBucketReplication
- DeleteBucketReplication

Request Syntax

```
GET /v20180820/bucket/name/replication HTTP/1.1
Host: Bucket.s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

name

Specifies the bucket to get the replication information for.

For using this parameter with Amazon S3 on Outposts with the REST API, you must specify the name and the x-amz-outpost-id as well.

For using this parameter with S3 on Outposts with the AWS SDK and CLI, you must specify the ARN of the bucket accessed in the format `arn:aws:s3-outposts:<Region>:<account-id>:outpost/<outpost-id>/bucket/<my-bucket-name>`. For example, to access the bucket `reports` through Outpost `my-outpost` owned by account `123456789012` in Region `us-west-2`, use the URL encoding of `arn:aws:s3-outposts:us-west-2:123456789012:outpost/my-outpost/bucket/reports`. The value must be URL encoded.

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: Yes

x-amz-account-id

The AWS account ID of the Outposts bucket.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<GetBucketReplicationResult>
   <ReplicationConfiguration>
      <Role>string</Role>
      <Rules>
         <Rule>
            <Bucket>string</Bucket>
            <DeleteMarkerReplication>
               <Status>string</Status>
            </DeleteMarkerReplication>
            <Destination>
               <AccessControlTranslation>
                  <Owner>string</Owner>
               </AccessControlTranslation>
               <Account>string</Account>
               <Bucket>string</Bucket>
               <EncryptionConfiguration>
                  <ReplicaKmsKeyID>string</ReplicaKmsKeyID>
               </EncryptionConfiguration>
               <Metrics>
                  <EventThreshold>
                     <Minutes>integer</Minutes>
                  </EventThreshold>
                  <Status>string</Status>
               </Metrics>
               <ReplicationTime>
                  <Status>string</Status>
                  <Time>
                     <Minutes>integer</Minutes>
                  </Time>
```

```
            </ReplicationTime>
            <StorageClass>string</StorageClass>
         </Destination>
         <ExistingObjectReplication>
            <Status>string</Status>
         </ExistingObjectReplication>
         <Filter>
            <And>
               <Prefix>string</Prefix>
               <Tags>
                  <S3Tag>
                     <Key>string</Key>
                     <Value>string</Value>
                  </S3Tag>
               </Tags>
            </And>
            <Prefix>string</Prefix>
            <Tag>
               <Key>string</Key>
               <Value>string</Value>
            </Tag>
         </Filter>
         <ID>string</ID>
         <Prefix>string</Prefix>
         <Priority>integer</Priority>
         <SourceSelectionCriteria>
            <ReplicaModifications>
               <Status>string</Status>
            </ReplicaModifications>
            <SseKmsEncryptedObjects>
               <Status>string</Status>
            </SseKmsEncryptedObjects>
         </SourceSelectionCriteria>
         <Status>string</Status>
      </Rule>
   </Rules>
</ReplicationConfiguration>
</GetBucketReplicationResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

GetBucketReplicationResult

Root level tag for the GetBucketReplicationResult parameters.

Required: Yes

ReplicationConfiguration

A container for one or more replication rules. A replication configuration must have at least one rule and you can add up to 100 rules. The maximum size of a replication configuration is 128 KB.

Type: ReplicationConfiguration data type

Examples

Sample request to get the replication configuration of an Amazon S3 on Outposts bucket

The following example shows how to get the replication configuration of an Outposts bucket.

```
GET /v20180820/bucket/example-outpost-bucket/replication HTTP/1.1
Host: s3-outposts.<Region>.amazonaws.com
x-amz-account-id: example-account-id
x-amz-outpost-id: op-01ac5d28a6a232904
Authorization: signatureValue
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3

- AWS SDK for Python
- AWS SDK for Ruby V3

GetBucketTagging

Service: Amazon S3 Control

> **Note**
>
> This action gets an Amazon S3 on Outposts bucket's tags. To get an S3 bucket tags, see GetBucketTagging in the *Amazon S3 API Reference*.

Returns the tag set associated with the Outposts bucket. For more information, see Using Amazon S3 on Outposts in the *Amazon S3 User Guide*.

To use this action, you must have permission to perform the `GetBucketTagging` action. By default, the bucket owner has this permission and can grant this permission to others.

`GetBucketTagging` has the following special error:

- Error code: `NoSuchTagSetError`
  - Description: There is no tag set associated with the bucket.

All Amazon S3 on Outposts REST API requests for this action require an additional parameter of `x-amz-outpost-id` to be passed with the request. In addition, you must use an S3 on Outposts endpoint hostname prefix instead of `s3-control`. For an example of the request syntax for Amazon S3 on Outposts that uses the S3 on Outposts endpoint hostname prefix and the `x-amz-outpost-id` derived by using the access point ARN, see the Examples section.

The following actions are related to `GetBucketTagging`:

- PutBucketTagging
- DeleteBucketTagging

Request Syntax

```
GET /v20180820/bucket/name/tagging HTTP/1.1
Host: Bucket.s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

name

Specifies the bucket.

For using this parameter with Amazon S3 on Outposts with the REST API, you must specify the name and the x-amz-outpost-id as well.

For using this parameter with S3 on Outposts with the AWS SDK and CLI, you must specify the ARN of the bucket accessed in the format `arn:aws:s3-outposts:<Region>:<account-id>:outpost/<outpost-id>/bucket/<my-bucket-name>`. For example, to access the bucket `reports` through Outpost `my-outpost` owned by account `123456789012` in Region `us-west-2`, use the URL encoding of `arn:aws:s3-outposts:us-west-2:123456789012:outpost/my-outpost/bucket/reports`. The value must be URL encoded.

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: Yes

x-amz-account-id

The AWS account ID of the Outposts bucket.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
```

```
<GetBucketTaggingResult>
   <TagSet>
      <S3Tag>
         <Key>string</Key>
         <Value>string</Value>
      </S3Tag>
   </TagSet>
</GetBucketTaggingResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

GetBucketTaggingResult

Root level tag for the GetBucketTaggingResult parameters.

Required: Yes

TagSet

The tags set of the Outposts bucket.

Type: Array of S3Tag data types

Examples

Amazon S3 on Outposts request example for getting a tag set for an Outposts bucket

The following request gets the tag set of the specified Outposts bucket `example-outpost-bucket`.

```
GET /v20180820/bucket/example-outpost-bucket/tagging HTTP/1.1
Host: s3-outposts.<Region>.amazonaws.com
x-amz-date: Wed, 28 Oct 2020 22:32:00 GMT
x-amz-account-id: example-account-id
x-amz-outpost-id: op-01ac5d28a6a232904
Authorization: authorization string
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetBucketVersioning

Service: Amazon S3 Control

> **Note**
>
> This operation returns the versioning state for S3 on Outposts buckets only. To return the versioning state for an S3 bucket, see GetBucketVersioning in the *Amazon S3 API Reference*.

Returns the versioning state for an S3 on Outposts bucket. With S3 Versioning, you can save multiple distinct copies of your objects and recover from unintended user actions and application failures.

If you've never set versioning on your bucket, it has no versioning state. In that case, the `GetBucketVersioning` request does not return a versioning state value.

For more information about versioning, see Versioning in the *Amazon S3 User Guide*.

All Amazon S3 on Outposts REST API requests for this action require an additional parameter of `x-amz-outpost-id` to be passed with the request. In addition, you must use an S3 on Outposts endpoint hostname prefix instead of `s3-control`. For an example of the request syntax for Amazon S3 on Outposts that uses the S3 on Outposts endpoint hostname prefix and the `x-amz-outpost-id` derived by using the access point ARN, see the Examples section.

The following operations are related to `GetBucketVersioning` for S3 on Outposts.

- PutBucketVersioning
- PutBucketLifecycleConfiguration
- GetBucketLifecycleConfiguration

Request Syntax

```
GET /v20180820/bucket/name/versioning HTTP/1.1
Host: Bucket.s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

name

The S3 on Outposts bucket to return the versioning state for.

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: Yes

x-amz-account-id

The AWS account ID of the S3 on Outposts bucket.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<GetBucketVersioningResult>
   <Status>string</Status>
   <MfaDelete>string</MfaDelete>
</GetBucketVersioningResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

GetBucketVersioningResult

Root level tag for the GetBucketVersioningResult parameters.

Required: Yes

MFADelete

Specifies whether MFA delete is enabled in the bucket versioning configuration. This element is returned only if the bucket has been configured with MFA delete. If MFA delete has never been configured for the bucket, this element is not returned.

Type: String

Valid Values: `Enabled | Disabled`

Status

The versioning state of the S3 on Outposts bucket.

Type: String

Valid Values: `Enabled | Suspended`

Examples

Sample GetBucketVersioning request on an S3 on Outposts bucket

This request returns the versioning state for an S3 on Outposts bucket that's named `example-outpost-bucket`.

```
GET /v20180820/bucket/example-outpost-bucket/?versioning HTTP/1.1
Host:s3-outposts.region-code.amazonaws.com
x-amz-account-id: example-account-id
x-amz-outpost-id: op-01ac5d28a6a232904
x-amz-date: Wed, 25 May  2022 00:14:21 GMT
Authorization: signatureValue
```

Sample GetBucketVersioning response on a versioning-enabled S3 on Outposts bucket

If you enabled versioning on a bucket, the response is:

```
    <VersioningConfiguration xmlns="http://awss3control.amazonaws.com/
doc/2018-08-20/">
       <Status>Enabled</Status>
```

```
    </VersioningConfiguration>
```

Sample GetBucketVersioning response on a versioning-suspended bucket

If you suspended versioning on a bucket, the response is:

```
    <VersioningConfiguration xmlns="http://awss3control.amazonaws.com/
doc/2018-08-20/">
       <Status>Suspended</Status>
    </VersioningConfiguration>
```

Sample GetBucketVersioning response if you have never enabled versioning.

If you have never enabled versioning on a bucket, the response is:

```
    <VersioningConfiguration xmlns="http://awss3control.amazonaws.com/
doc/2018-08-20/">
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetDataAccess

Service: Amazon S3 Control

Returns a temporary access credential from S3 Access Grants to the grantee or client application. The temporary credential is an AWS STS token that grants them access to the S3 data.

Permissions

You must have the `s3:GetDataAccess` permission to use this operation.

Additional Permissions

The IAM role that S3 Access Grants assumes must have the following permissions specified in the trust policy when registering the location: `sts:AssumeRole`, for directory users or groups `sts:SetContext`, and for IAM users or roles `sts:SetSourceIdentity`.

Request Syntax

```
GET /v20180820/accessgrantsinstance/dataaccess?
durationSeconds=DurationSeconds&permission=Permission&privilege=Privilege&target=Target&targetT
 HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

durationSeconds

The session duration, in seconds, of the temporary access credential that S3 Access Grants vends to the grantee or client application. The default value is 1 hour, but the grantee can specify a range from 900 seconds (15 minutes) up to 43200 seconds (12 hours). If the grantee requests a value higher than this maximum, the operation fails.

Valid Range: Minimum value of 900. Maximum value of 43200.

permission

The type of permission granted to your S3 data, which can be set to one of the following values:

- READ – Grant read-only access to the S3 data.

- `WRITE` – Grant write-only access to the S3 data.
- `READWRITE` – Grant both read and write access to the S3 data.

Valid Values: `READ | WRITE | READWRITE`

Required: Yes

privilege

The scope of the temporary access credential that S3 Access Grants vends to the grantee or client application.

- `Default` – The scope of the returned temporary access token is the scope of the grant that is closest to the target scope.
- `Minimal` – The scope of the returned temporary access token is the same as the requested target scope as long as the requested scope is the same as or a subset of the grant scope.

Valid Values: `Minimal | Default`

target

The S3 URI path of the data to which you are requesting temporary access credentials. If the requesting account has an access grant for this data, S3 Access Grants vends temporary access credentials in the response.

Length Constraints: Minimum length of 1. Maximum length of 2000.

Pattern: `^.+$`

Required: Yes

targetType

The type of `Target`. The only possible value is `Object`. Pass this value if the target data that you would like to access is a path to an object. Do not pass this value if the target data is a bucket or a bucket and a prefix.

Valid Values: `Object`

x-amz-account-id

The ID of the AWS account that is making this request.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<GetDataAccessResult>
   <Credentials>
      <AccessKeyId>string</AccessKeyId>
      <Expiration>timestamp</Expiration>
      <SecretAccessKey>string</SecretAccessKey>
      <SessionToken>string</SessionToken>
   </Credentials>
   <MatchedGrantTarget>string</MatchedGrantTarget>
</GetDataAccessResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

GetDataAccessResult

Root level tag for the GetDataAccessResult parameters.

Required: Yes

Credentials

The temporary credential token that S3 Access Grants vends.

Type: Credentials data type

MatchedGrantTarget

The S3 URI path of the data to which you are being granted temporary access credentials.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2000.

Pattern: ^.+$

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetJobTagging

Service: Amazon S3 Control

Returns the tags on an S3 Batch Operations job.

Permissions

To use the `GetJobTagging` operation, you must have permission to perform the `s3:GetJobTagging` action. For more information, see Controlling access and labeling jobs using tags in the *Amazon S3 User Guide*.

Related actions include:

- CreateJob
- PutJobTagging
- DeleteJobTagging

Request Syntax

```
GET /v20180820/jobs/id/tagging HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

id

The ID for the S3 Batch Operations job whose tags you want to retrieve.

Length Constraints: Minimum length of 5. Maximum length of 36.

Pattern: `[a-zA-Z0-9\-\_]+`

Required: Yes

x-amz-account-id

The AWS account ID associated with the S3 Batch Operations job.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<GetJobTaggingResult>
   <Tags>
      <S3Tag>
         <Key>string</Key>
         <Value>string</Value>
      </S3Tag>
   </Tags>
</GetJobTaggingResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

GetJobTaggingResult

Root level tag for the GetJobTaggingResult parameters.

Required: Yes

Tags

The set of tags associated with the S3 Batch Operations job.

Type: Array of S3Tag data types

Errors

InternalServiceException

HTTP Status Code: 500

NotFoundException

HTTP Status Code: 400

TooManyRequestsException

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetMultiRegionAccessPoint

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Returns configuration information about the specified Multi-Region Access Point.

This action will always be routed to the US West (Oregon) Region. For more information about the restrictions around working with Multi-Region Access Points, see Multi-Region Access Point restrictions and limitations in the *Amazon S3 User Guide*.

The following actions are related to `GetMultiRegionAccessPoint`:

- CreateMultiRegionAccessPoint
- DeleteMultiRegionAccessPoint
- DescribeMultiRegionAccessPointOperation
- ListMultiRegionAccessPoints

Request Syntax

```
GET /v20180820/mrap/instances/name+ HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

name

The name of the Multi-Region Access Point whose configuration information you want to receive. The name of the Multi-Region Access Point is different from the alias. For more information about the distinction between the name and the alias of an Multi-Region Access Point, see Rules for naming Amazon S3 Multi-Region Access Points in the *Amazon S3 User Guide*.

Length Constraints: Maximum length of 50.

Pattern: ^[a-z0-9][-a-z0-9]{1,48}[a-z0-9]$

Required: Yes

x-amz-account-id

The AWS account ID for the owner of the Multi-Region Access Point.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<GetMultiRegionAccessPointResult>
   <AccessPoint>
      <Alias>string</Alias>
      <CreatedAt>timestamp</CreatedAt>
      <Name>string</Name>
      <PublicAccessBlock>
         <BlockPublicAcls>boolean</BlockPublicAcls>
         <BlockPublicPolicy>boolean</BlockPublicPolicy>
         <IgnorePublicAcls>boolean</IgnorePublicAcls>
         <RestrictPublicBuckets>boolean</RestrictPublicBuckets>
      </PublicAccessBlock>
      <Regions>
         <Region>
            <Bucket>string</Bucket>
            <BucketAccountId>string</BucketAccountId>
            <Region>string</Region>
         </Region>
      </Regions>
      <Status>string</Status>
   </AccessPoint>
```

```
</GetMultiRegionAccessPointResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

GetMultiRegionAccessPointResult

Root level tag for the GetMultiRegionAccessPointResult parameters.

Required: Yes

AccessPoint

A container element containing the details of the requested Multi-Region Access Point.

Type: MultiRegionAccessPointReport data type

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetMultiRegionAccessPointPolicy

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Returns the access control policy of the specified Multi-Region Access Point.

This action will always be routed to the US West (Oregon) Region. For more information about the restrictions around working with Multi-Region Access Points, see Multi-Region Access Point restrictions and limitations in the *Amazon S3 User Guide*.

The following actions are related to `GetMultiRegionAccessPointPolicy`:

- GetMultiRegionAccessPointPolicyStatus
- PutMultiRegionAccessPointPolicy

Request Syntax

```
GET /v20180820/mrap/instances/name+/policy HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

name

Specifies the Multi-Region Access Point. The name of the Multi-Region Access Point is different from the alias. For more information about the distinction between the name and the alias of an Multi-Region Access Point, see Rules for naming Amazon S3 Multi-Region Access Points in the *Amazon S3 User Guide*.

Length Constraints: Maximum length of 50.

Pattern: `^[a-z0-9][-a-z0-9]{1,48}[a-z0-9]$`

Required: Yes

x-amz-account-id

The AWS account ID for the owner of the Multi-Region Access Point.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<GetMultiRegionAccessPointPolicyResult>
   <Policy>
      <Established>
         <Policy>string</Policy>
      </Established>
      <Proposed>
         <Policy>string</Policy>
      </Proposed>
   </Policy>
</GetMultiRegionAccessPointPolicyResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

GetMultiRegionAccessPointPolicyResult

Root level tag for the GetMultiRegionAccessPointPolicyResult parameters.

Required: Yes

Policy

The policy associated with the specified Multi-Region Access Point.

Type: MultiRegionAccessPointPolicyDocument data type

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetMultiRegionAccessPointPolicyStatus

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Indicates whether the specified Multi-Region Access Point has an access control policy that allows public access.

This action will always be routed to the US West (Oregon) Region. For more information about the restrictions around working with Multi-Region Access Points, see Multi-Region Access Point restrictions and limitations in the *Amazon S3 User Guide*.

The following actions are related to `GetMultiRegionAccessPointPolicyStatus`:

- GetMultiRegionAccessPointPolicy
- PutMultiRegionAccessPointPolicy

Request Syntax

```
GET /v20180820/mrap/instances/name+/policystatus HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

name

Specifies the Multi-Region Access Point. The name of the Multi-Region Access Point is different from the alias. For more information about the distinction between the name and the alias of an Multi-Region Access Point, see Rules for naming Amazon S3 Multi-Region Access Points in the *Amazon S3 User Guide*.

Length Constraints: Maximum length of 50.

Pattern: `^[a-z0-9][-a-z0-9]{1,48}[a-z0-9]$`

Required: Yes

x-amz-account-id

The AWS account ID for the owner of the Multi-Region Access Point.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<GetMultiRegionAccessPointPolicyStatusResult>
   <Established>
      <IsPublic>boolean</IsPublic>
   </Established>
</GetMultiRegionAccessPointPolicyStatusResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

GetMultiRegionAccessPointPolicyStatusResult

Root level tag for the GetMultiRegionAccessPointPolicyStatusResult parameters.

Required: Yes

Established

Indicates whether this access point policy is public. For more information about how Amazon S3 evaluates policies to determine whether they are public, see The Meaning of "Public" in the *Amazon S3 User Guide*.

Type: PolicyStatus data type

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetMultiRegionAccessPointRoutes

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Returns the routing configuration for a Multi-Region Access Point, indicating which Regions are active or passive.

To obtain routing control changes and failover requests, use the Amazon S3 failover control infrastructure endpoints in these five AWS Regions:

- `us-east-1`
- `us-west-2`
- `ap-southeast-2`
- `ap-northeast-1`
- `eu-west-1`

Request Syntax

```
GET /v20180820/mrap/instances/mrap+/routes HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

mrap

The Multi-Region Access Point ARN.

Length Constraints: Maximum length of 200.

Pattern: `^[a-zA-Z0-9\:.-]{3,200}$`

Required: Yes

x-amz-account-id

The AWS account ID for the owner of the Multi-Region Access Point.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<GetMultiRegionAccessPointRoutesResult>
   <Mrap>string</Mrap>
   <Routes>
      <Route>
         <Bucket>string</Bucket>
         <Region>string</Region>
         <TrafficDialPercentage>integer</TrafficDialPercentage>
      </Route>
   </Routes>
</GetMultiRegionAccessPointRoutesResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

GetMultiRegionAccessPointRoutesResult

Root level tag for the GetMultiRegionAccessPointRoutesResult parameters.

Required: Yes

Mrap

The Multi-Region Access Point ARN.

Type: String

Length Constraints: Maximum length of 200.

Pattern: `^[a-zA-Z0-9\:.-]{3,200}$`

Routes

The different routes that make up the route configuration. Active routes return a value of `100`, and passive routes return a value of `0`.

Type: Array of MultiRegionAccessPointRoute data types

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetPublicAccessBlock

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Retrieves the `PublicAccessBlock` configuration for an AWS account. For more information, see Using Amazon S3 block public access.

Related actions include:

- DeletePublicAccessBlock
- PutPublicAccessBlock

Request Syntax

```
GET /v20180820/configuration/publicAccessBlock HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

x-amz-account-id

The account ID for the AWS account whose `PublicAccessBlock` configuration you want to retrieve.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<PublicAccessBlockConfiguration>
   <BlockPublicAcls>boolean</BlockPublicAcls>
   <IgnorePublicAcls>boolean</IgnorePublicAcls>
   <BlockPublicPolicy>boolean</BlockPublicPolicy>
   <RestrictPublicBuckets>boolean</RestrictPublicBuckets>
</PublicAccessBlockConfiguration>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

PublicAccessBlockConfiguration

Root level tag for the PublicAccessBlockConfiguration parameters.

Required: Yes

BlockPublicAcls

Specifies whether Amazon S3 should block public access control lists (ACLs) for buckets in this account. Setting this element to TRUE causes the following behavior:

- PutBucketAcl and PutObjectAcl calls fail if the specified ACL is public.
- PUT Object calls fail if the request includes a public ACL.
- PUT Bucket calls fail if the request includes a public ACL.

Enabling this setting doesn't affect existing policies or ACLs.

This property is not supported for Amazon S3 on Outposts.

Type: Boolean

BlockPublicPolicy

Specifies whether Amazon S3 should block public bucket policies for buckets in this account. Setting this element to TRUE causes Amazon S3 to reject calls to PUT Bucket policy if the specified bucket policy allows public access.

Enabling this setting doesn't affect existing bucket policies.

This property is not supported for Amazon S3 on Outposts.

Type: Boolean

IgnorePublicAcls

Specifies whether Amazon S3 should ignore public ACLs for buckets in this account. Setting this element to TRUE causes Amazon S3 to ignore all public ACLs on buckets in this account and any objects that they contain.

Enabling this setting doesn't affect the persistence of any existing ACLs and doesn't prevent new public ACLs from being set.

This property is not supported for Amazon S3 on Outposts.

Type: Boolean

RestrictPublicBuckets

Specifies whether Amazon S3 should restrict public bucket policies for buckets in this account. Setting this element to TRUE restricts access to buckets with public policies to only AWS service principals and authorized users within this account.

Enabling this setting doesn't affect previously stored bucket policies, except that public and cross-account access within any public bucket policy, including non-public delegation to specific accounts, is blocked.

This property is not supported for Amazon S3 on Outposts.

Type: Boolean

Errors

NoSuchPublicAccessBlockConfiguration

Amazon S3 throws this exception if you make a `GetPublicAccessBlock` request against an account that doesn't have a `PublicAccessBlockConfiguration` set.

HTTP Status Code: 404

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetStorageLensConfiguration

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Gets the Amazon S3 Storage Lens configuration. For more information, see Assessing your storage activity and usage with Amazon S3 Storage Lens in the *Amazon S3 User Guide*. For a complete list of S3 Storage Lens metrics, see S3 Storage Lens metrics glossary in the *Amazon S3 User Guide*.

> **Note**
>
> To use this action, you must have permission to perform the `s3:GetStorageLensConfiguration` action. For more information, see Setting permissions to use Amazon S3 Storage Lens in the *Amazon S3 User Guide*.

Request Syntax

```
GET /v20180820/storagelens/storagelensid HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

storagelensid

The ID of the Amazon S3 Storage Lens configuration.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-\_\.]+`

Required: Yes

x-amz-account-id

The account ID of the requester.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<StorageLensConfiguration>
   <Id>string</Id>
   <AccountLevel>
      <ActivityMetrics>
         <IsEnabled>boolean</IsEnabled>
      </ActivityMetrics>
      <AdvancedCostOptimizationMetrics>
         <IsEnabled>boolean</IsEnabled>
      </AdvancedCostOptimizationMetrics>
      <AdvancedDataProtectionMetrics>
         <IsEnabled>boolean</IsEnabled>
      </AdvancedDataProtectionMetrics>
      <BucketLevel>
         <ActivityMetrics>
            <IsEnabled>boolean</IsEnabled>
         </ActivityMetrics>
         <AdvancedCostOptimizationMetrics>
            <IsEnabled>boolean</IsEnabled>
         </AdvancedCostOptimizationMetrics>
         <AdvancedDataProtectionMetrics>
            <IsEnabled>boolean</IsEnabled>
         </AdvancedDataProtectionMetrics>
         <DetailedStatusCodesMetrics>
            <IsEnabled>boolean</IsEnabled>
         </DetailedStatusCodesMetrics>
         <PrefixLevel>
            <StorageMetrics>
               <IsEnabled>boolean</IsEnabled>
               <SelectionCriteria>
```

```
                  <Delimiter>string</Delimiter>
                  <MaxDepth>integer</MaxDepth>
                  <MinStorageBytesPercentage>double</MinStorageBytesPercentage>
               </SelectionCriteria>
            </StorageMetrics>
         </PrefixLevel>
      </BucketLevel>
      <DetailedStatusCodesMetrics>
         <IsEnabled>boolean</IsEnabled>
      </DetailedStatusCodesMetrics>
      <StorageLensGroupLevel>
         <SelectionCriteria>
            <Exclude>
               <Arn>string</Arn>
            </Exclude>
            <Include>
               <Arn>string</Arn>
            </Include>
         </SelectionCriteria>
      </StorageLensGroupLevel>
   </AccountLevel>
   <Include>
      <Buckets>
         <Arn>string</Arn>
      </Buckets>
      <Regions>
         <Region>string</Region>
      </Regions>
   </Include>
   <Exclude>
      <Buckets>
         <Arn>string</Arn>
      </Buckets>
      <Regions>
         <Region>string</Region>
      </Regions>
   </Exclude>
   <DataExport>
      <CloudWatchMetrics>
         <IsEnabled>boolean</IsEnabled>
      </CloudWatchMetrics>
      <S3BucketDestination>
         <AccountId>string</AccountId>
         <Arn>string</Arn>
```

```
          <Encryption>
             <SSE-KMS>
                <KeyId>string</KeyId>
             </SSE-KMS>
             <SSE-S3>
             </SSE-S3>
          </Encryption>
          <Format>string</Format>
          <OutputSchemaVersion>string</OutputSchemaVersion>
          <Prefix>string</Prefix>
       </S3BucketDestination>
    </DataExport>
    <IsEnabled>boolean</IsEnabled>
    <AwsOrg>
       <Arn>string</Arn>
    </AwsOrg>
    <StorageLensArn>string</StorageLensArn>
</StorageLensConfiguration>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

StorageLensConfiguration

Root level tag for the StorageLensConfiguration parameters.

Required: Yes

AccountLevel

A container for all the account-level configurations of your S3 Storage Lens configuration.

Type: AccountLevel data type

AwsOrg

A container for the AWS organization for this S3 Storage Lens configuration.

Type: StorageLensAwsOrg data type

DataExport

A container to specify the properties of your S3 Storage Lens metrics export including, the destination, schema and format.

Type: StorageLensDataExport data type

Exclude

A container for what is excluded in this configuration. This container can only be valid if there is no `Include` container submitted, and it's not empty.

Type: Exclude data type

Id

A container for the Amazon S3 Storage Lens configuration ID.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-\_\.]+`

Include

A container for what is included in this configuration. This container can only be valid if there is no `Exclude` container submitted, and it's not empty.

Type: Include data type

IsEnabled

A container for whether the S3 Storage Lens configuration is enabled.

Type: Boolean

StorageLensArn

The Amazon Resource Name (ARN) of the S3 Storage Lens configuration. This property is read-only and follows the following format: `arn:aws:s3:`*`us-east-1`*`:`*`example-account-id`*`:storage-lens/`*`your-dashboard-name`*

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `arn:[a-z\-]+:s3:[a-z0-9\-]+:\d{12}:storage\-lens\/.*`

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetStorageLensConfigurationTagging

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Gets the tags of Amazon S3 Storage Lens configuration. For more information about S3 Storage Lens, see Assessing your storage activity and usage with Amazon S3 Storage Lens in the *Amazon S3 User Guide*.

> **Note**
>
> To use this action, you must have permission to perform the `s3:GetStorageLensConfigurationTagging` action. For more information, see Setting permissions to use Amazon S3 Storage Lens in the *Amazon S3 User Guide*.

Request Syntax

```
GET /v20180820/storagelens/storagelensid/tagging HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

storagelensid

The ID of the Amazon S3 Storage Lens configuration.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-\_\.]+`

Required: Yes

x-amz-account-id

The account ID of the requester.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<GetStorageLensConfigurationTaggingResult>
   <Tags>
      <Tag>
         <Key>string</Key>
         <Value>string</Value>
      </Tag>
   </Tags>
</GetStorageLensConfigurationTaggingResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

GetStorageLensConfigurationTaggingResult

Root level tag for the GetStorageLensConfigurationTaggingResult parameters.

Required: Yes

Tags

The tags of S3 Storage Lens configuration requested.

Type: Array of StorageLensTag data types

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

GetStorageLensGroup

Service: Amazon S3 Control

Retrieves the Storage Lens group configuration details.

To use this operation, you must have the permission to perform the `s3:GetStorageLensGroup` action. For more information about the required Storage Lens Groups permissions, see Setting account permissions to use S3 Storage Lens groups.

For information about Storage Lens groups errors, see List of Amazon S3 Storage Lens error codes.

Request Syntax

```
GET /v20180820/storagelensgroup/name HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

name

The name of the Storage Lens group that you're trying to retrieve the configuration details for.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-\_]+`

Required: Yes

x-amz-account-id

The AWS account ID associated with the Storage Lens group that you're trying to retrieve the details for.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<StorageLensGroup>
   <Name>string</Name>
   <Filter>
      <And>
         <MatchAnyPrefix>
            <Prefix>string</Prefix>
         </MatchAnyPrefix>
         <MatchAnySuffix>
            <Suffix>string</Suffix>
         </MatchAnySuffix>
         <MatchAnyTag>
            <Tag>
               <Key>string</Key>
               <Value>string</Value>
            </Tag>
         </MatchAnyTag>
         <MatchObjectAge>
            <DaysGreaterThan>integer</DaysGreaterThan>
            <DaysLessThan>integer</DaysLessThan>
         </MatchObjectAge>
         <MatchObjectSize>
            <BytesGreaterThan>long</BytesGreaterThan>
            <BytesLessThan>long</BytesLessThan>
         </MatchObjectSize>
      </And>
      <MatchAnyPrefix>
         <Prefix>string</Prefix>
      </MatchAnyPrefix>
      <MatchAnySuffix>
         <Suffix>string</Suffix>
      </MatchAnySuffix>
      <MatchAnyTag>
         <Tag>
            <Key>string</Key>
            <Value>string</Value>
         </Tag>
```

```
      </MatchAnyTag>
      <MatchObjectAge>
         <DaysGreaterThan>integer</DaysGreaterThan>
         <DaysLessThan>integer</DaysLessThan>
      </MatchObjectAge>
      <MatchObjectSize>
         <BytesGreaterThan>long</BytesGreaterThan>
         <BytesLessThan>long</BytesLessThan>
      </MatchObjectSize>
      <Or>
         <MatchAnyPrefix>
            <Prefix>string</Prefix>
         </MatchAnyPrefix>
         <MatchAnySuffix>
            <Suffix>string</Suffix>
         </MatchAnySuffix>
         <MatchAnyTag>
            <Tag>
               <Key>string</Key>
               <Value>string</Value>
            </Tag>
         </MatchAnyTag>
         <MatchObjectAge>
            <DaysGreaterThan>integer</DaysGreaterThan>
            <DaysLessThan>integer</DaysLessThan>
         </MatchObjectAge>
         <MatchObjectSize>
            <BytesGreaterThan>long</BytesGreaterThan>
            <BytesLessThan>long</BytesLessThan>
         </MatchObjectSize>
      </Or>
   </Filter>
   <StorageLensGroupArn>string</StorageLensGroupArn>
</StorageLensGroup>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

StorageLensGroup

Root level tag for the StorageLensGroup parameters.

Required: Yes

Filter

Sets the criteria for the Storage Lens group data that is displayed. For multiple filter conditions, the `AND` or `OR` logical operator is used.

Type: StorageLensGroupFilter data type

Name

Contains the name of the Storage Lens group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-\_]+`

StorageLensGroupArn

Contains the Amazon Resource Name (ARN) of the Storage Lens group. This property is read-only.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 1024.

Pattern: `arn:[a-z\-]+:s3:[a-z0-9\-]+:\d{12}:storage\-lens\-group\/.*`

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3

- AWS SDK for Python
- AWS SDK for Ruby V3

ListAccessGrants

Service: Amazon S3 Control

Returns the list of access grants in your S3 Access Grants instance.

Permissions

You must have the `s3:ListAccessGrants` permission to use this operation.

Request Syntax

```
GET /v20180820/accessgrantsinstance/grants?
application_arn=ApplicationArn&granteeidentifier=GranteeIdentifier&granteetype=GranteeType&gran
 HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

application_arn

The Amazon Resource Name (ARN) of an AWS IAM Identity Center application associated with your Identity Center instance. If the grant includes an application ARN, the grantee can only access the S3 data through this application.

Length Constraints: Minimum length of 10. Maximum length of 1224.

Pattern: `arn:[^:]+:sso:.*$`

granteeidentifier

The unique identifer of the `Grantee`. If the grantee type is `IAM`, the identifier is the IAM Amazon Resource Name (ARN) of the user or role. If the grantee type is a directory user or group, the identifier is 128-bit universally unique identifier (UUID) in the format `a1b2c3d4-5678-90ab-cdef-EXAMPLE11111`. You can obtain this UUID from your AWS IAM Identity Center instance.

granteetype

The type of the grantee to which access has been granted. It can be one of the following values:

- `IAM` - An IAM user or role.
- `DIRECTORY_USER` - Your corporate directory user. You can use this option if you have added your corporate identity directory to IAM Identity Center and associated the IAM Identity Center instance with your S3 Access Grants instance.
- `DIRECTORY_GROUP` - Your corporate directory group. You can use this option if you have added your corporate identity directory to IAM Identity Center and associated the IAM Identity Center instance with your S3 Access Grants instance.

Valid Values: `DIRECTORY_USER | DIRECTORY_GROUP | IAM`

grantscope

The S3 path of the data to which you are granting access. It is the result of appending the `Subprefix` to the location scope.

Length Constraints: Minimum length of 1. Maximum length of 2000.

Pattern: `^.+$`

maxResults

The maximum number of access grants that you would like returned in the `List Access Grants` response. If the results include the pagination token `NextToken`, make another call using the `NextToken` to determine if there are more results.

Valid Range: Minimum value of 0. Maximum value of 1000.

nextToken

A pagination token to request the next page of results. Pass this value into a subsequent `List Access Grants` request in order to retrieve the next page of results.

permission

The type of permission granted to your S3 data, which can be set to one of the following values:

- `READ` – Grant read-only access to the S3 data.
- `WRITE` – Grant write-only access to the S3 data.
- `READWRITE` – Grant both read and write access to the S3 data.

Valid Values: `READ | WRITE | READWRITE`

x-amz-account-id

The ID of the AWS account that is making this request.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<ListAccessGrantsResult>
   <NextToken>string</NextToken>
   <AccessGrantsList>
      <AccessGrant>
         <AccessGrantArn>string</AccessGrantArn>
         <AccessGrantId>string</AccessGrantId>
         <AccessGrantsLocationConfiguration>
            <S3SubPrefix>string</S3SubPrefix>
         </AccessGrantsLocationConfiguration>
         <AccessGrantsLocationId>string</AccessGrantsLocationId>
         <ApplicationArn>string</ApplicationArn>
         <CreatedAt>timestamp</CreatedAt>
         <Grantee>
            <GranteeIdentifier>string</GranteeIdentifier>
            <GranteeType>string</GranteeType>
         </Grantee>
         <GrantScope>string</GrantScope>
         <Permission>string</Permission>
      </AccessGrant>
   </AccessGrantsList>
</ListAccessGrantsResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

ListAccessGrantsResult

Root level tag for the ListAccessGrantsResult parameters.

Required: Yes

AccessGrantsList

A container for a list of grants in an S3 Access Grants instance.

Type: Array of ListAccessGrantEntry data types

NextToken

A pagination token to request the next page of results. Pass this value into a subsequent `List Access Grants` request in order to retrieve the next page of results.

Type: String

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListAccessGrantsInstances

Service: Amazon S3 Control

Returns a list of S3 Access Grants instances. An S3 Access Grants instance serves as a logical grouping for your individual access grants. You can only have one S3 Access Grants instance per Region per account.

Permissions

You must have the `s3:ListAccessGrantsInstances` permission to use this operation.

Request Syntax

```
GET /v20180820/accessgrantsinstances?maxResults=MaxResults&nextToken=NextToken HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

maxResults

The maximum number of access grants that you would like returned in the `List Access Grants` response. If the results include the pagination token `NextToken`, make another call using the `NextToken` to determine if there are more results.

Valid Range: Minimum value of 0. Maximum value of 1000.

nextToken

A pagination token to request the next page of results. Pass this value into a subsequent `List Access Grants Instances` request in order to retrieve the next page of results.

x-amz-account-id

The ID of the AWS account that is making this request.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<ListAccessGrantsInstancesResult>
   <NextToken>string</NextToken>
   <AccessGrantsInstancesList>
      <AccessGrantsInstance>
         <AccessGrantsInstanceArn>string</AccessGrantsInstanceArn>
         <AccessGrantsInstanceId>string</AccessGrantsInstanceId>
         <CreatedAt>timestamp</CreatedAt>
         <IdentityCenterArn>string</IdentityCenterArn>
      </AccessGrantsInstance>
   </AccessGrantsInstancesList>
</ListAccessGrantsInstancesResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

ListAccessGrantsInstancesResult

Root level tag for the ListAccessGrantsInstancesResult parameters.

Required: Yes

AccessGrantsInstancesList

A container for a list of S3 Access Grants instances.

Type: Array of ListAccessGrantsInstanceEntry data types

NextToken

A pagination token to request the next page of results. Pass this value into a subsequent `List Access Grants Instances` request in order to retrieve the next page of results.

Type: String

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListAccessGrantsLocations

Service: Amazon S3 Control

Returns a list of the locations registered in your S3 Access Grants instance.

Permissions

You must have the `s3:ListAccessGrantsLocations` permission to use this operation.

Request Syntax

```
GET /v20180820/accessgrantsinstance/locations?
locationscope=LocationScope&maxResults=MaxResults&nextToken=NextToken HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

locationscope

The S3 path to the location that you are registering. The location scope can be the default S3 location `s3://`, the S3 path to a bucket `s3://<bucket>`, or the S3 path to a bucket and prefix `s3://<bucket>/<prefix>`. A prefix in S3 is a string of characters at the beginning of an object key name used to organize the objects that you store in your S3 buckets. For example, object key names that start with the `engineering/` prefix or object key names that start with the `marketing/campaigns/` prefix.

Length Constraints: Minimum length of 1. Maximum length of 2000.

Pattern: `^.+$`

maxResults

The maximum number of access grants that you would like returned in the `List Access Grants` response. If the results include the pagination token `NextToken`, make another call using the `NextToken` to determine if there are more results.

Valid Range: Minimum value of 0. Maximum value of 1000.

nextToken

A pagination token to request the next page of results. Pass this value into a subsequent `List Access Grants Locations` request in order to retrieve the next page of results.

x-amz-account-id

The ID of the AWS account that is making this request.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<ListAccessGrantsLocationsResult>
   <NextToken>string</NextToken>
   <AccessGrantsLocationsList>
      <AccessGrantsLocation>
         <AccessGrantsLocationArn>string</AccessGrantsLocationArn>
         <AccessGrantsLocationId>string</AccessGrantsLocationId>
         <CreatedAt>timestamp</CreatedAt>
         <IAMRoleArn>string</IAMRoleArn>
         <LocationScope>string</LocationScope>
      </AccessGrantsLocation>
   </AccessGrantsLocationsList>
</ListAccessGrantsLocationsResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

ListAccessGrantsLocationsResult

Root level tag for the ListAccessGrantsLocationsResult parameters.

Required: Yes

AccessGrantsLocationsList

A container for a list of registered locations in an S3 Access Grants instance.

Type: Array of ListAccessGrantsLocationsEntry data types

NextToken

A pagination token to request the next page of results. Pass this value into a subsequent `List Access Grants Locations` request in order to retrieve the next page of results.

Type: String

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListAccessPoints

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Returns a list of the access points that are owned by the current account that's associated with the specified bucket. You can retrieve up to 1000 access points per call. If the specified bucket has more than 1,000 access points (or the number specified in `maxResults`, whichever is less), the response will include a continuation token that you can use to list the additional access points.

All Amazon S3 on Outposts REST API requests for this action require an additional parameter of `x-amz-outpost-id` to be passed with the request. In addition, you must use an S3 on Outposts endpoint hostname prefix instead of `s3-control`. For an example of the request syntax for Amazon S3 on Outposts that uses the S3 on Outposts endpoint hostname prefix and the `x-amz-outpost-id` derived by using the access point ARN, see the Examples section.

The following actions are related to `ListAccessPoints`:

- CreateAccessPoint
- DeleteAccessPoint
- GetAccessPoint

Request Syntax

```
GET /v20180820/accesspoint?bucket=Bucket&maxResults=MaxResults&nextToken=NextToken
 HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

bucket

The name of the bucket whose associated access points you want to list.

For using this parameter with Amazon S3 on Outposts with the REST API, you must specify the name and the x-amz-outpost-id as well.

For using this parameter with S3 on Outposts with the AWS SDK and CLI, you must specify the ARN of the bucket accessed in the format `arn:aws:s3-outposts:<Region>:<account-id>:outpost/<outpost-id>/bucket/<my-bucket-name>`. For example, to access the bucket `reports` through Outpost `my-outpost` owned by account `123456789012` in Region `us-west-2`, use the URL encoding of `arn:aws:s3-outposts:us-west-2:123456789012:outpost/my-outpost/bucket/reports`. The value must be URL encoded.

Length Constraints: Minimum length of 3. Maximum length of 255.

maxResults

The maximum number of access points that you want to include in the list. If the specified bucket has more than this number of access points, then the response will include a continuation token in the `NextToken` field that you can use to retrieve the next page of access points.

Valid Range: Minimum value of 0. Maximum value of 1000.

nextToken

A continuation token. If a previous call to `ListAccessPoints` returned a continuation token in the `NextToken` field, then providing that value here causes Amazon S3 to retrieve the next page of results.

Length Constraints: Minimum length of 1. Maximum length of 1024.

x-amz-account-id

The AWS account ID for the account that owns the specified access points.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<ListAccessPointsResult>
   <AccessPointList>
      <AccessPoint>
         <AccessPointArn>string</AccessPointArn>
         <Alias>string</Alias>
         <Bucket>string</Bucket>
         <BucketAccountId>string</BucketAccountId>
         <Name>string</Name>
         <NetworkOrigin>string</NetworkOrigin>
         <VpcConfiguration>
            <VpcId>string</VpcId>
         </VpcConfiguration>
      </AccessPoint>
   </AccessPointList>
   <NextToken>string</NextToken>
</ListAccessPointsResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

ListAccessPointsResult

Root level tag for the ListAccessPointsResult parameters.

Required: Yes

AccessPointList

Contains identification and configuration information for one or more access points associated with the specified bucket.

Type: Array of AccessPoint data types

NextToken

If the specified bucket has more access points than can be returned in one call to this API, this field contains a continuation token that you can provide in subsequent calls to this API to retrieve additional access points.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Examples

Sample request syntax for ListAccessPoints for Amazon S3 on Outposts

The following request returns a list access points of the specified Amazon S3 on Outposts bucket `example-outpost-bucket`.

```
           GET /v20180820/accesspoint?Bucket=example-outpost-
bucket&MaxResults=MaxResults&NextToken=NextToken HTTP/1.1
           Host: s3-outposts.<Region>.amazonaws.com
           Date: Wed, 28 Oct 2020 22:32:00 GMT
           Authorization: authorization string
           x-amz-account-id: example-account-id
           x-amz-outpost-id: op-01ac5d28a6a232904
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListAccessPointsForObjectLambda

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Returns some or all (up to 1,000) access points associated with the Object Lambda Access Point per call. If there are more access points than what can be returned in one call, the response will include a continuation token that you can use to list the additional access points.

The following actions are related to `ListAccessPointsForObjectLambda`:

- CreateAccessPointForObjectLambda
- DeleteAccessPointForObjectLambda
- GetAccessPointForObjectLambda

Request Syntax

```
GET /v20180820/accesspointforobjectlambda?maxResults=MaxResults&nextToken=NextToken
 HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

maxResults

The maximum number of access points that you want to include in the list. The response may contain fewer access points but will never contain more. If there are more than this number of access points, then the response will include a continuation token in the `NextToken` field that you can use to retrieve the next page of access points.

Valid Range: Minimum value of 0. Maximum value of 1000.

nextToken

If the list has more access points than can be returned in one call to this API, this field contains a continuation token that you can provide in subsequent calls to this API to retrieve additional access points.

Length Constraints: Minimum length of 1. Maximum length of 1024.

x-amz-account-id

The account ID for the account that owns the specified Object Lambda Access Point.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<ListAccessPointsForObjectLambdaResult>
   <ObjectLambdaAccessPointList>
      <ObjectLambdaAccessPoint>
         <Alias>
            <Status>string</Status>
            <Value>string</Value>
         </Alias>
         <Name>string</Name>
         <ObjectLambdaAccessPointArn>string</ObjectLambdaAccessPointArn>
      </ObjectLambdaAccessPoint>
   </ObjectLambdaAccessPointList>
   <NextToken>string</NextToken>
</ListAccessPointsForObjectLambdaResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

ListAccessPointsForObjectLambdaResult

Root level tag for the ListAccessPointsForObjectLambdaResult parameters.

Required: Yes

NextToken

If the list has more access points than can be returned in one call to this API, this field contains a continuation token that you can provide in subsequent calls to this API to retrieve additional access points.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

ObjectLambdaAccessPointList

Returns list of Object Lambda Access Points.

Type: Array of ObjectLambdaAccessPoint data types

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListJobs

Service: Amazon S3 Control

Lists current S3 Batch Operations jobs as well as the jobs that have ended within the last 90 days for the AWS account making the request. For more information, see S3 Batch Operations in the *Amazon S3 User Guide*.

Permissions

> To use the `ListJobs` operation, you must have permission to perform the `s3:ListJobs` action.

Related actions include:

- CreateJob
- DescribeJob
- UpdateJobPriority
- UpdateJobStatus

Request Syntax

```
GET /v20180820/jobs?jobStatuses=JobStatuses&maxResults=MaxResults&nextToken=NextToken
 HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

jobStatuses

> The `List Jobs` request returns jobs that match the statuses listed in this element.
>
> Valid Values: `Active | Cancelled | Cancelling | Complete | Completing | Failed | Failing | New | Paused | Pausing | Preparing | Ready | Suspended`

maxResults

The maximum number of jobs that Amazon S3 will include in the `List Jobs` response. If there are more jobs than this number, the response will include a pagination token in the `NextToken` field to enable you to retrieve the next page of results.

Valid Range: Minimum value of 0. Maximum value of 1000.

nextToken

A pagination token to request the next page of results. Use the token that Amazon S3 returned in the `NextToken` element of the `ListJobsResult` from the previous `List Jobs` request.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `^[A-Za-z0-9\+\:\/\=\?\#-_]+$`

x-amz-account-id

The AWS account ID associated with the S3 Batch Operations job.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<ListJobsResult>
   <NextToken>string</NextToken>
   <Jobs>
      <JobListDescriptor>
         <CreationTime>timestamp</CreationTime>
         <Description>string</Description>
         <JobId>string</JobId>
```

```
         <Operation>string</Operation>
         <Priority>integer</Priority>
         <ProgressSummary>
            <NumberOfTasksFailed>long</NumberOfTasksFailed>
            <NumberOfTasksSucceeded>long</NumberOfTasksSucceeded>
            <Timers>
               <ElapsedTimeInActiveSeconds>long</ElapsedTimeInActiveSeconds>
            </Timers>
            <TotalNumberOfTasks>long</TotalNumberOfTasks>
         </ProgressSummary>
         <Status>string</Status>
         <TerminationDate>timestamp</TerminationDate>
      </JobListDescriptor>
   </Jobs>
</ListJobsResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

ListJobsResult

Root level tag for the ListJobsResult parameters.

Required: Yes

Jobs

The list of current jobs and jobs that have ended within the last 30 days.

Type: Array of JobListDescriptor data types

NextToken

If the `List Jobs` request produced more than the maximum number of results, you can pass this value into a subsequent `List Jobs` request in order to retrieve the next page of results.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `^[A-Za-z0-9\+\:\/\=\?\#-_]+$`

Errors

InternalServiceException

HTTP Status Code: 500

InvalidNextTokenException

HTTP Status Code: 400

InvalidRequestException

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListMultiRegionAccessPoints

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Returns a list of the Multi-Region Access Points currently associated with the specified AWS account. Each call can return up to 100 Multi-Region Access Points, the maximum number of Multi-Region Access Points that can be associated with a single account.

This action will always be routed to the US West (Oregon) Region. For more information about the restrictions around working with Multi-Region Access Points, see Multi-Region Access Point restrictions and limitations in the *Amazon S3 User Guide*.

The following actions are related to `ListMultiRegionAccessPoint`:

- CreateMultiRegionAccessPoint
- DeleteMultiRegionAccessPoint
- DescribeMultiRegionAccessPointOperation
- GetMultiRegionAccessPoint

Request Syntax

```
GET /v20180820/mrap/instances?maxResults=MaxResults&nextToken=NextToken HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

maxResults

Not currently used. Do not use this parameter.

Valid Range: Minimum value of 0. Maximum value of 1000.

nextToken

Not currently used. Do not use this parameter.

Length Constraints: Minimum length of 1. Maximum length of 1024.

x-amz-account-id

The AWS account ID for the owner of the Multi-Region Access Point.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<ListMultiRegionAccessPointsResult>
   <AccessPoints>
      <AccessPoint>
         <Alias>string</Alias>
         <CreatedAt>timestamp</CreatedAt>
         <Name>string</Name>
         <PublicAccessBlock>
            <BlockPublicAcls>boolean</BlockPublicAcls>
            <BlockPublicPolicy>boolean</BlockPublicPolicy>
            <IgnorePublicAcls>boolean</IgnorePublicAcls>
            <RestrictPublicBuckets>boolean</RestrictPublicBuckets>
         </PublicAccessBlock>
         <Regions>
            <Region>
               <Bucket>string</Bucket>
               <BucketAccountId>string</BucketAccountId>
               <Region>string</Region>
            </Region>
         </Regions>
         <Status>string</Status>
```

```
      </AccessPoint>
   </AccessPoints>
   <NextToken>string</NextToken>
</ListMultiRegionAccessPointsResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

ListMultiRegionAccessPointsResult

Root level tag for the ListMultiRegionAccessPointsResult parameters.

Required: Yes

AccessPoints

The list of Multi-Region Access Points associated with the user.

Type: Array of MultiRegionAccessPointReport data types

NextToken

If the specified bucket has more Multi-Region Access Points than can be returned in one call to this action, this field contains a continuation token. You can use this token tin subsequent calls to this action to retrieve additional Multi-Region Access Points.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2

- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListRegionalBuckets

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Returns a list of all Outposts buckets in an Outpost that are owned by the authenticated sender of the request. For more information, see Using Amazon S3 on Outposts in the *Amazon S3 User Guide*.

For an example of the request syntax for Amazon S3 on Outposts that uses the S3 on Outposts endpoint hostname prefix and `x-amz-outpost-id` in your request, see the Examples section.

Request Syntax

```
GET /v20180820/bucket?maxResults=MaxResults&nextToken=NextToken HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
x-amz-outpost-id: OutpostId
```

URI Request Parameters

The request uses the following URI parameters.

maxResults

Valid Range: Minimum value of 0. Maximum value of 1000.

nextToken

Length Constraints: Minimum length of 1. Maximum length of 1024.

x-amz-account-id

The AWS account ID of the Outposts bucket.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

x-amz-outpost-id

The ID of the AWS Outposts resource.

> **Note**
>
> This ID is required by Amazon S3 on Outposts buckets.

Length Constraints: Minimum length of 1. Maximum length of 64.

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<ListRegionalBucketsResult>
   <RegionalBucketList>
      <RegionalBucket>
         <Bucket>string</Bucket>
         <BucketArn>string</BucketArn>
         <CreationDate>timestamp</CreationDate>
         <OutpostId>string</OutpostId>
         <PublicAccessBlockEnabled>boolean</PublicAccessBlockEnabled>
      </RegionalBucket>
   </RegionalBucketList>
   <NextToken>string</NextToken>
</ListRegionalBucketsResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

ListRegionalBucketsResult

Root level tag for the ListRegionalBucketsResult parameters.

Required: Yes

NextToken

`NextToken` is sent when `isTruncated` is true, which means there are more buckets that can be listed. The next list requests to Amazon S3 can be continued with this `NextToken`. `NextToken` is obfuscated and is not a real key.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

RegionalBucketList

Type: Array of RegionalBucket data types

Examples

Sample request to list an account's Outposts buckets

This request lists regional buckets.

```
GET /v20180820/bucket HTTP /1.1
Host:s3-outposts.us-west-2.amazonaws.com
Content-Length: 0
x-amz-outpost-id: op-01ac5d28a6a232904
x-amz-account-id: example-account-id
Date: Wed, 01 Mar  2006 12:00:00 GMT
Authorization: authorization string
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2

- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListStorageLensConfigurations

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Gets a list of Amazon S3 Storage Lens configurations. For more information about S3 Storage Lens, see Assessing your storage activity and usage with Amazon S3 Storage Lens in the *Amazon S3 User Guide*.

> **Note**
>
> To use this action, you must have permission to perform the `s3:ListStorageLensConfigurations` action. For more information, see Setting permissions to use Amazon S3 Storage Lens in the *Amazon S3 User Guide*.

Request Syntax

```
GET /v20180820/storagelens?nextToken=NextToken HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

nextToken

A pagination token to request the next page of results.

x-amz-account-id

The account ID of the requester.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<ListStorageLensConfigurationsResult>
   <NextToken>string</NextToken>
   <StorageLensConfigurationList>
      <HomeRegion>string</HomeRegion>
      <Id>string</Id>
      <IsEnabled>boolean</IsEnabled>
      <StorageLensArn>string</StorageLensArn>
   </StorageLensConfigurationList>
   ...
</ListStorageLensConfigurationsResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

ListStorageLensConfigurationsResult

Root level tag for the ListStorageLensConfigurationsResult parameters.

Required: Yes

NextToken

If the request produced more than the maximum number of S3 Storage Lens configuration results, you can pass this value into a subsequent request to retrieve the next page of results.

Type: String

StorageLensConfigurationList

A list of S3 Storage Lens configurations.

Type: Array of ListStorageLensConfigurationEntry data types

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListStorageLensGroups

Service: Amazon S3 Control

Lists all the Storage Lens groups in the specified home Region.

To use this operation, you must have the permission to perform the `s3:ListStorageLensGroups` action. For more information about the required Storage Lens Groups permissions, see Setting account permissions to use S3 Storage Lens groups.

For information about Storage Lens groups errors, see List of Amazon S3 Storage Lens error codes.

Request Syntax

```
GET /v20180820/storagelensgroup?nextToken=NextToken HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

nextToken

The token for the next set of results, or `null` if there are no more results.

x-amz-account-id

The AWS account ID that owns the Storage Lens groups.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
```

```
<ListStorageLensGroupsResult>
   <NextToken>string</NextToken>
   <StorageLensGroupList>
      <HomeRegion>string</HomeRegion>
      <Name>string</Name>
      <StorageLensGroupArn>string</StorageLensGroupArn>
   </StorageLensGroupList>
   ...
</ListStorageLensGroupsResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

ListStorageLensGroupsResult

Root level tag for the ListStorageLensGroupsResult parameters.

Required: Yes

NextToken

If `NextToken` is returned, there are more Storage Lens groups results available. The value of `NextToken` is a unique pagination token for each page. Make the call again using the returned token to retrieve the next page. Keep all other arguments unchanged. Each pagination token expires after 24 hours.

Type: String

StorageLensGroupList

The list of Storage Lens groups that exist in the specified home Region.

Type: Array of ListStorageLensGroupEntry data types

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface

- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListTagsForResource

Service: Amazon S3 Control

This operation allows you to list all the AWS resource tags for a specified resource. Each tag is a label consisting of a user-defined key and value. Tags can help you manage, identify, organize, search for, and filter resources.

Permissions

You must have the `s3:ListTagsForResource` permission to use this operation.

> **Note**
>
> This operation is only supported for S3 Storage Lens groups and for S3 Access Grants. The tagged resource can be an S3 Storage Lens group or S3 Access Grants instance, registered location, or grant.

For more information about the required Storage Lens Groups permissions, see Setting account permissions to use S3 Storage Lens groups.

For information about S3 Tagging errors, see List of Amazon S3 Tagging error codes.

Request Syntax

```
GET /v20180820/tags/resourceArn+ HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

resourceArn

The Amazon Resource Name (ARN) of the S3 resource that you want to list the tags for. The tagged resource can be an S3 Storage Lens group or S3 Access Grants instance, registered location, or grant.

Length Constraints: Maximum length of 1011.

Pattern: `arn:[^:]+:s3:[^:].*`

Required: Yes

x-amz-account-id

The AWS account ID of the resource owner.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<ListTagsForResourceResult>
   <Tags>
      <Tag>
         <Key>string</Key>
         <Value>string</Value>
      </Tag>
   </Tags>
</ListTagsForResourceResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

ListTagsForResourceResult

Root level tag for the ListTagsForResourceResult parameters.

Required: Yes

Tags

The AWS resource tags that are associated with the resource.

Type: Array of Tag data types

Array Members: Minimum number of 0 items. Maximum number of 50 items.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutAccessGrantsInstanceResourcePolicy

Service: Amazon S3 Control

Updates the resource policy of the S3 Access Grants instance.

Permissions

You must have the `s3:PutAccessGrantsInstanceResourcePolicy` permission to use this operation.

Request Syntax

```
PUT /v20180820/accessgrantsinstance/resourcepolicy HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
<?xml version="1.0" encoding="UTF-8"?>
<PutAccessGrantsInstanceResourcePolicyRequest xmlns="http://awss3control.amazonaws.com/
doc/2018-08-20/">
   <Policy>string</Policy>
   <Organization>string</Organization>
</PutAccessGrantsInstanceResourcePolicyRequest>
```

URI Request Parameters

The request uses the following URI parameters.

x-amz-account-id

The ID of the AWS account that is making this request.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request accepts the following data in XML format.

PutAccessGrantsInstanceResourcePolicyRequest

Root level tag for the PutAccessGrantsInstanceResourcePolicyRequest parameters.

Required: Yes

Organization

The Organization of the resource policy of the S3 Access Grants instance.

Type: String

Length Constraints: Minimum length of 12. Maximum length of 34.

Pattern: `^o-[a-z0-9]{10,32}$`

Required: No

Policy

The resource policy of the S3 Access Grants instance that you are updating.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 350000.

Required: Yes

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<PutAccessGrantsInstanceResourcePolicyResult>
   <Policy>string</Policy>
   <Organization>string</Organization>
   <CreatedAt>timestamp</CreatedAt>
</PutAccessGrantsInstanceResourcePolicyResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

PutAccessGrantsInstanceResourcePolicyResult

Root level tag for the PutAccessGrantsInstanceResourcePolicyResult parameters.

Required: Yes

CreatedAt

The date and time when you created the S3 Access Grants instance resource policy.

Type: Timestamp

Organization

The Organization of the resource policy of the S3 Access Grants instance.

Type: String

Length Constraints: Minimum length of 12. Maximum length of 34.

Pattern: `^o-[a-z0-9]{10,32}$`

Policy

The updated resource policy of the S3 Access Grants instance.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 350000.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3

- AWS SDK for Python
- AWS SDK for Ruby V3

PutAccessPointConfigurationForObjectLambda

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Replaces configuration for an Object Lambda Access Point.

The following actions are related to `PutAccessPointConfigurationForObjectLambda`:

- GetAccessPointConfigurationForObjectLambda

Request Syntax

```
PUT /v20180820/accesspointforobjectlambda/name/configuration HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
<?xml version="1.0" encoding="UTF-8"?>
<PutAccessPointConfigurationForObjectLambdaRequest xmlns="http://
awss3control.amazonaws.com/doc/2018-08-20/">
   <Configuration>
      <AllowedFeatures>
         <AllowedFeature>string</AllowedFeature>
      </AllowedFeatures>
      <CloudWatchMetricsEnabled>boolean</CloudWatchMetricsEnabled>
      <SupportingAccessPoint>string</SupportingAccessPoint>
      <TransformationConfigurations>
         <TransformationConfiguration>
            <Actions>
               <Action>string</Action>
            </Actions>
            <ContentTransformation>
               <AwsLambda>
                  <FunctionArn>string</FunctionArn>
                  <FunctionPayload>string</FunctionPayload>
               </AwsLambda>
            </ContentTransformation>
         </TransformationConfiguration>
      </TransformationConfigurations>
   </Configuration>
```

```
</PutAccessPointConfigurationForObjectLambdaRequest>
```

URI Request Parameters

The request uses the following URI parameters.

name

The name of the Object Lambda Access Point.

Length Constraints: Minimum length of 3. Maximum length of 45.

Pattern: `^[a-z0-9]([a-z0-9\-]*[a-z0-9])?$`

Required: Yes

x-amz-account-id

The account ID for the account that owns the specified Object Lambda Access Point.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request accepts the following data in XML format.

PutAccessPointConfigurationForObjectLambdaRequest

Root level tag for the PutAccessPointConfigurationForObjectLambdaRequest parameters.

Required: Yes

Configuration

Object Lambda Access Point configuration document.

Type: ObjectLambdaConfiguration data type

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutAccessPointPolicy

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Associates an access policy with the specified access point. Each access point can have only one policy, so a request made to this API replaces any existing policy associated with the specified access point.

All Amazon S3 on Outposts REST API requests for this action require an additional parameter of `x-amz-outpost-id` to be passed with the request. In addition, you must use an S3 on Outposts endpoint hostname prefix instead of `s3-control`. For an example of the request syntax for Amazon S3 on Outposts that uses the S3 on Outposts endpoint hostname prefix and the `x-amz-outpost-id` derived by using the access point ARN, see the Examples section.

The following actions are related to `PutAccessPointPolicy`:

- GetAccessPointPolicy
- DeleteAccessPointPolicy

Request Syntax

```
PUT /v20180820/accesspoint/name/policy HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
<?xml version="1.0" encoding="UTF-8"?>
<PutAccessPointPolicyRequest xmlns="http://awss3control.amazonaws.com/doc/2018-08-20/">
   <Policy>string</Policy>
</PutAccessPointPolicyRequest>
```

URI Request Parameters

The request uses the following URI parameters.

name

The name of the access point that you want to associate with the specified policy.

For using this parameter with Amazon S3 on Outposts with the REST API, you must specify the name and the x-amz-outpost-id as well.

For using this parameter with S3 on Outposts with the AWS SDK and CLI, you must specify the ARN of the access point accessed in the format `arn:aws:s3-outposts:<Region>:<account-id>:outpost/<outpost-id>/accesspoint/<my-accesspoint-name>`. For example, to access the access point `reports-ap` through Outpost `my-outpost` owned by account `123456789012` in Region `us-west-2`, use the URL encoding of `arn:aws:s3-outposts:us-west-2:123456789012:outpost/my-outpost/accesspoint/reports-ap`. The value must be URL encoded.

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: Yes

x-amz-account-id

The AWS account ID for owner of the bucket associated with the specified access point.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request accepts the following data in XML format.

PutAccessPointPolicyRequest

Root level tag for the PutAccessPointPolicyRequest parameters.

Required: Yes

Policy

The policy that you want to apply to the specified access point. For more information about access point policies, see Managing data access with Amazon S3 access points in the *Amazon S3 User Guide*.

Type: String

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

Sample request syntax for the PutAccessPointPolicy action for Amazon S3 on Outposts access point

This example illustrates one usage of PutAccessPointPolicy.

```
          PUT /v20180820/accesspoint/example-access-point/policy HTTP/1.1
          Host: s3-outposts.<Region>.amazonaws.com
          Date: Wed, 28 Oct 2020 22:32:00 GMT
          Authorization: authorization string
          x-amz-account-id: example-account-id
          x-amz-outpost-id: op-01ac5d28a6a232904
          <?xml version="1.0" encoding="UTF-8"?>
              <PutAccessPointPolicyRequest xmlns="http://awss3control.amazonaws.com/
doc/2018-08-20/">
                  <Policy>
{
   "Version":"2012-10-17",
   "Id":"AccessPointPolicy-for-example-access-point",
   "Statement":[
      {
         "Sid":"st1",
         "Effect":"Allow",
         "Principal":{
            "AWS":"example-account-id"
         },
         "Action":"s3-outposts:*",
         "Resource":"arn:aws:s3-outposts:your-Region:example-account-id:outpost/
op-01ac5d28a6a232904/accesspoint/example-access-point
      }
```

```
    ]
}
                    </Policy>
                </PutAccessPointPolicyRequest>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutAccessPointPolicyForObjectLambda

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Creates or replaces resource policy for an Object Lambda Access Point. For an example policy, see Creating Object Lambda Access Points in the *Amazon S3 User Guide*.

The following actions are related to `PutAccessPointPolicyForObjectLambda`:

- DeleteAccessPointPolicyForObjectLambda
- GetAccessPointPolicyForObjectLambda

Request Syntax

```
PUT /v20180820/accesspointforobjectlambda/name/policy HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
<?xml version="1.0" encoding="UTF-8"?>
<PutAccessPointPolicyForObjectLambdaRequest xmlns="http://awss3control.amazonaws.com/
doc/2018-08-20/">
   <Policy>string</Policy>
</PutAccessPointPolicyForObjectLambdaRequest>
```

URI Request Parameters

The request uses the following URI parameters.

name

The name of the Object Lambda Access Point.

Length Constraints: Minimum length of 3. Maximum length of 45.

Pattern: `^[a-z0-9]([a-z0-9\-]*[a-z0-9])?$`

Required: Yes

x-amz-account-id

The account ID for the account that owns the specified Object Lambda Access Point.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request accepts the following data in XML format.

PutAccessPointPolicyForObjectLambdaRequest

Root level tag for the PutAccessPointPolicyForObjectLambdaRequest parameters.

Required: Yes

Policy

Object Lambda Access Point resource policy document.

Type: String

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

Sample resource policy

The following illustrates a sample resource policy.

```
{
```

```
    "Version" : "2008-10-17",
    "Statement":[{
        "Sid": "Grant account 123456789012 GetObject access",
        "Effect":"Allow",
        "Principal" : {
            "AWS": "arn:aws:iam::123456789012:root"
        },
        "Action":["s3-object-lambda:GetObject"],
        "Resource":["arn:aws:s3-object-lambda:us-east-1:123456789012:accesspoint/my-
object-lambda-ap"]
        },
        {
        "Sid": "Grant account 444455556666 GetObject access",
        "Effect":"Allow",
        "Principal" : {
            "AWS": "arn:aws:iam::444455556666:root"
        },
        "Action":["s3-object-lambda:GetObject"],
        "Resource":["arn:aws:s3-object-lambda:us-east-1:123456789012:accesspoint/my-
object-lambda-ap"]
        }
    ]
}
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutBucketLifecycleConfiguration

Service: Amazon S3 Control

> **Note**
>
> This action puts a lifecycle configuration to an Amazon S3 on Outposts bucket. To put a lifecycle configuration to an S3 bucket, see PutBucketLifecycleConfiguration in the *Amazon S3 API Reference*.

Creates a new lifecycle configuration for the S3 on Outposts bucket or replaces an existing lifecycle configuration. Outposts buckets only support lifecycle configurations that delete/expire objects after a certain period of time and abort incomplete multipart uploads.

All Amazon S3 on Outposts REST API requests for this action require an additional parameter of `x-amz-outpost-id` to be passed with the request. In addition, you must use an S3 on Outposts endpoint hostname prefix instead of `s3-control`. For an example of the request syntax for Amazon S3 on Outposts that uses the S3 on Outposts endpoint hostname prefix and the `x-amz-outpost-id` derived by using the access point ARN, see the Examples section.

The following actions are related to `PutBucketLifecycleConfiguration`:

- GetBucketLifecycleConfiguration
- DeleteBucketLifecycleConfiguration

Request Syntax

```
PUT /v20180820/bucket/name/lifecycleconfiguration HTTP/1.1
Host: Bucket.s3-control.amazonaws.com
x-amz-account-id: AccountId
<?xml version="1.0" encoding="UTF-8"?>
<LifecycleConfiguration xmlns="http://awss3control.amazonaws.com/doc/2018-08-20/">
   <Rules>
      <Rule>
         <AbortIncompleteMultipartUpload>
            <DaysAfterInitiation>integer</DaysAfterInitiation>
         </AbortIncompleteMultipartUpload>
         <Expiration>
            <Date>timestamp</Date>
```

```
            <Days>integer</Days>
            <ExpiredObjectDeleteMarker>boolean</ExpiredObjectDeleteMarker>
         </Expiration>
         <Filter>
            <And>
               <ObjectSizeGreaterThan>long</ObjectSizeGreaterThan>
               <ObjectSizeLessThan>long</ObjectSizeLessThan>
               <Prefix>string</Prefix>
               <Tags>
                  <S3Tag>
                     <Key>string</Key>
                     <Value>string</Value>
                  </S3Tag>
               </Tags>
            </And>
            <ObjectSizeGreaterThan>long</ObjectSizeGreaterThan>
            <ObjectSizeLessThan>long</ObjectSizeLessThan>
            <Prefix>string</Prefix>
            <Tag>
               <Key>string</Key>
               <Value>string</Value>
            </Tag>
         </Filter>
         <ID>string</ID>
         <NoncurrentVersionExpiration>
            <NewerNoncurrentVersions>integer</NewerNoncurrentVersions>
            <NoncurrentDays>integer</NoncurrentDays>
         </NoncurrentVersionExpiration>
         <NoncurrentVersionTransitions>
            <NoncurrentVersionTransition>
               <NoncurrentDays>integer</NoncurrentDays>
               <StorageClass>string</StorageClass>
            </NoncurrentVersionTransition>
         </NoncurrentVersionTransitions>
         <Status>string</Status>
         <Transitions>
            <Transition>
               <Date>timestamp</Date>
               <Days>integer</Days>
               <StorageClass>string</StorageClass>
            </Transition>
         </Transitions>
      </Rule>
   </Rules>
```

```
</LifecycleConfiguration>
```

URI Request Parameters

The request uses the following URI parameters.

name

The name of the bucket for which to set the configuration.

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: Yes

x-amz-account-id

The AWS account ID of the Outposts bucket.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request accepts the following data in XML format.

LifecycleConfiguration

Root level tag for the LifecycleConfiguration parameters.

Required: Yes

Rules

A lifecycle rule for individual objects in an Outposts bucket.

Type: Array of LifecycleRule data types

Required: No

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

Sample PutBucketLifecycleConfiguration request on an Amazon S3 on Outposts bucket

This request puts a lifecycle configuration on an Outposts bucket named `example-outpost-bucket`.

```
            PUT /v20180820/bucket/example-outpost-bucket/lifecycleconfiguration
HTTP/1.1
            Host:s3-outposts.<Region>.amazonaws.com
            x-amz-account-id: example-account-id
            x-amz-outpost-id: op-01ac5d28a6a232904
            Content-Length: 0
            Date: Wed, 01 Mar  2006 12:00:00 GMT
            Content-MD5: q6yJDlIkcBaGGfb3QLY69A==
            Authorization: authorization string
            Content-Length: 214

            <LifecycleConfiguration>
              <Rule>
                <ID>id2</ID>
                <Filter>
                   <Prefix>logs/</Prefix>
                </Filter>
                <Status>Enabled</Status>
                <Expiration>
                  <Days>365</Days>
                </Expiration>
              </Rule>
            </LifecycleConfiguration>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface

- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutBucketPolicy

Service: Amazon S3 Control

> **Note**
>
> This action puts a bucket policy to an Amazon S3 on Outposts bucket. To put a policy on an S3 bucket, see PutBucketPolicy in the *Amazon S3 API Reference*.

Applies an Amazon S3 bucket policy to an Outposts bucket. For more information, see Using Amazon S3 on Outposts in the *Amazon S3 User Guide*.

If you are using an identity other than the root user of the AWS account that owns the Outposts bucket, the calling identity must have the `PutBucketPolicy` permissions on the specified Outposts bucket and belong to the bucket owner's account in order to use this action.

If you don't have `PutBucketPolicy` permissions, Amazon S3 returns a `403 Access Denied` error. If you have the correct permissions, but you're not using an identity that belongs to the bucket owner's account, Amazon S3 returns a `405 Method Not Allowed` error.

> **Important**
>
> As a security precaution, the root user of the AWS account that owns a bucket can always use this action, even if the policy explicitly denies the root user the ability to perform this action.

For more information about bucket policies, see Using Bucket Policies and User Policies.

All Amazon S3 on Outposts REST API requests for this action require an additional parameter of `x-amz-outpost-id` to be passed with the request. In addition, you must use an S3 on Outposts endpoint hostname prefix instead of `s3-control`. For an example of the request syntax for Amazon S3 on Outposts that uses the S3 on Outposts endpoint hostname prefix and the `x-amz-outpost-id` derived by using the access point ARN, see the Examples section.

The following actions are related to `PutBucketPolicy`:

- GetBucketPolicy
- DeleteBucketPolicy

Request Syntax

```
PUT /v20180820/bucket/name/policy HTTP/1.1
Host: Bucket.s3-control.amazonaws.com
x-amz-account-id: AccountId
x-amz-confirm-remove-self-bucket-access: ConfirmRemoveSelfBucketAccess
<?xml version="1.0" encoding="UTF-8"?>
<PutBucketPolicyRequest xmlns="http://awss3control.amazonaws.com/doc/2018-08-20/">
   <Policy>string</Policy>
</PutBucketPolicyRequest>
```

URI Request Parameters

The request uses the following URI parameters.

name

Specifies the bucket.

For using this parameter with Amazon S3 on Outposts with the REST API, you must specify the name and the x-amz-outpost-id as well.

For using this parameter with S3 on Outposts with the AWS SDK and CLI, you must specify the ARN of the bucket accessed in the format `arn:aws:s3-outposts:<Region>:<account-id>:outpost/<outpost-id>/bucket/<my-bucket-name>`. For example, to access the bucket `reports` through Outpost `my-outpost` owned by account `123456789012` in Region `us-west-2`, use the URL encoding of `arn:aws:s3-outposts:us-west-2:123456789012:outpost/my-outpost/bucket/reports`. The value must be URL encoded.

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: Yes

x-amz-account-id

The AWS account ID of the Outposts bucket.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

x-amz-confirm-remove-self-bucket-access

Set this parameter to true to confirm that you want to remove your permissions to change this bucket policy in the future.

> **Note**
>
> This is not supported by Amazon S3 on Outposts buckets.

Request Body

The request accepts the following data in XML format.

PutBucketPolicyRequest

Root level tag for the PutBucketPolicyRequest parameters.

Required: Yes

Policy

The bucket policy as a JSON document.

Type: String

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

Sample request for putting a bucket policy in an Amazon S3 on Outposts bucket

The following request shows the PUT an individual policy request for the Outposts bucket `example-outpost-bucket`.

```
PUT v20180820/bucket/example-outpost-bucket/policy HTTP/1.1
Host: s3-outposts.<Region>.amazonaws.com
Date: Tue, 04 Apr 2010 20:34:56 GMT
Authorization: authorization string
x-amz-account-id: example-account-id
x-amz-outpost-id: op-01ac5d28a6a232904
{
   "Version":"2012-10-17",
   "Id":"exampleS3OnOutpostBucketPolicy",
   "Statement":[
      {
         "Sid":"st1",
         "Effect":"Allow",
         "Principal":{
            "AWS":"example-account-id"
         },
         "Action":"s3-outposts:*",
         "Resource":"arn:aws:s3-outposts:<your-region>:example-account-id:outpost/
op-01ac5d28a6a232904/bucket/example-outpost-bucket"
      }
   ]
}
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python

- AWS SDK for Ruby V3

PutBucketReplication

Service: Amazon S3 Control

> **Note**
>
> This action creates an Amazon S3 on Outposts bucket's replication configuration. To create an S3 bucket's replication configuration, see PutBucketReplication in the *Amazon S3 API Reference*.

Creates a replication configuration or replaces an existing one. For information about S3 replication on Outposts configuration, see Replicating objects for S3 on Outposts in the *Amazon S3 User Guide*.

> **Note**
>
> It can take a while to propagate PUT or DELETE requests for a replication configuration to all S3 on Outposts systems. Therefore, the replication configuration that's returned by a GET request soon after a PUT or DELETE request might return a more recent result than what's on the Outpost. If an Outpost is offline, the delay in updating the replication configuration on that Outpost can be significant.

Specify the replication configuration in the request body. In the replication configuration, you provide the following information:

- The name of the destination bucket or buckets where you want S3 on Outposts to replicate objects
- The AWS Identity and Access Management (IAM) role that S3 on Outposts can assume to replicate objects on your behalf
- Other relevant information, such as replication rules

A replication configuration must include at least one rule and can contain a maximum of 100. Each rule identifies a subset of objects to replicate by filtering the objects in the source Outposts bucket. To choose additional subsets of objects to replicate, add a rule for each subset.

To specify a subset of the objects in the source Outposts bucket to apply a replication rule to, add the `Filter` element as a child of the `Rule` element. You can filter objects based on an object key

prefix, one or more object tags, or both. When you add the `Filter` element in the configuration, you must also add the following elements: `DeleteMarkerReplication`, `Status`, and `Priority`.

Using `PutBucketReplication` on Outposts requires that both the source and destination buckets must have versioning enabled. For information about enabling versioning on a bucket, see Managing S3 Versioning for your S3 on Outposts bucket.

For information about S3 on Outposts replication failure reasons, see Replication failure reasons in the *Amazon S3 User Guide*.

Handling Replication of Encrypted Objects

Outposts buckets are encrypted at all times. All the objects in the source Outposts bucket are encrypted and can be replicated. Also, all the replicas in the destination Outposts bucket are encrypted with the same encryption key as the objects in the source Outposts bucket.

Permissions

To create a `PutBucketReplication` request, you must have `s3-outposts:PutReplicationConfiguration` permissions for the bucket. The Outposts bucket owner has this permission by default and can grant it to others. For more information about permissions, see Setting up IAM with S3 on Outposts and Managing access to S3 on Outposts buckets.

> **Note**
>
> To perform this operation, the user or role must also have the `iam:CreateRole` and `iam:PassRole` permissions. For more information, see Granting a user permissions to pass a role to an AWS service.

All Amazon S3 on Outposts REST API requests for this action require an additional parameter of `x-amz-outpost-id` to be passed with the request. In addition, you must use an S3 on Outposts endpoint hostname prefix instead of `s3-control`. For an example of the request syntax for Amazon S3 on Outposts that uses the S3 on Outposts endpoint hostname prefix and the `x-amz-outpost-id` derived by using the access point ARN, see the Examples section.

The following operations are related to `PutBucketReplication`:

- GetBucketReplication

- DeleteBucketReplication

Request Syntax

```
PUT /v20180820/bucket/name/replication HTTP/1.1
Host: Bucket.s3-control.amazonaws.com
x-amz-account-id: AccountId
<?xml version="1.0" encoding="UTF-8"?>
<ReplicationConfiguration xmlns="http://awss3control.amazonaws.com/doc/2018-08-20/">
   <Role>string</Role>
   <Rules>
      <Rule>
         <Bucket>string</Bucket>
         <DeleteMarkerReplication>
            <Status>string</Status>
         </DeleteMarkerReplication>
         <Destination>
            <AccessControlTranslation>
               <Owner>string</Owner>
            </AccessControlTranslation>
            <Account>string</Account>
            <Bucket>string</Bucket>
            <EncryptionConfiguration>
               <ReplicaKmsKeyID>string</ReplicaKmsKeyID>
            </EncryptionConfiguration>
            <Metrics>
               <EventThreshold>
                  <Minutes>integer</Minutes>
               </EventThreshold>
               <Status>string</Status>
            </Metrics>
            <ReplicationTime>
               <Status>string</Status>
               <Time>
                  <Minutes>integer</Minutes>
               </Time>
            </ReplicationTime>
            <StorageClass>string</StorageClass>
         </Destination>
         <ExistingObjectReplication>
            <Status>string</Status>
         </ExistingObjectReplication>
         <Filter>
```

```
            <And>
               <Prefix>string</Prefix>
               <Tags>
                  <S3Tag>
                     <Key>string</Key>
                     <Value>string</Value>
                  </S3Tag>
               </Tags>
            </And>
            <Prefix>string</Prefix>
            <Tag>
               <Key>string</Key>
               <Value>string</Value>
            </Tag>
         </Filter>
         <ID>string</ID>
         <Prefix>string</Prefix>
         <Priority>integer</Priority>
         <SourceSelectionCriteria>
            <ReplicaModifications>
               <Status>string</Status>
            </ReplicaModifications>
            <SseKmsEncryptedObjects>
               <Status>string</Status>
            </SseKmsEncryptedObjects>
         </SourceSelectionCriteria>
         <Status>string</Status>
      </Rule>
   </Rules>
</ReplicationConfiguration>
```

URI Request Parameters

The request uses the following URI parameters.

name

Specifies the S3 on Outposts bucket to set the configuration for.

For using this parameter with Amazon S3 on Outposts with the REST API, you must specify the name and the x-amz-outpost-id as well.

For using this parameter with S3 on Outposts with the AWS SDK and CLI, you must specify the ARN of the bucket accessed in the format `arn:aws:s3-outposts:<Region>:<account-`

id>:outpost/<outpost-id>/bucket/<my-bucket-name>. For example, to access the bucket reports through Outpost my-outpost owned by account 123456789012 in Region us-west-2, use the URL encoding of arn:aws:s3-outposts:us-west-2:123456789012:outpost/my-outpost/bucket/reports. The value must be URL encoded.

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: Yes

x-amz-account-id

The AWS account ID of the Outposts bucket.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request accepts the following data in XML format.

ReplicationConfiguration

Root level tag for the ReplicationConfiguration parameters.

Required: Yes

Role

The Amazon Resource Name (ARN) of the AWS Identity and Access Management (IAM) role that S3 on Outposts assumes when replicating objects. For information about S3 replication on Outposts configuration, see Setting up replication in the *Amazon S3 User Guide*.

Type: String

Required: Yes

Rules

A container for one or more replication rules. A replication configuration must have at least one rule and can contain an array of 100 rules at the most.

Type: Array of ReplicationRule data types

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

Sample Request: Add a replication configuration to an Amazon S3 on Outposts bucket

The following sample PUT request creates a replication subresource on the specified Outposts bucket named `example-outpost-bucket` and saves the replication configuration in it. The replication configuration specifies a rule to replicate objects to the `example-outpost-bucket` bucket. The rule includes a filter to replicate only the objects that are created with the key name prefix `TaxDocs` and that have two specific tags.

After you add a replication configuration to your Outposts bucket, S3 on Outposts assumes the AWS Identity and Access Management (IAM) role that's specified in the configuration to replicate objects on behalf of the Outposts bucket owner. The bucket owner is the AWS account that created the Outposts bucket.

Filtering by using the `Filter` element is supported in the latest XML configuration. The earlier version of the XML configuration isn't supported.

For more examples of S3 replication on Outposts configuration, see Creating replication rules on Outposts in the *Amazon S3 User Guide*.

```
PUT /v20180820/bucket/example-outpost-bucket/replication HTTP/1.1
Host:s3-outposts.<Region>.amazonaws.com
x-amz-account-id: example-account-id
x-amz-outpost-id: op-01ac5d28a6a232904
Authorization: authorization string
```

```
<ReplicationConfiguration>
  <Role>arn:aws:iam::35667example:role/ReplicationRoleForS3Outposts</Role>
  <Rules>
   <Rule>
      <Bucket>arn:aws:s3-outposts:us-east-1:example-account-id:outpost/SOURCE-OUTPOST-
ID/accesspoint/SOURCE-OUTPOSTS-BUCKET-ACCESS-POINT</Bucket>
      <ID>rule1</ID>
      <Status>Enabled</Status>
      <Priority>1</Priority>
      <DeleteMarkerReplication>
         <Status>Disabled</Status>
      </DeleteMarkerReplication>
      <Filter>
         <And>
            <Prefix>TaxDocs</Prefix>
            <Tag>
               <Key>key1</Key>
               <Value>value1</Value>
            </Tag>
            <Tag>
               <Key>key2</Key>
               <Value>value2</Value>
            </Tag>
         </And>
      </Filter>
      <Destination>
         <Bucket>arn:aws:s3-outposts:us-east-1:example-account-id:outpost/DESTINATION-
OUTPOST-ID/accesspoint/DESTINATION-OUTPOSTS-BUCKET-ACCESS-POINT</Bucket>
      </Destination>
   </Rule>
  </Rules>
</ReplicationConfiguration>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++

- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutBucketTagging

Service: Amazon S3 Control

> **Note**
>
> This action puts tags on an Amazon S3 on Outposts bucket. To put tags on an S3 bucket, see PutBucketTagging in the *Amazon S3 API Reference*.

Sets the tags for an S3 on Outposts bucket. For more information, see Using Amazon S3 on Outposts in the *Amazon S3 User Guide*.

Use tags to organize your AWS bill to reflect your own cost structure. To do this, sign up to get your AWS account bill with tag key values included. Then, to see the cost of combined resources, organize your billing information according to resources with the same tag key values. For example, you can tag several resources with a specific application name, and then organize your billing information to see the total cost of that application across several services. For more information, see Cost allocation and tagging.

> **Note**
>
> Within a bucket, if you add a tag that has the same key as an existing tag, the new value overwrites the old value. For more information, see Using cost allocation in Amazon S3 bucket tags.

To use this action, you must have permissions to perform the `s3-outposts:PutBucketTagging` action. The Outposts bucket owner has this permission by default and can grant this permission to others. For more information about permissions, see Permissions Related to Bucket Subresource Operations and Managing access permissions to your Amazon S3 resources.

`PutBucketTagging` has the following special errors:

- Error code: `InvalidTagError`
  - Description: The tag provided was not a valid tag. This error can occur if the tag did not pass input validation. For information about tag restrictions, see User-Defined Tag Restrictions and AWS-Generated Cost Allocation Tag Restrictions.
- Error code: `MalformedXMLError`

  - Description: The XML provided does not match the schema.
- Error code: `OperationAbortedError`
  - Description: A conflicting conditional action is currently in progress against this resource. Try again.
- Error code: `InternalError`
  - Description: The service was unable to apply the provided tag to the bucket.

All Amazon S3 on Outposts REST API requests for this action require an additional parameter of `x-amz-outpost-id` to be passed with the request. In addition, you must use an S3 on Outposts endpoint hostname prefix instead of `s3-control`. For an example of the request syntax for Amazon S3 on Outposts that uses the S3 on Outposts endpoint hostname prefix and the `x-amz-outpost-id` derived by using the access point ARN, see the Examples section.

The following actions are related to `PutBucketTagging`:

- GetBucketTagging
- DeleteBucketTagging

Request Syntax

```
PUT /v20180820/bucket/name/tagging HTTP/1.1
Host: Bucket.s3-control.amazonaws.com
x-amz-account-id: AccountId
<?xml version="1.0" encoding="UTF-8"?>
<Tagging xmlns="http://awss3control.amazonaws.com/doc/2018-08-20/">
   <TagSet>
      <S3Tag>
         <Key>string</Key>
         <Value>string</Value>
      </S3Tag>
   </TagSet>
</Tagging>
```

URI Request Parameters

The request uses the following URI parameters.

name

The Amazon Resource Name (ARN) of the bucket.

For using this parameter with Amazon S3 on Outposts with the REST API, you must specify the name and the x-amz-outpost-id as well.

For using this parameter with S3 on Outposts with the AWS SDK and CLI, you must specify the ARN of the bucket accessed in the format `arn:aws:s3-outposts:<Region>:<account-id>:outpost/<outpost-id>/bucket/<my-bucket-name>`. For example, to access the bucket `reports` through Outpost `my-outpost` owned by account `123456789012` in Region `us-west-2`, use the URL encoding of `arn:aws:s3-outposts:us-west-2:123456789012:outpost/my-outpost/bucket/reports`. The value must be URL encoded.

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: Yes

x-amz-account-id

The AWS account ID of the Outposts bucket.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request accepts the following data in XML format.

Tagging

Root level tag for the Tagging parameters.

Required: Yes

TagSet

A collection for a set of tags.

Type: Array of S3Tag data types

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

Sample request: Add tag set to an Amazon S3 on Outposts bucket

The following request adds a tag set to the existing `example-outpost-bucket` bucket.

```
PUT v20180820/bucket/example-outpost-bucket/tagging HTTP/1.1
Host: s3-outposts.<Region>.amazonaws.com
Content-Length: 1660
x-amz-date: Thu, 12 Nov 2020 20:04:21 GMT
x-amz-account-id: example-account-id
x-amz-outpost-id: op-01ac5d28a6a232904
Authorization: authorization string

<Tagging>
  <TagSet>
    <Tag>
      <Key>Project</Key>
      <Value>Project One</Value>
    </Tag>
    <Tag>
      <Key>User</Key>
      <Value>jsmith</Value>
    </Tag>
  </TagSet>
</Tagging>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutBucketVersioning

Service: Amazon S3 Control

> **Note**
>
> This operation sets the versioning state for S3 on Outposts buckets only. To set the versioning state for an S3 bucket, see PutBucketVersioning in the *Amazon S3 API Reference*.

Sets the versioning state for an S3 on Outposts bucket. With S3 Versioning, you can save multiple distinct copies of your objects and recover from unintended user actions and application failures.

You can set the versioning state to one of the following:

- **Enabled** - Enables versioning for the objects in the bucket. All objects added to the bucket receive a unique version ID.
- **Suspended** - Suspends versioning for the objects in the bucket. All objects added to the bucket receive the version ID `null`.

If you've never set versioning on your bucket, it has no versioning state. In that case, a GetBucketVersioning request does not return a versioning state value.

When you enable S3 Versioning, for each object in your bucket, you have a current version and zero or more noncurrent versions. You can configure your bucket S3 Lifecycle rules to expire noncurrent versions after a specified time period. For more information, see Creating and managing a lifecycle configuration for your S3 on Outposts bucket in the *Amazon S3 User Guide*.

If you have an object expiration lifecycle configuration in your non-versioned bucket and you want to maintain the same permanent delete behavior when you enable versioning, you must add a noncurrent expiration policy. The noncurrent expiration lifecycle configuration will manage the deletes of the noncurrent object versions in the version-enabled bucket. For more information, see Versioning in the *Amazon S3 User Guide*.

All Amazon S3 on Outposts REST API requests for this action require an additional parameter of `x-amz-outpost-id` to be passed with the request. In addition, you must use an S3 on Outposts endpoint hostname prefix instead of `s3-control`. For an example of the request syntax for Amazon S3 on Outposts that uses the S3 on Outposts endpoint hostname prefix and the `x-amz-outpost-id` derived by using the access point ARN, see the Examples section.

The following operations are related to `PutBucketVersioning` for S3 on Outposts.

- GetBucketVersioning
- PutBucketLifecycleConfiguration
- GetBucketLifecycleConfiguration

Request Syntax

```
PUT /v20180820/bucket/name/versioning HTTP/1.1
Host: Bucket.s3-control.amazonaws.com
x-amz-account-id: AccountId
x-amz-mfa: MFA
<?xml version="1.0" encoding="UTF-8"?>
<VersioningConfiguration xmlns="http://awss3control.amazonaws.com/doc/2018-08-20/">
   <MfaDelete>string</MfaDelete>
   <Status>string</Status>
</VersioningConfiguration>
```

URI Request Parameters

The request uses the following URI parameters.

name

The S3 on Outposts bucket to set the versioning state for.

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: Yes

x-amz-account-id

The AWS account ID of the S3 on Outposts bucket.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

x-amz-mfa

The concatenation of the authentication device's serial number, a space, and the value that is displayed on your authentication device.

Request Body

The request accepts the following data in XML format.

VersioningConfiguration

Root level tag for the VersioningConfiguration parameters.

Required: Yes

MFADelete

Specifies whether MFA delete is enabled or disabled in the bucket versioning configuration for the S3 on Outposts bucket.

Type: String

Valid Values: `Enabled | Disabled`

Required: No

Status

Sets the versioning state of the S3 on Outposts bucket.

Type: String

Valid Values: `Enabled | Suspended`

Required: No

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

Sample PutBucketVersioning request on an Amazon S3 on Outposts bucket

This request sets the versioning state on an S3 on Outposts bucket that's named `example-outpost-bucket`.

```
PUT /v20180820/bucket/example-outpost-bucket/?versioning HTTP/1.1
Host:s3-outposts.region-code.amazonaws.com
x-amz-account-id: example-account-id
x-amz-outpost-id: op-01ac5d28a6a232904
Content-Length: 0
Date: Wed, 25 May  2022 12:00:00 GMT
Content-MD5: q6yJDlIkcBaGGfb3QLY69A==
Authorization: authorization string
Content-Length: 214

<VersioningConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
 <Status>Enabled</Status>
</VersioningConfiguration>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutJobTagging

Service: Amazon S3 Control

Sets the supplied tag-set on an S3 Batch Operations job.

A tag is a key-value pair. You can associate S3 Batch Operations tags with any job by sending a PUT request against the tagging subresource that is associated with the job. To modify the existing tag set, you can either replace the existing tag set entirely, or make changes within the existing tag set by retrieving the existing tag set using GetJobTagging, modify that tag set, and use this operation to replace the tag set with the one you modified. For more information, see Controlling access and labeling jobs using tags in the *Amazon S3 User Guide*.

Note

- If you send this request with an empty tag set, Amazon S3 deletes the existing tag set on the Batch Operations job. If you use this method, you are charged for a Tier 1 Request (PUT). For more information, see Amazon S3 pricing.
- For deleting existing tags for your Batch Operations job, a DeleteJobTagging request is preferred because it achieves the same result without incurring charges.
- A few things to consider about using tags:
  - Amazon S3 limits the maximum number of tags to 50 tags per job.
  - You can associate up to 50 tags with a job as long as they have unique tag keys.
  - A tag key can be up to 128 Unicode characters in length, and tag values can be up to 256 Unicode characters in length.
  - The key and values are case sensitive.
  - For tagging-related restrictions related to characters and encodings, see User-Defined Tag Restrictions in the *AWS Billing and Cost Management User Guide*.

Permissions

To use the `PutJobTagging` operation, you must have permission to perform the `s3:PutJobTagging` action.

Related actions include:

- CreateJob
- GetJobTagging
- DeleteJobTagging

Request Syntax

```
PUT /v20180820/jobs/id/tagging HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
<?xml version="1.0" encoding="UTF-8"?>
<PutJobTaggingRequest xmlns="http://awss3control.amazonaws.com/doc/2018-08-20/">
   <Tags>
      <S3Tag>
         <Key>string</Key>
         <Value>string</Value>
      </S3Tag>
   </Tags>
</PutJobTaggingRequest>
```

URI Request Parameters

The request uses the following URI parameters.

id

The ID for the S3 Batch Operations job whose tags you want to replace.

Length Constraints: Minimum length of 5. Maximum length of 36.

Pattern: `[a-zA-Z0-9\-\_]+`

Required: Yes

x-amz-account-id

The AWS account ID associated with the S3 Batch Operations job.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request accepts the following data in XML format.

PutJobTaggingRequest

Root level tag for the PutJobTaggingRequest parameters.

Required: Yes

Tags

The set of tags to associate with the S3 Batch Operations job.

Type: Array of S3Tag data types

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

InternalServiceException

HTTP Status Code: 500

NotFoundException

HTTP Status Code: 400

TooManyRequestsException

HTTP Status Code: 400

TooManyTagsException

Amazon S3 throws this exception if you have too many tags in your tag set.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutMultiRegionAccessPointPolicy

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Associates an access control policy with the specified Multi-Region Access Point. Each Multi-Region Access Point can have only one policy, so a request made to this action replaces any existing policy that is associated with the specified Multi-Region Access Point.

This action will always be routed to the US West (Oregon) Region. For more information about the restrictions around working with Multi-Region Access Points, see Multi-Region Access Point restrictions and limitations in the *Amazon S3 User Guide*.

The following actions are related to `PutMultiRegionAccessPointPolicy`:

- GetMultiRegionAccessPointPolicy
- GetMultiRegionAccessPointPolicyStatus

Request Syntax

```
POST /v20180820/async-requests/mrap/put-policy HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
<?xml version="1.0" encoding="UTF-8"?>
<PutMultiRegionAccessPointPolicyRequest xmlns="http://awss3control.amazonaws.com/
doc/2018-08-20/">
   <ClientToken>string</ClientToken>
   <Details>
      <Name>string</Name>
      <Policy>string</Policy>
   </Details>
</PutMultiRegionAccessPointPolicyRequest>
```

URI Request Parameters

The request uses the following URI parameters.

x-amz-account-id

The AWS account ID for the owner of the Multi-Region Access Point.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request accepts the following data in XML format.

PutMultiRegionAccessPointPolicyRequest

Root level tag for the PutMultiRegionAccessPointPolicyRequest parameters.

Required: Yes

ClientToken

An idempotency token used to identify the request and guarantee that requests are unique.

Type: String

Length Constraints: Maximum length of 64.

Pattern: \S+

Required: Yes

Details

A container element containing the details of the policy for the Multi-Region Access Point.

Type: PutMultiRegionAccessPointPolicyInput data type

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

```
<?xml version="1.0" encoding="UTF-8"?>
<PutMultiRegionAccessPointPolicyResult>
   <RequestTokenARN>string</RequestTokenARN>
</PutMultiRegionAccessPointPolicyResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

PutMultiRegionAccessPointPolicyResult

Root level tag for the PutMultiRegionAccessPointPolicyResult parameters.

Required: Yes

RequestTokenARN

The request token associated with the request. You can use this token with DescribeMultiRegionAccessPointOperation to determine the status of asynchronous requests.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `arn:.+`

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3

- AWS SDK for Python
- AWS SDK for Ruby V3

PutPublicAccessBlock

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Creates or modifies the `PublicAccessBlock` configuration for an AWS account. For this operation, users must have the `s3:PutAccountPublicAccessBlock` permission. For more information, see Using Amazon S3 block public access.

Related actions include:

- GetPublicAccessBlock
- DeletePublicAccessBlock

Request Syntax

```
PUT /v20180820/configuration/publicAccessBlock HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
<?xml version="1.0" encoding="UTF-8"?>
<PublicAccessBlockConfiguration xmlns="http://awss3control.amazonaws.com/
doc/2018-08-20/">
   <BlockPublicAcls>boolean</BlockPublicAcls>
   <IgnorePublicAcls>boolean</IgnorePublicAcls>
   <BlockPublicPolicy>boolean</BlockPublicPolicy>
   <RestrictPublicBuckets>boolean</RestrictPublicBuckets>
</PublicAccessBlockConfiguration>
```

URI Request Parameters

The request uses the following URI parameters.

x-amz-account-id

The account ID for the AWS account whose `PublicAccessBlock` configuration you want to set.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request accepts the following data in XML format.

PublicAccessBlockConfiguration

Root level tag for the PublicAccessBlockConfiguration parameters.

Required: Yes

BlockPublicAcls

Specifies whether Amazon S3 should block public access control lists (ACLs) for buckets in this account. Setting this element to TRUE causes the following behavior:

- PutBucketAcl and PutObjectAcl calls fail if the specified ACL is public.
- PUT Object calls fail if the request includes a public ACL.
- PUT Bucket calls fail if the request includes a public ACL.

Enabling this setting doesn't affect existing policies or ACLs.

This property is not supported for Amazon S3 on Outposts.

Type: Boolean

Required: No

BlockPublicPolicy

Specifies whether Amazon S3 should block public bucket policies for buckets in this account. Setting this element to TRUE causes Amazon S3 to reject calls to PUT Bucket policy if the specified bucket policy allows public access.

Enabling this setting doesn't affect existing bucket policies.

This property is not supported for Amazon S3 on Outposts.

Type: Boolean

Required: No

IgnorePublicAcls

Specifies whether Amazon S3 should ignore public ACLs for buckets in this account. Setting this element to TRUE causes Amazon S3 to ignore all public ACLs on buckets in this account and any objects that they contain.

Enabling this setting doesn't affect the persistence of any existing ACLs and doesn't prevent new public ACLs from being set.

This property is not supported for Amazon S3 on Outposts.

Type: Boolean

Required: No

RestrictPublicBuckets

Specifies whether Amazon S3 should restrict public bucket policies for buckets in this account. Setting this element to TRUE restricts access to buckets with public policies to only AWS service principals and authorized users within this account.

Enabling this setting doesn't affect previously stored bucket policies, except that public and cross-account access within any public bucket policy, including non-public delegation to specific accounts, is blocked.

This property is not supported for Amazon S3 on Outposts.

Type: Boolean

Required: No

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutStorageLensConfiguration

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Puts an Amazon S3 Storage Lens configuration. For more information about S3 Storage Lens, see Working with Amazon S3 Storage Lens in the *Amazon S3 User Guide*. For a complete list of S3 Storage Lens metrics, see S3 Storage Lens metrics glossary in the *Amazon S3 User Guide*.

> **Note**
>
> To use this action, you must have permission to perform the `s3:PutStorageLensConfiguration` action. For more information, see Setting permissions to use Amazon S3 Storage Lens in the *Amazon S3 User Guide*.

Request Syntax

```
PUT /v20180820/storagelens/storagelensid HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
<?xml version="1.0" encoding="UTF-8"?>
<PutStorageLensConfigurationRequest xmlns="http://awss3control.amazonaws.com/
doc/2018-08-20/">
   <StorageLensConfiguration>
      <AccountLevel>
         <ActivityMetrics>
            <IsEnabled>boolean</IsEnabled>
         </ActivityMetrics>
         <AdvancedCostOptimizationMetrics>
            <IsEnabled>boolean</IsEnabled>
         </AdvancedCostOptimizationMetrics>
         <AdvancedDataProtectionMetrics>
            <IsEnabled>boolean</IsEnabled>
         </AdvancedDataProtectionMetrics>
         <BucketLevel>
            <ActivityMetrics>
               <IsEnabled>boolean</IsEnabled>
```

```
            </ActivityMetrics>
            <AdvancedCostOptimizationMetrics>
               <IsEnabled>boolean</IsEnabled>
            </AdvancedCostOptimizationMetrics>
            <AdvancedDataProtectionMetrics>
               <IsEnabled>boolean</IsEnabled>
            </AdvancedDataProtectionMetrics>
            <DetailedStatusCodesMetrics>
               <IsEnabled>boolean</IsEnabled>
            </DetailedStatusCodesMetrics>
            <PrefixLevel>
               <StorageMetrics>
                  <IsEnabled>boolean</IsEnabled>
                  <SelectionCriteria>
                     <Delimiter>string</Delimiter>
                     <MaxDepth>integer</MaxDepth>
                     <MinStorageBytesPercentage>double</MinStorageBytesPercentage>
                  </SelectionCriteria>
               </StorageMetrics>
            </PrefixLevel>
         </BucketLevel>
         <DetailedStatusCodesMetrics>
            <IsEnabled>boolean</IsEnabled>
         </DetailedStatusCodesMetrics>
         <StorageLensGroupLevel>
            <SelectionCriteria>
               <Exclude>
                  <Arn>string</Arn>
               </Exclude>
               <Include>
                  <Arn>string</Arn>
               </Include>
            </SelectionCriteria>
         </StorageLensGroupLevel>
      </AccountLevel>
      <AwsOrg>
         <Arn>string</Arn>
      </AwsOrg>
      <DataExport>
         <CloudWatchMetrics>
            <IsEnabled>boolean</IsEnabled>
         </CloudWatchMetrics>
         <S3BucketDestination>
            <AccountId>string</AccountId>
```

```
            <Arn>string</Arn>
            <Encryption>
               <SSE-KMS>
                  <KeyId>string</KeyId>
               </SSE-KMS>
               <SSE-S3>
               </SSE-S3>
            </Encryption>
            <Format>string</Format>
            <OutputSchemaVersion>string</OutputSchemaVersion>
            <Prefix>string</Prefix>
         </S3BucketDestination>
      </DataExport>
      <Exclude>
         <Buckets>
            <Arn>string</Arn>
         </Buckets>
         <Regions>
            <Region>string</Region>
         </Regions>
      </Exclude>
      <Id>string</Id>
      <Include>
         <Buckets>
            <Arn>string</Arn>
         </Buckets>
         <Regions>
            <Region>string</Region>
         </Regions>
      </Include>
      <IsEnabled>boolean</IsEnabled>
      <StorageLensArn>string</StorageLensArn>
   </StorageLensConfiguration>
   <Tags>
      <Tag>
         <Key>string</Key>
         <Value>string</Value>
      </Tag>
   </Tags>
</PutStorageLensConfigurationRequest>
```

URI Request Parameters

The request uses the following URI parameters.

storagelensid

The ID of the S3 Storage Lens configuration.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-\_\.]+`

Required: Yes

x-amz-account-id

The account ID of the requester.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request accepts the following data in XML format.

PutStorageLensConfigurationRequest

Root level tag for the PutStorageLensConfigurationRequest parameters.

Required: Yes

StorageLensConfiguration

The S3 Storage Lens configuration.

Type: StorageLensConfiguration data type

Required: Yes

Tags

The tag set of the S3 Storage Lens configuration.

> **Note**
>
> You can set up to a maximum of 50 tags.

Type: Array of StorageLensTag data types

Required: No

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

PutStorageLensConfigurationTagging

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Put or replace tags on an existing Amazon S3 Storage Lens configuration. For more information about S3 Storage Lens, see Assessing your storage activity and usage with Amazon S3 Storage Lens in the *Amazon S3 User Guide*.

> **Note**
>
> To use this action, you must have permission to perform the `s3:PutStorageLensConfigurationTagging` action. For more information, see Setting permissions to use Amazon S3 Storage Lens in the *Amazon S3 User Guide*.

Request Syntax

```
PUT /v20180820/storagelens/storagelensid/tagging HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
<?xml version="1.0" encoding="UTF-8"?>
<PutStorageLensConfigurationTaggingRequest xmlns="http://awss3control.amazonaws.com/
doc/2018-08-20/">
   <Tags>
      <Tag>
         <Key>string</Key>
         <Value>string</Value>
      </Tag>
   </Tags>
</PutStorageLensConfigurationTaggingRequest>
```

URI Request Parameters

The request uses the following URI parameters.

storagelensid

The ID of the S3 Storage Lens configuration.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-\_\.]+`

Required: Yes

x-amz-account-id

The account ID of the requester.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request accepts the following data in XML format.

PutStorageLensConfigurationTaggingRequest

Root level tag for the PutStorageLensConfigurationTaggingRequest parameters.

Required: Yes

Tags

The tag set of the S3 Storage Lens configuration.

> **Note**
>
> You can set up to a maximum of 50 tags.

Type: Array of StorageLensTag data types

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

SubmitMultiRegionAccessPointRoutes

Service: Amazon S3 Control

> **Note**
>
> This operation is not supported by directory buckets.

Submits an updated route configuration for a Multi-Region Access Point. This API operation updates the routing status for the specified Regions from active to passive, or from passive to active. A value of `0` indicates a passive status, which means that traffic won't be routed to the specified Region. A value of `100` indicates an active status, which means that traffic will be routed to the specified Region. At least one Region must be active at all times.

When the routing configuration is changed, any in-progress operations (uploads, copies, deletes, and so on) to formerly active Regions will continue to run to their final completion state (success or failure). The routing configurations of any Regions that aren't specified remain unchanged.

> **Note**
>
> Updated routing configurations might not be immediately applied. It can take up to 2 minutes for your changes to take effect.

To submit routing control changes and failover requests, use the Amazon S3 failover control infrastructure endpoints in these five AWS Regions:

- `us-east-1`
- `us-west-2`
- `ap-southeast-2`
- `ap-northeast-1`
- `eu-west-1`

Request Syntax

```
PATCH /v20180820/mrap/instances/mrap+/routes HTTP/1.1
Host: s3-control.amazonaws.com
```

```
x-amz-account-id: AccountId
<?xml version="1.0" encoding="UTF-8"?>
<SubmitMultiRegionAccessPointRoutesRequest xmlns="http://awss3control.amazonaws.com/
doc/2018-08-20/">
   <RouteUpdates>
      <Route>
         <Bucket>string</Bucket>
         <Region>string</Region>
         <TrafficDialPercentage>integer</TrafficDialPercentage>
      </Route>
   </RouteUpdates>
</SubmitMultiRegionAccessPointRoutesRequest>
```

URI Request Parameters

The request uses the following URI parameters.

mrap

The Multi-Region Access Point ARN.

Length Constraints: Maximum length of 200.

Pattern: `^[a-zA-Z0-9\:.-]{3,200}$`

Required: Yes

x-amz-account-id

The AWS account ID for the owner of the Multi-Region Access Point.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request accepts the following data in XML format.

SubmitMultiRegionAccessPointRoutesRequest

Root level tag for the SubmitMultiRegionAccessPointRoutesRequest parameters.

Required: Yes

RouteUpdates

The different routes that make up the new route configuration. Active routes return a value of `100`, and passive routes return a value of `0`.

Type: Array of MultiRegionAccessPointRoute data types

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Examples

Sample request for initiating failover

In the following example, the request to submit these routing changes to initiate a failover is sent to the failover control infrastructure in the `us-east-1` Region. In this example, the `eu-north-1` Region is set to active, and the `ap-northeast-3` Region is set to passive. In other words, the `ap-northeast-3` Region is failed over to the `eu-north-1` Region.

```
PATCH /v20180820/mrap/instances/<Multi-Region Access Point>/routes HTTP/1.1
Host: example-account-id.s3-control.us-east-1.amazonaws.com

<SubmitMultiRegionAccessPointRoutesRequest>
  <RouteUpdates>
     <Route>
      <Region>eu-north-1</Region>
      <Bucket>example-bucket-eu-north-1</Bucket>
      <TrafficDialPercentage>100</TrafficDialPercentage>
     </Route>
     <Route>
      <Region>ap-northeast-3</Region>
      <Bucket>example-bucket-ap-northeast-3</Bucket>
```

```
      <TrafficDialPercentage>0</TrafficDialPercentage>
     </Route>
  </RouteUpdates>
</SubmitMultiRegionAccessPointRoutesRequest>
```

Sample request for setting a Region to active status

The following request updates the route configuration of the `eu-north-1` Region to active. The request is sent to the failover control infrastructure in the `eu-west-1` Region.

```
PATCH /v20180820/mrap/instances/<Multi-Region Access Point>/routes HTTP/1.1
Host: example-account-id.s3-control.eu-west-1.amazonaws.com

<SubmitMultiRegionAccessPointRoutesRequest>
   <RouteUpdates>
    <Route>
      <Region>eu-north-1<Region>
      <Bucket>example-bucket-eu-north-1</Bucket>
      <TrafficDialPercentage>100</TrafficDialPercentage>
    </Route>
   </RouteUpdates>
</SubmitMultiRegionAccessPointRoutesRequest>
```

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python

- AWS SDK for Ruby V3

TagResource

Service: Amazon S3 Control

Creates a new AWS resource tag or updates an existing resource tag. Each tag is a label consisting of a user-defined key and value. Tags can help you manage, identify, organize, search for, and filter resources. You can add up to 50 AWS resource tags for each S3 resource.

> **Note**
>
> This operation is only supported for S3 Storage Lens groups and for S3 Access Grants. The tagged resource can be an S3 Storage Lens group or S3 Access Grants instance, registered location, or grant.

Permissions

You must have the `s3:TagResource` permission to use this operation.

For more information about the required Storage Lens Groups permissions, see Setting account permissions to use S3 Storage Lens groups.

For information about S3 Tagging errors, see List of Amazon S3 Tagging error codes.

Request Syntax

```
POST /v20180820/tags/resourceArn+ HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
<?xml version="1.0" encoding="UTF-8"?>
<TagResourceRequest xmlns="http://awss3control.amazonaws.com/doc/2018-08-20/">
   <Tags>
      <Tag>
         <Key>string</Key>
         <Value>string</Value>
      </Tag>
   </Tags>
</TagResourceRequest>
```

URI Request Parameters

The request uses the following URI parameters.

resourceArn

The Amazon Resource Name (ARN) of the S3 resource that you're trying to add tags to. The tagged resource can be an S3 Storage Lens group or S3 Access Grants instance, registered location, or grant.

Length Constraints: Maximum length of 1011.

Pattern: `arn:[^:]+:s3:[^:].*`

Required: Yes

x-amz-account-id

The AWS account ID that created the S3 resource that you're trying to add tags to or the requester's account ID.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request accepts the following data in XML format.

TagResourceRequest

Root level tag for the TagResourceRequest parameters.

Required: Yes

Tags

The AWS resource tags that you want to add to the specified S3 resource.

Type: Array of Tag data types

Array Members: Minimum number of 0 items. Maximum number of 50 items.

Required: Yes

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UntagResource

Service: Amazon S3 Control

This operation removes the specified AWS resource tags from an S3 resource. Each tag is a label consisting of a user-defined key and value. Tags can help you manage, identify, organize, search for, and filter resources.

> **Note**
>
> This operation is only supported for S3 Storage Lens groups and for S3 Access Grants. The tagged resource can be an S3 Storage Lens group or S3 Access Grants instance, registered location, or grant.

Permissions

You must have the `s3:UntagResource` permission to use this operation.

For more information about the required Storage Lens Groups permissions, see Setting account permissions to use S3 Storage Lens groups.

For information about S3 Tagging errors, see List of Amazon S3 Tagging error codes.

Request Syntax

```
DELETE /v20180820/tags/resourceArn+?tagKeys=TagKeys HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

resourceArn

The Amazon Resource Name (ARN) of the S3 resource that you're trying to remove the tags from.

Length Constraints: Maximum length of 1011.

Pattern: `arn:[^:]+:s3:[^:].*`

Required: Yes

tagKeys

The array of tag key-value pairs that you're trying to remove from of the S3 resource.

Array Members: Minimum number of 0 items. Maximum number of 50 items.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^([\p{L}\p{Z}\p{N}_.:/=+\-@]*)$`

Required: Yes

x-amz-account-id

The AWS account ID that owns the resource that you're trying to remove the tags from.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET

- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateAccessGrantsLocation

Service: Amazon S3 Control

Updates the IAM role of a registered location in your S3 Access Grants instance.

Permissions

You must have the `s3:UpdateAccessGrantsLocation` permission to use this operation.

Additional Permissions

You must also have the following permission: `iam:PassRole`

Request Syntax

```
PUT /v20180820/accessgrantsinstance/location/id HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
<?xml version="1.0" encoding="UTF-8"?>
<UpdateAccessGrantsLocationRequest xmlns="http://awss3control.amazonaws.com/
doc/2018-08-20/">
   <IAMRoleArn>string</IAMRoleArn>
</UpdateAccessGrantsLocationRequest>
```

URI Request Parameters

The request uses the following URI parameters.

id

The ID of the registered location that you are updating. S3 Access Grants assigns this ID when you register the location. S3 Access Grants assigns the ID `default` to the default location `s3://` and assigns an auto-generated ID to other locations that you register.

The ID of the registered location to which you are granting access. S3 Access Grants assigned this ID when you registered the location. S3 Access Grants assigns the ID `default` to the default location `s3://` and assigns an auto-generated ID to other locations that you register.

If you are passing the `default` location, you cannot create an access grant for the entire default location. You must also specify a bucket or a bucket and prefix in the `Subprefix` field.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-]+`

Required: Yes

x-amz-account-id

The ID of the AWS account that is making this request.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request accepts the following data in XML format.

UpdateAccessGrantsLocationRequest

Root level tag for the UpdateAccessGrantsLocationRequest parameters.

Required: Yes

IAMRoleArn

The Amazon Resource Name (ARN) of the IAM role for the registered location. S3 Access Grants assumes this role to manage access to the registered location.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `arn:[^:]+:iam::\d{12}:role/.*`

Required: Yes

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<UpdateAccessGrantsLocationResult>
   <CreatedAt>timestamp</CreatedAt>
   <AccessGrantsLocationId>string</AccessGrantsLocationId>
```

```
    <AccessGrantsLocationArn>string</AccessGrantsLocationArn>
    <LocationScope>string</LocationScope>
    <IAMRoleArn>string</IAMRoleArn>
</UpdateAccessGrantsLocationResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

UpdateAccessGrantsLocationResult

Root level tag for the UpdateAccessGrantsLocationResult parameters.

Required: Yes

AccessGrantsLocationArn

The Amazon Resource Name (ARN) of the registered location that you are updating.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `arn:[a-z\-]+:s3:[a-z0-9\-]+:\d{12}:access\-grants\/location/[a-zA-Z0-9\-]+`

AccessGrantsLocationId

The ID of the registered location to which you are granting access. S3 Access Grants assigned this ID when you registered the location. S3 Access Grants assigns the ID `default` to the default location `s3://` and assigns an auto-generated ID to other locations that you register.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-]+`

CreatedAt

The date and time when you registered the location.

Type: Timestamp

IAMRoleArn

The Amazon Resource Name (ARN) of the IAM role of the registered location. S3 Access Grants assumes this role to manage access to the registered location.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `arn:[^:]+:iam::\d{12}:role/.*`

LocationScope

The S3 URI path of the location that you are updating. You cannot update the scope of the registered location. The location scope can be the default S3 location `s3://`, the S3 path to a bucket `s3://<bucket>`, or the S3 path to a bucket and prefix `s3://<bucket>/<prefix>`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2000.

Pattern: `^.+$`

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateJobPriority

Service: Amazon S3 Control

Updates an existing S3 Batch Operations job's priority. For more information, see S3 Batch Operations in the *Amazon S3 User Guide*.

Permissions

To use the `UpdateJobPriority` operation, you must have permission to perform the `s3:UpdateJobPriority` action.

Related actions include:

- CreateJob
- ListJobs
- DescribeJob
- UpdateJobStatus

Request Syntax

```
POST /v20180820/jobs/id/priority?priority=Priority HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

id

The ID for the job whose priority you want to update.

Length Constraints: Minimum length of 5. Maximum length of 36.

Pattern: `[a-zA-Z0-9\-\_]+`

Required: Yes

priority

The priority you want to assign to this job.

Valid Range: Minimum value of 0. Maximum value of 2147483647.

Required: Yes

x-amz-account-id

The AWS account ID associated with the S3 Batch Operations job.

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<UpdateJobPriorityResult>
   <JobId>string</JobId>
   <Priority>integer</Priority>
</UpdateJobPriorityResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

UpdateJobPriorityResult

Root level tag for the UpdateJobPriorityResult parameters.

Required: Yes

JobId

The ID for the job whose priority Amazon S3 updated.

Type: String

Length Constraints: Minimum length of 5. Maximum length of 36.

Pattern: `[a-zA-Z0-9\-\_]+`

Priority

The new priority assigned to the specified job.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 2147483647.

Errors

BadRequestException

HTTP Status Code: 400

InternalServiceException

HTTP Status Code: 500

NotFoundException

HTTP Status Code: 400

TooManyRequestsException

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2

- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateJobStatus

Service: Amazon S3 Control

Updates the status for the specified job. Use this operation to confirm that you want to run a job or to cancel an existing job. For more information, see S3 Batch Operations in the *Amazon S3 User Guide*.

Permissions

To use the `UpdateJobStatus` operation, you must have permission to perform the `s3:UpdateJobStatus` action.

Related actions include:

- CreateJob
- ListJobs
- DescribeJob
- UpdateJobStatus

Request Syntax

```
POST /v20180820/jobs/id/status?
requestedJobStatus=RequestedJobStatus&statusUpdateReason=StatusUpdateReason HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
```

URI Request Parameters

The request uses the following URI parameters.

id

The ID of the job whose status you want to update.

Length Constraints: Minimum length of 5. Maximum length of 36.

Pattern: `[a-zA-Z0-9\-\_]+`

Required: Yes

requestedJobStatus

The status that you want to move the specified job to.

Valid Values: `Cancelled | Ready`

Required: Yes

statusUpdateReason

A description of the reason why you want to change the specified job's status. This field can be any string up to the maximum length.

Length Constraints: Minimum length of 1. Maximum length of 256.

x-amz-account-id

The AWS account ID associated with the S3 Batch Operations job.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
<?xml version="1.0" encoding="UTF-8"?>
<UpdateJobStatusResult>
   <JobId>string</JobId>
   <Status>string</Status>
   <StatusUpdateReason>string</StatusUpdateReason>
</UpdateJobStatusResult>
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in XML format by the service.

UpdateJobStatusResult

Root level tag for the UpdateJobStatusResult parameters.

Required: Yes

JobId

The ID for the job whose status was updated.

Type: String

Length Constraints: Minimum length of 5. Maximum length of 36.

Pattern: `[a-zA-Z0-9\-\_]+`

Status

The current status for the specified job.

Type: String

Valid Values: `Active | Cancelled | Cancelling | Complete | Completing | Failed | Failing | New | Paused | Pausing | Preparing | Ready | Suspended`

StatusUpdateReason

The reason that the specified job's status was updated.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Errors

BadRequestException

HTTP Status Code: 400

InternalServiceException

HTTP Status Code: 500

JobStatusException

HTTP Status Code: 400

NotFoundException

HTTP Status Code: 400

TooManyRequestsException

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

UpdateStorageLensGroup

Service: Amazon S3 Control

Updates the existing Storage Lens group.

To use this operation, you must have the permission to perform the `s3:UpdateStorageLensGroup` action. For more information about the required Storage Lens Groups permissions, see Setting account permissions to use S3 Storage Lens groups.

For information about Storage Lens groups errors, see List of Amazon S3 Storage Lens error codes.

Request Syntax

```
PUT /v20180820/storagelensgroup/name HTTP/1.1
Host: s3-control.amazonaws.com
x-amz-account-id: AccountId
<?xml version="1.0" encoding="UTF-8"?>
<UpdateStorageLensGroupRequest xmlns="http://awss3control.amazonaws.com/
doc/2018-08-20/">
   <StorageLensGroup>
      <Filter>
         <And>
            <MatchAnyPrefix>
               <Prefix>string</Prefix>
            </MatchAnyPrefix>
            <MatchAnySuffix>
               <Suffix>string</Suffix>
            </MatchAnySuffix>
            <MatchAnyTag>
               <Tag>
                  <Key>string</Key>
                  <Value>string</Value>
               </Tag>
            </MatchAnyTag>
            <MatchObjectAge>
               <DaysGreaterThan>integer</DaysGreaterThan>
               <DaysLessThan>integer</DaysLessThan>
            </MatchObjectAge>
            <MatchObjectSize>
               <BytesGreaterThan>long</BytesGreaterThan>
               <BytesLessThan>long</BytesLessThan>
            </MatchObjectSize>
         </And>
```

```
      <MatchAnyPrefix>
         <Prefix>string</Prefix>
      </MatchAnyPrefix>
      <MatchAnySuffix>
         <Suffix>string</Suffix>
      </MatchAnySuffix>
      <MatchAnyTag>
         <Tag>
            <Key>string</Key>
            <Value>string</Value>
         </Tag>
      </MatchAnyTag>
      <MatchObjectAge>
         <DaysGreaterThan>integer</DaysGreaterThan>
         <DaysLessThan>integer</DaysLessThan>
      </MatchObjectAge>
      <MatchObjectSize>
         <BytesGreaterThan>long</BytesGreaterThan>
         <BytesLessThan>long</BytesLessThan>
      </MatchObjectSize>
      <Or>
         <MatchAnyPrefix>
            <Prefix>string</Prefix>
         </MatchAnyPrefix>
         <MatchAnySuffix>
            <Suffix>string</Suffix>
         </MatchAnySuffix>
         <MatchAnyTag>
            <Tag>
               <Key>string</Key>
               <Value>string</Value>
            </Tag>
         </MatchAnyTag>
         <MatchObjectAge>
            <DaysGreaterThan>integer</DaysGreaterThan>
            <DaysLessThan>integer</DaysLessThan>
         </MatchObjectAge>
         <MatchObjectSize>
            <BytesGreaterThan>long</BytesGreaterThan>
            <BytesLessThan>long</BytesLessThan>
         </MatchObjectSize>
      </Or>
   </Filter>
   <Name>string</Name>
```

```
      <StorageLensGroupArn>string</StorageLensGroupArn>
   </StorageLensGroup>
</UpdateStorageLensGroupRequest>
```

URI Request Parameters

The request uses the following URI parameters.

name

The name of the Storage Lens group that you want to update.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-\_]+`

Required: Yes

x-amz-account-id

The AWS account ID of the Storage Lens group owner.

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Request Body

The request accepts the following data in XML format.

UpdateStorageLensGroupRequest

Root level tag for the UpdateStorageLensGroupRequest parameters.

Required: Yes

StorageLensGroup

The JSON file that contains the Storage Lens group configuration.

Type: StorageLensGroup data type

Required: Yes

Response Syntax

```
HTTP/1.1 204
```

Response Elements

If the action is successful, the service sends back an HTTP 204 response with an empty HTTP body.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

Amazon S3 on Outposts

The following actions are supported by Amazon S3 on Outposts:

- CreateEndpoint
- DeleteEndpoint
- ListEndpoints
- ListOutpostsWithS3
- ListSharedEndpoints

CreateEndpoint

Service: Amazon S3 on Outposts

Creates an endpoint and associates it with the specified Outpost.

> **Note**
>
> It can take up to 5 minutes for this action to finish.

Related actions include:

- DeleteEndpoint
- ListEndpoints

Request Syntax

```
POST /S3Outposts/CreateEndpoint HTTP/1.1
Content-type: application/json

{
   "AccessType": "string",
   "CustomerOwnedIpv4Pool": "string",
   "OutpostId": "string",
   "SecurityGroupId": "string",
   "SubnetId": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

AccessType

The type of access for the network connectivity for the Amazon S3 on Outposts endpoint. To use the AWS VPC, choose `Private`. To use the endpoint with an on-premises network, choose

`CustomerOwnedIp`. If you choose `CustomerOwnedIp`, you must also provide the customer-owned IP address pool (CoIP pool).

> **Note**
>
> `Private` is the default access type value.

Type: String

Valid Values: `Private | CustomerOwnedIp`

Required: No

CustomerOwnedIpv4Pool

The ID of the customer-owned IPv4 address pool (CoIP pool) for the endpoint. IP addresses are allocated from this pool for the endpoint.

Type: String

Pattern: `^ipv4pool-coip-([0-9a-f]{17})$`

Required: No

OutpostId

The ID of the AWS Outposts.

Type: String

Pattern: `^(op-[a-f0-9]{17}|\d{12}|ec2)$`

Required: Yes

SecurityGroupId

The ID of the security group to use with the endpoint.

Type: String

Pattern: `^sg-([0-9a-f]{8}|[0-9a-f]{17})$`

Required: Yes

SubnetId

The ID of the subnet in the selected VPC. The endpoint subnet must belong to the Outpost that has Amazon S3 on Outposts provisioned.

Type: String

Pattern: `^subnet-([0-9a-f]{8}|[0-9a-f]{17})$`

Required: Yes

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "EndpointArn": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

EndpointArn

The Amazon Resource Name (ARN) of the endpoint.

Type: String

Pattern: `^arn:(aws|aws-cn|aws-us-gov|aws-iso|aws-iso-b):s3-outposts:[a-z\-0-9]*:[0-9]{12}:outpost/(op-[a-f0-9]{17}|ec2)/endpoint/[a-zA-Z0-9]{19}$`

Errors

AccessDeniedException

Access was denied for this action.

HTTP Status Code: 403

ConflictException

There was a conflict with this action, and it could not be completed.

HTTP Status Code: 409

InternalServerException

There was an exception with the internal server.

HTTP Status Code: 500

OutpostOfflineException

The service link connection to your Outposts home Region is down. Check your connection and try again.

HTTP Status Code: 400

ResourceNotFoundException

The requested resource was not found.

HTTP Status Code: 404

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 429

ValidationException

There was an exception validating this data.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET

- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteEndpoint

Service: Amazon S3 on Outposts

Deletes an endpoint.

> **Note**
>
> It can take up to 5 minutes for this action to finish.

Related actions include:

- CreateEndpoint
- ListEndpoints

Request Syntax

```
DELETE /S3Outposts/DeleteEndpoint?endpointId=EndpointId&outpostId=OutpostId HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

EndpointId

The ID of the endpoint.

Pattern: `^[a-zA-Z0-9]{19}$`

Required: Yes

OutpostId

The ID of the AWS Outposts.

Pattern: `^(op-[a-f0-9]{17}|\d{12}|ec2)$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

Errors

AccessDeniedException

Access was denied for this action.

HTTP Status Code: 403

InternalServerException

There was an exception with the internal server.

HTTP Status Code: 500

OutpostOfflineException

The service link connection to your Outposts home Region is down. Check your connection and try again.

HTTP Status Code: 400

ResourceNotFoundException

The requested resource was not found.

HTTP Status Code: 404

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 429

ValidationException

There was an exception validating this data.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListEndpoints

Service: Amazon S3 on Outposts

Lists endpoints associated with the specified Outpost.

Related actions include:

- CreateEndpoint
- DeleteEndpoint

Request Syntax

```
GET /S3Outposts/ListEndpoints?maxResults=MaxResults&nextToken=NextToken HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

MaxResults

The maximum number of endpoints that will be returned in the response.

Valid Range: Minimum value of 0. Maximum value of 100.

NextToken

If a previous response from this operation included a `NextToken` value, provide that value here to retrieve the next page of results.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `^[A-Za-z0-9\+\:\/\=\?\#-_]+$`

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
Content-type: application/json
```

```
{
   "Endpoints": [
      {
         "AccessType": "string",
         "CidrBlock": "string",
         "CreationTime": number,
         "CustomerOwnedIpv4Pool": "string",
         "EndpointArn": "string",
         "FailedReason": {
            "ErrorCode": "string",
            "Message": "string"
         },
         "NetworkInterfaces": [
            {
               "NetworkInterfaceId": "string"
            }
         ],
         "OutpostsId": "string",
         "SecurityGroupId": "string",
         "Status": "string",
         "SubnetId": "string",
         "VpcId": "string"
      }
   ],
   "NextToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

Endpoints

The list of endpoints associated with the specified Outpost.

Type: Array of Endpoint objects

NextToken

If the number of endpoints associated with the specified Outpost exceeds `MaxResults`, you can include this value in subsequent calls to this operation to retrieve more results.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `^[A-Za-z0-9\+\:\/\=\?\#-_]+$`

Errors

AccessDeniedException

Access was denied for this action.

HTTP Status Code: 403

InternalServerException

There was an exception with the internal server.

HTTP Status Code: 500

ResourceNotFoundException

The requested resource was not found.

HTTP Status Code: 404

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 429

ValidationException

There was an exception validating this data.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface

- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListOutpostsWithS3

Service: Amazon S3 on Outposts

Lists the Outposts with S3 on Outposts capacity for your AWS account. Includes S3 on Outposts that you have access to as the Outposts owner, or as a shared user from Resource Access Manager (RAM).

Request Syntax

```
GET /S3Outposts/ListOutpostsWithS3?maxResults=MaxResults&nextToken=NextToken HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

MaxResults

The maximum number of Outposts to return. The limit is 100.

Valid Range: Minimum value of 0. Maximum value of 100.

NextToken

When you can get additional results from the `ListOutpostsWithS3` call, a `NextToken` parameter is returned in the output. You can then pass in a subsequent command to the `NextToken` parameter to continue listing additional Outposts.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `^[A-Za-z0-9\+\:\/\=\?\#-_]+$`

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "NextToken": "string",
```

```
   "Outposts": [
      {
         "CapacityInBytes": number,
         "OutpostArn": "string",
         "OutpostId": "string",
         "OwnerId": "string",
         "S3OutpostArn": "string"
      }
   ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

NextToken

Returns a token that you can use to call `ListOutpostsWithS3` again and receive additional results, if there are any.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `^[A-Za-z0-9\+\:\/\=\?\#-_]+$`

Outposts

Returns the list of Outposts that have the following characteristics:

- outposts that have S3 provisioned
- outposts that are `Active` (not pending any provisioning nor decommissioned)
- outposts to which the the calling AWS account has access

Type: Array of Outpost objects

Errors

AccessDeniedException

Access was denied for this action.

HTTP Status Code: 403

InternalServerException

There was an exception with the internal server.

HTTP Status Code: 500

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 429

ValidationException

There was an exception validating this data.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ListSharedEndpoints

Service: Amazon S3 on Outposts

Lists all endpoints associated with an Outpost that has been shared by AWS Resource Access Manager (RAM).

Related actions include:

- CreateEndpoint
- DeleteEndpoint

Request Syntax

```
GET /S3Outposts/ListSharedEndpoints?
maxResults=MaxResults&nextToken=NextToken&outpostId=OutpostId HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

MaxResults

The maximum number of endpoints that will be returned in the response.

Valid Range: Minimum value of 0. Maximum value of 100.

NextToken

If a previous response from this operation included a `NextToken` value, you can provide that value here to retrieve the next page of results.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `^[A-Za-z0-9\+\:\/\=\?\#-_]+$`

OutpostId

The ID of the AWS Outpost.

Pattern: `^(op-[a-f0-9]{17}|\d{12}|ec2)$`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "Endpoints": [
      {
         "AccessType": "string",
         "CidrBlock": "string",
         "CreationTime": number,
         "CustomerOwnedIpv4Pool": "string",
         "EndpointArn": "string",
         "FailedReason": {
            "ErrorCode": "string",
            "Message": "string"
         },
         "NetworkInterfaces": [
            {
               "NetworkInterfaceId": "string"
            }
         ],
         "OutpostsId": "string",
         "SecurityGroupId": "string",
         "Status": "string",
         "SubnetId": "string",
         "VpcId": "string"
      }
   ],
   "NextToken": "string"
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

Endpoints

The list of endpoints associated with the specified Outpost that have been shared by AWS Resource Access Manager (RAM).

Type: Array of Endpoint objects

NextToken

If the number of endpoints associated with the specified Outpost exceeds `MaxResults`, you can include this value in subsequent calls to this operation to retrieve more results.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `^[A-Za-z0-9\+\:\/\=\?\#-_]+$`

Errors

AccessDeniedException

Access was denied for this action.

HTTP Status Code: 403

InternalServerException

There was an exception with the internal server.

HTTP Status Code: 500

ResourceNotFoundException

The requested resource was not found.

HTTP Status Code: 404

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 429

ValidationException

There was an exception validating this data.

HTTP Status Code: 400

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

Data Types

The following data types are supported by Amazon S3:

- AbortIncompleteMultipartUpload
- AccelerateConfiguration
- AccessControlPolicy
- AccessControlTranslation
- AnalyticsAndOperator
- AnalyticsConfiguration
- AnalyticsExportDestination
- AnalyticsFilter
- AnalyticsS3BucketDestination
- Bucket
- BucketInfo

- BucketLifecycleConfiguration
- BucketLoggingStatus
- Checksum
- CloudFunctionConfiguration
- CommonPrefix
- CompletedMultipartUpload
- CompletedPart
- Condition
- ContinuationEvent
- CopyObjectResult
- CopyPartResult
- CORSConfiguration
- CORSRule
- CreateBucketConfiguration
- CSVInput
- CSVOutput
- DefaultRetention
- Delete
- DeletedObject
- DeleteMarkerEntry
- DeleteMarkerReplication
- Destination
- Encryption
- EncryptionConfiguration
- EndEvent
- Error
- ErrorDocument
- EventBridgeConfiguration
- ExistingObjectReplication
- FilterRule

- GetObjectAttributesParts
- GlacierJobParameters
- Grant
- Grantee
- IndexDocument
- Initiator
- InputSerialization
- IntelligentTieringAndOperator
- IntelligentTieringConfiguration
- IntelligentTieringFilter
- InventoryConfiguration
- InventoryDestination
- InventoryEncryption
- InventoryFilter
- InventoryS3BucketDestination
- InventorySchedule
- JSONInput
- JSONOutput
- LambdaFunctionConfiguration
- LifecycleConfiguration
- LifecycleExpiration
- LifecycleRule
- LifecycleRuleAndOperator
- LifecycleRuleFilter
- LocationInfo
- LoggingEnabled
- MetadataEntry
- Metrics
- MetricsAndOperator
- MetricsConfiguration

- MetricsFilter
- MultipartUpload
- NoncurrentVersionExpiration
- NoncurrentVersionTransition
- NotificationConfiguration
- NotificationConfigurationDeprecated
- NotificationConfigurationFilter
- Object
- ObjectIdentifier
- ObjectLockConfiguration
- ObjectLockLegalHold
- ObjectLockRetention
- ObjectLockRule
- ObjectPart
- ObjectVersion
- OutputLocation
- OutputSerialization
- Owner
- OwnershipControls
- OwnershipControlsRule
- ParquetInput
- Part
- PartitionedPrefix
- PolicyStatus
- Progress
- ProgressEvent
- PublicAccessBlockConfiguration
- QueueConfiguration
- QueueConfigurationDeprecated
- RecordsEvent

- Redirect
- RedirectAllRequestsTo
- ReplicaModifications
- ReplicationConfiguration
- ReplicationRule
- ReplicationRuleAndOperator
- ReplicationRuleFilter
- ReplicationTime
- ReplicationTimeValue
- RequestPaymentConfiguration
- RequestProgress
- RestoreRequest
- RestoreStatus
- RoutingRule
- Rule
- S3KeyFilter
- S3Location
- ScanRange
- SelectObjectContentEventStream
- SelectParameters
- ServerSideEncryptionByDefault
- ServerSideEncryptionConfiguration
- ServerSideEncryptionRule
- SessionCredentials
- SimplePrefix
- SourceSelectionCriteria
- SSEKMS
- SseKmsEncryptedObjects
- SSES3
- Stats

- StatsEvent
- StorageClassAnalysis
- StorageClassAnalysisDataExport
- Tag
- Tagging
- TargetGrant
- TargetObjectKeyFormat
- Tiering
- TopicConfiguration
- TopicConfigurationDeprecated
- Transition
- VersioningConfiguration
- WebsiteConfiguration

The following data types are supported by Amazon S3 Control:

- AbortIncompleteMultipartUpload
- AccessControlTranslation
- AccessGrantsLocationConfiguration
- AccessPoint
- AccountLevel
- ActivityMetrics
- AdvancedCostOptimizationMetrics
- AdvancedDataProtectionMetrics
- AsyncErrorDetails
- AsyncOperation
- AsyncRequestParameters
- AsyncResponseDetails
- AwsLambdaTransformation
- BucketLevel
- CloudWatchMetrics

- CreateBucketConfiguration
- CreateMultiRegionAccessPointInput
- Credentials
- DeleteMarkerReplication
- DeleteMultiRegionAccessPointInput
- Destination
- DetailedStatusCodesMetrics
- EncryptionConfiguration
- EstablishedMultiRegionAccessPointPolicy
- Exclude
- ExistingObjectReplication
- GeneratedManifestEncryption
- Grantee
- Include
- JobDescriptor
- JobFailure
- JobListDescriptor
- JobManifest
- JobManifestGenerator
- JobManifestGeneratorFilter
- JobManifestLocation
- JobManifestSpec
- JobOperation
- JobProgressSummary
- JobReport
- JobTimers
- KeyNameConstraint
- LambdaInvokeOperation
- LifecycleConfiguration
- LifecycleExpiration

- LifecycleRule
- LifecycleRuleAndOperator
- LifecycleRuleFilter
- ListAccessGrantEntry
- ListAccessGrantsInstanceEntry
- ListAccessGrantsLocationsEntry
- ListStorageLensConfigurationEntry
- ListStorageLensGroupEntry
- MatchObjectAge
- MatchObjectSize
- Metrics
- MultiRegionAccessPointPolicyDocument
- MultiRegionAccessPointRegionalResponse
- MultiRegionAccessPointReport
- MultiRegionAccessPointRoute
- MultiRegionAccessPointsAsyncResponse
- NoncurrentVersionExpiration
- NoncurrentVersionTransition
- ObjectLambdaAccessPoint
- ObjectLambdaAccessPointAlias
- ObjectLambdaConfiguration
- ObjectLambdaContentTransformation
- ObjectLambdaTransformationConfiguration
- PolicyStatus
- PrefixLevel
- PrefixLevelStorageMetrics
- ProposedMultiRegionAccessPointPolicy
- PublicAccessBlockConfiguration
- PutMultiRegionAccessPointPolicyInput
- Region

- RegionalBucket
- RegionReport
- ReplicaModifications
- ReplicationConfiguration
- ReplicationRule
- ReplicationRuleAndOperator
- ReplicationRuleFilter
- ReplicationTime
- ReplicationTimeValue
- S3AccessControlList
- S3AccessControlPolicy
- S3BucketDestination
- S3CopyObjectOperation
- S3DeleteObjectTaggingOperation
- S3GeneratedManifestDescriptor
- S3Grant
- S3Grantee
- S3InitiateRestoreObjectOperation
- S3JobManifestGenerator
- S3ManifestOutputLocation
- S3ObjectLockLegalHold
- S3ObjectMetadata
- S3ObjectOwner
- S3ReplicateObjectOperation
- S3Retention
- S3SetObjectAclOperation
- S3SetObjectLegalHoldOperation
- S3SetObjectRetentionOperation
- S3SetObjectTaggingOperation
- S3Tag

- SelectionCriteria
- SourceSelectionCriteria
- SSEKMS
- SseKmsEncryptedObjects
- SSEKMSEncryption
- SSES3
- SSES3Encryption
- StorageLensAwsOrg
- StorageLensConfiguration
- StorageLensDataExport
- StorageLensDataExportEncryption
- StorageLensGroup
- StorageLensGroupAndOperator
- StorageLensGroupFilter
- StorageLensGroupLevel
- StorageLensGroupLevelSelectionCriteria
- StorageLensGroupOrOperator
- StorageLensTag
- Tag
- Tagging
- Transition
- VersioningConfiguration
- VpcConfiguration

The following data types are supported by Amazon S3 on Outposts:

- Endpoint
- FailedReason
- NetworkInterface
- Outpost

Amazon S3

The following data types are supported by Amazon S3:

- AbortIncompleteMultipartUpload
- AccelerateConfiguration
- AccessControlPolicy
- AccessControlTranslation
- AnalyticsAndOperator
- AnalyticsConfiguration
- AnalyticsExportDestination
- AnalyticsFilter
- AnalyticsS3BucketDestination
- Bucket
- BucketInfo
- BucketLifecycleConfiguration
- BucketLoggingStatus
- Checksum
- CloudFunctionConfiguration
- CommonPrefix
- CompletedMultipartUpload
- CompletedPart
- Condition
- ContinuationEvent
- CopyObjectResult
- CopyPartResult
- CORSConfiguration
- CORSRule
- CreateBucketConfiguration
- CSVInput
- CSVOutput

- DefaultRetention
- Delete
- DeletedObject
- DeleteMarkerEntry
- DeleteMarkerReplication
- Destination
- Encryption
- EncryptionConfiguration
- EndEvent
- Error
- ErrorDocument
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- GlacierJobParameters
- Grant
- Grantee
- IndexDocument
- Initiator
- InputSerialization
- IntelligentTieringAndOperator
- IntelligentTieringConfiguration
- IntelligentTieringFilter
- InventoryConfiguration
- InventoryDestination
- InventoryEncryption
- InventoryFilter
- InventoryS3BucketDestination
- InventorySchedule

- JSONInput
- JSONOutput
- LambdaFunctionConfiguration
- LifecycleConfiguration
- LifecycleExpiration
- LifecycleRule
- LifecycleRuleAndOperator
- LifecycleRuleFilter
- LocationInfo
- LoggingEnabled
- MetadataEntry
- Metrics
- MetricsAndOperator
- MetricsConfiguration
- MetricsFilter
- MultipartUpload
- NoncurrentVersionExpiration
- NoncurrentVersionTransition
- NotificationConfiguration
- NotificationConfigurationDeprecated
- NotificationConfigurationFilter
- Object
- ObjectIdentifier
- ObjectLockConfiguration
- ObjectLockLegalHold
- ObjectLockRetention
- ObjectLockRule
- ObjectPart
- ObjectVersion
- OutputLocation

- OutputSerialization
- Owner
- OwnershipControls
- OwnershipControlsRule
- ParquetInput
- Part
- PartitionedPrefix
- PolicyStatus
- Progress
- ProgressEvent
- PublicAccessBlockConfiguration
- QueueConfiguration
- QueueConfigurationDeprecated
- RecordsEvent
- Redirect
- RedirectAllRequestsTo
- ReplicaModifications
- ReplicationConfiguration
- ReplicationRule
- ReplicationRuleAndOperator
- ReplicationRuleFilter
- ReplicationTime
- ReplicationTimeValue
- RequestPaymentConfiguration
- RequestProgress
- RestoreRequest
- RestoreStatus
- RoutingRule
- Rule
- S3KeyFilter

- S3Location
- ScanRange
- SelectObjectContentEventStream
- SelectParameters
- ServerSideEncryptionByDefault
- ServerSideEncryptionConfiguration
- ServerSideEncryptionRule
- SessionCredentials
- SimplePrefix
- SourceSelectionCriteria
- SSEKMS
- SseKmsEncryptedObjects
- SSES3
- Stats
- StatsEvent
- StorageClassAnalysis
- StorageClassAnalysisDataExport
- Tag
- Tagging
- TargetGrant
- TargetObjectKeyFormat
- Tiering
- TopicConfiguration
- TopicConfigurationDeprecated
- Transition
- VersioningConfiguration
- WebsiteConfiguration

AbortIncompleteMultipartUpload

Service: Amazon S3

Specifies the days since the initiation of an incomplete multipart upload that Amazon S3 will wait before permanently removing all parts of the upload. For more information, see Aborting Incomplete Multipart Uploads Using a Bucket Lifecycle Configuration in the *Amazon S3 User Guide*.

Contents

DaysAfterInitiation

Specifies the number of days after which Amazon S3 aborts an incomplete multipart upload.

Type: Integer

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AccelerateConfiguration

Service: Amazon S3

Configures the transfer acceleration state for an Amazon S3 bucket. For more information, see Amazon S3 Transfer Acceleration in the *Amazon S3 User Guide*.

Contents

Status

Specifies the transfer acceleration status of the bucket.

Type: String

Valid Values: `Enabled | Suspended`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AccessControlPolicy

Service: Amazon S3

Contains the elements that set the ACL permissions for an object per grantee.

Contents

Grants

A list of grants.

Type: Array of Grant data types

Required: No

Owner

Container for the bucket owner's display name and ID.

Type: Owner data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AccessControlTranslation

Service: Amazon S3

A container for information about access control for replicas.

Contents

Owner

Specifies the replica ownership. For default and valid values, see PUT bucket replication in the *Amazon S3 API Reference*.

Type: String

Valid Values: `Destination`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AnalyticsAndOperator

Service: Amazon S3

A conjunction (logical AND) of predicates, which is used in evaluating a metrics filter. The operator must have at least two predicates in any combination, and an object must match all of the predicates for the filter to apply.

Contents

Prefix

The prefix to use when evaluating an AND predicate: The prefix that an object must have to be included in the metrics results.

Type: String

Required: No

Tags

The list of tags to use when evaluating an AND predicate.

Type: Array of Tag data types

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AnalyticsConfiguration

Service: Amazon S3

Specifies the configuration and any analyses for the analytics filter of an Amazon S3 bucket.

Contents

Id

The ID that identifies the analytics configuration.

Type: String

Required: Yes

StorageClassAnalysis

Contains data related to access patterns to be collected and made available to analyze the tradeoffs between different storage classes.

Type: StorageClassAnalysis data type

Required: Yes

Filter

The filter used to describe a set of objects for analyses. A filter must have exactly one prefix, one tag, or one conjunction (AnalyticsAndOperator). If no filter is provided, all objects will be considered in any analysis.

Type: AnalyticsFilter data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AnalyticsExportDestination

Service: Amazon S3

Where to publish the analytics results.

Contents

S3BucketDestination

A destination signifying output to an S3 bucket.

Type: AnalyticsS3BucketDestination data type

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AnalyticsFilter

Service: Amazon S3

The filter used to describe a set of objects for analyses. A filter must have exactly one prefix, one tag, or one conjunction (AnalyticsAndOperator). If no filter is provided, all objects will be considered in any analysis.

Contents

And

A conjunction (logical AND) of predicates, which is used in evaluating an analytics filter. The operator must have at least two predicates.

Type: AnalyticsAndOperator data type

Required: No

Prefix

The prefix to use when evaluating an analytics filter.

Type: String

Required: No

Tag

The tag to use when evaluating an analytics filter.

Type: Tag data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AnalyticsS3BucketDestination

Service: Amazon S3

Contains information about where to publish the analytics results.

Contents

Bucket

The Amazon Resource Name (ARN) of the bucket to which data is exported.

Type: String

Required: Yes

Format

Specifies the file format used when exporting data to Amazon S3.

Type: String

Valid Values: CSV

Required: Yes

BucketAccountId

The account ID that owns the destination S3 bucket. If no account ID is provided, the owner is not validated before exporting data.

> **Note**
>
> Although this value is optional, we strongly recommend that you set it to help prevent problems if the destination bucket ownership changes.

Type: String

Required: No

Prefix

The prefix to use when exporting data. The prefix is prepended to all results.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Bucket

Service: Amazon S3

In terms of implementation, a Bucket is a resource.

Contents

CreationDate

Date the bucket was created. This date can change when making changes to your bucket, such as editing its bucket policy.

Type: Timestamp

Required: No

Name

The name of the bucket.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

BucketInfo

Service: Amazon S3

Specifies the information about the bucket that will be created. For more information about directory buckets, see Directory buckets in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is only supported by directory buckets.

Contents

DataRedundancy

The number of Availability Zone that's used for redundancy for the bucket.

Type: String

Valid Values: `SingleAvailabilityZone`

Required: No

Type

The type of bucket.

Type: String

Valid Values: `Directory`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

BucketLifecycleConfiguration

Service: Amazon S3

Specifies the lifecycle configuration for objects in an Amazon S3 bucket. For more information, see Object Lifecycle Management in the *Amazon S3 User Guide*.

Contents

Rules

A lifecycle rule for individual objects in an Amazon S3 bucket.

Type: Array of LifecycleRule data types

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

BucketLoggingStatus

Service: Amazon S3

Container for logging status information.

Contents

LoggingEnabled

Describes where logs are stored and the prefix that Amazon S3 assigns to all log object keys for a bucket. For more information, see PUT Bucket logging in the *Amazon S3 API Reference*.

Type: LoggingEnabled data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Checksum

Service: Amazon S3

Contains all the possible checksum or digest values for an object.

Contents

ChecksumCRC32

The base64-encoded, 32-bit CRC32 checksum of the object. This will only be present if it was uploaded with the object. When you use an API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

Required: No

ChecksumCRC32C

The base64-encoded, 32-bit CRC32C checksum of the object. This will only be present if it was uploaded with the object. When you use an API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

Required: No

ChecksumSHA1

The base64-encoded, 160-bit SHA-1 digest of the object. This will only be present if it was uploaded with the object. When you use the API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

Required: No

ChecksumSHA256

The base64-encoded, 256-bit SHA-256 digest of the object. This will only be present if it was uploaded with the object. When you use an API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

CloudFunctionConfiguration

Service: Amazon S3

Container for specifying the AWS Lambda notification configuration.

Contents

CloudFunction

Lambda cloud function ARN that Amazon S3 can invoke when it detects events of the specified type.

Type: String

Required: No

Event

This member has been deprecated.

The bucket event for which to send notifications.

Type: String

Valid Values: `s3:ReducedRedundancyLostObject | s3:ObjectCreated:* | s3:ObjectCreated:Put | s3:ObjectCreated:Post | s3:ObjectCreated:Copy | s3:ObjectCreated:CompleteMultipartUpload | s3:ObjectRemoved:* | s3:ObjectRemoved:Delete | s3:ObjectRemoved:DeleteMarkerCreated | s3:ObjectRestore:* | s3:ObjectRestore:Post | s3:ObjectRestore:Completed | s3:Replication:* | s3:Replication:OperationFailedReplication | s3:Replication:OperationNotTracked | s3:Replication:OperationMissedThreshold | s3:Replication:OperationReplicatedAfterThreshold | s3:ObjectRestore:Delete | s3:LifecycleTransition | s3:IntelligentTiering | s3:ObjectAcl:Put | s3:LifecycleExpiration:* | s3:LifecycleExpiration:Delete | s3:LifecycleExpiration:DeleteMarkerCreated | s3:ObjectTagging:* | s3:ObjectTagging:Put | s3:ObjectTagging:Delete`

Required: No

Events

Bucket events for which to send notifications.

Type: Array of strings

Valid Values: `s3:ReducedRedundancyLostObject | s3:ObjectCreated:* | s3:ObjectCreated:Put | s3:ObjectCreated:Post | s3:ObjectCreated:Copy | s3:ObjectCreated:CompleteMultipartUpload | s3:ObjectRemoved:* | s3:ObjectRemoved:Delete | s3:ObjectRemoved:DeleteMarkerCreated | s3:ObjectRestore:* | s3:ObjectRestore:Post | s3:ObjectRestore:Completed | s3:Replication:* | s3:Replication:OperationFailedReplication | s3:Replication:OperationNotTracked | s3:Replication:OperationMissedThreshold | s3:Replication:OperationReplicatedAfterThreshold | s3:ObjectRestore:Delete | s3:LifecycleTransition | s3:IntelligentTiering | s3:ObjectAcl:Put | s3:LifecycleExpiration:* | s3:LifecycleExpiration:Delete | s3:LifecycleExpiration:DeleteMarkerCreated | s3:ObjectTagging:* | s3:ObjectTagging:Put | s3:ObjectTagging:Delete`

Required: No

Id

An optional unique identifier for configurations in a notification configuration. If you don't provide one, Amazon S3 will assign an ID.

Type: String

Required: No

InvocationRole

The role supporting the invocation of the Lambda function

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

CommonPrefix

Service: Amazon S3

Container for all (if there are any) keys between Prefix and the next occurrence of the string specified by a delimiter. CommonPrefixes lists keys that act like subdirectories in the directory specified by Prefix. For example, if the prefix is notes/ and the delimiter is a slash (/) as in notes/summer/july, the common prefix is notes/summer/.

Contents

Prefix

Container for the specified common prefix.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

CompletedMultipartUpload

Service: Amazon S3

The container for the completed multipart upload details.

Contents

Parts

Array of CompletedPart data types.

If you do not supply a valid `Part` with your request, the service sends back an HTTP 400 response.

Type: Array of CompletedPart data types

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

CompletedPart

Service: Amazon S3

Details of the parts that were uploaded.

Contents

ChecksumCRC32

The base64-encoded, 32-bit CRC32 checksum of the object. This will only be present if it was uploaded with the object. When you use an API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

Required: No

ChecksumCRC32C

The base64-encoded, 32-bit CRC32C checksum of the object. This will only be present if it was uploaded with the object. When you use an API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

Required: No

ChecksumSHA1

The base64-encoded, 160-bit SHA-1 digest of the object. This will only be present if it was uploaded with the object. When you use the API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

Required: No

ChecksumSHA256

The base64-encoded, 256-bit SHA-256 digest of the object. This will only be present if it was uploaded with the object. When you use an API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

Required: No

ETag

Entity tag returned when the part was uploaded.

Type: String

Required: No

PartNumber

Part number that identifies the part. This is a positive integer between 1 and 10,000.

> **Note**
>
> - **General purpose buckets** - In `CompleteMultipartUpload`, when a additional checksum (including `x-amz-checksum-crc32`, `x-amz-checksum-crc32c`, `x-amz-checksum-sha1`, or `x-amz-checksum-sha256`) is applied to each part, the `PartNumber` must start at 1 and the part numbers must be consecutive. Otherwise, Amazon S3 generates an HTTP `400 Bad Request` status code and an `InvalidPartOrder` error code.
> - **Directory buckets** - In `CompleteMultipartUpload`, the `PartNumber` must start at 1 and the part numbers must be consecutive.

Type: Integer

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Condition

Service: Amazon S3

A container for describing a condition that must be met for the specified redirect to apply. For example, 1. If request is for pages in the `/docs` folder, redirect to the `/documents` folder. 2. If request results in HTTP error 4xx, redirect request to another host where you might process the error.

Contents

HttpErrorCodeReturnedEquals

The HTTP error code when the redirect is applied. In the event of an error, if the error code equals this value, then the specified redirect is applied. Required when parent element `Condition` is specified and sibling `KeyPrefixEquals` is not specified. If both are specified, then both must be true for the redirect to be applied.

Type: String

Required: No

KeyPrefixEquals

The object key name prefix when the redirect is applied. For example, to redirect requests for `ExamplePage.html`, the key prefix will be `ExamplePage.html`. To redirect request for all pages with the prefix `docs/`, the key prefix will be `/docs`, which identifies all objects in the `docs/` folder. Required when the parent element `Condition` is specified and sibling `HttpErrorCodeReturnedEquals` is not specified. If both conditions are specified, both must be true for the redirect to be applied.

> **Important**
>
> Replacement must be made for object keys containing special characters (such as carriage returns) when using XML requests. For more information, see XML related object key constraints.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ContinuationEvent

Service: Amazon S3

Contents

The members of this exception structure are context-dependent.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

CopyObjectResult

Service: Amazon S3

Container for all response elements.

Contents

ChecksumCRC32

The base64-encoded, 32-bit CRC32 checksum of the object. This will only be present if it was uploaded with the object. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

Required: No

ChecksumCRC32C

The base64-encoded, 32-bit CRC32C checksum of the object. This will only be present if it was uploaded with the object. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

Required: No

ChecksumSHA1

The base64-encoded, 160-bit SHA-1 digest of the object. This will only be present if it was uploaded with the object. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

Required: No

ChecksumSHA256

The base64-encoded, 256-bit SHA-256 digest of the object. This will only be present if it was uploaded with the object. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

Required: No

ETag

Returns the ETag of the new object. The ETag reflects only changes to the contents of an object, not its metadata.

Type: String

Required: No

LastModified

Creation date of the object.

Type: Timestamp

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

CopyPartResult

Service: Amazon S3

Container for all response elements.

Contents

ChecksumCRC32

The base64-encoded, 32-bit CRC32 checksum of the object. This will only be present if it was uploaded with the object. When you use an API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

Required: No

ChecksumCRC32C

The base64-encoded, 32-bit CRC32C checksum of the object. This will only be present if it was uploaded with the object. When you use an API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

Required: No

ChecksumSHA1

The base64-encoded, 160-bit SHA-1 digest of the object. This will only be present if it was uploaded with the object. When you use the API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

Required: No

ChecksumSHA256

The base64-encoded, 256-bit SHA-256 digest of the object. This will only be present if it was uploaded with the object. When you use an API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

Required: No

ETag

Entity tag of the object.

Type: String

Required: No

LastModified

Date and time at which the object was uploaded.

Type: Timestamp

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

CORSConfiguration

Service: Amazon S3

Describes the cross-origin access configuration for objects in an Amazon S3 bucket. For more information, see Enabling Cross-Origin Resource Sharing in the *Amazon S3 User Guide*.

Contents

CORSRules

A set of origins and methods (cross-origin access that you want to allow). You can add up to 100 rules to the configuration.

Type: Array of CORSRule data types

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

CORSRule

Service: Amazon S3

Specifies a cross-origin access rule for an Amazon S3 bucket.

Contents

AllowedMethods

An HTTP method that you allow the origin to execute. Valid values are `GET`, `PUT`, `HEAD`, `POST`, and `DELETE`.

Type: Array of strings

Required: Yes

AllowedOrigins

One or more origins you want customers to be able to access the bucket from.

Type: Array of strings

Required: Yes

AllowedHeaders

Headers that are specified in the `Access-Control-Request-Headers` header. These headers are allowed in a preflight OPTIONS request. In response to any preflight OPTIONS request, Amazon S3 returns any requested headers that are allowed.

Type: Array of strings

Required: No

ExposeHeaders

One or more headers in the response that you want customers to be able to access from their applications (for example, from a JavaScript `XMLHttpRequest` object).

Type: Array of strings

Required: No

ID

Unique identifier for the rule. The value cannot be longer than 255 characters.

Type: String

Required: No

MaxAgeSeconds

The time in seconds that your browser is to cache the preflight response for the specified resource.

Type: Integer

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

CreateBucketConfiguration

Service: Amazon S3

The configuration information for the bucket.

Contents

Bucket

Specifies the information about the bucket that will be created.

> **Note**
>
> This functionality is only supported by directory buckets.

Type: BucketInfo data type

Required: No

Location

Specifies the location where the bucket will be created.

For directory buckets, the location type is Availability Zone.

> **Note**
>
> This functionality is only supported by directory buckets.

Type: LocationInfo data type

Required: No

LocationConstraint

Specifies the Region where the bucket will be created. You might choose a Region to optimize latency, minimize costs, or address regulatory requirements. For example, if you reside in Europe, you will probably find it advantageous to create buckets in the Europe (Ireland) Region. For more information, see Accessing a bucket in the *Amazon S3 User Guide*.

If you don't specify a Region, the bucket is created in the US East (N. Virginia) Region (us-east-1) by default.

> **Note**
>
> This functionality is not supported for directory buckets.

Type: String

Valid Values: `af-south-1 | ap-east-1 | ap-northeast-1 | ap-northeast-2 | ap-northeast-3 | ap-south-1 | ap-south-2 | ap-southeast-1 | ap-southeast-2 | ap-southeast-3 | ca-central-1 | cn-north-1 | cn-northwest-1 | EU | eu-central-1 | eu-north-1 | eu-south-1 | eu-south-2 | eu-west-1 | eu-west-2 | eu-west-3 | me-south-1 | sa-east-1 | us-east-2 | us-gov-east-1 | us-gov-west-1 | us-west-1 | us-west-2`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

CSVInput

Service: Amazon S3

Describes how an uncompressed comma-separated values (CSV)-formatted input object is formatted.

Contents

AllowQuotedRecordDelimiter

Specifies that CSV field values may contain quoted record delimiters and such records should be allowed. Default value is FALSE. Setting this value to TRUE may lower performance.

Type: Boolean

Required: No

Comments

A single character used to indicate that a row should be ignored when the character is present at the start of that row. You can specify any character to indicate a comment line. The default character is #.

Default: #

Type: String

Required: No

FieldDelimiter

A single character used to separate individual fields in a record. You can specify an arbitrary delimiter.

Type: String

Required: No

FileHeaderInfo

Describes the first line of input. Valid values are:

- `NONE`: First line is not a header.

- IGNORE: First line is a header, but you can't use the header values to indicate the column in an expression. You can use column position (such as _1, _2, …) to indicate the column (SELECT s._1 FROM OBJECT s).
- Use: First line is a header, and you can use the header value to identify a column in an expression (SELECT "name" FROM OBJECT).

Type: String

Valid Values: USE | IGNORE | NONE

Required: No

QuoteCharacter

A single character used for escaping when the field delimiter is part of the value. For example, if the value is a, b, Amazon S3 wraps this field value in quotation marks, as follows: " a , b ".

Type: String

Default: "

Ancestors: CSV

Type: String

Required: No

QuoteEscapeCharacter

A single character used for escaping the quotation mark character inside an already escaped value. For example, the value """ a , b """ is parsed as " a , b ".

Type: String

Required: No

RecordDelimiter

A single character used to separate individual records in the input. Instead of the default value, you can specify an arbitrary delimiter.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

CSVOutput

Service: Amazon S3

Describes how uncompressed comma-separated values (CSV)-formatted results are formatted.

Contents

FieldDelimiter

The value used to separate individual fields in a record. You can specify an arbitrary delimiter.

Type: String

Required: No

QuoteCharacter

A single character used for escaping when the field delimiter is part of the value. For example, if the value is `a, b`, Amazon S3 wraps this field value in quotation marks, as follows: `" a , b "`.

Type: String

Required: No

QuoteEscapeCharacter

The single character used for escaping the quote character inside an already escaped value.

Type: String

Required: No

QuoteFields

Indicates whether to use quotation marks around output fields.

- `ALWAYS`: Always use quotation marks for output fields.
- `ASNEEDED`: Use quotation marks for output fields when needed.

Type: String

Valid Values: `ALWAYS | ASNEEDED`

Required: No

RecordDelimiter

A single character used to separate individual records in the output. Instead of the default value, you can specify an arbitrary delimiter.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

DefaultRetention

Service: Amazon S3

The container element for specifying the default Object Lock retention settings for new objects placed in the specified bucket.

> **Note**
>
> - The `DefaultRetention` settings require both a mode and a period.
> - The `DefaultRetention` period can be either `Days` or `Years` but you must select one. You cannot specify `Days` and `Years` at the same time.

Contents

Days

The number of days that you want to specify for the default retention period. Must be used with `Mode`.

Type: Integer

Required: No

Mode

The default Object Lock retention mode you want to apply to new objects placed in the specified bucket. Must be used with either `Days` or `Years`.

Type: String

Valid Values: `GOVERNANCE | COMPLIANCE`

Required: No

Years

The number of years that you want to specify for the default retention period. Must be used with `Mode`.

Type: Integer

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Delete

Service: Amazon S3

Container for the objects to delete.

Contents

Objects

The object to delete.

> **Note**
>
> **Directory buckets** - For directory buckets, an object that's composed entirely of whitespace characters is not supported by the `DeleteObjects` API operation. The request will receive a `400 Bad Request` error and none of the objects in the request will be deleted.

Type: Array of ObjectIdentifier data types

Required: Yes

Quiet

Element to enable quiet mode for the request. When you add this element, you must set its value to `true`.

Type: Boolean

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

DeletedObject

Service: Amazon S3

Information about the deleted object.

Contents

DeleteMarker

Indicates whether the specified object version that was permanently deleted was (true) or was not (false) a delete marker before deletion. In a simple DELETE, this header indicates whether (true) or not (false) the current version of the object is a delete marker.

> **Note**
>
> This functionality is not supported for directory buckets.

Type: Boolean

Required: No

DeleteMarkerVersionId

The version ID of the delete marker created as a result of the DELETE operation. If you delete a specific object version, the value returned by this header is the version ID of the object version deleted.

> **Note**
>
> This functionality is not supported for directory buckets.

Type: String

Required: No

Key

The name of the deleted object.

Type: String

Length Constraints: Minimum length of 1.

Required: No

VersionId

The version ID of the deleted object.

> **Note**
>
> This functionality is not supported for directory buckets.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

DeleteMarkerEntry

Service: Amazon S3

Information about the delete marker.

Contents

IsLatest

Specifies whether the object is (true) or is not (false) the latest version of an object.

Type: Boolean

Required: No

Key

The object key.

Type: String

Length Constraints: Minimum length of 1.

Required: No

LastModified

Date and time when the object was last modified.

Type: Timestamp

Required: No

Owner

The account that created the delete marker.>

Type: Owner data type

Required: No

VersionId

Version ID of an object.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

DeleteMarkerReplication

Service: Amazon S3

Specifies whether Amazon S3 replicates delete markers. If you specify a `Filter` in your replication configuration, you must also include a `DeleteMarkerReplication` element. If your `Filter` includes a `Tag` element, the `DeleteMarkerReplication` `Status` must be set to Disabled, because Amazon S3 does not support replicating delete markers for tag-based rules. For an example configuration, see Basic Rule Configuration.

For more information about delete marker replication, see Basic Rule Configuration.

> **Note**
>
> If you are using an earlier version of the replication configuration, Amazon S3 handles replication of delete markers differently. For more information, see Backward Compatibility.

Contents

Status

Indicates whether to replicate delete markers.

> **Note**
>
> Indicates whether to replicate delete markers.

Type: String

Valid Values: `Enabled | Disabled`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Destination

Service: Amazon S3

Specifies information about where to publish analysis or configuration results for an Amazon S3 bucket and S3 Replication Time Control (S3 RTC).

Contents

Bucket

The Amazon Resource Name (ARN) of the bucket where you want Amazon S3 to store the results.

Type: String

Required: Yes

AccessControlTranslation

Specify this only in a cross-account scenario (where source and destination bucket owners are not the same), and you want to change replica ownership to the AWS account that owns the destination bucket. If this is not specified in the replication configuration, the replicas are owned by same AWS account that owns the source object.

Type: AccessControlTranslation data type

Required: No

Account

Destination bucket owner account ID. In a cross-account scenario, if you direct Amazon S3 to change replica ownership to the AWS account that owns the destination bucket by specifying the `AccessControlTranslation` property, this is the account ID of the destination bucket owner. For more information, see Replication Additional Configuration: Changing the Replica Owner in the *Amazon S3 User Guide*.

Type: String

Required: No

EncryptionConfiguration

A container that provides information about encryption. If `SourceSelectionCriteria` is specified, you must specify this element.

Type: EncryptionConfiguration data type

Required: No

Metrics

A container specifying replication metrics-related settings enabling replication metrics and events.

Type: Metrics data type

Required: No

ReplicationTime

A container specifying S3 Replication Time Control (S3 RTC), including whether S3 RTC is enabled and the time when all objects and operations on objects must be replicated. Must be specified together with a `Metrics` block.

Type: ReplicationTime data type

Required: No

StorageClass

The storage class to use when replicating objects, such as S3 Standard or reduced redundancy. By default, Amazon S3 uses the storage class of the source object to create the object replica.

For valid values, see the `StorageClass` element of the PUT Bucket replication action in the *Amazon S3 API Reference*.

Type: String

Valid Values: `STANDARD | REDUCED_REDUNDANCY | STANDARD_IA | ONEZONE_IA | INTELLIGENT_TIERING | GLACIER | DEEP_ARCHIVE | OUTPOSTS | GLACIER_IR | SNOW | EXPRESS_ONEZONE`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Encryption

Service: Amazon S3

Contains the type of server-side encryption used.

Contents

EncryptionType

The server-side encryption algorithm used when storing job results in Amazon S3 (for example, AES256, `aws:kms`).

Type: String

Valid Values: `AES256 | aws:kms | aws:kms:dsse`

Required: Yes

KMSContext

If the encryption type is `aws:kms`, this optional value can be used to specify the encryption context for the restore results.

Type: String

Required: No

KMSKeyId

If the encryption type is `aws:kms`, this optional value specifies the ID of the symmetric encryption customer managed key to use for encryption of job results. Amazon S3 only supports symmetric encryption KMS keys. For more information, see Asymmetric keys in AWS KMS in the *AWS Key Management Service Developer Guide*.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

EncryptionConfiguration

Service: Amazon S3

Specifies encryption-related information for an Amazon S3 bucket that is a destination for replicated objects.

Contents

ReplicaKmsKeyID

Specifies the ID (Key ARN or Alias ARN) of the customer managed AWS KMS key stored in AWS Key Management Service (KMS) for the destination bucket. Amazon S3 uses this key to encrypt replica objects. Amazon S3 only supports symmetric encryption KMS keys. For more information, see Asymmetric keys in AWS KMS in the *AWS Key Management Service Developer Guide*.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

EndEvent

Service: Amazon S3

A message that indicates the request is complete and no more messages will be sent. You should not assume that the request is complete until the client receives an `EndEvent`.

Contents

The members of this exception structure are context-dependent.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Error

Service: Amazon S3

Container for all error elements.

Contents

Code

The error code is a string that uniquely identifies an error condition. It is meant to be read and understood by programs that detect and handle errors by type. The following is a list of Amazon S3 error codes. For more information, see Error responses.

- • *Code:* AccessDenied
  - *Description:* Access Denied
  - *HTTP Status Code:* 403 Forbidden
  - *SOAP Fault Code Prefix:* Client
- • *Code:* AccountProblem
  - *Description:* There is a problem with your AWS account that prevents the action from completing successfully. Contact AWS Support for further assistance.
  - *HTTP Status Code:* 403 Forbidden
  - *SOAP Fault Code Prefix:* Client
- • *Code:* AllAccessDisabled
  - *Description:* All access to this Amazon S3 resource has been disabled. Contact AWS Support for further assistance.
  - *HTTP Status Code:* 403 Forbidden
  - *SOAP Fault Code Prefix:* Client
- • *Code:* AmbiguousGrantByEmailAddress
  - *Description:* The email address you provided is associated with more than one account.
  - *HTTP Status Code:* 400 Bad Request
  - *SOAP Fault Code Prefix:* Client
- • *Code:* AuthorizationHeaderMalformed
  - *Description:* The authorization header you provided is invalid.
  - *HTTP Status Code:* 400 Bad Request
  - *HTTP Status Code:* N/A

- • *Code:* BadDigest
  - *Description:* The Content-MD5 you specified did not match what we received.
  - *HTTP Status Code:* 400 Bad Request
  - *SOAP Fault Code Prefix:* Client
- • *Code:* BucketAlreadyExists
  - *Description:* The requested bucket name is not available. The bucket namespace is shared by all users of the system. Please select a different name and try again.
  - *HTTP Status Code:* 409 Conflict
  - *SOAP Fault Code Prefix:* Client
- • *Code:* BucketAlreadyOwnedByYou
  - *Description:* The bucket you tried to create already exists, and you own it. Amazon S3 returns this error in all AWS Regions except in the North Virginia Region. For legacy compatibility, if you re-create an existing bucket that you already own in the North Virginia Region, Amazon S3 returns 200 OK and resets the bucket access control lists (ACLs).
  - *Code:* 409 Conflict (in all Regions except the North Virginia Region)
  - *SOAP Fault Code Prefix:* Client
- • *Code:* BucketNotEmpty
  - *Description:* The bucket you tried to delete is not empty.
  - *HTTP Status Code:* 409 Conflict
  - *SOAP Fault Code Prefix:* Client
- • *Code:* CredentialsNotSupported
  - *Description:* This request does not support credentials.
  - *HTTP Status Code:* 400 Bad Request
  - *SOAP Fault Code Prefix:* Client
- • *Code:* CrossLocationLoggingProhibited
  - *Description:* Cross-location logging not allowed. Buckets in one geographic location cannot log information to a bucket in another location.
  - *HTTP Status Code:* 403 Forbidden
  - *SOAP Fault Code Prefix:* Client
- • *Code:* EntityTooSmall
  - *Description:* Your proposed upload is smaller than the minimum allowed object size.

- *HTTP Status Code:* 400 Bad Request
- *SOAP Fault Code Prefix:* Client

- • *Code:* EntityTooLarge
  - *Description:* Your proposed upload exceeds the maximum allowed object size.
  - *HTTP Status Code:* 400 Bad Request
  - *SOAP Fault Code Prefix:* Client
- • *Code:* ExpiredToken
  - *Description:* The provided token has expired.
  - *HTTP Status Code:* 400 Bad Request
  - *SOAP Fault Code Prefix:* Client
- • *Code:* IllegalVersioningConfigurationException
  - *Description:* Indicates that the versioning configuration specified in the request is invalid.
  - *HTTP Status Code:* 400 Bad Request
  - *SOAP Fault Code Prefix:* Client
- • *Code:* IncompleteBody
  - *Description:* You did not provide the number of bytes specified by the Content-Length HTTP header
  - *HTTP Status Code:* 400 Bad Request
  - *SOAP Fault Code Prefix:* Client
- • *Code:* IncorrectNumberOfFilesInPostRequest
  - *Description:* POST requires exactly one file upload per request.
  - *HTTP Status Code:* 400 Bad Request
  - *SOAP Fault Code Prefix:* Client
- • *Code:* InlineDataTooLarge
  - *Description:* Inline data exceeds the maximum allowed size.
  - *HTTP Status Code:* 400 Bad Request
  - *SOAP Fault Code Prefix:* Client
- • *Code:* InternalError
  - *Description:* We encountered an internal error. Please try again.
  - *HTTP Status Code:* 500 Internal Server Error

- *SOAP Fault Code Prefix:* Server
- - *Code:* InvalidAccessKeyId
  - *Description:* The AWS access key ID you provided does not exist in our records.
  - *HTTP Status Code:* 403 Forbidden
  - *SOAP Fault Code Prefix:* Client
- - *Code:* InvalidAddressingHeader
  - *Description:* You must specify the Anonymous role.
  - *HTTP Status Code:* N/A
  - *SOAP Fault Code Prefix:* Client
- - *Code:* InvalidArgument
  - *Description:* Invalid Argument
  - *HTTP Status Code:* 400 Bad Request
  - *SOAP Fault Code Prefix:* Client
- - *Code:* InvalidBucketName
  - *Description:* The specified bucket is not valid.
  - *HTTP Status Code:* 400 Bad Request
  - *SOAP Fault Code Prefix:* Client
- - *Code:* InvalidBucketState
  - *Description:* The request is not valid with the current state of the bucket.
  - *HTTP Status Code:* 409 Conflict
  - *SOAP Fault Code Prefix:* Client
- - *Code:* InvalidDigest
  - *Description:* The Content-MD5 you specified is not valid.
  - *HTTP Status Code:* 400 Bad Request
  - *SOAP Fault Code Prefix:* Client
- - *Code:* InvalidEncryptionAlgorithmError
  - *Description:* The encryption request you specified is not valid. The valid value is AES256.
  - *HTTP Status Code:* 400 Bad Request
  - *SOAP Fault Code Prefix:* Client
- - *Code:* InvalidLocationConstraint

- *Description:* The specified location constraint is not valid. For more information about Regions, see How to Select a Region for Your Buckets.
- *HTTP Status Code:* 400 Bad Request
- *SOAP Fault Code Prefix:* Client

- *Code:* InvalidObjectState
- *Description:* The action is not valid for the current state of the object.
- *HTTP Status Code:* 403 Forbidden
- *SOAP Fault Code Prefix:* Client

- *Code:* InvalidPart
- *Description:* One or more of the specified parts could not be found. The part might not have been uploaded, or the specified entity tag might not have matched the part's entity tag.
- *HTTP Status Code:* 400 Bad Request
- *SOAP Fault Code Prefix:* Client

- *Code:* InvalidPartOrder
- *Description:* The list of parts was not in ascending order. Parts list must be specified in order by part number.
- *HTTP Status Code:* 400 Bad Request
- *SOAP Fault Code Prefix:* Client

- *Code:* InvalidPayer
- *Description:* All access to this object has been disabled. Please contact AWS Support for further assistance.
- *HTTP Status Code:* 403 Forbidden
- *SOAP Fault Code Prefix:* Client

- *Code:* InvalidPolicyDocument
- *Description:* The content of the form does not meet the conditions specified in the policy document.
- *HTTP Status Code:* 400 Bad Request
- *SOAP Fault Code Prefix:* Client

- *Code:* InvalidRange
- *Description:* The requested range cannot be satisfied.

  - *HTTP Status Code:* 416 Requested Range Not Satisfiable
  - *SOAP Fault Code Prefix:* Client
- - *Code:* InvalidRequest
  - *Description:* Please use `AWS4-HMAC-SHA256`.
  - *HTTP Status Code:* 400 Bad Request
  - *Code:* N/A
- - *Code:* InvalidRequest
  - *Description:* SOAP requests must be made over an HTTPS connection.
  - *HTTP Status Code:* 400 Bad Request
  - *SOAP Fault Code Prefix:* Client
- - *Code:* InvalidRequest
  - *Description:* Amazon S3 Transfer Acceleration is not supported for buckets with non-DNS compliant names.
  - *HTTP Status Code:* 400 Bad Request
  - *Code:* N/A
- - *Code:* InvalidRequest
  - *Description:* Amazon S3 Transfer Acceleration is not supported for buckets with periods (.) in their names.
  - *HTTP Status Code:* 400 Bad Request
  - *Code:* N/A
- - *Code:* InvalidRequest
  - *Description:* Amazon S3 Transfer Accelerate endpoint only supports virtual style requests.
  - *HTTP Status Code:* 400 Bad Request
  - *Code:* N/A
- - *Code:* InvalidRequest
  - *Description:* Amazon S3 Transfer Accelerate is not configured on this bucket.
  - *HTTP Status Code:* 400 Bad Request
  - *Code:* N/A
- - *Code:* InvalidRequest
  - *Description:* Amazon S3 Transfer Accelerate is disabled on this bucket.
  - *HTTP Status Code:* 400 Bad Request

    - *Code:* N/A
- - *Code:* InvalidRequest
    - *Description:* Amazon S3 Transfer Acceleration is not supported on this bucket. Contact AWS Support for more information.
    - *HTTP Status Code:* 400 Bad Request
    - *Code:* N/A
- - *Code:* InvalidRequest
    - *Description:* Amazon S3 Transfer Acceleration cannot be enabled on this bucket. Contact AWS Support for more information.
    - *HTTP Status Code:* 400 Bad Request
    - *Code:* N/A
- - *Code:* InvalidSecurity
    - *Description:* The provided security credentials are not valid.
    - *HTTP Status Code:* 403 Forbidden
    - *SOAP Fault Code Prefix:* Client
- - *Code:* InvalidSOAPRequest
    - *Description:* The SOAP request body is invalid.
    - *HTTP Status Code:* 400 Bad Request
    - *SOAP Fault Code Prefix:* Client
- - *Code:* InvalidStorageClass
    - *Description:* The storage class you specified is not valid.
    - *HTTP Status Code:* 400 Bad Request
    - *SOAP Fault Code Prefix:* Client
- - *Code:* InvalidTargetBucketForLogging
    - *Description:* The target bucket for logging does not exist, is not owned by you, or does not have the appropriate grants for the log-delivery group.
    - *HTTP Status Code:* 400 Bad Request
    - *SOAP Fault Code Prefix:* Client
- - *Code:* InvalidToken
    - *Description:* The provided token is malformed or otherwise invalid.
    - *HTTP Status Code:* 400 Bad Request

    - *SOAP Fault Code Prefix:* Client
- - *Code:* InvalidURI
    - *Description:* Couldn't parse the specified URI.
    - *HTTP Status Code:* 400 Bad Request
    - *SOAP Fault Code Prefix:* Client
- - *Code:* KeyTooLongError
    - *Description:* Your key is too long.
    - *HTTP Status Code:* 400 Bad Request
    - *SOAP Fault Code Prefix:* Client
- - *Code:* MalformedACLError
    - *Description:* The XML you provided was not well-formed or did not validate against our published schema.
    - *HTTP Status Code:* 400 Bad Request
    - *SOAP Fault Code Prefix:* Client
- - *Code:* MalformedPOSTRequest
    - *Description:* The body of your POST request is not well-formed multipart/form-data.
    - *HTTP Status Code:* 400 Bad Request
    - *SOAP Fault Code Prefix:* Client
- - *Code:* MalformedXML
    - *Description:* This happens when the user sends malformed XML (XML that doesn't conform to the published XSD) for the configuration. The error message is, "The XML you provided was not well-formed or did not validate against our published schema."
    - *HTTP Status Code:* 400 Bad Request
    - *SOAP Fault Code Prefix:* Client
- - *Code:* MaxMessageLengthExceeded
    - *Description:* Your request was too big.
    - *HTTP Status Code:* 400 Bad Request
    - *SOAP Fault Code Prefix:* Client
- - *Code:* MaxPostPreDataLengthExceededError
    - *Description:* Your POST request fields preceding the upload file were too large.
    - *HTTP Status Code:* 400 Bad Request

  - *SOAP Fault Code Prefix:* Client
- - *Code:* MetadataTooLarge
  - *Description:* Your metadata headers exceed the maximum allowed metadata size.
  - *HTTP Status Code:* 400 Bad Request
  - *SOAP Fault Code Prefix:* Client
- - *Code:* MethodNotAllowed
  - *Description:* The specified method is not allowed against this resource.
  - *HTTP Status Code:* 405 Method Not Allowed
  - *SOAP Fault Code Prefix:* Client
- - *Code:* MissingAttachment
  - *Description:* A SOAP attachment was expected, but none were found.
  - *HTTP Status Code:* N/A
  - *SOAP Fault Code Prefix:* Client
- - *Code:* MissingContentLength
  - *Description:* You must provide the Content-Length HTTP header.
  - *HTTP Status Code:* 411 Length Required
  - *SOAP Fault Code Prefix:* Client
- - *Code:* MissingRequestBodyError
  - *Description:* This happens when the user sends an empty XML document as a request. The error message is, "Request body is empty."
  - *HTTP Status Code:* 400 Bad Request
  - *SOAP Fault Code Prefix:* Client
- - *Code:* MissingSecurityElement
  - *Description:* The SOAP 1.1 request is missing a security element.
  - *HTTP Status Code:* 400 Bad Request
  - *SOAP Fault Code Prefix:* Client
- - *Code:* MissingSecurityHeader
  - *Description:* Your request is missing a required header.
  - *HTTP Status Code:* 400 Bad Request
  - *SOAP Fault Code Prefix:* Client

- • *Code:* NoLoggingStatusForKey
  - *Description:* There is no such thing as a logging status subresource for a key.
  - *HTTP Status Code:* 400 Bad Request
  - *SOAP Fault Code Prefix:* Client
- • *Code:* NoSuchBucket
  - *Description:* The specified bucket does not exist.
  - *HTTP Status Code:* 404 Not Found
  - *SOAP Fault Code Prefix:* Client
- • *Code:* NoSuchBucketPolicy
  - *Description:* The specified bucket does not have a bucket policy.
  - *HTTP Status Code:* 404 Not Found
  - *SOAP Fault Code Prefix:* Client
- • *Code:* NoSuchKey
  - *Description:* The specified key does not exist.
  - *HTTP Status Code:* 404 Not Found
  - *SOAP Fault Code Prefix:* Client
- • *Code:* NoSuchLifecycleConfiguration
  - *Description:* The lifecycle configuration does not exist.
  - *HTTP Status Code:* 404 Not Found
  - *SOAP Fault Code Prefix:* Client
- • *Code:* NoSuchUpload
  - *Description:* The specified multipart upload does not exist. The upload ID might be invalid, or the multipart upload might have been aborted or completed.
  - *HTTP Status Code:* 404 Not Found
  - *SOAP Fault Code Prefix:* Client
- • *Code:* NoSuchVersion
  - *Description:* Indicates that the version ID specified in the request does not match an existing version.
  - *HTTP Status Code:* 404 Not Found
  - *SOAP Fault Code Prefix:* Client
- • *Code:* NotImplemented

- *Description:* A header you provided implies functionality that is not implemented.
- *HTTP Status Code:* 501 Not Implemented
- *SOAP Fault Code Prefix:* Server

- *Code:* NotSignedUp
- *Description:* Your account is not signed up for the Amazon S3 service. You must sign up before you can use Amazon S3. You can sign up at the following URL: Amazon S3
- *HTTP Status Code:* 403 Forbidden
- *SOAP Fault Code Prefix:* Client

- *Code:* OperationAborted
- *Description:* A conflicting conditional action is currently in progress against this resource. Try again.
- *HTTP Status Code:* 409 Conflict
- *SOAP Fault Code Prefix:* Client

- *Code:* PermanentRedirect
- *Description:* The bucket you are attempting to access must be addressed using the specified endpoint. Send all future requests to this endpoint.
- *HTTP Status Code:* 301 Moved Permanently
- *SOAP Fault Code Prefix:* Client

- *Code:* PreconditionFailed
- *Description:* At least one of the preconditions you specified did not hold.
- *HTTP Status Code:* 412 Precondition Failed
- *SOAP Fault Code Prefix:* Client

- *Code:* Redirect
- *Description:* Temporary redirect.
- *HTTP Status Code:* 307 Moved Temporarily
- *SOAP Fault Code Prefix:* Client

- *Code:* RestoreAlreadyInProgress
- *Description:* Object restore is already in progress.
- *HTTP Status Code:* 409 Conflict
- *SOAP Fault Code Prefix:* Client

- *Code:* RequestIsNotMultiPartContent

  - *Description:* Bucket POST must be of the enclosure-type multipart/form-data.
  - *HTTP Status Code:* 400 Bad Request
  - *SOAP Fault Code Prefix:* Client
- • *Code:* RequestTimeout
  - *Description:* Your socket connection to the server was not read from or written to within the timeout period.
  - *HTTP Status Code:* 400 Bad Request
  - *SOAP Fault Code Prefix:* Client
- • *Code:* RequestTimeTooSkewed
  - *Description:* The difference between the request time and the server's time is too large.
  - *HTTP Status Code:* 403 Forbidden
  - *SOAP Fault Code Prefix:* Client
- • *Code:* RequestTorrentOfBucketError
  - *Description:* Requesting the torrent file of a bucket is not permitted.
  - *HTTP Status Code:* 400 Bad Request
  - *SOAP Fault Code Prefix:* Client
- • *Code:* SignatureDoesNotMatch
  - *Description:* The request signature we calculated does not match the signature you provided. Check your AWS secret access key and signing method. For more information, see REST Authentication and SOAP Authentication for details.
  - *HTTP Status Code:* 403 Forbidden
  - *SOAP Fault Code Prefix:* Client
- • *Code:* ServiceUnavailable
  - *Description:* Service is unable to handle request.
  - *HTTP Status Code:* 503 Service Unavailable
  - *SOAP Fault Code Prefix:* Server
- • *Code:* SlowDown
  - *Description:* Reduce your request rate.
  - *HTTP Status Code:* 503 Slow Down
  - *SOAP Fault Code Prefix:* Server
- • *Code:* TemporaryRedirect

  - *Description:* You are being redirected to the bucket while DNS updates.
  - *HTTP Status Code:* 307 Moved Temporarily
  - *SOAP Fault Code Prefix:* Client
- • *Code:* TokenRefreshRequired
  - *Description:* The provided token must be refreshed.
  - *HTTP Status Code:* 400 Bad Request
  - *SOAP Fault Code Prefix:* Client
- • *Code:* TooManyBuckets
  - *Description:* You have attempted to create more buckets than allowed.
  - *HTTP Status Code:* 400 Bad Request
  - *SOAP Fault Code Prefix:* Client
- • *Code:* UnexpectedContent
  - *Description:* This request does not support content.
  - *HTTP Status Code:* 400 Bad Request
  - *SOAP Fault Code Prefix:* Client
- • *Code:* UnresolvableGrantByEmailAddress
  - *Description:* The email address you provided does not match any account on record.
  - *HTTP Status Code:* 400 Bad Request
  - *SOAP Fault Code Prefix:* Client
- • *Code:* UserKeyMustBeSpecified
  - *Description:* The bucket POST must contain the specified field name. If it is specified, check the order of the fields.
  - *HTTP Status Code:* 400 Bad Request
  - *SOAP Fault Code Prefix:* Client

Type: String

Required: No

Key

The error key.

Type: String

Length Constraints: Minimum length of 1.

Required: No

Message

The error message contains a generic description of the error condition in English. It is intended for a human audience. Simple programs display the message directly to the end user if they encounter an error condition they don't know how or don't care to handle. Sophisticated programs with more exhaustive error handling and proper internationalization are more likely to ignore the error message.

Type: String

Required: No

VersionId

The version ID of the error.

> **Note**
>
> This functionality is not supported for directory buckets.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ErrorDocument

Service: Amazon S3

The error information.

Contents

Key

The object key name to use when a 4XX class error occurs.

> **Important**
>
> Replacement must be made for object keys containing special characters (such as carriage returns) when using XML requests. For more information, see XML related object key constraints.

Type: String

Length Constraints: Minimum length of 1.

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

EventBridgeConfiguration

Service: Amazon S3

A container for specifying the configuration for Amazon EventBridge.

Contents

The members of this exception structure are context-dependent.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ExistingObjectReplication

Service: Amazon S3

Optional configuration to replicate existing source bucket objects. For more information, see Replicating Existing Objects in the *Amazon S3 User Guide*.

Contents

Status

Specifies whether Amazon S3 replicates existing source bucket objects.

Type: String

Valid Values: `Enabled | Disabled`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

FilterRule

Service: Amazon S3

Specifies the Amazon S3 object key name to filter on. An object key name is the name assigned to an object in your Amazon S3 bucket. You specify whether to filter on the suffix or prefix of the object key name. A prefix is a specific string of characters at the beginning of an object key name, which you can use to organize objects. For example, you can start the key names of related objects with a prefix, such as `2023-` or `engineering/`. Then, you can use `FilterRule` to find objects in a bucket with key names that have the same prefix. A suffix is similar to a prefix, but it is at the end of the object key name instead of at the beginning.

Contents

Name

The object key name prefix or suffix identifying one or more objects to which the filtering rule applies. The maximum length is 1,024 characters. Overlapping prefixes and suffixes are not supported. For more information, see Configuring Event Notifications in the *Amazon S3 User Guide*.

Type: String

Valid Values: `prefix | suffix`

Required: No

Value

The value that the filter searches for in object key names.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2

- AWS SDK for Ruby V3

GetObjectAttributesParts

Service: Amazon S3

A collection of parts associated with a multipart upload.

Contents

IsTruncated

Indicates whether the returned list of parts is truncated. A value of `true` indicates that the list was truncated. A list can be truncated if the number of parts exceeds the limit returned in the `MaxParts` element.

Type: Boolean

Required: No

MaxParts

The maximum number of parts allowed in the response.

Type: Integer

Required: No

NextPartNumberMarker

When a list is truncated, this element specifies the last part in the list, as well as the value to use for the `PartNumberMarker` request parameter in a subsequent request.

Type: Integer

Required: No

PartNumberMarker

The marker for the current part.

Type: Integer

Required: No

Parts

A container for elements related to a particular part. A response can contain zero or more `Parts` elements.

> **Note**
>
> - **General purpose buckets** - For `GetObjectAttributes`, if a additional checksum (including `x-amz-checksum-crc32`, `x-amz-checksum-crc32c`, `x-amz-checksum-sha1`, or `x-amz-checksum-sha256`) isn't applied to the object specified in the request, the response doesn't return `Part`.
> - **Directory buckets** - For `GetObjectAttributes`, no matter whether a additional checksum is applied to the object specified in the request, the response returns `Part`.

Type: Array of ObjectPart data types

Required: No

TotalPartsCount

The total number of parts.

Type: Integer

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

GlacierJobParameters

Service: Amazon S3

Container for S3 Glacier job parameters.

Contents

Tier

Retrieval tier at which the restore will be processed.

Type: String

Valid Values: `Standard | Bulk | Expedited`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Grant

Service: Amazon S3

Container for grant information.

Contents

Grantee

The person being granted permissions.

Type: Grantee data type

Required: No

Permission

Specifies the permission given to the grantee.

Type: String

Valid Values: `FULL_CONTROL | WRITE | WRITE_ACP | READ | READ_ACP`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Grantee

Service: Amazon S3

Container for the person being granted permissions.

Contents

Type

Type of grantee

Type: String

Valid Values: `CanonicalUser | AmazonCustomerByEmail | Group`

Required: Yes

DisplayName

Screen name of the grantee.

Type: String

Required: No

EmailAddress

Email address of the grantee.

> **Note**
>
> Using email addresses to specify a grantee is only supported in the following AWS Regions:
>
> - US East (N. Virginia)
> - US West (N. California)
> - US West (Oregon)
> - Asia Pacific (Singapore)
> - Asia Pacific (Sydney)
> - Asia Pacific (Tokyo)
> - Europe (Ireland)
> - South America (São Paulo)

For a list of all the Amazon S3 supported Regions and endpoints, see Regions and Endpoints in the AWS General Reference.

Type: String

Required: No

ID

The canonical user ID of the grantee.

Type: String

Required: No

URI

URI of the grantee group.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

IndexDocument

Service: Amazon S3

Container for the `Suffix` element.

Contents

Suffix

A suffix that is appended to a request that is for a directory on the website endpoint. (For example, if the suffix is `index.html` and you make a request to `samplebucket/images/`, the data that is returned will be for the object with the key name `images/index.html`.) The suffix must not be empty and must not include a slash character.

> **Important**
>
> Replacement must be made for object keys containing special characters (such as carriage returns) when using XML requests. For more information, see XML related object key constraints.

Type: String

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Initiator

Service: Amazon S3

Container element that identifies who initiated the multipart upload.

Contents

DisplayName

Name of the Principal.

> **Note**
>
> This functionality is not supported for directory buckets.

Type: String

Required: No

ID

If the principal is an AWS account, it provides the Canonical User ID. If the principal is an IAM User, it provides a user ARN value.

> **Note**
>
> **Directory buckets** - If the principal is an AWS account, it provides the AWS account ID. If the principal is an IAM User, it provides a user ARN value.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++

- AWS SDK for Java V2
- AWS SDK for Ruby V3

InputSerialization

Service: Amazon S3

Describes the serialization format of the object.

Contents

CompressionType

Specifies object's compression format. Valid values: NONE, GZIP, BZIP2. Default Value: NONE.

Type: String

Valid Values: `NONE | GZIP | BZIP2`

Required: No

CSV

Describes the serialization of a CSV-encoded object.

Type: CSVInput data type

Required: No

JSON

Specifies JSON as object's input serialization format.

Type: JSONInput data type

Required: No

Parquet

Specifies Parquet as object's input serialization format.

Type: ParquetInput data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

IntelligentTieringAndOperator

Service: Amazon S3

A container for specifying S3 Intelligent-Tiering filters. The filters determine the subset of objects to which the rule applies.

Contents

Prefix

An object key name prefix that identifies the subset of objects to which the configuration applies.

Type: String

Required: No

Tags

All of these tags must exist in the object's tag set in order for the configuration to apply.

Type: Array of Tag data types

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

IntelligentTieringConfiguration

Service: Amazon S3

Specifies the S3 Intelligent-Tiering configuration for an Amazon S3 bucket.

For information about the S3 Intelligent-Tiering storage class, see Storage class for automatically optimizing frequently and infrequently accessed objects.

Contents

Id

The ID used to identify the S3 Intelligent-Tiering configuration.

Type: String

Required: Yes

Status

Specifies the status of the configuration.

Type: String

Valid Values: `Enabled | Disabled`

Required: Yes

Tierings

Specifies the S3 Intelligent-Tiering storage class tier of the configuration.

Type: Array of Tiering data types

Required: Yes

Filter

Specifies a bucket filter. The configuration only includes objects that meet the filter's criteria.

Type: IntelligentTieringFilter data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

IntelligentTieringFilter

Service: Amazon S3

The `Filter` is used to identify objects that the S3 Intelligent-Tiering configuration applies to.

Contents

And

A conjunction (logical AND) of predicates, which is used in evaluating a metrics filter. The operator must have at least two predicates, and an object must match all of the predicates in order for the filter to apply.

Type: IntelligentTieringAndOperator data type

Required: No

Prefix

An object key name prefix that identifies the subset of objects to which the rule applies.

> **Important**
>
> Replacement must be made for object keys containing special characters (such as carriage returns) when using XML requests. For more information, see XML related object key constraints.

Type: String

Required: No

Tag

A container of a key value name pair.

Type: Tag data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

InventoryConfiguration

Service: Amazon S3

Specifies the inventory configuration for an Amazon S3 bucket. For more information, see GET Bucket inventory in the *Amazon S3 API Reference*.

Contents

Destination

Contains information about where to publish the inventory results.

Type: InventoryDestination data type

Required: Yes

Id

The ID used to identify the inventory configuration.

Type: String

Required: Yes

IncludedObjectVersions

Object versions to include in the inventory list. If set to `All`, the list includes all the object versions, which adds the version-related fields `VersionId`, `IsLatest`, and `DeleteMarker` to the list. If set to `Current`, the list does not contain these version-related fields.

Type: String

Valid Values: `All | Current`

Required: Yes

IsEnabled

Specifies whether the inventory is enabled or disabled. If set to `True`, an inventory list is generated. If set to `False`, no inventory list is generated.

Type: Boolean

Required: Yes

Schedule

Specifies the schedule for generating inventory results.

Type: InventorySchedule data type

Required: Yes

Filter

Specifies an inventory filter. The inventory only includes objects that meet the filter's criteria.

Type: InventoryFilter data type

Required: No

OptionalFields

Contains the optional fields that are included in the inventory results.

Type: Array of strings

Valid Values: `Size | LastModifiedDate | StorageClass | ETag | IsMultipartUploaded | ReplicationStatus | EncryptionStatus | ObjectLockRetainUntilDate | ObjectLockMode | ObjectLockLegalHoldStatus | IntelligentTieringAccessTier | BucketKeyStatus | ChecksumAlgorithm | ObjectAccessControlList | ObjectOwner`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

InventoryDestination

Service: Amazon S3

Specifies the inventory configuration for an Amazon S3 bucket.

Contents

S3BucketDestination

Contains the bucket name, file format, bucket owner (optional), and prefix (optional) where inventory results are published.

Type: InventoryS3BucketDestination data type

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

InventoryEncryption

Service: Amazon S3

Contains the type of server-side encryption used to encrypt the inventory results.

Contents

SSEKMS

Specifies the use of SSE-KMS to encrypt delivered inventory reports.

Type: SSEKMS data type

Required: No

SSES3

Specifies the use of SSE-S3 to encrypt delivered inventory reports.

Type: SSES3 data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

InventoryFilter

Service: Amazon S3

Specifies an inventory filter. The inventory only includes objects that meet the filter's criteria.

Contents

Prefix

The prefix that an object must have to be included in the inventory results.

Type: String

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

InventoryS3BucketDestination

Service: Amazon S3

Contains the bucket name, file format, bucket owner (optional), and prefix (optional) where inventory results are published.

Contents

Bucket

The Amazon Resource Name (ARN) of the bucket where inventory results will be published.

Type: String

Required: Yes

Format

Specifies the output format of the inventory results.

Type: String

Valid Values: `CSV | ORC | Parquet`

Required: Yes

AccountId

The account ID that owns the destination S3 bucket. If no account ID is provided, the owner is not validated before exporting data.

> **Note**
>
> Although this value is optional, we strongly recommend that you set it to help prevent problems if the destination bucket ownership changes.

Type: String

Required: No

Encryption

Contains the type of server-side encryption used to encrypt the inventory results.

Type: InventoryEncryption data type

Required: No

Prefix

The prefix that is prepended to all inventory results.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

InventorySchedule

Service: Amazon S3

Specifies the schedule for generating inventory results.

Contents

Frequency

Specifies how frequently inventory results are produced.

Type: String

Valid Values: `Daily | Weekly`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

JSONInput

Service: Amazon S3

Specifies JSON as object's input serialization format.

Contents

Type

The type of JSON. Valid values: Document, Lines.

Type: String

Valid Values: `DOCUMENT | LINES`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

JSONOutput

Service: Amazon S3

Specifies JSON as request's output serialization format.

Contents

RecordDelimiter

The value used to separate individual records in the output. If no value is specified, Amazon S3 uses a newline character ('\n').

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

LambdaFunctionConfiguration

Service: Amazon S3

A container for specifying the configuration for AWS Lambda notifications.

Contents

Events

The Amazon S3 bucket event for which to invoke the AWS Lambda function. For more information, see Supported Event Types in the *Amazon S3 User Guide*.

Type: Array of strings

Valid Values: `s3:ReducedRedundancyLostObject | s3:ObjectCreated:* | s3:ObjectCreated:Put | s3:ObjectCreated:Post | s3:ObjectCreated:Copy | s3:ObjectCreated:CompleteMultipartUpload | s3:ObjectRemoved:* | s3:ObjectRemoved:Delete | s3:ObjectRemoved:DeleteMarkerCreated | s3:ObjectRestore:* | s3:ObjectRestore:Post | s3:ObjectRestore:Completed | s3:Replication:* | s3:Replication:OperationFailedReplication | s3:Replication:OperationNotTracked | s3:Replication:OperationMissedThreshold | s3:Replication:OperationReplicatedAfterThreshold | s3:ObjectRestore:Delete | s3:LifecycleTransition | s3:IntelligentTiering | s3:ObjectAcl:Put | s3:LifecycleExpiration:* | s3:LifecycleExpiration:Delete | s3:LifecycleExpiration:DeleteMarkerCreated | s3:ObjectTagging:* | s3:ObjectTagging:Put | s3:ObjectTagging:Delete`

Required: Yes

LambdaFunctionArn

The Amazon Resource Name (ARN) of the AWS Lambda function that Amazon S3 invokes when the specified event type occurs.

Type: String

Required: Yes

Filter

Specifies object key name filtering rules. For information about key name filtering, see Configuring event notifications using object key name filtering in the *Amazon S3 User Guide*.

Type: NotificationConfigurationFilter data type

Required: No

Id

An optional unique identifier for configurations in a notification configuration. If you don't provide one, Amazon S3 will assign an ID.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

LifecycleConfiguration

Service: Amazon S3

Container for lifecycle rules. You can add as many as 1000 rules.

For more information see, Managing your storage lifecycle in the *Amazon S3 User Guide*.

Contents

Rules

Specifies lifecycle configuration rules for an Amazon S3 bucket.

Type: Array of Rule data types

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

LifecycleExpiration

Service: Amazon S3

Container for the expiration for the lifecycle of the object.

For more information see, Managing your storage lifecycle in the *Amazon S3 User Guide*.

Contents

Date

Indicates at what date the object is to be moved or deleted. The date value must conform to the ISO 8601 format. The time is always midnight UTC.

Type: Timestamp

Required: No

Days

Indicates the lifetime, in days, of the objects that are subject to the rule. The value must be a non-zero positive integer.

Type: Integer

Required: No

ExpiredObjectDeleteMarker

Indicates whether Amazon S3 will remove a delete marker with no noncurrent versions. If set to true, the delete marker will be expired; if set to false the policy takes no action. This cannot be specified with Days or Date in a Lifecycle Expiration Policy.

Type: Boolean

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++

- AWS SDK for Java V2
- AWS SDK for Ruby V3

LifecycleRule

Service: Amazon S3

A lifecycle rule for individual objects in an Amazon S3 bucket.

For more information see, Managing your storage lifecycle in the *Amazon S3 User Guide*.

Contents

Status

If 'Enabled', the rule is currently being applied. If 'Disabled', the rule is not currently being applied.

Type: String

Valid Values: `Enabled | Disabled`

Required: Yes

AbortIncompleteMultipartUpload

Specifies the days since the initiation of an incomplete multipart upload that Amazon S3 will wait before permanently removing all parts of the upload. For more information, see Aborting Incomplete Multipart Uploads Using a Bucket Lifecycle Configuration in the *Amazon S3 User Guide*.

Type: AbortIncompleteMultipartUpload data type

Required: No

Expiration

Specifies the expiration for the lifecycle of the object in the form of date, days and, whether the object has a delete marker.

Type: LifecycleExpiration data type

Required: No

Filter

The `Filter` is used to identify objects that a Lifecycle Rule applies to. A `Filter` must have exactly one of `Prefix`, `Tag`, or `And` specified. `Filter` is required if the `LifecycleRule` does not contain a `Prefix` element.

Type: LifecycleRuleFilter data type

Required: No

ID

Unique identifier for the rule. The value cannot be longer than 255 characters.

Type: String

Required: No

NoncurrentVersionExpiration

Specifies when noncurrent object versions expire. Upon expiration, Amazon S3 permanently deletes the noncurrent object versions. You set this lifecycle configuration action on a bucket that has versioning enabled (or suspended) to request that Amazon S3 delete noncurrent object versions at a specific period in the object's lifetime.

Type: NoncurrentVersionExpiration data type

Required: No

NoncurrentVersionTransitions

Specifies the transition rule for the lifecycle rule that describes when noncurrent objects transition to a specific storage class. If your bucket is versioning-enabled (or versioning is suspended), you can set this action to request that Amazon S3 transition noncurrent object versions to a specific storage class at a set period in the object's lifetime.

Type: Array of NoncurrentVersionTransition data types

Required: No

Prefix

This member has been deprecated.

Prefix identifying one or more objects to which the rule applies. This is no longer used; use `Filter` instead.

> **Important**
>
> Replacement must be made for object keys containing special characters (such as carriage returns) when using XML requests. For more information, see XML related object key constraints.

Type: String

Required: No

Transitions

Specifies when an Amazon S3 object transitions to a specified storage class.

Type: Array of Transition data types

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

LifecycleRuleAndOperator

Service: Amazon S3

This is used in a Lifecycle Rule Filter to apply a logical AND to two or more predicates. The Lifecycle Rule will apply to any object matching all of the predicates configured inside the And operator.

Contents

ObjectSizeGreaterThan

Minimum object size to which the rule applies.

Type: Long

Required: No

ObjectSizeLessThan

Maximum object size to which the rule applies.

Type: Long

Required: No

Prefix

Prefix identifying one or more objects to which the rule applies.

Type: String

Required: No

Tags

All of these tags must exist in the object's tag set in order for the rule to apply.

Type: Array of Tag data types

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

LifecycleRuleFilter

Service: Amazon S3

The `Filter` is used to identify objects that a Lifecycle Rule applies to. A `Filter` can have exactly one of `Prefix`, `Tag`, `ObjectSizeGreaterThan`, `ObjectSizeLessThan`, or `And` specified. If the `Filter` element is left empty, the Lifecycle Rule applies to all objects in the bucket.

Contents

And

This is used in a Lifecycle Rule Filter to apply a logical AND to two or more predicates. The Lifecycle Rule will apply to any object matching all of the predicates configured inside the And operator.

Type: LifecycleRuleAndOperator data type

Required: No

ObjectSizeGreaterThan

Minimum object size to which the rule applies.

Type: Long

Required: No

ObjectSizeLessThan

Maximum object size to which the rule applies.

Type: Long

Required: No

Prefix

Prefix identifying one or more objects to which the rule applies.

> **Important**
>
> Replacement must be made for object keys containing special characters (such as carriage returns) when using XML requests. For more information, see XML related object key constraints.

Type: String

Required: No

Tag

This tag must exist in the object's tag set in order for the rule to apply.

Type: Tag data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

LocationInfo

Service: Amazon S3

Specifies the location where the bucket will be created.

For directory buckets, the location type is Availability Zone. For more information about directory buckets, see Directory buckets in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is only supported by directory buckets.

Contents

Name

The name of the location where the bucket will be created.

For directory buckets, the name of the location is the AZ ID of the Availability Zone where the bucket will be created. An example AZ ID value is `usw2-az1`.

Type: String

Required: No

Type

The type of location where the bucket will be created.

Type: String

Valid Values: `AvailabilityZone`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++

- AWS SDK for Java V2
- AWS SDK for Ruby V3

LoggingEnabled

Service: Amazon S3

Describes where logs are stored and the prefix that Amazon S3 assigns to all log object keys for a bucket. For more information, see PUT Bucket logging in the *Amazon S3 API Reference*.

Contents

TargetBucket

Specifies the bucket where you want Amazon S3 to store server access logs. You can have your logs delivered to any bucket that you own, including the same bucket that is being logged. You can also configure multiple buckets to deliver their logs to the same target bucket. In this case, you should choose a different `TargetPrefix` for each source bucket so that the delivered log files can be distinguished by key.

Type: String

Required: Yes

TargetPrefix

A prefix for all log object keys. If you store log files from multiple Amazon S3 buckets in a single bucket, you can use a prefix to distinguish which log files came from which bucket.

Type: String

Required: Yes

TargetGrants

Container for granting information.

Buckets that use the bucket owner enforced setting for Object Ownership don't support target grants. For more information, see Permissions for server access log delivery in the *Amazon S3 User Guide*.

Type: Array of TargetGrant data types

Required: No

TargetObjectKeyFormat

Amazon S3 key format for log objects.

Type: TargetObjectKeyFormat data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

MetadataEntry

Service: Amazon S3

A metadata key-value pair to store with an object.

Contents

Name

Name of the object.

Type: String

Required: No

Value

Value of the object.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Metrics

Service: Amazon S3

A container specifying replication metrics-related settings enabling replication metrics and events.

Contents

Status

Specifies whether the replication metrics are enabled.

Type: String

Valid Values: `Enabled | Disabled`

Required: Yes

EventThreshold

A container specifying the time threshold for emitting the `s3:Replication:OperationMissedThreshold` event.

Type: ReplicationTimeValue data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

MetricsAndOperator

Service: Amazon S3

A conjunction (logical AND) of predicates, which is used in evaluating a metrics filter. The operator must have at least two predicates, and an object must match all of the predicates in order for the filter to apply.

Contents

AccessPointArn

The access point ARN used when evaluating an AND predicate.

Type: String

Required: No

Prefix

The prefix used when evaluating an AND predicate.

Type: String

Required: No

Tags

The list of tags used when evaluating an AND predicate.

Type: Array of Tag data types

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

MetricsConfiguration

Service: Amazon S3

Specifies a metrics configuration for the CloudWatch request metrics (specified by the metrics configuration ID) from an Amazon S3 bucket. If you're updating an existing metrics configuration, note that this is a full replacement of the existing metrics configuration. If you don't include the elements you want to keep, they are erased. For more information, see PutBucketMetricsConfiguration.

Contents

Id

The ID used to identify the metrics configuration. The ID has a 64 character limit and can only contain letters, numbers, periods, dashes, and underscores.

Type: String

Required: Yes

Filter

Specifies a metrics configuration filter. The metrics configuration will only include objects that meet the filter's criteria. A filter must be a prefix, an object tag, an access point ARN, or a conjunction (MetricsAndOperator).

Type: MetricsFilter data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

MetricsFilter

Service: Amazon S3

Specifies a metrics configuration filter. The metrics configuration only includes objects that meet the filter's criteria. A filter must be a prefix, an object tag, an access point ARN, or a conjunction (MetricsAndOperator). For more information, see PutBucketMetricsConfiguration.

Contents

AccessPointArn

The access point ARN used when evaluating a metrics filter.

Type: String

Required: No

And

A conjunction (logical AND) of predicates, which is used in evaluating a metrics filter. The operator must have at least two predicates, and an object must match all of the predicates in order for the filter to apply.

Type: MetricsAndOperator data type

Required: No

Prefix

The prefix used when evaluating a metrics filter.

Type: String

Required: No

Tag

The tag used when evaluating a metrics filter.

Type: Tag data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

MultipartUpload

Service: Amazon S3

Container for the `MultipartUpload` for the Amazon S3 object.

Contents

ChecksumAlgorithm

The algorithm that was used to create a checksum of the object.

Type: String

Valid Values: `CRC32 | CRC32C | SHA1 | SHA256`

Required: No

Initiated

Date and time at which the multipart upload was initiated.

Type: Timestamp

Required: No

Initiator

Identifies who initiated the multipart upload.

Type: Initiator data type

Required: No

Key

Key of the object for which the multipart upload was initiated.

Type: String

Length Constraints: Minimum length of 1.

Required: No

Owner

Specifies the owner of the object that is part of the multipart upload.

> **Note**
>
> **Directory buckets** - The bucket owner is returned as the object owner for all the objects.

Type: Owner data type

Required: No

StorageClass

The class of storage used to store the object.

> **Note**
>
> **Directory buckets** - Only the S3 Express One Zone storage class is supported by directory buckets to store objects.

Type: String

Valid Values: `STANDARD | REDUCED_REDUNDANCY | STANDARD_IA | ONEZONE_IA | INTELLIGENT_TIERING | GLACIER | DEEP_ARCHIVE | OUTPOSTS | GLACIER_IR | SNOW | EXPRESS_ONEZONE`

Required: No

UploadId

Upload ID that identifies the multipart upload.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++

- AWS SDK for Java V2
- AWS SDK for Ruby V3

NoncurrentVersionExpiration

Service: Amazon S3

Specifies when noncurrent object versions expire. Upon expiration, Amazon S3 permanently deletes the noncurrent object versions. You set this lifecycle configuration action on a bucket that has versioning enabled (or suspended) to request that Amazon S3 delete noncurrent object versions at a specific period in the object's lifetime.

Contents

NewerNoncurrentVersions

Specifies how many noncurrent versions Amazon S3 will retain. You can specify up to 100 noncurrent versions to retain. Amazon S3 will permanently delete any additional noncurrent versions beyond the specified number to retain. For more information about noncurrent versions, see Lifecycle configuration elements in the *Amazon S3 User Guide*.

Type: Integer

Required: No

NoncurrentDays

Specifies the number of days an object is noncurrent before Amazon S3 can perform the associated action. The value must be a non-zero positive integer. For information about the noncurrent days calculations, see How Amazon S3 Calculates When an Object Became Noncurrent in the *Amazon S3 User Guide*.

Type: Integer

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

NoncurrentVersionTransition

Service: Amazon S3

Container for the transition rule that describes when noncurrent objects transition to the `STANDARD_IA`, `ONEZONE_IA`, `INTELLIGENT_TIERING`, `GLACIER_IR`, `GLACIER`, or `DEEP_ARCHIVE` storage class. If your bucket is versioning-enabled (or versioning is suspended), you can set this action to request that Amazon S3 transition noncurrent object versions to the `STANDARD_IA`, `ONEZONE_IA`, `INTELLIGENT_TIERING`, `GLACIER_IR`, `GLACIER`, or `DEEP_ARCHIVE` storage class at a specific period in the object's lifetime.

Contents

NewerNoncurrentVersions

Specifies how many noncurrent versions Amazon S3 will retain in the same storage class before transitioning objects. You can specify up to 100 noncurrent versions to retain. Amazon S3 will transition any additional noncurrent versions beyond the specified number to retain. For more information about noncurrent versions, see Lifecycle configuration elements in the *Amazon S3 User Guide*.

Type: Integer

Required: No

NoncurrentDays

Specifies the number of days an object is noncurrent before Amazon S3 can perform the associated action. For information about the noncurrent days calculations, see How Amazon S3 Calculates How Long an Object Has Been Noncurrent in the *Amazon S3 User Guide*.

Type: Integer

Required: No

StorageClass

The class of storage used to store the object.

Type: String

Valid Values: `GLACIER | STANDARD_IA | ONEZONE_IA | INTELLIGENT_TIERING | DEEP_ARCHIVE | GLACIER_IR`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

NotificationConfiguration

Service: Amazon S3

A container for specifying the notification configuration of the bucket. If this element is empty, notifications are turned off for the bucket.

Contents

EventBridgeConfiguration

Enables delivery of events to Amazon EventBridge.

Type: EventBridgeConfiguration data type

Required: No

LambdaFunctionConfigurations

Describes the AWS Lambda functions to invoke and the events for which to invoke them.

Type: Array of LambdaFunctionConfiguration data types

Required: No

QueueConfigurations

The Amazon Simple Queue Service queues to publish messages to and the events for which to publish messages.

Type: Array of QueueConfiguration data types

Required: No

TopicConfigurations

The topic to which notifications are sent and the events for which notifications are generated.

Type: Array of TopicConfiguration data types

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

NotificationConfigurationDeprecated

Service: Amazon S3

Contents

CloudFunctionConfiguration

Container for specifying the AWS Lambda notification configuration.

Type: CloudFunctionConfiguration data type

Required: No

QueueConfiguration

This data type is deprecated. This data type specifies the configuration for publishing messages to an Amazon Simple Queue Service (Amazon SQS) queue when Amazon S3 detects specified events.

Type: QueueConfigurationDeprecated data type

Required: No

TopicConfiguration

This data type is deprecated. A container for specifying the configuration for publication of messages to an Amazon Simple Notification Service (Amazon SNS) topic when Amazon S3 detects specified events.

Type: TopicConfigurationDeprecated data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

NotificationConfigurationFilter

Service: Amazon S3

Specifies object key name filtering rules. For information about key name filtering, see Configuring event notifications using object key name filtering in the *Amazon S3 User Guide*.

Contents

Key

A container for object key name prefix and suffix filtering rules.

Type: S3KeyFilter data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Object

Service: Amazon S3

An object consists of data and its descriptive metadata.

Contents

ChecksumAlgorithm

The algorithm that was used to create a checksum of the object.

Type: Array of strings

Valid Values: `CRC32 | CRC32C | SHA1 | SHA256`

Required: No

ETag

The entity tag is a hash of the object. The ETag reflects changes only to the contents of an object, not its metadata. The ETag may or may not be an MD5 digest of the object data. Whether or not it is depends on how the object was created and how it is encrypted as described below:

- Objects created by the PUT Object, POST Object, or Copy operation, or through the AWS Management Console, and are encrypted by SSE-S3 or plaintext, have ETags that are an MD5 digest of their object data.
- Objects created by the PUT Object, POST Object, or Copy operation, or through the AWS Management Console, and are encrypted by SSE-C or SSE-KMS, have ETags that are not an MD5 digest of their object data.
- If an object is created by either the Multipart Upload or Part Copy operation, the ETag is not an MD5 digest, regardless of the method of encryption. If an object is larger than 16 MB, the AWS Management Console will upload or copy that object as a Multipart Upload, and therefore the ETag will not be an MD5 digest.

> **Note**
>
> **Directory buckets** - MD5 is not supported by directory buckets.

Type: String

Required: No

Key

The name that you assign to an object. You use the object key to retrieve the object.

Type: String

Length Constraints: Minimum length of 1.

Required: No

LastModified

Creation date of the object.

Type: Timestamp

Required: No

Owner

The owner of the object

> **Note**
>
> **Directory buckets** - The bucket owner is returned as the object owner.

Type: Owner data type

Required: No

RestoreStatus

Specifies the restoration status of an object. Objects in certain storage classes must be restored before they can be retrieved. For more information about these storage classes and how to work with archived objects, see Working with archived objects in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets. Only the S3 Express One Zone storage class is supported by directory buckets to store objects.

Type: RestoreStatus data type

Required: No

Size

Size in bytes of the object

Type: Long

Required: No

StorageClass

The class of storage used to store the object.

> **Note**
>
> **Directory buckets** - Only the S3 Express One Zone storage class is supported by directory buckets to store objects.

Type: String

Valid Values: `STANDARD | REDUCED_REDUNDANCY | GLACIER | STANDARD_IA | ONEZONE_IA | INTELLIGENT_TIERING | DEEP_ARCHIVE | OUTPOSTS | GLACIER_IR | SNOW | EXPRESS_ONEZONE`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ObjectIdentifier

Service: Amazon S3

Object Identifier is unique value to identify objects.

Contents

Key

Key name of the object.

> **Important**
>
> Replacement must be made for object keys containing special characters (such as carriage returns) when using XML requests. For more information, see XML related object key constraints.

Type: String

Length Constraints: Minimum length of 1.

Required: Yes

VersionId

Version ID for the specific version of the object to delete.

> **Note**
>
> This functionality is not supported for directory buckets.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ObjectLockConfiguration

Service: Amazon S3

The container element for Object Lock configuration parameters.

Contents

ObjectLockEnabled

Indicates whether this bucket has an Object Lock configuration enabled. Enable `ObjectLockEnabled` when you apply `ObjectLockConfiguration` to a bucket.

Type: String

Valid Values: `Enabled`

Required: No

Rule

Specifies the Object Lock rule for the specified object. Enable the this rule when you apply `ObjectLockConfiguration` to a bucket. Bucket settings require both a mode and a period. The period can be either `Days` or `Years` but you must select one. You cannot specify `Days` and `Years` at the same time.

Type: ObjectLockRule data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ObjectLockLegalHold

Service: Amazon S3

A legal hold configuration for an object.

Contents

Status

Indicates whether the specified object has a legal hold in place.

Type: String

Valid Values: `ON` | `OFF`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ObjectLockRetention

Service: Amazon S3

A Retention configuration for an object.

Contents

Mode

Indicates the Retention mode for the specified object.

Type: String

Valid Values: `GOVERNANCE | COMPLIANCE`

Required: No

RetainUntilDate

The date on which this Object Lock Retention will expire.

Type: Timestamp

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ObjectLockRule

Service: Amazon S3

The container element for an Object Lock rule.

Contents

DefaultRetention

The default Object Lock retention mode and period that you want to apply to new objects placed in the specified bucket. Bucket settings require both a mode and a period. The period can be either `Days` or `Years` but you must select one. You cannot specify `Days` and `Years` at the same time.

Type: DefaultRetention data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ObjectPart

Service: Amazon S3

A container for elements related to an individual part.

Contents

ChecksumCRC32

This header can be used as a data integrity check to verify that the data received is the same data that was originally sent. This header specifies the base64-encoded, 32-bit CRC32 checksum of the object. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

Required: No

ChecksumCRC32C

The base64-encoded, 32-bit CRC32C checksum of the object. This will only be present if it was uploaded with the object. When you use an API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

Required: No

ChecksumSHA1

The base64-encoded, 160-bit SHA-1 digest of the object. This will only be present if it was uploaded with the object. When you use the API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

Required: No

ChecksumSHA256

The base64-encoded, 256-bit SHA-256 digest of the object. This will only be present if it was uploaded with the object. When you use an API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

Required: No

PartNumber

The part number identifying the part. This value is a positive integer between 1 and 10,000.

Type: Integer

Required: No

Size

The size of the uploaded part in bytes.

Type: Long

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ObjectVersion

Service: Amazon S3

The version of an object.

Contents

ChecksumAlgorithm

The algorithm that was used to create a checksum of the object.

Type: Array of strings

Valid Values: `CRC32 | CRC32C | SHA1 | SHA256`

Required: No

ETag

The entity tag is an MD5 hash of that version of the object.

Type: String

Required: No

IsLatest

Specifies whether the object is (true) or is not (false) the latest version of an object.

Type: Boolean

Required: No

Key

The object key.

Type: String

Length Constraints: Minimum length of 1.

Required: No

LastModified

Date and time when the object was last modified.

Type: Timestamp

Required: No

Owner

Specifies the owner of the object.

Type: Owner data type

Required: No

RestoreStatus

Specifies the restoration status of an object. Objects in certain storage classes must be restored before they can be retrieved. For more information about these storage classes and how to work with archived objects, see Working with archived objects in the *Amazon S3 User Guide*.

Type: RestoreStatus data type

Required: No

Size

Size in bytes of the object.

Type: Long

Required: No

StorageClass

The class of storage used to store the object.

Type: String

Valid Values: STANDARD

Required: No

VersionId

Version ID of an object.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

OutputLocation

Service: Amazon S3

Describes the location where the restore job's output is stored.

Contents

S3

Describes an S3 location that will receive the results of the restore request.

Type: S3Location data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

OutputSerialization

Service: Amazon S3

Describes how results of the Select job are serialized.

Contents

CSV

Describes the serialization of CSV-encoded Select results.

Type: CSVOutput data type

Required: No

JSON

Specifies JSON as request's output serialization format.

Type: JSONOutput data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Owner

Service: Amazon S3

Container for the owner's display name and ID.

Contents

DisplayName

Container for the display name of the owner. This value is only supported in the following AWS Regions:

- US East (N. Virginia)
- US West (N. California)
- US West (Oregon)
- Asia Pacific (Singapore)
- Asia Pacific (Sydney)
- Asia Pacific (Tokyo)
- Europe (Ireland)
- South America (São Paulo)

> **Note**
>
> This functionality is not supported for directory buckets.

Type: String

Required: No

ID

Container for the ID of the owner.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

OwnershipControls

Service: Amazon S3

The container element for a bucket's ownership controls.

Contents

Rules

The container element for an ownership control rule.

Type: Array of OwnershipControlsRule data types

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

OwnershipControlsRule

Service: Amazon S3

The container element for an ownership control rule.

Contents

ObjectOwnership

The container element for object ownership for a bucket's ownership controls.

`BucketOwnerPreferred` - Objects uploaded to the bucket change ownership to the bucket owner if the objects are uploaded with the `bucket-owner-full-control` canned ACL.

`ObjectWriter` - The uploading account will own the object if the object is uploaded with the `bucket-owner-full-control` canned ACL.

`BucketOwnerEnforced` - Access control lists (ACLs) are disabled and no longer affect permissions. The bucket owner automatically owns and has full control over every object in the bucket. The bucket only accepts PUT requests that don't specify an ACL or specify bucket owner full control ACLs (such as the predefined `bucket-owner-full-control` canned ACL or a custom ACL in XML format that grants the same permissions).

By default, `ObjectOwnership` is set to `BucketOwnerEnforced` and ACLs are disabled. We recommend keeping ACLs disabled, except in uncommon use cases where you must control access for each object individually. For more information about S3 Object Ownership, see Controlling ownership of objects and disabling ACLs for your bucket in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets. Directory buckets use the bucket owner enforced setting for S3 Object Ownership.

Type: String

Valid Values: `BucketOwnerPreferred | ObjectWriter | BucketOwnerEnforced`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ParquetInput

Service: Amazon S3

Container for Parquet.

Contents

The members of this exception structure are context-dependent.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Part

Service: Amazon S3

Container for elements related to a part.

Contents

ChecksumCRC32

This header can be used as a data integrity check to verify that the data received is the same data that was originally sent. This header specifies the base64-encoded, 32-bit CRC32 checksum of the object. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

Required: No

ChecksumCRC32C

The base64-encoded, 32-bit CRC32C checksum of the object. This will only be present if it was uploaded with the object. When you use an API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

Required: No

ChecksumSHA1

The base64-encoded, 160-bit SHA-1 digest of the object. This will only be present if it was uploaded with the object. When you use the API operation on an object that was uploaded using multipart uploads, this value may not be a direct checksum value of the full object. Instead, it's a calculation based on the checksum values of each individual part. For more information about how checksums are calculated with multipart uploads, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

Required: No

ChecksumSHA256

This header can be used as a data integrity check to verify that the data received is the same data that was originally sent. This header specifies the base64-encoded, 256-bit SHA-256 digest of the object. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

Required: No

ETag

Entity tag returned when the part was uploaded.

Type: String

Required: No

LastModified

Date and time at which the part was uploaded.

Type: Timestamp

Required: No

PartNumber

Part number identifying the part. This is a positive integer between 1 and 10,000.

Type: Integer

Required: No

Size

Size in bytes of the uploaded part data.

Type: Long

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

PartitionedPrefix

Service: Amazon S3

Amazon S3 keys for log objects are partitioned in the following format:

`[DestinationPrefix][SourceAccountId]/[SourceRegion]/[SourceBucket]/[YYYY]/[MM]/[DD]/[YYYY]-[MM]-[DD]-[hh]-[mm]-[ss]-[UniqueString]`

PartitionedPrefix defaults to EventTime delivery when server access logs are delivered.

Contents

PartitionDateSource

Specifies the partition date source for the partitioned prefix. PartitionDateSource can be EventTime or DeliveryTime.

Type: String

Valid Values: `EventTime | DeliveryTime`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

PolicyStatus

Service: Amazon S3

The container element for a bucket's policy status.

Contents

IsPublic

The policy status for this bucket. TRUE indicates that this bucket is public. FALSE indicates that the bucket is not public.

Type: Boolean

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Progress

Service: Amazon S3

This data type contains information about progress of an operation.

Contents

BytesProcessed

The current number of uncompressed object bytes processed.

Type: Long

Required: No

BytesReturned

The current number of bytes of records payload data returned.

Type: Long

Required: No

BytesScanned

The current number of object bytes scanned.

Type: Long

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ProgressEvent

Service: Amazon S3

This data type contains information about the progress event of an operation.

Contents

Details

The Progress event details.

Type: Progress data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

PublicAccessBlockConfiguration

Service: Amazon S3

The PublicAccessBlock configuration that you want to apply to this Amazon S3 bucket. You can enable the configuration options in any combination. For more information about when Amazon S3 considers a bucket or object public, see The Meaning of "Public" in the *Amazon S3 User Guide*.

Contents

BlockPublicAcls

Specifies whether Amazon S3 should block public access control lists (ACLs) for this bucket and objects in this bucket. Setting this element to TRUE causes the following behavior:

- PUT Bucket ACL and PUT Object ACL calls fail if the specified ACL is public.
- PUT Object calls fail if the request includes a public ACL.
- PUT Bucket calls fail if the request includes a public ACL.

Enabling this setting doesn't affect existing policies or ACLs.

Type: Boolean

Required: No

BlockPublicPolicy

Specifies whether Amazon S3 should block public bucket policies for this bucket. Setting this element to TRUE causes Amazon S3 to reject calls to PUT Bucket policy if the specified bucket policy allows public access.

Enabling this setting doesn't affect existing bucket policies.

Type: Boolean

Required: No

IgnorePublicAcls

Specifies whether Amazon S3 should ignore public ACLs for this bucket and objects in this bucket. Setting this element to TRUE causes Amazon S3 to ignore all public ACLs on this bucket and objects in this bucket.

Enabling this setting doesn't affect the persistence of any existing ACLs and doesn't prevent new public ACLs from being set.

Type: Boolean

Required: No

RestrictPublicBuckets

Specifies whether Amazon S3 should restrict public bucket policies for this bucket. Setting this element to TRUE restricts access to this bucket to only AWS service principals and authorized users within this account if the bucket has a public policy.

Enabling this setting doesn't affect previously stored bucket policies, except that public and cross-account access within any public bucket policy, including non-public delegation to specific accounts, is blocked.

Type: Boolean

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

QueueConfiguration

Service: Amazon S3

Specifies the configuration for publishing messages to an Amazon Simple Queue Service (Amazon SQS) queue when Amazon S3 detects specified events.

Contents

Events

A collection of bucket events for which to send notifications

Type: Array of strings

Valid Values: `s3:ReducedRedundancyLostObject | s3:ObjectCreated:* | s3:ObjectCreated:Put | s3:ObjectCreated:Post | s3:ObjectCreated:Copy | s3:ObjectCreated:CompleteMultipartUpload | s3:ObjectRemoved:* | s3:ObjectRemoved:Delete | s3:ObjectRemoved:DeleteMarkerCreated | s3:ObjectRestore:* | s3:ObjectRestore:Post | s3:ObjectRestore:Completed | s3:Replication:* | s3:Replication:OperationFailedReplication | s3:Replication:OperationNotTracked | s3:Replication:OperationMissedThreshold | s3:Replication:OperationReplicatedAfterThreshold | s3:ObjectRestore:Delete | s3:LifecycleTransition | s3:IntelligentTiering | s3:ObjectAcl:Put | s3:LifecycleExpiration:* | s3:LifecycleExpiration:Delete | s3:LifecycleExpiration:DeleteMarkerCreated | s3:ObjectTagging:* | s3:ObjectTagging:Put | s3:ObjectTagging:Delete`

Required: Yes

QueueArn

The Amazon Resource Name (ARN) of the Amazon SQS queue to which Amazon S3 publishes a message when it detects events of the specified type.

Type: String

Required: Yes

Filter

Specifies object key name filtering rules. For information about key name filtering, see Configuring event notifications using object key name filtering in the *Amazon S3 User Guide*.

Type: NotificationConfigurationFilter data type

Required: No

Id

An optional unique identifier for configurations in a notification configuration. If you don't provide one, Amazon S3 will assign an ID.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

QueueConfigurationDeprecated

Service: Amazon S3

This data type is deprecated. Use QueueConfiguration for the same purposes. This data type specifies the configuration for publishing messages to an Amazon Simple Queue Service (Amazon SQS) queue when Amazon S3 detects specified events.

Contents

Event

This member has been deprecated.

The bucket event for which to send notifications.

Type: String

Valid Values: `s3:ReducedRedundancyLostObject | s3:ObjectCreated:* | s3:ObjectCreated:Put | s3:ObjectCreated:Post | s3:ObjectCreated:Copy | s3:ObjectCreated:CompleteMultipartUpload | s3:ObjectRemoved:* | s3:ObjectRemoved:Delete | s3:ObjectRemoved:DeleteMarkerCreated | s3:ObjectRestore:* | s3:ObjectRestore:Post | s3:ObjectRestore:Completed | s3:Replication:* | s3:Replication:OperationFailedReplication | s3:Replication:OperationNotTracked | s3:Replication:OperationMissedThreshold | s3:Replication:OperationReplicatedAfterThreshold | s3:ObjectRestore:Delete | s3:LifecycleTransition | s3:IntelligentTiering | s3:ObjectAcl:Put | s3:LifecycleExpiration:* | s3:LifecycleExpiration:Delete | s3:LifecycleExpiration:DeleteMarkerCreated | s3:ObjectTagging:* | s3:ObjectTagging:Put | s3:ObjectTagging:Delete`

Required: No

Events

A collection of bucket events for which to send notifications.

Type: Array of strings

Valid Values: `s3:ReducedRedundancyLostObject | s3:ObjectCreated:* | s3:ObjectCreated:Put | s3:ObjectCreated:Post | s3:ObjectCreated:Copy`

```
| s3:ObjectCreated:CompleteMultipartUpload | s3:ObjectRemoved:* |
s3:ObjectRemoved:Delete | s3:ObjectRemoved:DeleteMarkerCreated |
s3:ObjectRestore:* | s3:ObjectRestore:Post | s3:ObjectRestore:Completed
| s3:Replication:* | s3:Replication:OperationFailedReplication |
s3:Replication:OperationNotTracked |
s3:Replication:OperationMissedThreshold |
s3:Replication:OperationReplicatedAfterThreshold |
s3:ObjectRestore:Delete | s3:LifecycleTransition |
s3:IntelligentTiering | s3:ObjectAcl:Put | s3:LifecycleExpiration:* |
s3:LifecycleExpiration:Delete |
s3:LifecycleExpiration:DeleteMarkerCreated | s3:ObjectTagging:* |
s3:ObjectTagging:Put | s3:ObjectTagging:Delete
```

Required: No

Id

An optional unique identifier for configurations in a notification configuration. If you don't provide one, Amazon S3 will assign an ID.

Type: String

Required: No

Queue

The Amazon Resource Name (ARN) of the Amazon SQS queue to which Amazon S3 publishes a message when it detects events of the specified type.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RecordsEvent

Service: Amazon S3

The container for the records event.

Contents

Payload

The byte array of partial, one or more result records.

Type: Base64-encoded binary data object

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Redirect

Service: Amazon S3

Specifies how requests are redirected. In the event of an error, you can specify a different error code to return.

Contents

HostName

The host name to use in the redirect request.

Type: String

Required: No

HttpRedirectCode

The HTTP redirect code to use on the response. Not required if one of the siblings is present.

Type: String

Required: No

Protocol

Protocol to use when redirecting requests. The default is the protocol that is used in the original request.

Type: String

Valid Values: `http | https`

Required: No

ReplaceKeyPrefixWith

The object key prefix to use in the redirect request. For example, to redirect requests for all pages with prefix `docs/` (objects in the `docs/` folder) to `documents/`, you can set a condition block with `KeyPrefixEquals` set to `docs/` and in the Redirect set `ReplaceKeyPrefixWith` to `/documents`. Not required if one of the siblings is present. Can be present only if `ReplaceKeyWith` is not provided.

> **Important**
>
> Replacement must be made for object keys containing special characters (such as carriage returns) when using XML requests. For more information, see XML related object key constraints.

Type: String

Required: No

ReplaceKeyWith

The specific object key to use in the redirect request. For example, redirect request to `error.html`. Not required if one of the siblings is present. Can be present only if `ReplaceKeyPrefixWith` is not provided.

> **Important**
>
> Replacement must be made for object keys containing special characters (such as carriage returns) when using XML requests. For more information, see XML related object key constraints.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RedirectAllRequestsTo

Service: Amazon S3

Specifies the redirect behavior of all requests to a website endpoint of an Amazon S3 bucket.

Contents

HostName

Name of the host where requests are redirected.

Type: String

Required: Yes

Protocol

Protocol to use when redirecting requests. The default is the protocol that is used in the original request.

Type: String

Valid Values: `http | https`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ReplicaModifications

Service: Amazon S3

A filter that you can specify for selection for modifications on replicas. Amazon S3 doesn't replicate replica modifications by default. In the latest version of replication configuration (when `Filter` is specified), you can specify this element and set the status to `Enabled` to replicate modifications on replicas.

> **Note**
>
> If you don't specify the `Filter` element, Amazon S3 assumes that the replication configuration is the earlier version, V1. In the earlier version, this element is not allowed.

Contents

Status

Specifies whether Amazon S3 replicates modifications on replicas.

Type: String

Valid Values: `Enabled | Disabled`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ReplicationConfiguration

Service: Amazon S3

A container for replication rules. You can add up to 1,000 rules. The maximum size of a replication configuration is 2 MB.

Contents

Role

The Amazon Resource Name (ARN) of the AWS Identity and Access Management (IAM) role that Amazon S3 assumes when replicating objects. For more information, see How to Set Up Replication in the *Amazon S3 User Guide*.

Type: String

Required: Yes

Rules

A container for one or more replication rules. A replication configuration must have at least one rule and can contain a maximum of 1,000 rules.

Type: Array of ReplicationRule data types

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ReplicationRule

Service: Amazon S3

Specifies which Amazon S3 objects to replicate and where to store the replicas.

Contents

Destination

A container for information about the replication destination and its configurations including enabling the S3 Replication Time Control (S3 RTC).

Type: Destination data type

Required: Yes

Status

Specifies whether the rule is enabled.

Type: String

Valid Values: `Enabled | Disabled`

Required: Yes

DeleteMarkerReplication

Specifies whether Amazon S3 replicates delete markers. If you specify a `Filter` in your replication configuration, you must also include a `DeleteMarkerReplication` element. If your `Filter` includes a `Tag` element, the `DeleteMarkerReplication` `Status` must be set to Disabled, because Amazon S3 does not support replicating delete markers for tag-based rules. For an example configuration, see Basic Rule Configuration.

For more information about delete marker replication, see Basic Rule Configuration.

> **Note**
>
> If you are using an earlier version of the replication configuration, Amazon S3 handles replication of delete markers differently. For more information, see Backward Compatibility.

Type: DeleteMarkerReplication data type

Required: No

ExistingObjectReplication

Optional configuration to replicate existing source bucket objects. For more information, see Replicating Existing Objects in the *Amazon S3 User Guide*.

Type: ExistingObjectReplication data type

Required: No

Filter

A filter that identifies the subset of objects to which the replication rule applies. A `Filter` must specify exactly one `Prefix`, `Tag`, or an `And` child element.

Type: ReplicationRuleFilter data type

Required: No

ID

A unique identifier for the rule. The maximum value is 255 characters.

Type: String

Required: No

Prefix

This member has been deprecated.

An object key name prefix that identifies the object or objects to which the rule applies. The maximum prefix length is 1,024 characters. To include all objects in a bucket, specify an empty string.

> **Important**
>
> Replacement must be made for object keys containing special characters (such as carriage returns) when using XML requests. For more information, see XML related object key constraints.

Type: String

Required: No

Priority

The priority indicates which rule has precedence whenever two or more replication rules conflict. Amazon S3 will attempt to replicate objects according to all replication rules. However, if there are two or more rules with the same destination bucket, then objects will be replicated according to the rule with the highest priority. The higher the number, the higher the priority.

For more information, see Replication in the *Amazon S3 User Guide*.

Type: Integer

Required: No

SourceSelectionCriteria

A container that describes additional filters for identifying the source objects that you want to replicate. You can choose to enable or disable the replication of these objects. Currently, Amazon S3 supports only the filter that you can specify for objects created with server-side encryption using a customer managed key stored in AWS Key Management Service (SSE-KMS).

Type: SourceSelectionCriteria data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ReplicationRuleAndOperator

Service: Amazon S3

A container for specifying rule filters. The filters determine the subset of objects to which the rule applies. This element is required only if you specify more than one filter.

For example:

- If you specify both a `Prefix` and a `Tag` filter, wrap these filters in an `And` tag.
- If you specify a filter based on multiple tags, wrap the `Tag` elements in an `And` tag.

Contents

Prefix

An object key name prefix that identifies the subset of objects to which the rule applies.

Type: String

Required: No

Tags

An array of tags containing key and value pairs.

Type: Array of Tag data types

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ReplicationRuleFilter

Service: Amazon S3

A filter that identifies the subset of objects to which the replication rule applies. A `Filter` must specify exactly one `Prefix`, `Tag`, or an `And` child element.

Contents

And

A container for specifying rule filters. The filters determine the subset of objects to which the rule applies. This element is required only if you specify more than one filter. For example:

- If you specify both a `Prefix` and a `Tag` filter, wrap these filters in an `And` tag.
- If you specify a filter based on multiple tags, wrap the `Tag` elements in an `And` tag.

Type: ReplicationRuleAndOperator data type

Required: No

Prefix

An object key name prefix that identifies the subset of objects to which the rule applies.

> **Important**
>
> Replacement must be made for object keys containing special characters (such as carriage returns) when using XML requests. For more information, see XML related object key constraints.

Type: String

Required: No

Tag

A container for specifying a tag key and value.

The rule applies only to objects that have the tag in their tag set.

Type: Tag data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ReplicationTime

Service: Amazon S3

A container specifying S3 Replication Time Control (S3 RTC) related information, including whether S3 RTC is enabled and the time when all objects and operations on objects must be replicated. Must be specified together with a `Metrics` block.

Contents

Status

Specifies whether the replication time is enabled.

Type: String

Valid Values: `Enabled | Disabled`

Required: Yes

Time

A container specifying the time by which replication should be complete for all objects and operations on objects.

Type: ReplicationTimeValue data type

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ReplicationTimeValue

Service: Amazon S3

A container specifying the time value for S3 Replication Time Control (S3 RTC) and replication metrics `EventThreshold`.

Contents

Minutes

Contains an integer specifying time in minutes.

Valid value: 15

Type: Integer

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RequestPaymentConfiguration

Service: Amazon S3

Container for Payer.

Contents

Payer

Specifies who pays for the download and request fees.

Type: String

Valid Values: `Requester | BucketOwner`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RequestProgress

Service: Amazon S3

Container for specifying if periodic `QueryProgress` messages should be sent.

Contents

Enabled

Specifies whether periodic QueryProgress frames should be sent. Valid values: TRUE, FALSE. Default value: FALSE.

Type: Boolean

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RestoreRequest

Service: Amazon S3

Container for restore job parameters.

Contents

Days

Lifetime of the active copy in days. Do not use with restores that specify `OutputLocation`.

The Days element is required for regular restores, and must not be provided for select requests.

Type: Integer

Required: No

Description

The optional description for the job.

Type: String

Required: No

GlacierJobParameters

S3 Glacier related parameters pertaining to this job. Do not use with restores that specify `OutputLocation`.

Type: GlacierJobParameters data type

Required: No

OutputLocation

Describes the location where the restore job's output is stored.

Type: OutputLocation data type

Required: No

SelectParameters

Describes the parameters for Select job types.

Type: SelectParameters data type

Required: No

Tier

Retrieval tier at which the restore will be processed.

Type: String

Valid Values: `Standard | Bulk | Expedited`

Required: No

Type

Type of restore request.

Type: String

Valid Values: `SELECT`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RestoreStatus

Service: Amazon S3

Specifies the restoration status of an object. Objects in certain storage classes must be restored before they can be retrieved. For more information about these storage classes and how to work with archived objects, see Working with archived objects in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported for directory buckets. Only the S3 Express One Zone storage class is supported by directory buckets to store objects.

Contents

IsRestoreInProgress

Specifies whether the object is currently being restored. If the object restoration is in progress, the header returns the value TRUE. For example:

```
x-amz-optional-object-attributes: IsRestoreInProgress="true"
```

If the object restoration has completed, the header returns the value FALSE. For example:

```
x-amz-optional-object-attributes: IsRestoreInProgress="false",
RestoreExpiryDate="2012-12-21T00:00:00.000Z"
```

If the object hasn't been restored, there is no header response.

Type: Boolean

Required: No

RestoreExpiryDate

Indicates when the restored copy will expire. This value is populated only if the object has already been restored. For example:

```
x-amz-optional-object-attributes: IsRestoreInProgress="false",
RestoreExpiryDate="2012-12-21T00:00:00.000Z"
```

Type: Timestamp

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RoutingRule

Service: Amazon S3

Specifies the redirect behavior and when a redirect is applied. For more information about routing rules, see Configuring advanced conditional redirects in the *Amazon S3 User Guide*.

Contents

Redirect

Container for redirect information. You can redirect requests to another host, to another page, or with another protocol. In the event of an error, you can specify a different error code to return.

Type: Redirect data type

Required: Yes

Condition

A container for describing a condition that must be met for the specified redirect to apply. For example, 1. If request is for pages in the `/docs` folder, redirect to the `/documents` folder. 2. If request results in HTTP error 4xx, redirect request to another host where you might process the error.

Type: Condition data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Rule

Service: Amazon S3

Specifies lifecycle rules for an Amazon S3 bucket. For more information, see Put Bucket Lifecycle Configuration in the *Amazon S3 API Reference*. For examples, see Put Bucket Lifecycle Configuration Examples.

Contents

Prefix

Object key prefix that identifies one or more objects to which this rule applies.

> **Important**
>
> Replacement must be made for object keys containing special characters (such as carriage returns) when using XML requests. For more information, see XML related object key constraints.

Type: String

Required: Yes

Status

If `Enabled`, the rule is currently being applied. If `Disabled`, the rule is not currently being applied.

Type: String

Valid Values: `Enabled | Disabled`

Required: Yes

AbortIncompleteMultipartUpload

Specifies the days since the initiation of an incomplete multipart upload that Amazon S3 will wait before permanently removing all parts of the upload. For more information, see Aborting Incomplete Multipart Uploads Using a Bucket Lifecycle Configuration in the *Amazon S3 User Guide*.

Type: AbortIncompleteMultipartUpload data type

Required: No

Expiration

Specifies the expiration for the lifecycle of the object.

Type: LifecycleExpiration data type

Required: No

ID

Unique identifier for the rule. The value can't be longer than 255 characters.

Type: String

Required: No

NoncurrentVersionExpiration

Specifies when noncurrent object versions expire. Upon expiration, Amazon S3 permanently deletes the noncurrent object versions. You set this lifecycle configuration action on a bucket that has versioning enabled (or suspended) to request that Amazon S3 delete noncurrent object versions at a specific period in the object's lifetime.

Type: NoncurrentVersionExpiration data type

Required: No

NoncurrentVersionTransition

Container for the transition rule that describes when noncurrent objects transition to the `STANDARD_IA`, `ONEZONE_IA`, `INTELLIGENT_TIERING`, `GLACIER_IR`, `GLACIER`, or `DEEP_ARCHIVE` storage class. If your bucket is versioning-enabled (or versioning is suspended), you can set this action to request that Amazon S3 transition noncurrent object versions to the `STANDARD_IA`, `ONEZONE_IA`, `INTELLIGENT_TIERING`, `GLACIER_IR`, `GLACIER`, or `DEEP_ARCHIVE` storage class at a specific period in the object's lifetime.

Type: NoncurrentVersionTransition data type

Required: No

Transition

Specifies when an object transitions to a specified storage class. For more information about Amazon S3 lifecycle configuration rules, see Transitioning Objects Using Amazon S3 Lifecycle in the *Amazon S3 User Guide*.

Type: Transition data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

S3KeyFilter

Service: Amazon S3

A container for object key name prefix and suffix filtering rules.

Contents

FilterRules

A list of containers for the key-value pair that defines the criteria for the filter rule.

Type: Array of FilterRule data types

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

S3Location

Service: Amazon S3

Describes an Amazon S3 location that will receive the results of the restore request.

Contents

BucketName

The name of the bucket where the restore results will be placed.

Type: String

Required: Yes

Prefix

The prefix that is prepended to the restore results for this request.

Type: String

Required: Yes

AccessControlList

A list of grants that control access to the staged results.

Type: Array of Grant data types

Required: No

CannedACL

The canned ACL to apply to the restore results.

Type: String

Valid Values: `private | public-read | public-read-write | authenticated-read | aws-exec-read | bucket-owner-read | bucket-owner-full-control`

Required: No

Encryption

Contains the type of server-side encryption used.

Type: Encryption data type

Required: No

StorageClass

The class of storage used to store the restore results.

Type: String

Valid Values: `STANDARD | REDUCED_REDUNDANCY | STANDARD_IA | ONEZONE_IA | INTELLIGENT_TIERING | GLACIER | DEEP_ARCHIVE | OUTPOSTS | GLACIER_IR | SNOW | EXPRESS_ONEZONE`

Required: No

Tagging

The tag-set that is applied to the restore results.

Type: Tagging data type

Required: No

UserMetadata

A list of metadata to store with the restore results in S3.

Type: Array of MetadataEntry data types

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ScanRange

Service: Amazon S3

Specifies the byte range of the object to get the records from. A record is processed when its first byte is contained by the range. This parameter is optional, but when specified, it must not be empty. See RFC 2616, Section 14.35.1 about how to specify the start and end of the range.

Contents

End

Specifies the end of the byte range. This parameter is optional. Valid values: non-negative integers. The default value is one less than the size of the object being queried. If only the End parameter is supplied, it is interpreted to mean scan the last N bytes of the file. For example, `<scanrange><end>50</end></scanrange>` means scan the last 50 bytes.

Type: Long

Required: No

Start

Specifies the start of the byte range. This parameter is optional. Valid values: non-negative integers. The default value is 0. If only `start` is supplied, it means scan from that point to the end of the file. For example, `<scanrange><start>50</start></scanrange>` means scan from byte 50 until the end of the file.

Type: Long

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SelectObjectContentEventStream

Service: Amazon S3

The container for selecting objects from a content event stream.

Contents

Cont

The Continuation Event.

Type: ContinuationEvent data type

Required: No

End

The End Event.

Type: EndEvent data type

Required: No

Progress

The Progress Event.

Type: ProgressEvent data type

Required: No

Records

The Records Event.

Type: RecordsEvent data type

Required: No

Stats

The Stats Event.

Type: StatsEvent data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SelectParameters

Service: Amazon S3

Describes the parameters for Select job types.

Contents

Expression

The expression that is used to query the object.

Type: String

Required: Yes

ExpressionType

The type of the provided expression (for example, SQL).

Type: String

Valid Values: SQL

Required: Yes

InputSerialization

Describes the serialization format of the object.

Type: InputSerialization data type

Required: Yes

OutputSerialization

Describes how the results of the Select job are serialized.

Type: OutputSerialization data type

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ServerSideEncryptionByDefault

Service: Amazon S3

Describes the default server-side encryption to apply to new objects in the bucket. If a PUT Object request doesn't specify any server-side encryption, this default encryption will be applied. If you don't specify a customer managed key at configuration, Amazon S3 automatically creates an AWS KMS key in your AWS account the first time that you add an object encrypted with SSE-KMS to a bucket. By default, Amazon S3 uses this KMS key for SSE-KMS. For more information, see PUT Bucket encryption in the *Amazon S3 API Reference*.

Contents

SSEAlgorithm

Server-side encryption algorithm to use for the default encryption.

Type: String

Valid Values: `AES256` | `aws:kms` | `aws:kms:dsse`

Required: Yes

KMSMasterKeyID

AWS Key Management Service (KMS) customer AWS KMS key ID to use for the default encryption. This parameter is allowed if and only if `SSEAlgorithm` is set to `aws:kms` or `aws:kms:dsse`.

You can specify the key ID, key alias, or the Amazon Resource Name (ARN) of the KMS key.

- Key ID: `1234abcd-12ab-34cd-56ef-1234567890ab`
- Key ARN: `arn:aws:kms:us-east-2:111122223333:key/1234abcd-12ab-34cd-56ef-1234567890ab`
- Key Alias: `alias/alias-name`

If you use a key ID, you can run into a LogDestination undeliverable error when creating a VPC flow log.

If you are using encryption with cross-account or AWS service operations you must use a fully qualified KMS key ARN. For more information, see Using encryption for cross-account operations.

> **Important**
>
> Amazon S3 only supports symmetric encryption KMS keys. For more information, see Asymmetric keys in AWS KMS in the *AWS Key Management Service Developer Guide*.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ServerSideEncryptionConfiguration

Service: Amazon S3

Specifies the default server-side-encryption configuration.

Contents

Rules

Container for information about a particular server-side encryption configuration rule.

Type: Array of ServerSideEncryptionRule data types

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ServerSideEncryptionRule

Service: Amazon S3

Specifies the default server-side encryption configuration.

Contents

ApplyServerSideEncryptionByDefault

Specifies the default server-side encryption to apply to new objects in the bucket. If a PUT Object request doesn't specify any server-side encryption, this default encryption will be applied.

Type: ServerSideEncryptionByDefault data type

Required: No

BucketKeyEnabled

Specifies whether Amazon S3 should use an S3 Bucket Key with server-side encryption using KMS (SSE-KMS) for new objects in the bucket. Existing objects are not affected. Setting the `BucketKeyEnabled` element to `true` causes Amazon S3 to use an S3 Bucket Key. By default, S3 Bucket Key is not enabled.

For more information, see Amazon S3 Bucket Keys in the *Amazon S3 User Guide*.

Type: Boolean

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SessionCredentials

Service: Amazon S3

The established temporary security credentials of the session.

> **Note**
>
> **Directory buckets** - These session credentials are only supported for the authentication and authorization of Zonal endpoint APIs on directory buckets.

Contents

AccessKeyId

A unique identifier that's associated with a secret access key. The access key ID and the secret access key are used together to sign programmatic AWS requests cryptographically.

Type: String

Required: Yes

Expiration

Temporary security credentials expire after a specified interval. After temporary credentials expire, any calls that you make with those credentials will fail. So you must generate a new set of temporary credentials. Temporary credentials cannot be extended or refreshed beyond the original specified interval.

Type: Timestamp

Required: Yes

SecretAccessKey

A key that's used with the access key ID to cryptographically sign programmatic AWS requests. Signing a request identifies the sender and prevents the request from being altered.

Type: String

Required: Yes

SessionToken

A part of the temporary security credentials. The session token is used to validate the temporary security credentials.

Type: String

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SimplePrefix

Service: Amazon S3

To use simple format for S3 keys for log objects, set SimplePrefix to an empty object.

`[DestinationPrefix][YYYY]-[MM]-[DD]-[hh]-[mm]-[ss]-[UniqueString]`

Contents

The members of this exception structure are context-dependent.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SourceSelectionCriteria

Service: Amazon S3

A container that describes additional filters for identifying the source objects that you want to replicate. You can choose to enable or disable the replication of these objects. Currently, Amazon S3 supports only the filter that you can specify for objects created with server-side encryption using a customer managed key stored in AWS Key Management Service (SSE-KMS).

Contents

ReplicaModifications

A filter that you can specify for selections for modifications on replicas. Amazon S3 doesn't replicate replica modifications by default. In the latest version of replication configuration (when `Filter` is specified), you can specify this element and set the status to `Enabled` to replicate modifications on replicas.

> **Note**
>
> If you don't specify the `Filter` element, Amazon S3 assumes that the replication configuration is the earlier version, V1. In the earlier version, this element is not allowed

Type: ReplicaModifications data type

Required: No

SseKmsEncryptedObjects

A container for filter information for the selection of Amazon S3 objects encrypted with AWS KMS. If you include `SourceSelectionCriteria` in the replication configuration, this element is required.

Type: SseKmsEncryptedObjects data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SSEKMS

Service: Amazon S3

Specifies the use of SSE-KMS to encrypt delivered inventory reports.

Contents

KeyId

Specifies the ID of the AWS Key Management Service (AWS KMS) symmetric encryption customer managed key to use for encrypting inventory reports.

Type: String

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SseKmsEncryptedObjects

Service: Amazon S3

A container for filter information for the selection of S3 objects encrypted with AWS KMS.

Contents

Status

Specifies whether Amazon S3 replicates objects created with server-side encryption using an AWS KMS key stored in AWS Key Management Service.

Type: String

Valid Values: `Enabled | Disabled`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SSES3

Service: Amazon S3

Specifies the use of SSE-S3 to encrypt delivered inventory reports.

Contents

The members of this exception structure are context-dependent.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Stats

Service: Amazon S3

Container for the stats details.

Contents

BytesProcessed

The total number of uncompressed object bytes processed.

Type: Long

Required: No

BytesReturned

The total number of bytes of records payload data returned.

Type: Long

Required: No

BytesScanned

The total number of object bytes scanned.

Type: Long

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

StatsEvent

Service: Amazon S3

Container for the Stats Event.

Contents

Details

The Stats event details.

Type: Stats data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

StorageClassAnalysis

Service: Amazon S3

Specifies data related to access patterns to be collected and made available to analyze the tradeoffs between different storage classes for an Amazon S3 bucket.

Contents

DataExport

Specifies how data related to the storage class analysis for an Amazon S3 bucket should be exported.

Type: StorageClassAnalysisDataExport data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

StorageClassAnalysisDataExport

Service: Amazon S3

Container for data related to the storage class analysis for an Amazon S3 bucket for export.

Contents

Destination

The place to store the data for an analysis.

Type: AnalyticsExportDestination data type

Required: Yes

OutputSchemaVersion

The version of the output schema to use when exporting data. Must be `V_1`.

Type: String

Valid Values: `V_1`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Tag

Service: Amazon S3

A container of a key value name pair.

Contents

Key

Name of the object key.

Type: String

Length Constraints: Minimum length of 1.

Required: Yes

Value

Value of the tag.

Type: String

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Tagging

Service: Amazon S3

Container for `TagSet` elements.

Contents

TagSet

A collection for a set of tags

Type: Array of Tag data types

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

TargetGrant

Service: Amazon S3

Container for granting information.

Buckets that use the bucket owner enforced setting for Object Ownership don't support target grants. For more information, see Permissions server access log delivery in the *Amazon S3 User Guide*.

Contents

Grantee

Container for the person being granted permissions.

Type: Grantee data type

Required: No

Permission

Logging permissions assigned to the grantee for the bucket.

Type: String

Valid Values: `FULL_CONTROL | READ | WRITE`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

TargetObjectKeyFormat

Service: Amazon S3

Amazon S3 key format for log objects. Only one format, PartitionedPrefix or SimplePrefix, is allowed.

Contents

PartitionedPrefix

Partitioned S3 key for log objects.

Type: PartitionedPrefix data type

Required: No

SimplePrefix

To use the simple format for S3 keys for log objects. To specify SimplePrefix format, set SimplePrefix to {}.

Type: SimplePrefix data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Tiering

Service: Amazon S3

The S3 Intelligent-Tiering storage class is designed to optimize storage costs by automatically moving data to the most cost-effective storage access tier, without additional operational overhead.

Contents

AccessTier

S3 Intelligent-Tiering access tier. See Storage class for automatically optimizing frequently and infrequently accessed objects for a list of access tiers in the S3 Intelligent-Tiering storage class.

Type: String

Valid Values: `ARCHIVE_ACCESS | DEEP_ARCHIVE_ACCESS`

Required: Yes

Days

The number of consecutive days of no access after which an object will be eligible to be transitioned to the corresponding tier. The minimum number of days specified for Archive Access tier must be at least 90 days and Deep Archive Access tier must be at least 180 days. The maximum can be up to 2 years (730 days).

Type: Integer

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

TopicConfiguration

Service: Amazon S3

A container for specifying the configuration for publication of messages to an Amazon Simple Notification Service (Amazon SNS) topic when Amazon S3 detects specified events.

Contents

Events

The Amazon S3 bucket event about which to send notifications. For more information, see Supported Event Types in the *Amazon S3 User Guide*.

Type: Array of strings

Valid Values: `s3:ReducedRedundancyLostObject | s3:ObjectCreated:* | s3:ObjectCreated:Put | s3:ObjectCreated:Post | s3:ObjectCreated:Copy | s3:ObjectCreated:CompleteMultipartUpload | s3:ObjectRemoved:* | s3:ObjectRemoved:Delete | s3:ObjectRemoved:DeleteMarkerCreated | s3:ObjectRestore:* | s3:ObjectRestore:Post | s3:ObjectRestore:Completed | s3:Replication:* | s3:Replication:OperationFailedReplication | s3:Replication:OperationNotTracked | s3:Replication:OperationMissedThreshold | s3:Replication:OperationReplicatedAfterThreshold | s3:ObjectRestore:Delete | s3:LifecycleTransition | s3:IntelligentTiering | s3:ObjectAcl:Put | s3:LifecycleExpiration:* | s3:LifecycleExpiration:Delete | s3:LifecycleExpiration:DeleteMarkerCreated | s3:ObjectTagging:* | s3:ObjectTagging:Put | s3:ObjectTagging:Delete`

Required: Yes

TopicArn

The Amazon Resource Name (ARN) of the Amazon SNS topic to which Amazon S3 publishes a message when it detects events of the specified type.

Type: String

Required: Yes

Filter

Specifies object key name filtering rules. For information about key name filtering, see Configuring event notifications using object key name filtering in the *Amazon S3 User Guide*.

Type: NotificationConfigurationFilter data type

Required: No

Id

An optional unique identifier for configurations in a notification configuration. If you don't provide one, Amazon S3 will assign an ID.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

TopicConfigurationDeprecated

Service: Amazon S3

A container for specifying the configuration for publication of messages to an Amazon Simple Notification Service (Amazon SNS) topic when Amazon S3 detects specified events. This data type is deprecated. Use TopicConfiguration instead.

Contents

Event

This member has been deprecated.

Bucket event for which to send notifications.

Type: String

Valid Values: `s3:ReducedRedundancyLostObject | s3:ObjectCreated:* | s3:ObjectCreated:Put | s3:ObjectCreated:Post | s3:ObjectCreated:Copy | s3:ObjectCreated:CompleteMultipartUpload | s3:ObjectRemoved:* | s3:ObjectRemoved:Delete | s3:ObjectRemoved:DeleteMarkerCreated | s3:ObjectRestore:* | s3:ObjectRestore:Post | s3:ObjectRestore:Completed | s3:Replication:* | s3:Replication:OperationFailedReplication | s3:Replication:OperationNotTracked | s3:Replication:OperationMissedThreshold | s3:Replication:OperationReplicatedAfterThreshold | s3:ObjectRestore:Delete | s3:LifecycleTransition | s3:IntelligentTiering | s3:ObjectAcl:Put | s3:LifecycleExpiration:* | s3:LifecycleExpiration:Delete | s3:LifecycleExpiration:DeleteMarkerCreated | s3:ObjectTagging:* | s3:ObjectTagging:Put | s3:ObjectTagging:Delete`

Required: No

Events

A collection of events related to objects

Type: Array of strings

Valid Values: `s3:ReducedRedundancyLostObject | s3:ObjectCreated:* | s3:ObjectCreated:Put | s3:ObjectCreated:Post | s3:ObjectCreated:Copy`

```
| s3:ObjectCreated:CompleteMultipartUpload | s3:ObjectRemoved:* |
s3:ObjectRemoved:Delete | s3:ObjectRemoved:DeleteMarkerCreated |
s3:ObjectRestore:* | s3:ObjectRestore:Post | s3:ObjectRestore:Completed
| s3:Replication:* | s3:Replication:OperationFailedReplication |
s3:Replication:OperationNotTracked |
s3:Replication:OperationMissedThreshold |
s3:Replication:OperationReplicatedAfterThreshold |
s3:ObjectRestore:Delete | s3:LifecycleTransition |
s3:IntelligentTiering | s3:ObjectAcl:Put | s3:LifecycleExpiration:* |
s3:LifecycleExpiration:Delete |
s3:LifecycleExpiration:DeleteMarkerCreated | s3:ObjectTagging:* |
s3:ObjectTagging:Put | s3:ObjectTagging:Delete
```

Required: No

Id

An optional unique identifier for configurations in a notification configuration. If you don't provide one, Amazon S3 will assign an ID.

Type: String

Required: No

Topic

Amazon SNS topic to which Amazon S3 will publish a message to report the specified events for the bucket.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Transition

Service: Amazon S3

Specifies when an object transitions to a specified storage class. For more information about Amazon S3 lifecycle configuration rules, see Transitioning Objects Using Amazon S3 Lifecycle in the *Amazon S3 User Guide*.

Contents

Date

Indicates when objects are transitioned to the specified storage class. The date value must be in ISO 8601 format. The time is always midnight UTC.

Type: Timestamp

Required: No

Days

Indicates the number of days after creation when objects are transitioned to the specified storage class. The value must be a positive integer.

Type: Integer

Required: No

StorageClass

The storage class to which you want the object to transition.

Type: String

Valid Values: `GLACIER | STANDARD_IA | ONEZONE_IA | INTELLIGENT_TIERING | DEEP_ARCHIVE | GLACIER_IR`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VersioningConfiguration

Service: Amazon S3

Describes the versioning state of an Amazon S3 bucket. For more information, see PUT Bucket versioning in the *Amazon S3 API Reference*.

Contents

MFADelete

Specifies whether MFA delete is enabled in the bucket versioning configuration. This element is only returned if the bucket has been configured with MFA delete. If the bucket has never been so configured, this element is not returned.

Type: String

Valid Values: `Enabled | Disabled`

Required: No

Status

The versioning state of the bucket.

Type: String

Valid Values: `Enabled | Suspended`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

WebsiteConfiguration

Service: Amazon S3

Specifies website configuration parameters for an Amazon S3 bucket.

Contents

ErrorDocument

The name of the error document for the website.

Type: ErrorDocument data type

Required: No

IndexDocument

The name of the index document for the website.

Type: IndexDocument data type

Required: No

RedirectAllRequestsTo

The redirect behavior for every request to this bucket's website endpoint.

> **Important**
>
> If you specify this property, you can't specify any other property.

Type: RedirectAllRequestsTo data type

Required: No

RoutingRules

Rules that define when a redirect is applied and the redirect behavior.

Type: Array of RoutingRule data types

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Amazon S3 Control

The following data types are supported by Amazon S3 Control:

- AbortIncompleteMultipartUpload
- AccessControlTranslation
- AccessGrantsLocationConfiguration
- AccessPoint
- AccountLevel
- ActivityMetrics
- AdvancedCostOptimizationMetrics
- AdvancedDataProtectionMetrics
- AsyncErrorDetails
- AsyncOperation
- AsyncRequestParameters
- AsyncResponseDetails
- AwsLambdaTransformation
- BucketLevel
- CloudWatchMetrics
- CreateBucketConfiguration
- CreateMultiRegionAccessPointInput
- Credentials
- DeleteMarkerReplication
- DeleteMultiRegionAccessPointInput

- Destination
- DetailedStatusCodesMetrics
- EncryptionConfiguration
- EstablishedMultiRegionAccessPointPolicy
- Exclude
- ExistingObjectReplication
- GeneratedManifestEncryption
- Grantee
- Include
- JobDescriptor
- JobFailure
- JobListDescriptor
- JobManifest
- JobManifestGenerator
- JobManifestGeneratorFilter
- JobManifestLocation
- JobManifestSpec
- JobOperation
- JobProgressSummary
- JobReport
- JobTimers
- KeyNameConstraint
- LambdaInvokeOperation
- LifecycleConfiguration
- LifecycleExpiration
- LifecycleRule
- LifecycleRuleAndOperator
- LifecycleRuleFilter
- ListAccessGrantEntry
- ListAccessGrantsInstanceEntry

- ListAccessGrantsLocationsEntry
- ListStorageLensConfigurationEntry
- ListStorageLensGroupEntry
- MatchObjectAge
- MatchObjectSize
- Metrics
- MultiRegionAccessPointPolicyDocument
- MultiRegionAccessPointRegionalResponse
- MultiRegionAccessPointReport
- MultiRegionAccessPointRoute
- MultiRegionAccessPointsAsyncResponse
- NoncurrentVersionExpiration
- NoncurrentVersionTransition
- ObjectLambdaAccessPoint
- ObjectLambdaAccessPointAlias
- ObjectLambdaConfiguration
- ObjectLambdaContentTransformation
- ObjectLambdaTransformationConfiguration
- PolicyStatus
- PrefixLevel
- PrefixLevelStorageMetrics
- ProposedMultiRegionAccessPointPolicy
- PublicAccessBlockConfiguration
- PutMultiRegionAccessPointPolicyInput
- Region
- RegionalBucket
- RegionReport
- ReplicaModifications
- ReplicationConfiguration
- ReplicationRule

- ReplicationRuleAndOperator
- ReplicationRuleFilter
- ReplicationTime
- ReplicationTimeValue
- S3AccessControlList
- S3AccessControlPolicy
- S3BucketDestination
- S3CopyObjectOperation
- S3DeleteObjectTaggingOperation
- S3GeneratedManifestDescriptor
- S3Grant
- S3Grantee
- S3InitiateRestoreObjectOperation
- S3JobManifestGenerator
- S3ManifestOutputLocation
- S3ObjectLockLegalHold
- S3ObjectMetadata
- S3ObjectOwner
- S3ReplicateObjectOperation
- S3Retention
- S3SetObjectAclOperation
- S3SetObjectLegalHoldOperation
- S3SetObjectRetentionOperation
- S3SetObjectTaggingOperation
- S3Tag
- SelectionCriteria
- SourceSelectionCriteria
- SSEKMS
- SseKmsEncryptedObjects
- SSEKMSEncryption

- SSES3
- SSES3Encryption
- StorageLensAwsOrg
- StorageLensConfiguration
- StorageLensDataExport
- StorageLensDataExportEncryption
- StorageLensGroup
- StorageLensGroupAndOperator
- StorageLensGroupFilter
- StorageLensGroupLevel
- StorageLensGroupLevelSelectionCriteria
- StorageLensGroupOrOperator
- StorageLensTag
- Tag
- Tagging
- Transition
- VersioningConfiguration
- VpcConfiguration

AbortIncompleteMultipartUpload

Service: Amazon S3 Control

The container for abort incomplete multipart upload

Contents

DaysAfterInitiation

Specifies the number of days after which Amazon S3 aborts an incomplete multipart upload to the Outposts bucket.

Type: Integer

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AccessControlTranslation

Service: Amazon S3 Control

A container for information about access control for replicas.

> **Note**
>
> This is not supported by Amazon S3 on Outposts buckets.

Contents

Owner

Specifies the replica ownership.

Type: String

Valid Values: `Destination`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AccessGrantsLocationConfiguration

Service: Amazon S3 Control

The configuration options of the S3 Access Grants location. It contains the `S3SubPrefix` field. The grant scope, the data to which you are granting access, is the result of appending the `Subprefix` field to the scope of the registered location.

Contents

S3SubPrefix

The `S3SubPrefix` is appended to the location scope creating the grant scope. Use this field to narrow the scope of the grant to a subset of the location scope. This field is required if the location scope is the default location `s3://` because you cannot create a grant for all of your S3 data in the Region and must narrow the scope. For example, if the location scope is the default location `s3://`, the `S3SubPrefx` can be a <bucket-name>/*, so the full grant scope path would be `s3://<bucket-name>/*`. Or the `S3SubPrefx` can be `<bucket-name>/<prefix-name>*`, so the full grant scope path would be or `s3://<bucket-name>/<prefix-name>*`.

If the `S3SubPrefix` includes a prefix, append the wildcard character `*` after the prefix to indicate that you want to include all object key names in the bucket that start with that prefix.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2000.

Pattern: `^.+$`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AccessPoint

Service: Amazon S3 Control

An access point used to access a bucket.

Contents

Bucket

The name of the bucket associated with this access point.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: Yes

Name

The name of this access point.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: Yes

NetworkOrigin

Indicates whether this access point allows access from the public internet. If `VpcConfiguration` is specified for this access point, then `NetworkOrigin` is `VPC`, and the access point doesn't allow access from the public internet. Otherwise, `NetworkOrigin` is `Internet`, and the access point allows access from the public internet, subject to the access point and bucket access policies.

Type: String

Valid Values: `Internet | VPC`

Required: Yes

AccessPointArn

The ARN for the access point.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 128.

Required: No

Alias

The name or alias of the access point.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[0-9a-z\\-]{63}`

Required: No

BucketAccountId

The AWS account ID associated with the S3 bucket associated with this access point.

Type: String

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: No

VpcConfiguration

The virtual private cloud (VPC) configuration for this access point, if one exists.

> **Note**
>
> This element is empty if this access point is an Amazon S3 on Outposts access point that is used by other AWS services.

Type: VpcConfiguration data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AccountLevel

Service: Amazon S3 Control

A container element for the account-level Amazon S3 Storage Lens configuration.

For more information about S3 Storage Lens, see Assessing your storage activity and usage with S3 Storage Lens in the *Amazon S3 User Guide*. For a complete list of S3 Storage Lens metrics, see S3 Storage Lens metrics glossary in the *Amazon S3 User Guide*.

Contents

BucketLevel

A container element for the S3 Storage Lens bucket-level configuration.

Type: BucketLevel data type

Required: Yes

ActivityMetrics

A container element for S3 Storage Lens activity metrics.

Type: ActivityMetrics data type

Required: No

AdvancedCostOptimizationMetrics

A container element for S3 Storage Lens advanced cost-optimization metrics.

Type: AdvancedCostOptimizationMetrics data type

Required: No

AdvancedDataProtectionMetrics

A container element for S3 Storage Lens advanced data-protection metrics.

Type: AdvancedDataProtectionMetrics data type

Required: No

DetailedStatusCodesMetrics

A container element for detailed status code metrics.

Type: DetailedStatusCodesMetrics data type

Required: No

StorageLensGroupLevel

A container element for S3 Storage Lens groups metrics.

Type: StorageLensGroupLevel data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ActivityMetrics

Service: Amazon S3 Control

The container element for Amazon S3 Storage Lens activity metrics. Activity metrics show details about how your storage is requested, such as requests (for example, All requests, Get requests, Put requests), bytes uploaded or downloaded, and errors.

For more information about S3 Storage Lens, see Assessing your storage activity and usage with S3 Storage Lens in the *Amazon S3 User Guide*. For a complete list of S3 Storage Lens metrics, see S3 Storage Lens metrics glossary in the *Amazon S3 User Guide*.

Contents

IsEnabled

A container that indicates whether activity metrics are enabled.

Type: Boolean

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AdvancedCostOptimizationMetrics

Service: Amazon S3 Control

The container element for Amazon S3 Storage Lens advanced cost-optimization metrics. Advanced cost-optimization metrics provide insights that you can use to manage and optimize your storage costs, for example, lifecycle rule counts for transitions, expirations, and incomplete multipart uploads.

For more information about S3 Storage Lens, see Assessing your storage activity and usage with S3 Storage Lens in the *Amazon S3 User Guide*. For a complete list of S3 Storage Lens metrics, see S3 Storage Lens metrics glossary in the *Amazon S3 User Guide*.

Contents

IsEnabled

A container that indicates whether advanced cost-optimization metrics are enabled.

Type: Boolean

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AdvancedDataProtectionMetrics

Service: Amazon S3 Control

The container element for Amazon S3 Storage Lens advanced data-protection metrics. Advanced data-protection metrics provide insights that you can use to perform audits and protect your data, for example replication rule counts within and across Regions.

For more information about S3 Storage Lens, see Assessing your storage activity and usage with S3 Storage Lens in the *Amazon S3 User Guide*. For a complete list of S3 Storage Lens metrics, see S3 Storage Lens metrics glossary in the *Amazon S3 User Guide*.

Contents

IsEnabled

A container that indicates whether advanced data-protection metrics are enabled.

Type: Boolean

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AsyncErrorDetails

Service: Amazon S3 Control

Error details for the failed asynchronous operation.

Contents

Code

A string that uniquely identifies the error condition.

Type: String

Length Constraints: Maximum length of 1024.

Required: No

Message

A generic description of the error condition in English.

Type: String

Length Constraints: Maximum length of 1024.

Required: No

RequestId

The ID of the request associated with the error.

Type: String

Length Constraints: Maximum length of 1024.

Required: No

Resource

The identifier of the resource associated with the error.

Type: String

Length Constraints: Maximum length of 1024.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AsyncOperation

Service: Amazon S3 Control

A container for the information about an asynchronous operation.

Contents

CreationTime

The time that the request was sent to the service.

Type: Timestamp

Required: No

Operation

The specific operation for the asynchronous request.

Type: String

Valid Values: `CreateMultiRegionAccessPoint | DeleteMultiRegionAccessPoint | PutMultiRegionAccessPointPolicy`

Required: No

RequestParameters

The parameters associated with the request.

Type: AsyncRequestParameters data type

Required: No

RequestStatus

The current status of the request.

Type: String

Required: No

RequestTokenARN

The request token associated with the request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `arn:.+`

Required: No

ResponseDetails

The details of the response.

Type: AsyncResponseDetails data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AsyncRequestParameters

Service: Amazon S3 Control

A container for the request parameters associated with an asynchronous request.

Contents

CreateMultiRegionAccessPointRequest

A container of the parameters for a CreateMultiRegionAccessPoint request.

Type: CreateMultiRegionAccessPointInput data type

Required: No

DeleteMultiRegionAccessPointRequest

A container of the parameters for a DeleteMultiRegionAccessPoint request.

Type: DeleteMultiRegionAccessPointInput data type

Required: No

PutMultiRegionAccessPointPolicyRequest

A container of the parameters for a PutMultiRegionAccessPoint request.

Type: PutMultiRegionAccessPointPolicyInput data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AsyncResponseDetails

Service: Amazon S3 Control

A container for the response details that are returned when querying about an asynchronous request.

Contents

ErrorDetails

Error details for an asynchronous request.

Type: AsyncErrorDetails data type

Required: No

MultiRegionAccessPointDetails

The details for the Multi-Region Access Point.

Type: MultiRegionAccessPointsAsyncResponse data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AwsLambdaTransformation

Service: Amazon S3 Control

AWS Lambda function used to transform objects through an Object Lambda Access Point.

Contents

FunctionArn

The Amazon Resource Name (ARN) of the AWS Lambda function.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

FunctionPayload

Additional JSON that provides supplemental data to the Lambda function used to transform objects.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

BucketLevel

Service: Amazon S3 Control

A container for the bucket-level configuration for Amazon S3 Storage Lens.

For more information about S3 Storage Lens, see Assessing your storage activity and usage with S3 Storage Lens in the *Amazon S3 User Guide*.

Contents

ActivityMetrics

A container for the bucket-level activity metrics for S3 Storage Lens.

Type: ActivityMetrics data type

Required: No

AdvancedCostOptimizationMetrics

A container for bucket-level advanced cost-optimization metrics for S3 Storage Lens.

Type: AdvancedCostOptimizationMetrics data type

Required: No

AdvancedDataProtectionMetrics

A container for bucket-level advanced data-protection metrics for S3 Storage Lens.

Type: AdvancedDataProtectionMetrics data type

Required: No

DetailedStatusCodesMetrics

A container for bucket-level detailed status code metrics for S3 Storage Lens.

Type: DetailedStatusCodesMetrics data type

Required: No

PrefixLevel

A container for the prefix-level metrics for S3 Storage Lens.

Type: PrefixLevel data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

CloudWatchMetrics

Service: Amazon S3 Control

A container for enabling Amazon CloudWatch publishing for S3 Storage Lens metrics.

For more information about publishing S3 Storage Lens metrics to CloudWatch, see Monitor S3 Storage Lens metrics in CloudWatch in the *Amazon S3 User Guide*.

Contents

IsEnabled

A container that indicates whether CloudWatch publishing for S3 Storage Lens metrics is enabled. A value of `true` indicates that CloudWatch publishing for S3 Storage Lens metrics is enabled.

Type: Boolean

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

CreateBucketConfiguration

Service: Amazon S3 Control

The container for the bucket configuration.

> **Note**
>
> This is not supported by Amazon S3 on Outposts buckets.

Contents

LocationConstraint

Specifies the Region where the bucket will be created. If you are creating a bucket on the US East (N. Virginia) Region (us-east-1), you do not need to specify the location.

> **Note**
>
> This is not supported by Amazon S3 on Outposts buckets.

Type: String

Valid Values: EU | `eu-west-1` | `us-west-1` | `us-west-2` | `ap-south-1` | `ap-southeast-1` | `ap-southeast-2` | `ap-northeast-1` | `sa-east-1` | `cn-north-1` | `eu-central-1`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

CreateMultiRegionAccessPointInput

Service: Amazon S3 Control

A container for the information associated with a CreateMultiRegionAccessPoint request.

Contents

Name

The name of the Multi-Region Access Point associated with this request.

Type: String

Length Constraints: Maximum length of 50.

Pattern: `^[a-z0-9][-a-z0-9]{1,48}[a-z0-9]$`

Required: Yes

Regions

The buckets in different Regions that are associated with the Multi-Region Access Point.

Type: Array of Region data types

Required: Yes

PublicAccessBlock

The `PublicAccessBlock` configuration that you want to apply to this Amazon S3 account. You can enable the configuration options in any combination. For more information about when Amazon S3 considers a bucket or object public, see The Meaning of "Public" in the *Amazon S3 User Guide*.

This data type is not supported for Amazon S3 on Outposts.

Type: PublicAccessBlockConfiguration data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Credentials

Service: Amazon S3 Control

The AWS Security Token Service temporary credential that S3 Access Grants vends to grantees and client applications.

Contents

AccessKeyId

The unique access key ID of the AWS STS temporary credential that S3 Access Grants vends to grantees and client applications.

Type: String

Required: No

Expiration

The expiration date and time of the temporary credential that S3 Access Grants vends to grantees and client applications.

Type: Timestamp

Required: No

SecretAccessKey

The secret access key of the AWS STS temporary credential that S3 Access Grants vends to grantees and client applications.

Type: String

Required: No

SessionToken

The AWS STS temporary credential that S3 Access Grants vends to grantees and client applications.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

DeleteMarkerReplication

Service: Amazon S3 Control

Specifies whether S3 on Outposts replicates delete markers. If you specify a `Filter` element in your replication configuration, you must also include a `DeleteMarkerReplication` element. If your `Filter` includes a `Tag` element, the `DeleteMarkerReplication` element's `Status` child element must be set to `Disabled`, because S3 on Outposts does not support replicating delete markers for tag-based rules.

For more information about delete marker replication, see How delete operations affect replication in the *Amazon S3 User Guide*.

Contents

Status

Indicates whether to replicate delete markers.

Type: String

Valid Values: `Enabled | Disabled`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

DeleteMultiRegionAccessPointInput

Service: Amazon S3 Control

A container for the information associated with a DeleteMultiRegionAccessPoint request.

Contents

Name

The name of the Multi-Region Access Point associated with this request.

Type: String

Length Constraints: Maximum length of 50.

Pattern: `^[a-z0-9][-a-z0-9]{1,48}[a-z0-9]$`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Destination

Service: Amazon S3 Control

Specifies information about the replication destination bucket and its settings for an S3 on Outposts replication configuration.

Contents

Bucket

The Amazon Resource Name (ARN) of the access point for the destination bucket where you want S3 on Outposts to store the replication results.

Type: String

Required: Yes

AccessControlTranslation

Specify this property only in a cross-account scenario (where the source and destination bucket owners are not the same), and you want to change replica ownership to the AWS account that owns the destination bucket. If this property is not specified in the replication configuration, the replicas are owned by same AWS account that owns the source object.

> **Note**
>
> This is not supported by Amazon S3 on Outposts buckets.

Type: AccessControlTranslation data type

Required: No

Account

The destination bucket owner's account ID.

Type: String

Length Constraints: Maximum length of 64.

Pattern: ^\d{12}$

Required: No

EncryptionConfiguration

A container that provides information about encryption. If `SourceSelectionCriteria` is specified, you must specify this element.

> **Note**
>
> This is not supported by Amazon S3 on Outposts buckets.

Type: EncryptionConfiguration data type

Required: No

Metrics

A container that specifies replication metrics-related settings.

Type: Metrics data type

Required: No

ReplicationTime

A container that specifies S3 Replication Time Control (S3 RTC) settings, including whether S3 RTC is enabled and the time when all objects and operations on objects must be replicated. Must be specified together with a `Metrics` block.

> **Note**
>
> This is not supported by Amazon S3 on Outposts buckets.

Type: ReplicationTime data type

Required: No

StorageClass

The storage class to use when replicating objects. All objects stored on S3 on Outposts are stored in the OUTPOSTS storage class. S3 on Outposts uses the OUTPOSTS storage class to create the object replicas.

> **Note**
>
> Values other than OUTPOSTS aren't supported by Amazon S3 on Outposts.

Type: String

Valid Values: `STANDARD | REDUCED_REDUNDANCY | STANDARD_IA | ONEZONE_IA | INTELLIGENT_TIERING | GLACIER | DEEP_ARCHIVE | OUTPOSTS | GLACIER_IR`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

DetailedStatusCodesMetrics

Service: Amazon S3 Control

The container element for Amazon S3 Storage Lens detailed status code metrics. Detailed status code metrics generate metrics for HTTP status codes, such as `200 OK`, `403 Forbidden`, `503 Service Unavailable` and others.

For more information about S3 Storage Lens, see Assessing your storage activity and usage with S3 Storage Lens in the *Amazon S3 User Guide*. For a complete list of S3 Storage Lens metrics, see S3 Storage Lens metrics glossary in the *Amazon S3 User Guide*.

Contents

IsEnabled

A container that indicates whether detailed status code metrics are enabled.

Type: Boolean

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

EncryptionConfiguration

Service: Amazon S3 Control

Specifies encryption-related information for an Amazon S3 bucket that is a destination for replicated objects.

> **Note**
>
> This is not supported by Amazon S3 on Outposts buckets.

Contents

ReplicaKmsKeyID

Specifies the ID of the customer managed AWS KMS key that's stored in AWS Key Management Service (AWS KMS) for the destination bucket. This ID is either the Amazon Resource Name (ARN) for the KMS key or the alias ARN for the KMS key. Amazon S3 uses this KMS key to encrypt replica objects. Amazon S3 supports only symmetric encryption KMS keys. For more information, see Symmetric encryption KMS keys in the *AWS Key Management Service Developer Guide*.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

EstablishedMultiRegionAccessPointPolicy

Service: Amazon S3 Control

The last established access control policy for a Multi-Region Access Point.

When you update the policy, the update is first listed as the proposed policy. After the update is finished and all Regions have been updated, the proposed policy is listed as the established policy. If both policies have the same version number, the proposed policy is the established policy.

Contents

Policy

The details of the last established policy.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Exclude

Service: Amazon S3 Control

A container for what Amazon S3 Storage Lens will exclude.

Contents

Buckets

A container for the S3 Storage Lens bucket excludes.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:[^:]+:s3:.*`

Required: No

Regions

A container for the S3 Storage Lens Region excludes.

Type: Array of strings

Length Constraints: Minimum length of 5. Maximum length of 30.

Pattern: `[a-z0-9\-]+`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ExistingObjectReplication

Service: Amazon S3 Control

An optional configuration to replicate existing source bucket objects.

> **Note**
>
> This is not supported by Amazon S3 on Outposts buckets.

Contents

Status

Specifies whether Amazon S3 replicates existing source bucket objects.

Type: String

Valid Values: `Enabled | Disabled`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

GeneratedManifestEncryption

Service: Amazon S3 Control

The encryption configuration to use when storing the generated manifest.

Contents

SSEKMS

Configuration details on how SSE-KMS is used to encrypt generated manifest objects.

Type: SSEKMSEncryption data type

Required: No

SSES3

Specifies the use of SSE-S3 to encrypt generated manifest objects.

Type: SSES3Encryption data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Grantee

Service: Amazon S3 Control

The user, group, or role to which you are granting access. You can grant access to an IAM user or role. If you have added your corporate directory to AWS IAM Identity Center and associated your Identity Center instance with your S3 Access Grants instance, the grantee can also be a corporate directory user or group.

Contents

GranteeIdentifier

The unique identifier of the `Grantee`. If the grantee type is `IAM`, the identifier is the IAM Amazon Resource Name (ARN) of the user or role. If the grantee type is a directory user or group, the identifier is 128-bit universally unique identifier (UUID) in the format `a1b2c3d4-5678-90ab-cdef-EXAMPLE11111`. You can obtain this UUID from your AWS IAM Identity Center instance.

Type: String

Required: No

GranteeType

The type of the grantee to which access has been granted. It can be one of the following values:

- `IAM` - An IAM user or role.
- `DIRECTORY_USER` - Your corporate directory user. You can use this option if you have added your corporate identity directory to IAM Identity Center and associated the IAM Identity Center instance with your S3 Access Grants instance.
- `DIRECTORY_GROUP` - Your corporate directory group. You can use this option if you have added your corporate identity directory to IAM Identity Center and associated the IAM Identity Center instance with your S3 Access Grants instance.

Type: String

Valid Values: `DIRECTORY_USER | DIRECTORY_GROUP | IAM`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Include

Service: Amazon S3 Control

A container for what Amazon S3 Storage Lens configuration includes.

Contents

Buckets

A container for the S3 Storage Lens bucket includes.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:[^:]+:s3:.*`

Required: No

Regions

A container for the S3 Storage Lens Region includes.

Type: Array of strings

Length Constraints: Minimum length of 5. Maximum length of 30.

Pattern: `[a-z0-9\-]+`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

JobDescriptor

Service: Amazon S3 Control

A container element for the job configuration and status information returned by a `Describe Job` request.

Contents

ConfirmationRequired

Indicates whether confirmation is required before Amazon S3 begins running the specified job. Confirmation is required only for jobs created through the Amazon S3 console.

Type: Boolean

Required: No

CreationTime

A timestamp indicating when this job was created.

Type: Timestamp

Required: No

Description

The description for this job, if one was provided in this job's `Create Job` request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Required: No

FailureReasons

If the specified job failed, this field contains information describing the failure.

Type: Array of JobFailure data types

Required: No

GeneratedManifestDescriptor

The attribute of the JobDescriptor containing details about the job's generated manifest.

Type: S3GeneratedManifestDescriptor data type

Required: No

JobArn

The Amazon Resource Name (ARN) for this job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `arn:[^:]+:s3:[a-zA-Z0-9\-]+:\d{12}:job\/.*`

Required: No

JobId

The ID for the specified job.

Type: String

Length Constraints: Minimum length of 5. Maximum length of 36.

Pattern: `[a-zA-Z0-9\-\_]+`

Required: No

Manifest

The configuration information for the specified job's manifest object.

Type: JobManifest data type

Required: No

ManifestGenerator

The manifest generator that was used to generate a job manifest for this job.

Type: JobManifestGenerator data type

Note: This object is a Union. Only one member of this object can be specified or returned.

Required: No

Operation

The operation that the specified job is configured to run on the objects listed in the manifest.

Type: JobOperation data type

Required: No

Priority

The priority of the specified job.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 2147483647.

Required: No

ProgressSummary

Describes the total number of tasks that the specified job has run, the number of tasks that succeeded, and the number of tasks that failed.

Type: JobProgressSummary data type

Required: No

Report

Contains the configuration information for the job-completion report if you requested one in the `Create Job` request.

Type: JobReport data type

Required: No

RoleArn

The Amazon Resource Name (ARN) for the AWS Identity and Access Management (IAM) role assigned to run the tasks for this job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `arn:[^:]+:iam::\d{12}:role/.*`

Required: No

Status

The current status of the specified job.

Type: String

Valid Values: `Active | Cancelled | Cancelling | Complete | Completing | Failed | Failing | New | Paused | Pausing | Preparing | Ready | Suspended`

Required: No

StatusUpdateReason

The reason for updating the job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Required: No

SuspendedCause

The reason why the specified job was suspended. A job is only suspended if you create it through the Amazon S3 console. When you create the job, it enters the `Suspended` state to await confirmation before running. After you confirm the job, it automatically exits the `Suspended` state.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

SuspendedDate

The timestamp when this job was suspended, if it has been suspended.

Type: Timestamp

Required: No

TerminationDate

A timestamp indicating when this job terminated. A job's termination date is the date and time when it succeeded, failed, or was canceled.

Type: Timestamp

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

JobFailure

Service: Amazon S3 Control

If this job failed, this element indicates why the job failed.

Contents

FailureCode

The failure code, if any, for the specified job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Required: No

FailureReason

The failure reason, if any, for the specified job.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

JobListDescriptor

Service: Amazon S3 Control

Contains the configuration and status information for a single job retrieved as part of a job list.

Contents

CreationTime

A timestamp indicating when the specified job was created.

Type: Timestamp

Required: No

Description

The user-specified description that was included in the specified job's `Create Job` request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Required: No

JobId

The ID for the specified job.

Type: String

Length Constraints: Minimum length of 5. Maximum length of 36.

Pattern: `[a-zA-Z0-9\-\_]+`

Required: No

Operation

The operation that the specified job is configured to run on every object listed in the manifest.

Type: String

Valid Values: `LambdaInvoke | S3PutObjectCopy | S3PutObjectAcl | S3PutObjectTagging | S3DeleteObjectTagging | S3InitiateRestoreObject | S3PutObjectLegalHold | S3PutObjectRetention | S3ReplicateObject`

Required: No

Priority

The current priority for the specified job.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 2147483647.

Required: No

ProgressSummary

Describes the total number of tasks that the specified job has run, the number of tasks that succeeded, and the number of tasks that failed.

Type: JobProgressSummary data type

Required: No

Status

The specified job's current status.

Type: String

Valid Values: `Active | Cancelled | Cancelling | Complete | Completing | Failed | Failing | New | Paused | Pausing | Preparing | Ready | Suspended`

Required: No

TerminationDate

A timestamp indicating when the specified job terminated. A job's termination date is the date and time when it succeeded, failed, or was canceled.

Type: Timestamp

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

JobManifest

Service: Amazon S3 Control

Contains the configuration information for a job's manifest.

Contents

Location

Contains the information required to locate the specified job's manifest. Manifests can't be imported from directory buckets. For more information, see Directory buckets.

Type: JobManifestLocation data type

Required: Yes

Spec

Describes the format of the specified job's manifest. If the manifest is in CSV format, also describes the columns contained within the manifest.

Type: JobManifestSpec data type

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

JobManifestGenerator

Service: Amazon S3 Control

Configures the type of the job's ManifestGenerator.

Contents

> **Important**
>
> This data type is a UNION, so only one of the following members can be specified when used or returned.

S3JobManifestGenerator

The S3 job ManifestGenerator's configuration details.

Type: S3JobManifestGenerator data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

JobManifestGeneratorFilter

Service: Amazon S3 Control

The filter used to describe a set of objects for the job's manifest.

Contents

CreatedAfter

If provided, the generated manifest includes only source bucket objects that were created after this time.

Type: Timestamp

Required: No

CreatedBefore

If provided, the generated manifest includes only source bucket objects that were created before this time.

Type: Timestamp

Required: No

EligibleForReplication

Include objects in the generated manifest only if they are eligible for replication according to the Replication configuration on the source bucket.

Type: Boolean

Required: No

KeyNameConstraint

If provided, the generated manifest includes only source bucket objects whose object keys match the string constraints specified for `MatchAnyPrefix`, `MatchAnySuffix`, and `MatchAnySubstring`.

Type: KeyNameConstraint data type

Required: No

MatchAnyStorageClass

If provided, the generated manifest includes only source bucket objects that are stored with the specified storage class.

Type: Array of strings

Valid Values: `STANDARD | STANDARD_IA | ONEZONE_IA | GLACIER | INTELLIGENT_TIERING | DEEP_ARCHIVE | GLACIER_IR`

Required: No

ObjectReplicationStatuses

If provided, the generated manifest includes only source bucket objects that have one of the specified Replication statuses.

Type: Array of strings

Valid Values: `COMPLETED | FAILED | REPLICA | NONE`

Required: No

ObjectSizeGreaterThanBytes

If provided, the generated manifest includes only source bucket objects whose file size is greater than the specified number of bytes.

Type: Long

Required: No

ObjectSizeLessThanBytes

If provided, the generated manifest includes only source bucket objects whose file size is less than the specified number of bytes.

Type: Long

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

JobManifestLocation

Service: Amazon S3 Control

Contains the information required to locate a manifest object. Manifests can't be imported from directory buckets. For more information, see Directory buckets.

Contents

ETag

The ETag for the specified manifest object.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: Yes

ObjectArn

The Amazon Resource Name (ARN) for a manifest object.

> **Important**
>
> When you're using XML requests, you must replace special characters (such as carriage returns) in object keys with their equivalent XML entity codes. For more information, see XML-related object key constraints in the *Amazon S3 User Guide*.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2000.

Pattern: `arn:[^:]+:s3:.*`

Required: Yes

ObjectVersionId

The optional version ID to identify a specific version of the manifest object.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2000.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

JobManifestSpec

Service: Amazon S3 Control

Describes the format of a manifest. If the manifest is in CSV format, also describes the columns contained within the manifest.

Contents

Format

Indicates which of the available formats the specified manifest uses.

Type: String

Valid Values: `S3BatchOperations_CSV_20180820 | S3InventoryReport_CSV_20161130`

Required: Yes

Fields

If the specified manifest object is in the `S3BatchOperations_CSV_20180820` format, this element describes which columns contain the required data.

Type: Array of strings

Valid Values: `Ignore | Bucket | Key | VersionId`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

JobOperation

Service: Amazon S3 Control

The operation that you want this job to perform on every object listed in the manifest. For more information about the available operations, see Operations in the *Amazon S3 User Guide*.

Contents

LambdaInvoke

Directs the specified job to invoke an AWS Lambda function on every object in the manifest.

Type: LambdaInvokeOperation data type

Required: No

S3DeleteObjectTagging

Directs the specified job to execute a DELETE Object tagging call on every object in the manifest.

> **Note**
>
> This functionality is not supported by directory buckets.

Type: S3DeleteObjectTaggingOperation data type

Required: No

S3InitiateRestoreObject

Directs the specified job to initiate restore requests for every archived object in the manifest.

> **Note**
>
> This functionality is not supported by directory buckets.

Type: S3InitiateRestoreObjectOperation data type

Required: No

S3PutObjectAcl

Directs the specified job to run a `PutObjectAcl` call on every object in the manifest.

> **Note**
>
> This functionality is not supported by directory buckets.

Type: S3SetObjectAclOperation data type

Required: No

S3PutObjectCopy

Directs the specified job to run a PUT Copy object call on every object in the manifest.

Type: S3CopyObjectOperation data type

Required: No

S3PutObjectLegalHold

Contains the configuration for an S3 Object Lock legal hold operation that an S3 Batch Operations job passes to every object to the underlying `PutObjectLegalHold` API operation. For more information, see Using S3 Object Lock legal hold with S3 Batch Operations in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported by directory buckets.

Type: S3SetObjectLegalHoldOperation data type

Required: No

S3PutObjectRetention

Contains the configuration parameters for the Object Lock retention action for an S3 Batch Operations job. Batch Operations passes every object to the underlying `PutObjectRetention` API operation. For more information, see Using S3 Object Lock retention with S3 Batch Operations in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported by directory buckets.

Type: S3SetObjectRetentionOperation data type

Required: No

S3PutObjectTagging

Directs the specified job to run a PUT Object tagging call on every object in the manifest.

> **Note**
>
> This functionality is not supported by directory buckets.

Type: S3SetObjectTaggingOperation data type

Required: No

S3ReplicateObject

Directs the specified job to invoke `ReplicateObject` on every object in the job's manifest.

> **Note**
>
> This functionality is not supported by directory buckets.

Type: S3ReplicateObjectOperation data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++

- AWS SDK for Java V2
- AWS SDK for Ruby V3

JobProgressSummary

Service: Amazon S3 Control

Describes the total number of tasks that the specified job has started, the number of tasks that succeeded, and the number of tasks that failed.

Contents

NumberOfTasksFailed

Type: Long

Valid Range: Minimum value of 0.

Required: No

NumberOfTasksSucceeded

Type: Long

Valid Range: Minimum value of 0.

Required: No

Timers

The JobTimers attribute of a job's progress summary.

Type: JobTimers data type

Required: No

TotalNumberOfTasks

Type: Long

Valid Range: Minimum value of 0.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

JobReport

Service: Amazon S3 Control

Contains the configuration parameters for a job-completion report.

Contents

Enabled

Indicates whether the specified job will generate a job-completion report.

Type: Boolean

Required: Yes

Bucket

The Amazon Resource Name (ARN) for the bucket where specified job-completion report will be stored.

> **Note**
>
> **Directory buckets** - Directory buckets aren't supported as a location for Batch Operations to store job completion reports.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:[^:]+:s3:.*`

Required: No

Format

The format of the specified job-completion report.

Type: String

Valid Values: `Report_CSV_20180820`

Required: No

Prefix

An optional prefix to describe where in the specified bucket the job-completion report will be stored. Amazon S3 stores the job-completion report at `<prefix>/job-<job-id>/report.json`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 512.

Required: No

ReportScope

Indicates whether the job-completion report will include details of all tasks or only failed tasks.

Type: String

Valid Values: `AllTasks | FailedTasksOnly`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

JobTimers

Service: Amazon S3 Control

Provides timing details for the job.

Contents

ElapsedTimeInActiveSeconds

Indicates the elapsed time in seconds the job has been in the Active job state.

Type: Long

Valid Range: Minimum value of 0.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

KeyNameConstraint

Service: Amazon S3 Control

If provided, the generated manifest includes only source bucket objects whose object keys match the string constraints specified for `MatchAnyPrefix`, `MatchAnySuffix`, and `MatchAnySubstring`.

Contents

MatchAnyPrefix

If provided, the generated manifest includes objects where the specified string appears at the start of the object key string.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

MatchAnySubstring

If provided, the generated manifest includes objects where the specified string appears anywhere within the object key string.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

MatchAnySuffix

If provided, the generated manifest includes objects where the specified string appears at the end of the object key string.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

LambdaInvokeOperation

Service: Amazon S3 Control

Contains the configuration parameters for a `Lambda Invoke` operation.

Contents

FunctionArn

The Amazon Resource Name (ARN) for the AWS Lambda function that the specified job will invoke on every object in the manifest.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: No

InvocationSchemaVersion

Specifies the schema version for the payload that Batch Operations sends when invoking an AWS Lambda function. Version `1.0` is the default. Version `2.0` is required when you use Batch Operations to invoke AWS Lambda functions that act on directory buckets, or if you need to specify `UserArguments`. For more information, see Automate object processing in Amazon S3 directory buckets with S3 Batch Operations and AWS Lambda in the *AWS Storage Blog*.

> **Important**
>
> Ensure that your AWS Lambda function code expects `InvocationSchemaVersion` **2.0** and uses bucket name rather than bucket ARN. If the `InvocationSchemaVersion` does not match what your AWS Lambda function expects, your function might not work as expected.

> **Note**
>
> **Directory buckets** - To initiate AWS Lambda function to perform custom actions on objects in directory buckets, you must specify `2.0`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Required: No

UserArguments

Key-value pairs that are passed in the payload that Batch Operations sends when invoking an AWS Lambda function. You must specify `InvocationSchemaVersion` **2.0** for `LambdaInvoke` operations that include `UserArguments`. For more information, see Automate object processing in Amazon S3 directory buckets with S3 Batch Operations and AWS Lambda in the *AWS Storage Blog*.

Type: String to string map

Map Entries: Maximum number of 10 items.

Key Length Constraints: Minimum length of 1. Maximum length of 64.

Value Length Constraints: Maximum length of 1024.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

LifecycleConfiguration

Service: Amazon S3 Control

The container for the Outposts bucket lifecycle configuration.

Contents

Rules

A lifecycle rule for individual objects in an Outposts bucket.

Type: Array of LifecycleRule data types

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

LifecycleExpiration

Service: Amazon S3 Control

The container of the Outposts bucket lifecycle expiration.

Contents

Date

Indicates at what date the object is to be deleted. Should be in GMT ISO 8601 format.

Type: Timestamp

Required: No

Days

Indicates the lifetime, in days, of the objects that are subject to the rule. The value must be a non-zero positive integer.

Type: Integer

Required: No

ExpiredObjectDeleteMarker

Indicates whether Amazon S3 will remove a delete marker with no noncurrent versions. If set to true, the delete marker will be expired. If set to false, the policy takes no action. This cannot be specified with Days or Date in a Lifecycle Expiration Policy.

Type: Boolean

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

LifecycleRule

Service: Amazon S3 Control

The container for the Outposts bucket lifecycle rule.

Contents

Status

If 'Enabled', the rule is currently being applied. If 'Disabled', the rule is not currently being applied.

Type: String

Valid Values: `Enabled | Disabled`

Required: Yes

AbortIncompleteMultipartUpload

Specifies the days since the initiation of an incomplete multipart upload that Amazon S3 waits before permanently removing all parts of the upload. For more information, see Aborting Incomplete Multipart Uploads Using a Bucket Lifecycle Configuration in the *Amazon S3 User Guide*.

Type: AbortIncompleteMultipartUpload data type

Required: No

Expiration

Specifies the expiration for the lifecycle of the object in the form of date, days and, whether the object has a delete marker.

Type: LifecycleExpiration data type

Required: No

Filter

The container for the filter of lifecycle rule.

Type: LifecycleRuleFilter data type

Required: No

ID

Unique identifier for the rule. The value cannot be longer than 255 characters.

Type: String

Required: No

NoncurrentVersionExpiration

The noncurrent version expiration of the lifecycle rule.

Type: NoncurrentVersionExpiration data type

Required: No

NoncurrentVersionTransitions

Specifies the transition rule for the lifecycle rule that describes when noncurrent objects transition to a specific storage class. If your bucket is versioning-enabled (or versioning is suspended), you can set this action to request that Amazon S3 transition noncurrent object versions to a specific storage class at a set period in the object's lifetime.

> **Note**
>
> This is not supported by Amazon S3 on Outposts buckets.

Type: Array of NoncurrentVersionTransition data types

Required: No

Transitions

Specifies when an Amazon S3 object transitions to a specified storage class.

> **Note**
>
> This is not supported by Amazon S3 on Outposts buckets.

Type: Array of Transition data types

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

LifecycleRuleAndOperator

Service: Amazon S3 Control

The container for the Outposts bucket lifecycle rule and operator.

Contents

ObjectSizeGreaterThan

The non-inclusive minimum object size for the lifecycle rule. Setting this property to 7 means the rule applies to objects with a size that is greater than 7.

Type: Long

Required: No

ObjectSizeLessThan

The non-inclusive maximum object size for the lifecycle rule. Setting this property to 77 means the rule applies to objects with a size that is less than 77.

Type: Long

Required: No

Prefix

Prefix identifying one or more objects to which the rule applies.

Type: String

Required: No

Tags

All of these tags must exist in the object's tag set in order for the rule to apply.

Type: Array of S3Tag data types

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

LifecycleRuleFilter

Service: Amazon S3 Control

The container for the filter of the lifecycle rule.

Contents

And

The container for the AND condition for the lifecycle rule.

Type: LifecycleRuleAndOperator data type

Required: No

ObjectSizeGreaterThan

Minimum object size to which the rule applies.

Type: Long

Required: No

ObjectSizeLessThan

Maximum object size to which the rule applies.

Type: Long

Required: No

Prefix

Prefix identifying one or more objects to which the rule applies.

> **Important**
>
> When you're using XML requests, you must replace special characters (such as carriage returns) in object keys with their equivalent XML entity codes. For more information, see XML-related object key constraints in the *Amazon S3 User Guide*.

Type: String

Required: No

Tag

A container for a key-value name pair.

Type: S3Tag data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ListAccessGrantEntry

Service: Amazon S3 Control

Information about the access grant.

Contents

AccessGrantArn

The Amazon Resource Name (ARN) of the access grant.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `arn:[a-z\-]+:s3:[a-z0-9\-]+:\d{12}:access\-grants\/grant/[a-zA-Z0-9\-]+`

Required: No

AccessGrantId

The ID of the access grant. S3 Access Grants auto-generates this ID when you create the access grant.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-]+`

Required: No

AccessGrantsLocationConfiguration

The configuration options of the grant location. The grant location is the S3 path to the data to which you are granting access.

Type: AccessGrantsLocationConfiguration data type

Required: No

AccessGrantsLocationId

The ID of the registered location to which you are granting access. S3 Access Grants assigns this ID when you register the location. S3 Access Grants assigns the ID `default` to the default location `s3://` and assigns an auto-generated ID to other locations that you register.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-]+`

Required: No

ApplicationArn

The Amazon Resource Name (ARN) of an AWS IAM Identity Center application associated with your Identity Center instance. If the grant includes an application ARN, the grantee can only access the S3 data through this application.

Type: String

Length Constraints: Minimum length of 10. Maximum length of 1224.

Pattern: `arn:[^:]+:sso:.*$`

Required: No

CreatedAt

The date and time when you created the S3 Access Grants instance.

Type: Timestamp

Required: No

Grantee

The user, group, or role to which you are granting access. You can grant access to an IAM user or role. If you have added your corporate directory to AWS IAM Identity Center and associated your Identity Center instance with your S3 Access Grants instance, the grantee can also be a corporate directory user or group.

Type: Grantee data type

Required: No

GrantScope

The S3 path of the data to which you are granting access. It is the result of appending the `Subprefix` to the location scope.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2000.

Pattern: `^.+$`

Required: No

Permission

The type of access granted to your S3 data, which can be set to one of the following values:

- `READ` – Grant read-only access to the S3 data.
- `WRITE` – Grant write-only access to the S3 data.
- `READWRITE` – Grant both read and write access to the S3 data.

Type: String

Valid Values: `READ | WRITE | READWRITE`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ListAccessGrantsInstanceEntry

Service: Amazon S3 Control

Information about the S3 Access Grants instance.

Contents

AccessGrantsInstanceArn

The Amazon Resource Name (ARN) of the S3 Access Grants instance.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `arn:[a-z\-]+:s3:[a-z0-9\-]+:\d{12}:access\-grants\/[a-zA-Z0-9\-]+`

Required: No

AccessGrantsInstanceId

The ID of the S3 Access Grants instance. The ID is `default`. You can have one S3 Access Grants instance per Region per account.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-]+`

Required: No

CreatedAt

The date and time when you created the S3 Access Grants instance.

Type: Timestamp

Required: No

IdentityCenterArn

If you associated your S3 Access Grants instance with an AWS IAM Identity Center instance, this field returns the Amazon Resource Name (ARN) of the IAM Identity Center instance application;

a subresource of the original Identity Center instance. S3 Access Grants creates this Identity Center application for the specific S3 Access Grants instance.

Type: String

Length Constraints: Minimum length of 10. Maximum length of 1224.

Pattern: `arn:[^:]+:sso::(\d{12}){0,1}:instance/.*$`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ListAccessGrantsLocationsEntry

Service: Amazon S3 Control

A container for information about the registered location.

Contents

AccessGrantsLocationArn

The Amazon Resource Name (ARN) of the registered location.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `arn:[a-z\-]+:s3:[a-z0-9\-]+:\d{12}:access\-grants\/location/[a-zA-Z0-9\-]+`

Required: No

AccessGrantsLocationId

The ID of the registered location to which you are granting access. S3 Access Grants assigns this ID when you register the location. S3 Access Grants assigns the ID `default` to the default location `s3://` and assigns an auto-generated ID to other locations that you register.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-]+`

Required: No

CreatedAt

The date and time when you registered the location.

Type: Timestamp

Required: No

IAMRoleArn

The Amazon Resource Name (ARN) of the IAM role for the registered location. S3 Access Grants assumes this role to manage access to the registered location.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `arn:[^:]+:iam::\d{12}:role/.*`

Required: No

LocationScope

The S3 path to the location that you are registering. The location scope can be the default S3 location `s3://`, the S3 path to a bucket `s3://<bucket>`, or the S3 path to a bucket and prefix `s3://<bucket>/<prefix>`. A prefix in S3 is a string of characters at the beginning of an object key name used to organize the objects that you store in your S3 buckets. For example, object key names that start with the `engineering/` prefix or object key names that start with the `marketing/campaigns/` prefix.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2000.

Pattern: `^.+$`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ListStorageLensConfigurationEntry

Service: Amazon S3 Control

Part of `ListStorageLensConfigurationResult`. Each entry includes the description of the S3 Storage Lens configuration, its home Region, whether it is enabled, its Amazon Resource Name (ARN), and config ID.

Contents

HomeRegion

A container for the S3 Storage Lens home Region. Your metrics data is stored and retained in your designated S3 Storage Lens home Region.

Type: String

Length Constraints: Minimum length of 5. Maximum length of 30.

Pattern: `[a-z0-9\-]+`

Required: Yes

Id

A container for the S3 Storage Lens configuration ID.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-\_\.]+`

Required: Yes

StorageLensArn

The ARN of the S3 Storage Lens configuration. This property is read-only.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `arn:[a-z\-]+:s3:[a-z0-9\-]+:\d{12}:storage\-lens\/.*`

Required: Yes

IsEnabled

A container for whether the S3 Storage Lens configuration is enabled. This property is required.

Type: Boolean

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ListStorageLensGroupEntry

Service: Amazon S3 Control

Each entry contains a Storage Lens group that exists in the specified home Region.

Contents

HomeRegion

Contains the AWS Region where the Storage Lens group was created.

Type: String

Length Constraints: Minimum length of 5. Maximum length of 30.

Pattern: `[a-z0-9\-]+`

Required: Yes

Name

Contains the name of the Storage Lens group that exists in the specified home Region.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-\_]+`

Required: Yes

StorageLensGroupArn

Contains the Amazon Resource Name (ARN) of the Storage Lens group. This property is read-only.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 1024.

Pattern: `arn:[a-z\-]+:s3:[a-z0-9\-]+:\d{12}:storage\-lens\-group\/.*`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

MatchObjectAge

Service: Amazon S3 Control

A filter condition that specifies the object age range of included objects in days. Only integers are supported.

Contents

DaysGreaterThan

Specifies the maximum object age in days. Must be a positive whole number, greater than the minimum object age and less than or equal to 2,147,483,647.

Type: Integer

Required: No

DaysLessThan

Specifies the minimum object age in days. The value must be a positive whole number, greater than 0 and less than or equal to 2,147,483,647.

Type: Integer

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

MatchObjectSize

Service: Amazon S3 Control

A filter condition that specifies the object size range of included objects in bytes. Only integers are supported.

Contents

BytesGreaterThan

Specifies the minimum object size in Bytes. The value must be a positive number, greater than 0 and less than 5 TB.

Type: Long

Required: No

BytesLessThan

Specifies the maximum object size in Bytes. The value must be a positive number, greater than the minimum object size and less than 5 TB.

Type: Long

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Metrics

Service: Amazon S3 Control

A container that specifies replication metrics-related settings.

Contents

Status

Specifies whether replication metrics are enabled.

Type: String

Valid Values: `Enabled | Disabled`

Required: Yes

EventThreshold

A container that specifies the time threshold for emitting the `s3:Replication:OperationMissedThreshold` event.

> **Note**
>
> This is not supported by Amazon S3 on Outposts buckets.

Type: ReplicationTimeValue data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

MultiRegionAccessPointPolicyDocument

Service: Amazon S3 Control

The Multi-Region Access Point access control policy.

When you update the policy, the update is first listed as the proposed policy. After the update is finished and all Regions have been updated, the proposed policy is listed as the established policy. If both policies have the same version number, the proposed policy is the established policy.

Contents

Established

The last established policy for the Multi-Region Access Point.

Type: EstablishedMultiRegionAccessPointPolicy data type

Required: No

Proposed

The proposed policy for the Multi-Region Access Point.

Type: ProposedMultiRegionAccessPointPolicy data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

MultiRegionAccessPointRegionalResponse

Service: Amazon S3 Control

Status information for a single Multi-Region Access Point Region.

Contents

Name

The name of the Region in the Multi-Region Access Point.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Required: No

RequestStatus

The current status of the Multi-Region Access Point in this Region.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

MultiRegionAccessPointReport

Service: Amazon S3 Control

A collection of statuses for a Multi-Region Access Point in the various Regions it supports.

Contents

Alias

The alias for the Multi-Region Access Point. For more information about the distinction between the name and the alias of an Multi-Region Access Point, see Rules for naming Amazon S3 Multi-Region Access Points.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[a-z][a-z0-9]*[.]mrap$`

Required: No

CreatedAt

When the Multi-Region Access Point create request was received.

Type: Timestamp

Required: No

Name

The name of the Multi-Region Access Point.

Type: String

Length Constraints: Maximum length of 50.

Pattern: `^[a-z0-9][-a-z0-9]{1,48}[a-z0-9]$`

Required: No

PublicAccessBlock

The `PublicAccessBlock` configuration that you want to apply to this Amazon S3 account. You can enable the configuration options in any combination. For more information about when

Amazon S3 considers a bucket or object public, see The Meaning of "Public" in the *Amazon S3 User Guide*.

This data type is not supported for Amazon S3 on Outposts.

Type: PublicAccessBlockConfiguration data type

Required: No

Regions

A collection of the Regions and buckets associated with the Multi-Region Access Point.

Type: Array of RegionReport data types

Required: No

Status

The current status of the Multi-Region Access Point.

`CREATING` and `DELETING` are temporary states that exist while the request is propagating and being completed. If a Multi-Region Access Point has a status of `PARTIALLY_CREATED`, you can retry creation or send a request to delete the Multi-Region Access Point. If a Multi-Region Access Point has a status of `PARTIALLY_DELETED`, you can retry a delete request to finish the deletion of the Multi-Region Access Point.

Type: String

Valid Values: `READY | INCONSISTENT_ACROSS_REGIONS | CREATING | PARTIALLY_CREATED | PARTIALLY_DELETED | DELETING`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

MultiRegionAccessPointRoute

Service: Amazon S3 Control

A structure for a Multi-Region Access Point that indicates where Amazon S3 traffic can be routed. Routes can be either active or passive. Active routes can process Amazon S3 requests through the Multi-Region Access Point, but passive routes are not eligible to process Amazon S3 requests.

Each route contains the Amazon S3 bucket name and the AWS Region that the bucket is located in. The route also includes the `TrafficDialPercentage` value, which shows whether the bucket and Region are active (indicated by a value of `100`) or passive (indicated by a value of `0`).

Contents

TrafficDialPercentage

The traffic state for the specified bucket or AWS Region.

A value of `0` indicates a passive state, which means that no new traffic will be routed to the Region.

A value of `100` indicates an active state, which means that traffic will be routed to the specified Region.

When the routing configuration for a Region is changed from active to passive, any in-progress operations (uploads, copies, deletes, and so on) to the formerly active Region will continue to run to until a final success or failure status is reached.

If all Regions in the routing configuration are designated as passive, you'll receive an `InvalidRequest` error.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 100.

Required: Yes

Bucket

The name of the Amazon S3 bucket for which you'll submit a routing configuration change. Either the `Bucket` or the `Region` value must be provided. If both are provided, the bucket must be in the specified Region.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: No

Region

The AWS Region to which you'll be submitting a routing configuration change. Either the `Bucket` or the `Region` value must be provided. If both are provided, the bucket must be in the specified Region.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

MultiRegionAccessPointsAsyncResponse

Service: Amazon S3 Control

The Multi-Region Access Point details that are returned when querying about an asynchronous request.

Contents

Regions

A collection of status information for the different Regions that a Multi-Region Access Point supports.

Type: Array of MultiRegionAccessPointRegionalResponse data types

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

NoncurrentVersionExpiration

Service: Amazon S3 Control

The container of the noncurrent version expiration.

Contents

NewerNoncurrentVersions

Specifies how many noncurrent versions S3 on Outposts will retain. If there are this many more recent noncurrent versions, S3 on Outposts will take the associated action. For more information about noncurrent versions, see Lifecycle configuration elements in the *Amazon S3 User Guide*.

Type: Integer

Required: No

NoncurrentDays

Specifies the number of days an object is noncurrent before Amazon S3 can perform the associated action. For information about the noncurrent days calculations, see How Amazon S3 Calculates When an Object Became Noncurrent in the *Amazon S3 User Guide*.

Type: Integer

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

NoncurrentVersionTransition

Service: Amazon S3 Control

The container for the noncurrent version transition.

Contents

NoncurrentDays

Specifies the number of days an object is noncurrent before Amazon S3 can perform the associated action. For information about the noncurrent days calculations, see How Amazon S3 Calculates How Long an Object Has Been Noncurrent in the *Amazon S3 User Guide*.

Type: Integer

Required: No

StorageClass

The class of storage used to store the object.

Type: String

Valid Values: `GLACIER | STANDARD_IA | ONEZONE_IA | INTELLIGENT_TIERING | DEEP_ARCHIVE`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ObjectLambdaAccessPoint

Service: Amazon S3 Control

An access point with an attached AWS Lambda function used to access transformed data from an Amazon S3 bucket.

Contents

Name

The name of the Object Lambda Access Point.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 45.

Pattern: `^[a-z0-9]([a-z0-9\-]*[a-z0-9])?$`

Required: Yes

Alias

The alias of the Object Lambda Access Point.

Type: ObjectLambdaAccessPointAlias data type

Required: No

ObjectLambdaAccessPointArn

Specifies the ARN for the Object Lambda Access Point.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `arn:[^:]+:s3-object-lambda:[^:]*:\d{12}:accesspoint/.*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ObjectLambdaAccessPointAlias

Service: Amazon S3 Control

The alias of an Object Lambda Access Point. For more information, see How to use a bucket-style alias for your S3 bucket Object Lambda Access Point.

Contents

Status

The status of the Object Lambda Access Point alias. If the status is `PROVISIONING`, the Object Lambda Access Point is provisioning the alias and the alias is not ready for use yet. If the status is `READY`, the Object Lambda Access Point alias is successfully provisioned and ready for use.

Type: String

Length Constraints: Minimum length of 2. Maximum length of 16.

Valid Values: `PROVISIONING | READY`

Required: No

Value

The alias value of the Object Lambda Access Point.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 63.

Pattern: `^[0-9a-z\\-]{3,63}`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ObjectLambdaConfiguration

Service: Amazon S3 Control

A configuration used when creating an Object Lambda Access Point.

Contents

SupportingAccessPoint

Standard access point associated with the Object Lambda Access Point.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `arn:[^:]+:s3:[^:]*:\d{12}:accesspoint/.*`

Required: Yes

TransformationConfigurations

A container for transformation configurations for an Object Lambda Access Point.

Type: Array of ObjectLambdaTransformationConfiguration data types

Required: Yes

AllowedFeatures

A container for allowed features. Valid inputs are `GetObject-Range`, `GetObject-PartNumber`, `HeadObject-Range`, and `HeadObject-PartNumber`.

Type: Array of strings

Valid Values: `GetObject-Range | GetObject-PartNumber | HeadObject-Range | HeadObject-PartNumber`

Required: No

CloudWatchMetricsEnabled

A container for whether the CloudWatch metrics configuration is enabled.

Type: Boolean

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ObjectLambdaContentTransformation

Service: Amazon S3 Control

A container for AwsLambdaTransformation.

Contents

> **Important**
>
> This data type is a UNION, so only one of the following members can be specified when used or returned.

AwsLambda

A container for an AWS Lambda function.

Type: AwsLambdaTransformation data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ObjectLambdaTransformationConfiguration

Service: Amazon S3 Control

A configuration used when creating an Object Lambda Access Point transformation.

Contents

Actions

A container for the action of an Object Lambda Access Point configuration. Valid inputs are `GetObject`, `ListObjects`, `HeadObject`, and `ListObjectsV2`.

Type: Array of strings

Valid Values: `GetObject | HeadObject | ListObjects | ListObjectsV2`

Required: Yes

ContentTransformation

A container for the content transformation of an Object Lambda Access Point configuration.

Type: ObjectLambdaContentTransformation data type

Note: This object is a Union. Only one member of this object can be specified or returned.

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

PolicyStatus

Service: Amazon S3 Control

Indicates whether this access point policy is public. For more information about how Amazon S3 evaluates policies to determine whether they are public, see The Meaning of "Public" in the *Amazon S3 User Guide*.

Contents

IsPublic

Type: Boolean

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

PrefixLevel

Service: Amazon S3 Control

A container for the prefix-level configuration.

Contents

StorageMetrics

A container for the prefix-level storage metrics for S3 Storage Lens.

Type: PrefixLevelStorageMetrics data type

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

PrefixLevelStorageMetrics

Service: Amazon S3 Control

A container for the prefix-level storage metrics for S3 Storage Lens.

Contents

IsEnabled

A container for whether prefix-level storage metrics are enabled.

Type: Boolean

Required: No

SelectionCriteria

Type: SelectionCriteria data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ProposedMultiRegionAccessPointPolicy

Service: Amazon S3 Control

The proposed access control policy for the Multi-Region Access Point.

When you update the policy, the update is first listed as the proposed policy. After the update is finished and all Regions have been updated, the proposed policy is listed as the established policy. If both policies have the same version number, the proposed policy is the established policy.

Contents

Policy

The details of the proposed policy.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

PublicAccessBlockConfiguration

Service: Amazon S3 Control

The `PublicAccessBlock` configuration that you want to apply to this Amazon S3 account. You can enable the configuration options in any combination. For more information about when Amazon S3 considers a bucket or object public, see The Meaning of "Public" in the *Amazon S3 User Guide*.

This data type is not supported for Amazon S3 on Outposts.

Contents

BlockPublicAcls

Specifies whether Amazon S3 should block public access control lists (ACLs) for buckets in this account. Setting this element to `TRUE` causes the following behavior:

- `PutBucketAcl` and `PutObjectAcl` calls fail if the specified ACL is public.
- PUT Object calls fail if the request includes a public ACL.
- PUT Bucket calls fail if the request includes a public ACL.

Enabling this setting doesn't affect existing policies or ACLs.

This property is not supported for Amazon S3 on Outposts.

Type: Boolean

Required: No

BlockPublicPolicy

Specifies whether Amazon S3 should block public bucket policies for buckets in this account. Setting this element to `TRUE` causes Amazon S3 to reject calls to PUT Bucket policy if the specified bucket policy allows public access.

Enabling this setting doesn't affect existing bucket policies.

This property is not supported for Amazon S3 on Outposts.

Type: Boolean

Required: No

IgnorePublicAcls

Specifies whether Amazon S3 should ignore public ACLs for buckets in this account. Setting this element to TRUE causes Amazon S3 to ignore all public ACLs on buckets in this account and any objects that they contain.

Enabling this setting doesn't affect the persistence of any existing ACLs and doesn't prevent new public ACLs from being set.

This property is not supported for Amazon S3 on Outposts.

Type: Boolean

Required: No

RestrictPublicBuckets

Specifies whether Amazon S3 should restrict public bucket policies for buckets in this account. Setting this element to TRUE restricts access to buckets with public policies to only AWS service principals and authorized users within this account.

Enabling this setting doesn't affect previously stored bucket policies, except that public and cross-account access within any public bucket policy, including non-public delegation to specific accounts, is blocked.

This property is not supported for Amazon S3 on Outposts.

Type: Boolean

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

PutMultiRegionAccessPointPolicyInput

Service: Amazon S3 Control

A container for the information associated with a PutMultiRegionAccessPoint request.

Contents

Name

The name of the Multi-Region Access Point associated with the request.

Type: String

Length Constraints: Maximum length of 50.

Pattern: `^[a-z0-9][-a-z0-9]{1,48}[a-z0-9]$`

Required: Yes

Policy

The policy details for the `PutMultiRegionAccessPoint` request.

Type: String

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Region

Service: Amazon S3 Control

A Region that supports a Multi-Region Access Point as well as the associated bucket for the Region.

Contents

Bucket

The name of the associated bucket for the Region.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: Yes

BucketAccountId

The AWS account ID that owns the Amazon S3 bucket that's associated with this Multi-Region Access Point.

Type: String

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RegionalBucket

Service: Amazon S3 Control

The container for the regional bucket.

Contents

Bucket

Type: String

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: Yes

CreationDate

The creation date of the regional bucket

Type: Timestamp

Required: Yes

PublicAccessBlockEnabled

Type: Boolean

Required: Yes

BucketArn

The Amazon Resource Name (ARN) for the regional bucket.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 128.

Required: No

OutpostId

The AWS Outposts ID of the regional bucket.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RegionReport

Service: Amazon S3 Control

A combination of a bucket and Region that's part of a Multi-Region Access Point.

Contents

Bucket

The name of the bucket.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 255.

Required: No

BucketAccountId

The AWS account ID that owns the Amazon S3 bucket that's associated with this Multi-Region Access Point.

Type: String

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: No

Region

The name of the Region.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ReplicaModifications

Service: Amazon S3 Control

A filter that you can use to specify whether replica modification sync is enabled. S3 on Outposts replica modification sync can help you keep object metadata synchronized between replicas and source objects. By default, S3 on Outposts replicates metadata from the source objects to the replicas only. When replica modification sync is enabled, S3 on Outposts replicates metadata changes made to the replica copies back to the source object, making the replication bidirectional.

To replicate object metadata modifications on replicas, you can specify this element and set the `Status` of this element to `Enabled`.

> **Note**
>
> You must enable replica modification sync on the source and destination buckets to replicate replica metadata changes between the source and the replicas.

Contents

Status

Specifies whether S3 on Outposts replicates modifications to object metadata on replicas.

Type: String

Valid Values: `Enabled | Disabled`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ReplicationConfiguration

Service: Amazon S3 Control

A container for one or more replication rules. A replication configuration must have at least one rule and you can add up to 100 rules. The maximum size of a replication configuration is 128 KB.

Contents

Role

The Amazon Resource Name (ARN) of the AWS Identity and Access Management (IAM) role that S3 on Outposts assumes when replicating objects. For information about S3 replication on Outposts configuration, see Setting up replication in the *Amazon S3 User Guide*.

Type: String

Required: Yes

Rules

A container for one or more replication rules. A replication configuration must have at least one rule and can contain an array of 100 rules at the most.

Type: Array of ReplicationRule data types

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ReplicationRule

Service: Amazon S3 Control

Specifies which S3 on Outposts objects to replicate and where to store the replicas.

Contents

Bucket

The Amazon Resource Name (ARN) of the access point for the source Outposts bucket that you want S3 on Outposts to replicate the objects from.

Type: String

Required: Yes

Destination

A container for information about the replication destination and its configurations.

Type: Destination data type

Required: Yes

Status

Specifies whether the rule is enabled.

Type: String

Valid Values: `Enabled | Disabled`

Required: Yes

DeleteMarkerReplication

Specifies whether S3 on Outposts replicates delete markers. If you specify a `Filter` element in your replication configuration, you must also include a `DeleteMarkerReplication` element. If your `Filter` includes a `Tag` element, the `DeleteMarkerReplication` element's `Status` child element must be set to `Disabled`, because S3 on Outposts doesn't support replicating delete markers for tag-based rules.

For more information about delete marker replication, see How delete operations affect replication in the *Amazon S3 User Guide*.

Type: DeleteMarkerReplication data type

Required: No

ExistingObjectReplication

An optional configuration to replicate existing source bucket objects.

> **Note**
>
> This is not supported by Amazon S3 on Outposts buckets.

Type: ExistingObjectReplication data type

Required: No

Filter

A filter that identifies the subset of objects to which the replication rule applies. A `Filter` element must specify exactly one `Prefix`, `Tag`, or `And` child element.

Type: ReplicationRuleFilter data type

Required: No

ID

A unique identifier for the rule. The maximum value is 255 characters.

Type: String

Required: No

Prefix

This member has been deprecated.

An object key name prefix that identifies the object or objects to which the rule applies. The maximum prefix length is 1,024 characters. To include all objects in an Outposts bucket, specify an empty string.

> **Important**
>
> When you're using XML requests, you must replace special characters (such as carriage returns) in object keys with their equivalent XML entity codes. For more information, see XML-related object key constraints in the *Amazon S3 User Guide*.

Type: String

Required: No

Priority

The priority indicates which rule has precedence whenever two or more replication rules conflict. S3 on Outposts attempts to replicate objects according to all replication rules. However, if there are two or more rules with the same destination Outposts bucket, then objects will be replicated according to the rule with the highest priority. The higher the number, the higher the priority.

For more information, see Creating replication rules on Outposts in the *Amazon S3 User Guide*.

Type: Integer

Required: No

SourceSelectionCriteria

A container that describes additional filters for identifying the source Outposts objects that you want to replicate. You can choose to enable or disable the replication of these objects.

Type: SourceSelectionCriteria data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ReplicationRuleAndOperator

Service: Amazon S3 Control

A container for specifying rule filters. The filters determine the subset of objects to which the rule applies. This element is required only if you specify more than one filter.

For example:

- If you specify both a `Prefix` and a `Tag` filter, wrap these filters in an `And` element.
- If you specify a filter based on multiple tags, wrap the `Tag` elements in an `And` element.

Contents

Prefix

An object key name prefix that identifies the subset of objects that the rule applies to.

Type: String

Required: No

Tags

An array of tags that contain key and value pairs.

Type: Array of S3Tag data types

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ReplicationRuleFilter

Service: Amazon S3 Control

A filter that identifies the subset of objects to which the replication rule applies. A `Filter` element must specify exactly one `Prefix`, `Tag`, or `And` child element.

Contents

And

A container for specifying rule filters. The filters determine the subset of objects that the rule applies to. This element is required only if you specify more than one filter. For example:

- If you specify both a `Prefix` and a `Tag` filter, wrap these filters in an `And` element.
- If you specify a filter based on multiple tags, wrap the `Tag` elements in an `And` element.

Type: ReplicationRuleAndOperator data type

Required: No

Prefix

An object key name prefix that identifies the subset of objects that the rule applies to.

> **Important**
>
> When you're using XML requests, you must replace special characters (such as carriage returns) in object keys with their equivalent XML entity codes. For more information, see XML-related object key constraints in the *Amazon S3 User Guide*.

Type: String

Required: No

Tag

A container for a key-value name pair.

Type: S3Tag data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ReplicationTime

Service: Amazon S3 Control

A container that specifies S3 Replication Time Control (S3 RTC) related information, including whether S3 RTC is enabled and the time when all objects and operations on objects must be replicated.

> **Note**
>
> This is not supported by Amazon S3 on Outposts buckets.

Contents

Status

Specifies whether S3 Replication Time Control (S3 RTC) is enabled.

Type: String

Valid Values: `Enabled | Disabled`

Required: Yes

Time

A container that specifies the time by which replication should be complete for all objects and operations on objects.

Type: ReplicationTimeValue data type

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ReplicationTimeValue

Service: Amazon S3 Control

A container that specifies the time value for S3 Replication Time Control (S3 RTC). This value is also used for the replication metrics `EventThreshold` element.

> **Note**
>
> This is not supported by Amazon S3 on Outposts buckets.

Contents

Minutes

Contains an integer that specifies the time period in minutes.

Valid value: 15

Type: Integer

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

S3AccessControlList

Service: Amazon S3 Control

Contents

Owner

Type: S3ObjectOwner data type

Required: Yes

Grants

Type: Array of S3Grant data types

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

S3AccessControlPolicy

Service: Amazon S3 Control

Contents

AccessControlList

Type: S3AccessControlList data type

Required: No

CannedAccessControlList

Type: String

Valid Values: `private | public-read | public-read-write | aws-exec-read | authenticated-read | bucket-owner-read | bucket-owner-full-control`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

S3BucketDestination

Service: Amazon S3 Control

A container for the bucket where the Amazon S3 Storage Lens metrics export files are located.

Contents

AccountId

The account ID of the owner of the S3 Storage Lens metrics export bucket.

Type: String

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: Yes

Arn

The Amazon Resource Name (ARN) of the bucket. This property is read-only and follows the following format: `arn:aws:s3:`*`us-east-1`*`:`*`example-account-id`*`:bucket/`*`your-destination-bucket-name`*

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:[^:]+:s3:.*`

Required: Yes

Format

Type: String

Valid Values: `CSV | Parquet`

Required: Yes

OutputSchemaVersion

The schema version of the export file.

Type: String

Valid Values: V_1

Required: Yes

Encryption

The container for the type encryption of the metrics exports in this bucket.

Type: StorageLensDataExportEncryption data type

Required: No

Prefix

The prefix of the destination bucket where the metrics export will be delivered.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

S3CopyObjectOperation

Service: Amazon S3 Control

Contains the configuration parameters for a PUT Copy object operation. S3 Batch Operations passes every object to the underlying `CopyObject` API operation. For more information about the parameters for this operation, see CopyObject.

Contents

AccessControlGrants

> **Note**
>
> This functionality is not supported by directory buckets.

Type: Array of S3Grant data types

Required: No

BucketKeyEnabled

Specifies whether Amazon S3 should use an S3 Bucket Key for object encryption with server-side encryption using AWS KMS (SSE-KMS). Setting this header to `true` causes Amazon S3 to use an S3 Bucket Key for object encryption with SSE-KMS.

Specifying this header with an *object* action doesn't affect *bucket-level* settings for S3 Bucket Key.

> **Note**
>
> This functionality is not supported by directory buckets.

Type: Boolean

Required: No

CannedAccessControlList

> **Note**
>
> This functionality is not supported by directory buckets.

Type: String

Valid Values: `private | public-read | public-read-write | aws-exec-read | authenticated-read | bucket-owner-read | bucket-owner-full-control`

Required: No

ChecksumAlgorithm

Indicates the algorithm that you want Amazon S3 to use to create the checksum. For more information, see Checking object integrity in the *Amazon S3 User Guide*.

Type: String

Valid Values: `CRC32 | CRC32C | SHA1 | SHA256`

Required: No

MetadataDirective

Type: String

Valid Values: `COPY | REPLACE`

Required: No

ModifiedSinceConstraint

Type: Timestamp

Required: No

NewObjectMetadata

If you don't provide this parameter, Amazon S3 copies all the metadata from the original objects. If you specify an empty set, the new objects will have no tags. Otherwise, Amazon S3 assigns the supplied tags to the new objects.

Type: S3ObjectMetadata data type

Required: No

NewObjectTagging

Specifies a list of tags to add to the destination objects after they are copied. If `NewObjectTagging` is not specified, the tags of the source objects are copied to destination objects by default.

> **Note**
>
> **Directory buckets** - Tags aren't supported by directory buckets. If your source objects have tags and your destination bucket is a directory bucket, specify an empty tag set in the `NewObjectTagging` field to prevent copying the source object tags to the directory bucket.

Type: Array of S3Tag data types

Required: No

ObjectLockLegalHoldStatus

The legal hold status to be applied to all objects in the Batch Operations job.

> **Note**
>
> This functionality is not supported by directory buckets.

Type: String

Valid Values: `OFF | ON`

Required: No

ObjectLockMode

The retention mode to be applied to all objects in the Batch Operations job.

> **Note**
>
> This functionality is not supported by directory buckets.

Type: String

Valid Values: `COMPLIANCE | GOVERNANCE`

Required: No

ObjectLockRetainUntilDate

The date when the applied object retention configuration expires on all objects in the Batch Operations job.

> **Note**
>
> This functionality is not supported by directory buckets.

Type: Timestamp

Required: No

RedirectLocation

If the destination bucket is configured as a website, specifies an optional metadata property for website redirects, `x-amz-website-redirect-location`. Allows webpage redirects if the object copy is accessed through a website endpoint.

> **Note**
>
> This functionality is not supported by directory buckets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Required: No

RequesterPays

> **Note**
>
> This functionality is not supported by directory buckets.

Type: Boolean

Required: No

SSEAwsKmsKeyId

> **Note**
>
> This functionality is not supported by directory buckets.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2000.

Required: No

StorageClass

Specify the storage class for the destination objects in a Copy operation.

> **Note**
>
> **Directory buckets** - This functionality is not supported by directory buckets.

Type: String

Valid Values: `STANDARD | STANDARD_IA | ONEZONE_IA | GLACIER | INTELLIGENT_TIERING | DEEP_ARCHIVE | GLACIER_IR`

Required: No

TargetKeyPrefix

Specifies the folder prefix that you want the objects to be copied into. For example, to copy objects into a folder named `Folder1` in the destination bucket, set the `TargetKeyPrefix` property to `Folder1`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

TargetResource

Specifies the destination bucket Amazon Resource Name (ARN) for the batch copy operation.

- **General purpose buckets** - For example, to copy objects to a general purpose bucket named `destinationBucket`, set the `TargetResource` property to `arn:aws:s3:::destinationBucket`.
- **Directory buckets** - For example, to copy objects to a directory bucket named `destinationBucket` in the Availability Zone; identified by the AZ ID `usw2-az1`, set the `TargetResource` property to `arn:aws:s3express:`*`region`*`:`*`account_id`*`:/bucket/`*`destination_bucket_base_name`*`--usw2-az1--x-s3`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:[^:]+:(s3|s3express):.*`

Required: No

UnModifiedSinceConstraint

Type: Timestamp

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

S3DeleteObjectTaggingOperation

Service: Amazon S3 Control

Contains no configuration parameters because the DELETE Object tagging (`DeleteObjectTagging`) API operation accepts only the bucket name and key name as parameters, which are defined in the job's manifest.

Contents

The members of this exception structure are context-dependent.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

S3GeneratedManifestDescriptor

Service: Amazon S3 Control

Describes the specified job's generated manifest. Batch Operations jobs created with a ManifestGenerator populate details of this descriptor after execution of the ManifestGenerator.

Contents

Format

The format of the generated manifest.

Type: String

Valid Values: `S3InventoryReport_CSV_20211130`

Required: No

Location

Contains the information required to locate a manifest object. Manifests can't be imported from directory buckets. For more information, see Directory buckets.

Type: JobManifestLocation data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

S3Grant

Service: Amazon S3 Control

Contents

Grantee

Type: S3Grantee data type

Required: No

Permission

Type: String

Valid Values: `FULL_CONTROL | READ | WRITE | READ_ACP | WRITE_ACP`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

S3Grantee

Service: Amazon S3 Control

Contents

DisplayName

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

Identifier

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

TypeIdentifier

Type: String

Valid Values: `id | emailAddress | uri`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

S3InitiateRestoreObjectOperation

Service: Amazon S3 Control

Contains the configuration parameters for a POST Object restore job. S3 Batch Operations passes every object to the underlying `RestoreObject` API operation. For more information about the parameters for this operation, see RestoreObject.

Contents

ExpirationInDays

This argument specifies how long the S3 Glacier or S3 Glacier Deep Archive object remains available in Amazon S3. S3 Initiate Restore Object jobs that target S3 Glacier and S3 Glacier Deep Archive objects require `ExpirationInDays` set to 1 or greater.

Conversely, do *not* set `ExpirationInDays` when creating S3 Initiate Restore Object jobs that target S3 Intelligent-Tiering Archive Access and Deep Archive Access tier objects. Objects in S3 Intelligent-Tiering archive access tiers are not subject to restore expiry, so specifying `ExpirationInDays` results in restore request failure.

S3 Batch Operations jobs can operate either on S3 Glacier and S3 Glacier Deep Archive storage class objects or on S3 Intelligent-Tiering Archive Access and Deep Archive Access storage tier objects, but not both types in the same job. If you need to restore objects of both types you *must* create separate Batch Operations jobs.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

GlacierJobTier

S3 Batch Operations supports `STANDARD` and `BULK` retrieval tiers, but not the `EXPEDITED` retrieval tier.

Type: String

Valid Values: `BULK | STANDARD`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

S3JobManifestGenerator

Service: Amazon S3 Control

The container for the service that will create the S3 manifest.

Contents

EnableManifestOutput

Determines whether or not to write the job's generated manifest to a bucket.

Type: Boolean

Required: Yes

SourceBucket

The source bucket used by the ManifestGenerator.

> **Note**
>
> **Directory buckets** - Directory buckets aren't supported as the source buckets used by `S3JobManifestGenerator` to generate the job manifest.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:[^:]+:s3:.*`

Required: Yes

ExpectedBucketOwner

The AWS account ID that owns the bucket the generated manifest is written to. If provided the generated manifest bucket's owner AWS account ID must match this value, else the job fails.

Type: String

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: No

Filter

Specifies rules the S3JobManifestGenerator should use to decide whether an object in the source bucket should or should not be included in the generated job manifest.

Type: JobManifestGeneratorFilter data type

Required: No

ManifestOutputLocation

Specifies the location the generated manifest will be written to. Manifests can't be written to directory buckets. For more information, see Directory buckets.

Type: S3ManifestOutputLocation data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

S3ManifestOutputLocation

Service: Amazon S3 Control

Location details for where the generated manifest should be written.

Contents

Bucket

The bucket ARN the generated manifest should be written to.

> **Note**
>
> **Directory buckets** - Directory buckets aren't supported as the buckets to store the generated manifest.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `arn:[^:]+:s3:.*`

Required: Yes

ManifestFormat

The format of the generated manifest.

Type: String

Valid Values: `S3InventoryReport_CSV_20211130`

Required: Yes

ExpectedManifestBucketOwner

The Account ID that owns the bucket the generated manifest is written to.

Type: String

Length Constraints: Maximum length of 64.

Pattern: `^\d{12}$`

Required: No

ManifestEncryption

Specifies what encryption should be used when the generated manifest objects are written.

Type: GeneratedManifestEncryption data type

Required: No

ManifestPrefix

Prefix identifying one or more objects to which the manifest applies.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 512.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

S3ObjectLockLegalHold

Service: Amazon S3 Control

Whether S3 Object Lock legal hold will be applied to objects in an S3 Batch Operations job.

Contents

Status

The Object Lock legal hold status to be applied to all objects in the Batch Operations job.

Type: String

Valid Values: `OFF` | `ON`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

S3ObjectMetadata

Service: Amazon S3 Control

Contents

CacheControl

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

ContentDisposition

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

ContentEncoding

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

ContentLanguage

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

ContentLength

This member has been deprecated.

Type: Long

Valid Range: Minimum value of 0.

Required: No

ContentMD5

This member has been deprecated.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

ContentType

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

HttpExpiresDate

Type: Timestamp

Required: No

RequesterCharged

This member has been deprecated.

Type: Boolean

Required: No

SSEAlgorithm

> **Note**
>
> For directory buckets, only the server-side encryption with Amazon S3 managed keys (SSE-S3) (AES256) is supported.

Type: String

Valid Values: `AES256` | `KMS`

Required: No

UserMetadata

Type: String to string map

Map Entries: Maximum number of 8192 items.

Key Length Constraints: Minimum length of 1. Maximum length of 1024.

Value Length Constraints: Maximum length of 1024.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

S3ObjectOwner

Service: Amazon S3 Control

Contents

DisplayName

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

ID

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

S3ReplicateObjectOperation

Service: Amazon S3 Control

Directs the specified job to invoke `ReplicateObject` on every object in the job's manifest.

Contents

The members of this exception structure are context-dependent.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

S3Retention

Service: Amazon S3 Control

Contains the S3 Object Lock retention mode to be applied to all objects in the S3 Batch Operations job. If you don't provide `Mode` and `RetainUntilDate` data types in your operation, you will remove the retention from your objects. For more information, see Using S3 Object Lock retention with S3 Batch Operations in the *Amazon S3 User Guide*.

Contents

Mode

The Object Lock retention mode to be applied to all objects in the Batch Operations job.

Type: String

Valid Values: `COMPLIANCE | GOVERNANCE`

Required: No

RetainUntilDate

The date when the applied Object Lock retention will expire on all objects set by the Batch Operations job.

Type: Timestamp

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

S3SetObjectAclOperation

Service: Amazon S3 Control

Contains the configuration parameters for a PUT Object ACL operation. S3 Batch Operations passes every object to the underlying `PutObjectAcl` API operation. For more information about the parameters for this operation, see PutObjectAcl.

Contents

AccessControlPolicy

Type: S3AccessControlPolicy data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

S3SetObjectLegalHoldOperation

Service: Amazon S3 Control

Contains the configuration for an S3 Object Lock legal hold operation that an S3 Batch Operations job passes to every object to the underlying `PutObjectLegalHold` API operation. For more information, see Using S3 Object Lock legal hold with S3 Batch Operations in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported by directory buckets.

Contents

LegalHold

Contains the Object Lock legal hold status to be applied to all objects in the Batch Operations job.

Type: S3ObjectLockLegalHold data type

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

S3SetObjectRetentionOperation

Service: Amazon S3 Control

Contains the configuration parameters for the Object Lock retention action for an S3 Batch Operations job. Batch Operations passes every object to the underlying `PutObjectRetention` API operation. For more information, see Using S3 Object Lock retention with S3 Batch Operations in the *Amazon S3 User Guide*.

> **Note**
>
> This functionality is not supported by directory buckets.

Contents

Retention

Contains the Object Lock retention mode to be applied to all objects in the Batch Operations job. For more information, see Using S3 Object Lock retention with S3 Batch Operations in the *Amazon S3 User Guide*.

Type: S3Retention data type

Required: Yes

BypassGovernanceRetention

Indicates if the action should be applied to objects in the Batch Operations job even if they have Object Lock `GOVERNANCE` type in place.

Type: Boolean

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2

- AWS SDK for Ruby V3

S3SetObjectTaggingOperation

Service: Amazon S3 Control

Contains the configuration parameters for a PUT Object Tagging operation. S3 Batch Operations passes every object to the underlying `PutObjectTagging` API operation. For more information about the parameters for this operation, see PutObjectTagging.

Contents

TagSet

Type: Array of S3Tag data types

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

S3Tag

Service: Amazon S3 Control

A container for a key-value name pair.

Contents

Key

Key of the tag

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^([\p{L}\p{Z}\p{N}_.:/=+\-@]*)$`

Required: Yes

Value

Value of the tag

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: `^([\p{L}\p{Z}\p{N}_.:/=+\-@]*)$`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SelectionCriteria

Service: Amazon S3 Control

Contents

Delimiter

A container for the delimiter of the selection criteria being used.

Type: String

Length Constraints: Maximum length of 1.

Required: No

MaxDepth

The max depth of the selection criteria

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10.

Required: No

MinStorageBytesPercentage

The minimum number of storage bytes percentage whose metrics will be selected.

> **Note**
>
> You must choose a value greater than or equal to `1.0`.

Type: Double

Valid Range: Minimum value of 0.1. Maximum value of 100.

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SourceSelectionCriteria

Service: Amazon S3 Control

A container that describes additional filters for identifying the source objects that you want to replicate. You can choose to enable or disable the replication of these objects.

Contents

ReplicaModifications

A filter that you can use to specify whether replica modification sync is enabled. S3 on Outposts replica modification sync can help you keep object metadata synchronized between replicas and source objects. By default, S3 on Outposts replicates metadata from the source objects to the replicas only. When replica modification sync is enabled, S3 on Outposts replicates metadata changes made to the replica copies back to the source object, making the replication bidirectional.

To replicate object metadata modifications on replicas, you can specify this element and set the `Status` of this element to `Enabled`.

> **Note**
>
> You must enable replica modification sync on the source and destination buckets to replicate replica metadata changes between the source and the replicas.

Type: ReplicaModifications data type

Required: No

SseKmsEncryptedObjects

A filter that you can use to select Amazon S3 objects that are encrypted with server-side encryption by using AWS Key Management Service (AWS KMS) keys. If you include `SourceSelectionCriteria` in the replication configuration, this element is required.

> **Note**
>
> This is not supported by Amazon S3 on Outposts buckets.

Type: SseKmsEncryptedObjects data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SSEKMS

Service: Amazon S3 Control

Contents

KeyId

A container for the ARN of the SSE-KMS encryption. This property is read-only and follows the following format: `arn:aws:kms:`*`us-east-1`*`:`*`example-account-id`*`:key/`*`example-9a73-4afc-8d29-8f5900cef44e`*

Type: String

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SseKmsEncryptedObjects

Service: Amazon S3 Control

A container for filter information that you can use to select S3 objects that are encrypted with AWS Key Management Service (AWS KMS).

> **Note**
>
> This is not supported by Amazon S3 on Outposts buckets.

Contents

Status

Specifies whether Amazon S3 replicates objects that are created with server-side encryption by using an AWS KMS key stored in AWS Key Management Service.

Type: String

Valid Values: `Enabled | Disabled`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SSEKMSEncryption

Service: Amazon S3 Control

Configuration for the use of SSE-KMS to encrypt generated manifest objects.

Contents

KeyId

Specifies the ID of the AWS Key Management Service (AWS KMS) symmetric encryption customer managed key to use for encrypting generated manifest objects.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2000.

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SSES3

Service: Amazon S3 Control

Contents

The members of this exception structure are context-dependent.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SSES3Encryption

Service: Amazon S3 Control

Configuration for the use of SSE-S3 to encrypt generated manifest objects.

Contents

The members of this exception structure are context-dependent.

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

StorageLensAwsOrg

Service: Amazon S3 Control

The AWS organization for your S3 Storage Lens.

Contents

Arn

A container for the Amazon Resource Name (ARN) of the AWS organization. This property is read-only and follows the following format: `arn:aws:organizations:`*`us-east-1`*`:`*`example-account-id`*`:organization/`*`o-ex2l495dck`*

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `arn:[a-z\-]+:organizations::\d{12}:organization\/o-[a-z0-9]{10,32}`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

StorageLensConfiguration

Service: Amazon S3 Control

A container for the Amazon S3 Storage Lens configuration.

Contents

AccountLevel

A container for all the account-level configurations of your S3 Storage Lens configuration.

Type: AccountLevel data type

Required: Yes

Id

A container for the Amazon S3 Storage Lens configuration ID.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-\_\.]+`

Required: Yes

IsEnabled

A container for whether the S3 Storage Lens configuration is enabled.

Type: Boolean

Required: Yes

AwsOrg

A container for the AWS organization for this S3 Storage Lens configuration.

Type: StorageLensAwsOrg data type

Required: No

DataExport

A container to specify the properties of your S3 Storage Lens metrics export including, the destination, schema and format.

Type: StorageLensDataExport data type

Required: No

Exclude

A container for what is excluded in this configuration. This container can only be valid if there is no `Include` container submitted, and it's not empty.

Type: Exclude data type

Required: No

Include

A container for what is included in this configuration. This container can only be valid if there is no `Exclude` container submitted, and it's not empty.

Type: Include data type

Required: No

StorageLensArn

The Amazon Resource Name (ARN) of the S3 Storage Lens configuration. This property is read-only and follows the following format: `arn:aws:s3:us-east-1:example-account-id:storage-lens/your-dashboard-name`

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `arn:[a-z\-]+:s3:[a-z0-9\-]+:\d{12}:storage\-lens\/.*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2

- AWS SDK for Ruby V3

StorageLensDataExport

Service: Amazon S3 Control

A container to specify the properties of your S3 Storage Lens metrics export, including the destination, schema, and format.

Contents

CloudWatchMetrics

A container for enabling Amazon CloudWatch publishing for S3 Storage Lens metrics.

Type: CloudWatchMetrics data type

Required: No

S3BucketDestination

A container for the bucket where the S3 Storage Lens metrics export will be located.

> **Note**
>
> This bucket must be located in the same Region as the storage lens configuration.

Type: S3BucketDestination data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

StorageLensDataExportEncryption

Service: Amazon S3 Control

A container for the encryption of the S3 Storage Lens metrics exports.

Contents

SSEKMS

Type: SSEKMS data type

Required: No

SSES3

Type: SSES3 data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

StorageLensGroup

Service: Amazon S3 Control

A custom grouping of objects that include filters for prefixes, suffixes, object tags, object size, or object age. You can create an S3 Storage Lens group that includes a single filter or multiple filter conditions. To specify multiple filter conditions, you use `AND` or `OR` logical operators.

Contents

Filter

Sets the criteria for the Storage Lens group data that is displayed. For multiple filter conditions, the `AND` or `OR` logical operator is used.

Type: StorageLensGroupFilter data type

Required: Yes

Name

Contains the name of the Storage Lens group.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9\-\_]+`

Required: Yes

StorageLensGroupArn

Contains the Amazon Resource Name (ARN) of the Storage Lens group. This property is read-only.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 1024.

Pattern: `arn:[a-z\-]+:s3:[a-z0-9\-]+:\d{12}:storage\-lens\-group\/.*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

StorageLensGroupAndOperator

Service: Amazon S3 Control

A logical operator that allows multiple filter conditions to be joined for more complex comparisons of Storage Lens group data.

Contents

MatchAnyPrefix

Contains a list of prefixes. At least one prefix must be specified. Up to 10 prefixes are allowed.

Type: Array of strings

Required: No

MatchAnySuffix

Contains a list of suffixes. At least one suffix must be specified. Up to 10 suffixes are allowed.

Type: Array of strings

Required: No

MatchAnyTag

Contains the list of object tags. At least one object tag must be specified. Up to 10 object tags are allowed.

Type: Array of S3Tag data types

Required: No

MatchObjectAge

Contains `DaysGreaterThan` and `DaysLessThan` to define the object age range (minimum and maximum number of days).

Type: MatchObjectAge data type

Required: No

MatchObjectSize

Contains `BytesGreaterThan` and `BytesLessThan` to define the object size range (minimum and maximum number of Bytes).

Type: MatchObjectSize data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

StorageLensGroupFilter

Service: Amazon S3 Control

The filter element sets the criteria for the Storage Lens group data that is displayed. For multiple filter conditions, the `AND` or `OR` logical operator is used.

Contents

And

A logical operator that allows multiple filter conditions to be joined for more complex comparisons of Storage Lens group data. Objects must match all of the listed filter conditions that are joined by the `And` logical operator. Only one of each filter condition is allowed.

Type: StorageLensGroupAndOperator data type

Required: No

MatchAnyPrefix

Contains a list of prefixes. At least one prefix must be specified. Up to 10 prefixes are allowed.

Type: Array of strings

Required: No

MatchAnySuffix

Contains a list of suffixes. At least one suffix must be specified. Up to 10 suffixes are allowed.

Type: Array of strings

Required: No

MatchAnyTag

Contains the list of S3 object tags. At least one object tag must be specified. Up to 10 object tags are allowed.

Type: Array of S3Tag data types

Required: No

MatchObjectAge

Contains `DaysGreaterThan` and `DaysLessThan` to define the object age range (minimum and maximum number of days).

Type: MatchObjectAge data type

Required: No

MatchObjectSize

Contains `BytesGreaterThan` and `BytesLessThan` to define the object size range (minimum and maximum number of Bytes).

Type: MatchObjectSize data type

Required: No

Or

A single logical operator that allows multiple filter conditions to be joined. Objects can match any of the listed filter conditions, which are joined by the `Or` logical operator. Only one of each filter condition is allowed.

Type: StorageLensGroupOrOperator data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

StorageLensGroupLevel

Service: Amazon S3 Control

Specifies the Storage Lens groups to include in the Storage Lens group aggregation.

Contents

SelectionCriteria

Indicates which Storage Lens group ARNs to include or exclude in the Storage Lens group aggregation. If this value is left null, then all Storage Lens groups are selected.

Type: StorageLensGroupLevelSelectionCriteria data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

StorageLensGroupLevelSelectionCriteria

Service: Amazon S3 Control

Indicates which Storage Lens group ARNs to include or exclude in the Storage Lens group aggregation. You can only attach Storage Lens groups to your Storage Lens dashboard if they're included in your Storage Lens group aggregation. If this value is left null, then all Storage Lens groups are selected.

Contents

Exclude

Indicates which Storage Lens group ARNs to exclude from the Storage Lens group aggregation.

Type: Array of strings

Length Constraints: Minimum length of 4. Maximum length of 1024.

Pattern: `arn:[a-z\-]+:s3:[a-z0-9\-]+:\d{12}:storage\-lens\-group\/.*`

Required: No

Include

Indicates which Storage Lens group ARNs to include in the Storage Lens group aggregation.

Type: Array of strings

Length Constraints: Minimum length of 4. Maximum length of 1024.

Pattern: `arn:[a-z\-]+:s3:[a-z0-9\-]+:\d{12}:storage\-lens\-group\/.*`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

StorageLensGroupOrOperator

Service: Amazon S3 Control

A container element for specifying `Or` rule conditions. The rule conditions determine the subset of objects to which the `Or` rule applies. Objects can match any of the listed filter conditions, which are joined by the `Or` logical operator. Only one of each filter condition is allowed.

Contents

MatchAnyPrefix

Filters objects that match any of the specified prefixes.

Type: Array of strings

Required: No

MatchAnySuffix

Filters objects that match any of the specified suffixes.

Type: Array of strings

Required: No

MatchAnyTag

Filters objects that match any of the specified S3 object tags.

Type: Array of S3Tag data types

Required: No

MatchObjectAge

Filters objects that match the specified object age range.

Type: MatchObjectAge data type

Required: No

MatchObjectSize

Filters objects that match the specified object size range.

Type: MatchObjectSize data type

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

StorageLensTag

Service: Amazon S3 Control

Contents

Key

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^([\p{L}\p{Z}\p{N}_.:/=+\-@]*)$`

Required: Yes

Value

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: `^([\p{L}\p{Z}\p{N}_.:/=+\-@]*)$`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Tag

Service: Amazon S3 Control

An AWS resource tag that's associated with your S3 resource. You can add tags to new objects when you upload them, or you can add object tags to existing objects.

> **Note**
>
> This operation is only supported for S3 Storage Lens groups and for S3 Access Grants. The tagged resource can be an S3 Storage Lens group or S3 Access Grants instance, registered location, or grant.

Contents

Key

The key of the key-value pair of a tag added to your AWS resource. A tag key can be up to 128 Unicode characters in length and is case-sensitive. System created tags that begin with `aws:` aren't supported.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `^([\p{L}\p{Z}\p{N}_.:/=+\-@]*)$`

Required: Yes

Value

The value of the key-value pair of a tag added to your AWS resource. A tag value can be up to 256 Unicode characters in length and is case-sensitive.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: `^([\p{L}\p{Z}\p{N}_.:/=+\-@]*)$`

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Tagging

Service: Amazon S3 Control

Contents

TagSet

A collection for a set of tags.

Type: Array of S3Tag data types

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Transition

Service: Amazon S3 Control

Specifies when an object transitions to a specified storage class. For more information about Amazon S3 Lifecycle configuration rules, see Transitioning objects using Amazon S3 Lifecycle in the *Amazon S3 User Guide*.

Contents

Date

Indicates when objects are transitioned to the specified storage class. The date value must be in ISO 8601 format. The time is always midnight UTC.

Type: Timestamp

Required: No

Days

Indicates the number of days after creation when objects are transitioned to the specified storage class. The value must be a positive integer.

Type: Integer

Required: No

StorageClass

The storage class to which you want the object to transition.

Type: String

Valid Values: `GLACIER | STANDARD_IA | ONEZONE_IA | INTELLIGENT_TIERING | DEEP_ARCHIVE`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VersioningConfiguration

Service: Amazon S3 Control

Describes the versioning state of an Amazon S3 on Outposts bucket. For more information, see PutBucketVersioning.

Contents

MFADelete

Specifies whether MFA delete is enabled or disabled in the bucket versioning configuration for the S3 on Outposts bucket.

Type: String

Valid Values: `Enabled | Disabled`

Required: No

Status

Sets the versioning state of the S3 on Outposts bucket.

Type: String

Valid Values: `Enabled | Suspended`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VpcConfiguration

Service: Amazon S3 Control

The virtual private cloud (VPC) configuration for an access point.

Contents

VpcId

If this field is specified, this access point will only allow connections from the specified VPC ID.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: Yes

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Amazon S3 on Outposts

The following data types are supported by Amazon S3 on Outposts:

- Endpoint
- FailedReason
- NetworkInterface
- Outpost

Endpoint

Service: Amazon S3 on Outposts

Amazon S3 on Outposts Access Points simplify managing data access at scale for shared datasets in S3 on Outposts. S3 on Outposts uses endpoints to connect to AWS Outposts buckets so that you can perform actions within your virtual private cloud (VPC). For more information, see Accessing S3 on Outposts using VPC-only access points in the *Amazon Simple Storage Service User Guide*.

Contents

AccessType

The type of connectivity used to access the Amazon S3 on Outposts endpoint.

Type: String

Valid Values: `Private | CustomerOwnedIp`

Required: No

CidrBlock

The VPC CIDR committed by this endpoint.

Type: String

Required: No

CreationTime

The time the endpoint was created.

Type: Timestamp

Required: No

CustomerOwnedIpv4Pool

The ID of the customer-owned IPv4 address pool used for the endpoint.

Type: String

Pattern: `^ipv4pool-coip-([0-9a-f]{17})$`

Required: No

EndpointArn

The Amazon Resource Name (ARN) of the endpoint.

Type: String

Pattern: `^arn:(aws|aws-cn|aws-us-gov|aws-iso|aws-iso-b):s3-outposts:[a-z\-0-9]*:[0-9]{12}:outpost/(op-[a-f0-9]{17}|ec2)/endpoint/[a-zA-Z0-9]{19}$`

Required: No

FailedReason

The failure reason, if any, for a create or delete endpoint operation.

Type: FailedReason object

Required: No

NetworkInterfaces

The network interface of the endpoint.

Type: Array of NetworkInterface objects

Required: No

OutpostsId

The ID of the AWS Outposts.

Type: String

Pattern: `^(op-[a-f0-9]{17}|\d{12}|ec2)$`

Required: No

SecurityGroupId

The ID of the security group used for the endpoint.

Type: String

Pattern: `^sg-([0-9a-f]{8}|[0-9a-f]{17})$`

Required: No

Status

The status of the endpoint.

Type: String

Valid Values: `Pending | Available | Deleting | Create_Failed | Delete_Failed`

Required: No

SubnetId

The ID of the subnet used for the endpoint.

Type: String

Pattern: `^subnet-([0-9a-f]{8}|[0-9a-f]{17})$`

Required: No

VpcId

The ID of the VPC used for the endpoint.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

FailedReason

Service: Amazon S3 on Outposts

The failure reason, if any, for a create or delete endpoint operation.

Contents

ErrorCode

The failure code, if any, for a create or delete endpoint operation.

Type: String

Required: No

Message

Additional error details describing the endpoint failure and recommended action.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

NetworkInterface

Service: Amazon S3 on Outposts

The container for the network interface.

Contents

NetworkInterfaceId

The ID for the network interface.

Type: String

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Outpost

Service: Amazon S3 on Outposts

Contains the details for the Outpost object.

Contents

CapacityInBytes

The Amazon S3 capacity of the outpost in bytes.

Type: Long

Required: No

OutpostArn

Specifies the unique Amazon Resource Name (ARN) for the outpost.

Type: String

Pattern: `^arn:(aws|aws-cn|aws-us-gov|aws-iso|aws-iso-b):outposts:[a-z\-0-9]*:[0-9]{12}:outpost/(op-[a-f0-9]{17}|ec2)$`

Required: No

OutpostId

Specifies the unique identifier for the outpost.

Type: String

Pattern: `^(op-[a-f0-9]{17}|\d{12}|ec2)$`

Required: No

OwnerId

Returns the AWS account ID of the outpost owner. Useful for comparing owned versus shared outposts.

Type: String

Pattern: `^\d{12}$`

Required: No

S3OutpostArn

Specifies the unique S3 on Outposts ARN for use with AWS Resource Access Manager (AWS RAM).

Type: String

Pattern: `^arn:(aws|aws-cn|aws-us-gov|aws-iso|aws-iso-b):s3-outposts:[a-z\-0-9]*:[0-9]{12}:outpost/(op-[a-f0-9]{17}|\d{12})/s3$`

Required: No

See Also

For more information about using this API in one of the language-specific AWS SDKs, see the following:

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Authenticating Requests (AWS Signature Version 4)

Topics

- Authentication Methods
- Introduction to Signing Requests
- Authenticating Requests: Using the Authorization Header (AWS Signature Version 4)
- Authenticating Requests: Using Query Parameters (AWS Signature Version 4)
- Examples: Signature Calculations in AWS Signature Version 4
- Authenticating Requests: Browser-Based Uploads Using POST (AWS Signature Version 4)
- Amazon S3 Signature Version 4 Authentication Specific Policy Keys

Every interaction with Amazon S3 is either authenticated or anonymous. This section explains request authentication with the AWS Signature Version 4 algorithm.

> **Note**
>
> If you use the AWS SDKs (see Sample Code and Libraries) to send your requests, you don't need to read this section because the SDK clients authenticate your requests by using access keys that you provide. Unless you have a good reason not to, you should always use the AWS SDKs. In Regions that support both signature versions, you can request AWS SDKs to use specific signature version. For more information, see Specifying Signature Version in Request Authentication in the *Amazon Simple Storage Service User Guide*. You need to read this section only if you are implementing the AWS Signature Version 4 algorithm in your custom client.

Authentication with AWS Signature Version 4 provides some or all of the following, depending on how you choose to sign your request:

- **Verification of the identity of the requester** – Authenticated requests require a signature that you create by using your access keys (access key ID, secret access key). For information about getting access keys, see Understanding and Getting Your Security Credentials in the *AWS General Reference*. If you are using temporary security credentials, the signature calculations also require

a security token. For more information, see Requesting Temporary Security Credentials in the *IAM User Guide*.

- **In-transit data protection** – In order to prevent tampering with a request while it is in transit, you use some of the request elements to calculate the request signature. Upon receiving the request, Amazon S3 calculates the signature by using the same request elements. If any request component received by Amazon S3 does not match the component that was used to calculate the signature, Amazon S3 will reject the request.
- **Protect against reuse of the signed portions of the request** – The signed portions (using AWS Signatures) of requests are valid within 15 minutes of the timestamp in the request. An unauthorized party who has access to a signed request can modify the unsigned portions of the request without affecting the request's validity in the 15 minute window. Because of this, we recommend that you maximize protection by signing request headers and body, making HTTPS requests to Amazon S3, and by using the `s3:x-amz-content-sha256` condition key (see Amazon S3 Signature Version 4 Authentication Specific Policy Keys) in AWS policies to require users to sign Amazon S3 request bodies.

> **Note**
>
> Amazon S3 supports Signature Version 4, a protocol for authenticating inbound API requests to AWS services, in all AWS Regions. At this time, AWS Regions created before January 30, 2014 will continue to support the previous protocol, Signature Version 2. Any new Regions after January 30, 2014 will support only Signature Version 4 and therefore all requests to those Regions must be made with Signature Version 4. For more information about AWS Signature Version 2, see Signing and Authenticating REST Requests in the *Amazon Simple Storage Service User Guide*.

Authentication Methods

You can express authentication information by using one of the following methods:

- **HTTP Authorization header** – Using the HTTP `Authorization` header is the most common method of authenticating an Amazon S3 request. All of the Amazon S3 REST operations (except for browser-based uploads using POST requests) require this header. For more information about

the `Authorization` header value, and how to calculate signature and related options, see Authenticating Requests: Using the Authorization Header (AWS Signature Version 4).

- **Query string parameters** – You can use a query string to express a request entirely in a URL. In this case, you use query parameters to provide request information, including the authentication information. Because the request signature is part of the URL, this type of URL is often referred to as a presigned URL. You can use presigned URLs to embed clickable links, which can be valid for up to seven days, in HTML. For more information, see Authenticating Requests: Using Query Parameters (AWS Signature Version 4).

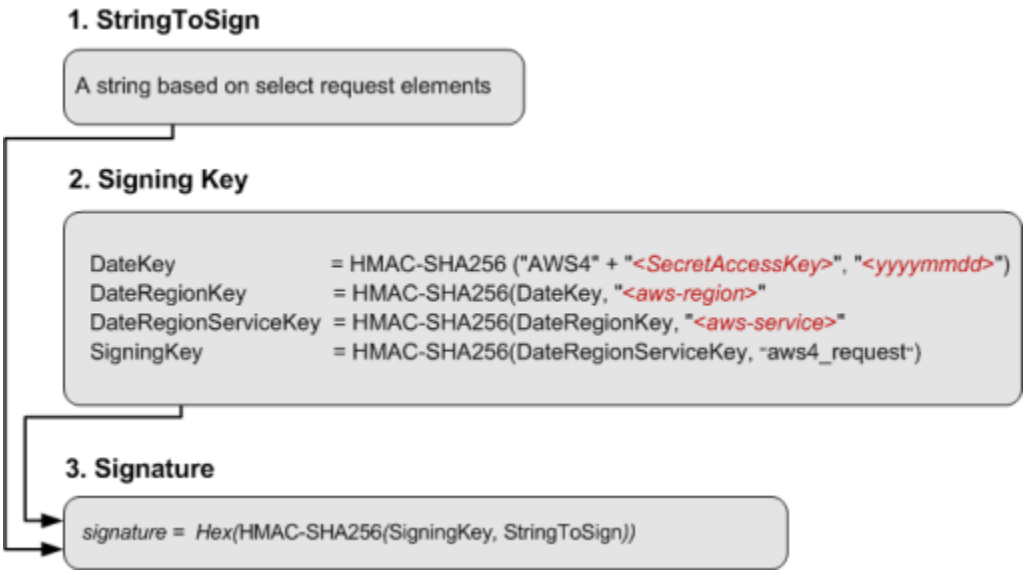
Amazon S3 also supports browser-based uploads that use HTTP POST requests. With an HTTP POST request, you can upload content to Amazon S3 directly from the browser. For information about authenticating POST requests, see Browser-Based Uploads Using POST (AWS Signature Version 4).

Introduction to Signing Requests

Authentication information that you send in a request must include a signature. To calculate a signature, you first concatenate select request elements to form a string, referred to as the *string to sign*. You then use a signing key to calculate the hash-based message authentication code (HMAC) of the string to sign.

In AWS Signature Version 4, you don't use your secret access key to sign the request. Instead, you first use your secret access key to derive a signing key. The derived signing key is specific to the date, service, and Region. For more information about how to derive a signing key in different programming languages, see Examples of how to derive a signing key for Signature Version 4.

The following diagram illustrates the general process of computing a signature.



The string to sign depends on the request type. For example, when you use the HTTP Authorization header or the query parameters for authentication, you use a varying combination of request elements to create the string to sign. For an HTTP POST request, the POST policy in the request is the string you sign. For more information about computing string to sign, follow links provided at the end of this section.

For signing key, the diagram shows series of calculations, where result of each step you feed into the next step. The final step is the signing key.

Upon receiving an authenticated request, Amazon S3 servers re-create the signature by using the authentication information that is contained in the request. If the signatures match, Amazon S3 processes your request; otherwise, the request is rejected.

For more information about authenticating requests, see the following topics:

- Authenticating Requests: Using the Authorization Header (AWS Signature Version 4)
- Authenticating Requests: Using Query Parameters (AWS Signature Version 4)
- Browser-Based Uploads Using POST (AWS Signature Version 4)

Authenticating Requests: Using the Authorization Header (AWS Signature Version 4)

Topics

- Overview

- Signature Calculations for the Authorization Header: Transferring Payload in a Single Chunk (AWS Signature Version 4)
- Signature Calculations for the Authorization Header: Transferring Payload in Multiple Chunks (Chunked Upload) (AWS Signature Version 4)
- Signature Calculations for the Authorization Header: Including Trailing Headers (Chunked Upload) (AWS Signature Version 4)

Overview

Using the HTTP `Authorization` header is the most common method of providing authentication information. Except for POST requests and requests that are signed by using query parameters, all Amazon S3 operations use the `Authorization` request header to provide authentication information.

The following is an example of the `Authorization` header value. Line breaks are added to this example for readability:

```
Authorization: AWS4-HMAC-SHA256
Credential=AKIAIOSFODNN7EXAMPLE/20130524/us-east-1/s3/aws4_request,
SignedHeaders=host;range;x-amz-date,
Signature=fe5f80f77d5fa3beca038a248ff027d0445342fe2855ddc963176630326f1024
```

The following table describes the various components of the `Authorization` header value in the preceding example:

Component	Description
`AWS4-HMAC-SHA256`	The algorithm that was used to calculate the signature. You must provide this value when you use AWS Signature Version 4 for authentication. The string specifies AWS Signature Version 4 (`AWS4`) and the signing algorithm (`HMAC-SHA256`).
`Credential`	

Component	Description
	Your access key ID and the scope information, which includes the date, Region, and service that were used to calculate the signature. This string has the following form: `<your-access-key-id> /<date>/<aws-region> /<aws-service> /aws4_request` Where: • *<date>* value is specified using YYYYMMDD format. • *<aws-service>* value is s3 when sending request to Amazon S3.
SignedHeaders	A semicolon-separated list of request headers that you used to compute Signature . The list includes header names only, and the header names must be in lowercase. For example: `host;range;x-amz-date`
Signature	The 256-bit signature expressed as 64 lowercase hexadecimal characters. For example: `fe5f80f77d5fa3beca038a248ff027d0445342fe2855d dc963176630326f1024` Note that the signature calculations vary depending on the option you choose to transfer the payload.

The signature calculations vary depending on the method you choose to transfer the request payload. S3 supports the following options:

- **Transfer payload in a single chunk** – In this case, you have the following signature calculation options:

  - **Signed payload option** – You can optionally compute the entire payload checksum and include it in signature calculation. This provides added security but you need to read your payload twice or buffer it in memory.

    For example, in order to upload a file, you need to read the file first to compute a payload hash for signature calculation and again for transmission when you create the request. For smaller payloads, this approach might be preferable. However, for large files, reading the file twice can be inefficient, so you might want to upload data in chunks instead.

    We recommend you include payload checksum for added security.
  - **Unsigned payload option** – Do not include payload checksum in signature calculation.

  For step-by-step instructions to calculate signature and construct the Authorization header value, see Signature Calculations for the Authorization Header: Transferring Payload in a Single Chunk (AWS Signature Version 4).
- **Transfer payload in multiple chunks (chunked upload)** – In this case you transfer payload in chunks. You can transfer a payload in chunks regardless of the payload size.

  You can break up your payload into chunks. These can be fixed or variable-size chunks. By uploading data in chunks, you avoid reading the entire payload to calculate the signature. Instead, for the first chunk, you calculate a seed signature that uses only the request headers. The second chunk contains the signature for the first chunk, and each subsequent chunk contains the signature for the chunk that precedes it. At the end of the upload, you send a final chunk with 0 bytes of data that contains the signature of the last chunk of the payload. For more information, see Signature Calculations for the Authorization Header: Transferring Payload in Multiple Chunks (Chunked Upload) (AWS Signature Version 4).

When signing your requests, you can use either AWS Signature Version 4 or AWS Signature Version 4A. The key difference between the two is determined by how the signature is calculated. With AWS Signature Version 4A, the signature does not include Region-specific information and is calculated using the `AWS4-ECDSA-P256-SHA256` algorithm.

In addition to these options, you have the option of including a trailer with your request. In order to include a trailer with your request, you need to specify that in the header by setting `x-amz-content-sha256` to the appropriate value. If you are using a trailing header, you must include `x-amz-trailer` in the header and specify the trailing header names as a string in a comma-separated list. All trailing headers are written after the final chunk. If you're uploading the data in multiple chunks, you must send a final chunk with 0 bytes of data before sending the trailing header.

When you send a request, you must tell Amazon S3 which of the preceding options you have chosen in your signature calculation, by adding the `x-amz-content-sha256` header with one of the following values:

Header value	Description
Actual payload checksum value	This value is the actual checksum of your object and is only possible when you are uploading the data in a single chunk.
UNSIGNED-PAYLOAD	Use this when you are uploading the object as a single unsigned chunk.
STREAMING-UNSIGNED-PAYLOAD-TRAILER	Use this when sending an unsigned payload over multiple chunks. In this case you also have a trailing header after the chunk is uploaded.
STREAMING-AWS4-HMAC-SHA256-PAYLOAD	Use this when sending a payload over multiple chunks, and the chunks are signed using `AWS4-HMAC-SHA256` . This produces a SigV4 signature.
STREAMING-AWS4-HMAC-SHA256-PAYLOAD-TRAILER	Use this when sending a payload over multiple chunks, and the chunks are signed using `AWS4-HMAC-SHA256` . This produces a SigV4 signature. In addition, the digest for the chunks is included as a trailing header.
STREAMING-AWS4-ECDSA-P256-SHA256-PAYLOAD	Use this when sending a payload over multiple chunks, and the chunks are signed using `AWS4-ECDSA-P256-SHA256` . This produces a SigV4A signature.

Header value	Description
STREAMING-AWS4-ECDSA-P256-SHA256-PAYLOAD-TRAILER	Use this when sending a payload over multiple chunks, and the chunks are signed using `AWS4-ECDSA-P256-SHA256` . This produces a SigV4A signature. In addition, the digest for the chunks is included as a trailing header.

Upon receiving the request, Amazon S3 re-creates the string to sign using information in the `Authorization` header and the `date` header. It then verifies with authentication service the signatures match. The request date can be specified by using either the HTTP `Date` or the `x-amz-date` header. If both headers are present, `x-amz-date` takes precedence.

If the signatures match, Amazon S3 processes your request; otherwise, your request will fail.

For more information, see the following topics:

Signature Calculations for the Authorization Header: Transferring Payload in a Single Chunk (AWS Signature Version 4)

Signature Calculations for the Authorization Header: Transferring Payload in Multiple Chunks (Chunked Upload) (AWS Signature Version 4)

Signature Calculations for the Authorization Header: Including Trailing Headers (Chunked Upload) (AWS Signature Version 4)

Signature Calculations for the Authorization Header: Transferring Payload in a Single Chunk (AWS Signature Version 4)

When using the `Authorization` header to authenticate requests, the header value includes, among other things, a signature. The signature calculations vary depending on the choice you make for transferring the payload (Overview). This section explains signature calculations when you choose to transfer the payload in a single chunk. The example section (see Examples: Signature Calculations) shows signature calculations and resulting `Authorization` headers that you can use as a test suite to verify your code.

Important

When transferring payload in a single chunk, you can optionally choose to include the payload hash in the signature calculations, referred as *signed payload* (if you don't include it, the payload is considered *unsigned*). The signing procedure discussed in the following section applies to both, but note the following differences:

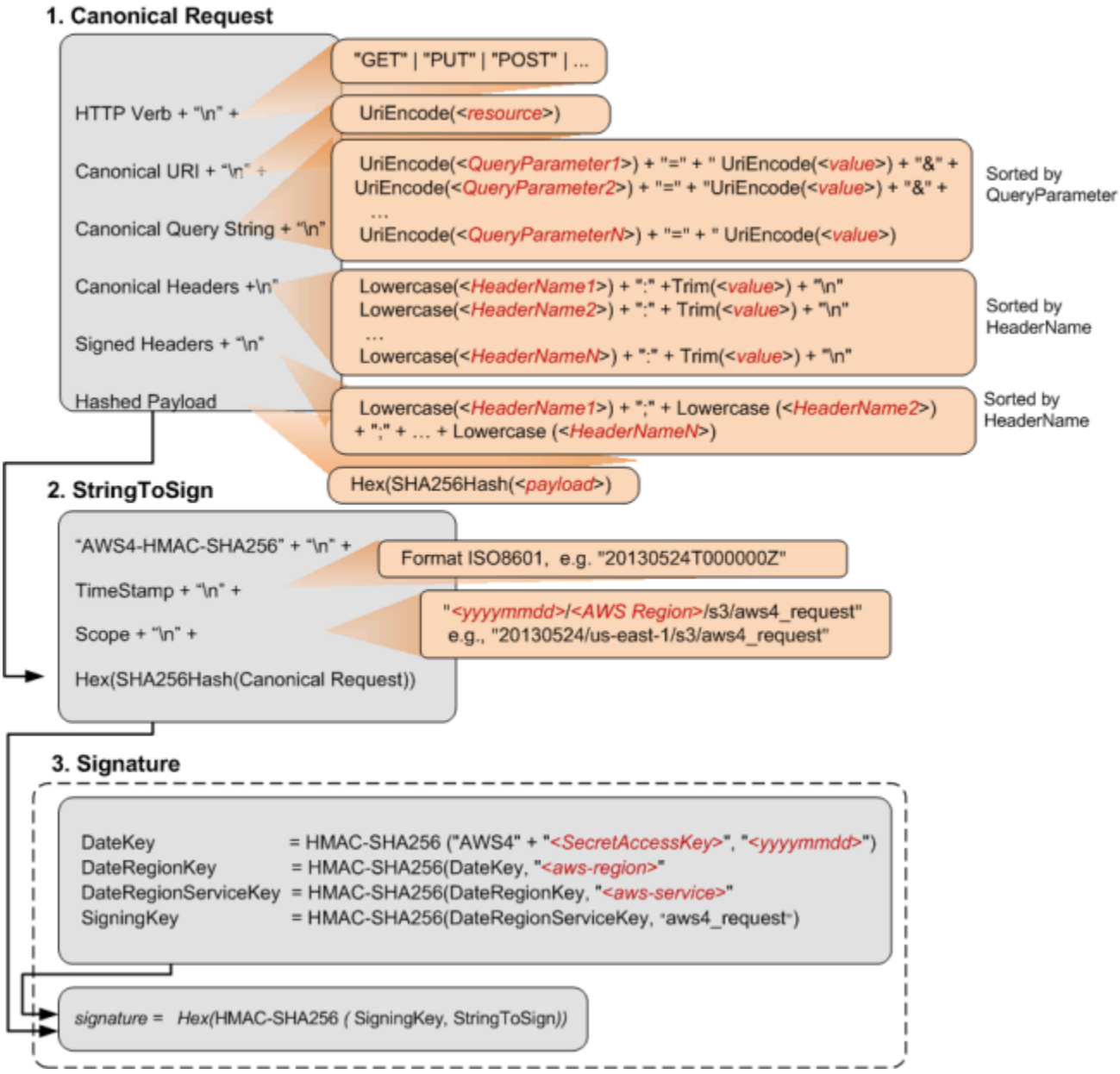
- **Signed payload option** – You include the payload hash when constructing the canonical request (that then becomes part of StringToSign, as explained in the signature calculation section). You also specify the same value as the `x-amz-content-sha256` header value when sending the request to S3.
- **Unsigned payload option** – You include the literal string `UNSIGNED-PAYLOAD` when constructing a canonical request, and set the same value as the `x-amz-content-sha256` header value when sending the request to Amazon S3.

When you send your request to Amazon S3, the `x-amz-content-sha256` header value informs Amazon S3 whether the payload is signed or not. Amazon S3 can then create the signature accordingly for verification.

Calculating a Signature

To calculate a signature, you first need a string to sign. You then calculate a `HMAC-SHA256` hash of the string to sign by using a signing key. The following diagram illustrates the process, including the various components of the string that you create for signing

When Amazon S3 receives an authenticated request, it computes the signature and then compares it with the signature that you provided in the request. For that reason, you must compute the signature by using the same method that is used by Amazon S3. The process of putting a request in an agreed-upon form for signing is called canonicalization.



The following table describes the functions that are shown in the diagram. You need to implement code for these functions.

Function	Description
`Lowercase()`	Convert the string to lowercase.
`Hex()`	Lowercase base 16 encoding.
`SHA256Hash()`	Secure Hash Algorithm (SHA) cryptographic hash function.

Function	Description
`HMAC-SHA256()`	Computes HMAC by using the SHA256 algorithm with the signing key provided. This is the final signature.
`Trim()`	Remove any leading or trailing whitespace.
`UriEncode()`	URI encode every byte. UriEncode() must enforce the following rules: • URI encode every byte except the unreserved characters: 'A'-'Z', 'a'-'z', '0'-'9', '-', '.', '_', and '~'. • The space character is a reserved character and must be encoded as "%20" (and not as "+"). • Each URI encoded byte is formed by a '%' and the two-digit hexadecimal value of the byte. • Letters in the hexadecimal value must be uppercase, for example "%1A". • Encode the forward slash character, '/', everywhere except in the object key name. For example, if the object key name is `photos/Jan/sample.jpg` , the forward slash in the key name is not encoded. **Important** The standard UriEncode functions provided by your development platform may not work because of differences in implementation and related ambiguity in the underlying RFCs. We recommend that you write your own custom UriEncode function to ensure that your encoding will work. To see an example of a UriEncode function in Java, see Java Utilities on the GitHub website.

Task 1: Create a Canonical Request

This section provides an overview of creating a canonical request.

The following is the canonical request format that Amazon S3 uses to calculate a signature. For signatures to match, you must create a canonical request in this format:

```
<HTTPMethod>\n
<CanonicalURI>\n
<CanonicalQueryString>\n
<CanonicalHeaders>\n
<SignedHeaders>\n
<HashedPayload>
```

Where:

- *HTTPMethod* is one of the HTTP methods, for example GET, PUT, HEAD, and DELETE.
- *CanonicalURI* is the URI-encoded version of the absolute path component of the URI—everything starting with the "/" that follows the domain name and up to the end of the string or to the question mark character ('?') if you have query string parameters. The URI in the following example, `/examplebucket/myphoto.jpg`, is the absolute path and you don't encode the "/" in the absolute path:

  ```
  http://s3.amazonaws.com/examplebucket/myphoto.jpg
  ```

  > **Note**
  >
  > You do not normalize URI paths for requests to Amazon S3. For example, you may have a bucket with an object named "my-object//example//photo.user". Normalizing the path changes the object name in the request to "my-object/example/photo.user". This is an incorrect path for that object.

- *CanonicalQueryString* specifies the URI-encoded query string parameters. You URI-encode name and values individually. You must also sort the parameters in the canonical query string alphabetically by key name. The sorting occurs after encoding. The query string in the following URI example is `prefix=somePrefix&marker=someMarker&max-keys=20`:

```
http://s3.amazonaws.com/examplebucket?prefix=somePrefix&marker=someMarker&max-keys=20
```

The canonical query string is as follows (line breaks are added to this example for readability):

```
UriEncode("marker")+"="+UriEncode("someMarker")+"&"+
UriEncode("max-keys")+"="+UriEncode("20") + "&" +
UriEncode("prefix")+"="+UriEncode("somePrefix")
```

When a request targets a subresource, the corresponding query parameter value will be an empty string (""). For example, the following URI identifies the ACL subresource on the `examplebucket` bucket:

```
http://s3.amazonaws.com/examplebucket?acl
```

The CanonicalQueryString in this case is as follows:

```
UriEncode("acl") + "=" + ""
```

If the URI does not include a '?', there is no query string in the request, and you set the canonical query string to an empty string (""). You will still need to include the "\n".

- *`CanonicalHeaders`* is a list of request headers with their values. Individual header name and value pairs are separated by the newline character ("\n"). Header names must be in lowercase. You must sort the header names alphabetically to construct the string, as shown in the following example:

```
Lowercase(<HeaderName1>)+":"+Trim(<value>)+"\n"
Lowercase(<HeaderName2>)+":"+Trim(<value>)+"\n"
...
Lowercase(<HeaderNameN>)+":"+Trim(<value>)+"\n"
```

The `Lowercase()` and `Trim()` functions used in this example are described in the preceding section.

The *`CanonicalHeaders`* list must include the following:

- HTTP `host` header.
- If the `Content-Type` header is present in the request, you must add it to the *`CanonicalHeaders`* list.
- Any `x-amz-*` headers that you plan to include in your request must also be added. For example, if you are using temporary security credentials, you need to include `x-amz-security-token` in your request. You must add this header in the list of *`CanonicalHeaders`*.

> **Note**
>
> The `x-amz-content-sha256` header is required for all AWS Signature Version 4 requests. It provides a hash of the request payload. If there is no payload, you must provide the hash of an empty string.

The following is an example `CanonicalHeaders` string. The header names are in lowercase and sorted.

```
host:s3.amazonaws.com
x-amz-content-sha256:e3b0c44298fc1c149afbf4c8996fb92427ae41e4649b934ca495991b7852b855
x-amz-date:20130708T220855Z
```

> **Note**
>
> For the purpose of calculating an authorization signature, only the host and any `x-amz-*` headers are required; however, in order to prevent data tampering, you should consider including all the headers in the signature calculation.

- *`SignedHeaders`* is an alphabetically sorted, semicolon-separated list of lowercase request header names. The request headers in the list are the same headers that you included in the `CanonicalHeaders` string. For example, for the previous example, the value of *`SignedHeaders`* would be as follows:

```
host;x-amz-content-sha256;x-amz-date
```

- *HashedPayload* is the hexadecimal value of the SHA256 hash of the request payload.

```
Hex(SHA256Hash(<payload>)
```

If there is no payload in the request, you compute a hash of the empty string as follows:

```
Hex(SHA256Hash(""))
```

The hash returns the following value:

```
e3b0c44298fc1c149afbf4c8996fb92427ae41e4649b934ca495991b7852b855
```

For example, when you upload an object by using a PUT request, you provide object data in the body. When you retrieve an object by using a GET request, you compute the empty string hash.

Task 2: Create a String to Sign

This section provides an overview of creating a string to sign. For step-by-step instructions, see Task 2: Create a String to Sign in the *AWS General Reference*.

The string to sign is a concatenation of the following strings:

```
"AWS4-HMAC-SHA256" + "\n" +
timeStampISO8601Format + "\n" +
<Scope> + "\n" +
Hex(SHA256Hash(<CanonicalRequest>))
```

The constant string `AWS4-HMAC-SHA256` specifies the hash algorithm that you are using, HMAC-SHA256. The `timeStamp` is the current UTC time in ISO 8601 format (for example, `20130524T000000Z`).

Scope binds the resulting signature to a specific date, an AWS Region, and a service. Thus, your resulting signature will work only in the specific Region and for a specific service. The signature is valid for seven days after the specified date.

```
date.Format(<YYYYMMDD>) + "/" + <region> + "/" + <service> + "/aws4_request"
```

For Amazon S3, the service string is `s3`. For a list of *`region`* strings, see Regions and Endpoints in the *AWS General Reference*. The Region column in this table provides the list of valid Region strings.

The following scope restricts the resulting signature to the `us-east-1` Region and Amazon S3.

```
20130606/us-east-1/s3/aws4_request
```

> **Note**
>
> Scope must use the same date that you use to compute the signing key, as discussed in the following section.

Task 3: Calculate Signature

In AWS Signature Version 4, instead of using your AWS access keys to sign a request, you first create a signing key that is scoped to a specific Region and service. For more information about signing keys, see Introduction to Signing Requests.

```
DateKey              = HMAC-SHA256("AWS4"+"<SecretAccessKey>", "<YYYYMMDD>")
DateRegionKey        = HMAC-SHA256(<DateKey>, "<aws-region>")
DateRegionServiceKey = HMAC-SHA256(<DateRegionKey>, "<aws-service>")
SigningKey           = HMAC-SHA256(<DateRegionServiceKey>, "aws4_request")
```

> **Note**
>
> Some use cases can process signature keys for up to 7 days. For more information see Share an Object with Others.

For a list of Region strings, see Regions and Endpoints in the *AWS General Reference*.

Using a signing key enables you to keep your AWS credentials in one safe place. For example, if you have multiple servers that communicate with Amazon S3, you share the signing key with those servers; you don't have to keep a copy of your secret access key on each server. Signing key is valid

for up to seven days. So each time you calculate signing key you will need to share the signing key with your servers. For more information, see Authenticating Requests (AWS Signature Version 4).

The final signature is the HMAC-SHA256 hash of the string to sign, using the signing key as the key.

```
HMAC-SHA256(SigningKey, StringToSign)
```

For step-by-step instructions on creating a signature, see Task 3: Create a Signature in the *AWS General Reference*.

Examples: Signature Calculations

You can use the examples in this section as a reference to check signature calculations in your code. The calculations shown in the examples use the following data:

- Example access keys.

Parameter	Value
`AWSAccessKeyId`	`AKIAIOSFODNN7EXAMPLE`
`AWSSecretAccessKey`	`wJalrXUtnFEMI/K7MDENG/bPxRfiCYEXAMPLEKEY`

- Request timestamp of 20130524T000000Z (`Fri, 24 May 2013 00:00:00 GMT`).
- Bucket name `examplebucket`.
- The bucket is assumed to be in the US East (N. Virginia) Region. The credential `Scope` and the `Signing Key` calculations use `us-east-1` as the Region specifier. For information about other Regions, see Regions and Endpoints in the *AWS General Reference*.
- You can use either path-style or virtual hosted–style requests. The following examples show how to sign a virtual hosted–style request, for example:

  ```
  https://examplebucket.s3.amazonaws.com/photos/photo1.jpg
  ```

  For more information, see Virtual Hosting of Buckets in the *Amazon Simple Storage Service User Guide*.

Example: GET Object

The following example gets the first 10 bytes of an object (test.txt) from `examplebucket`. For more information about the API action, see GetObject.

```
GET /test.txt HTTP/1.1
Host: examplebucket.s3.amazonaws.com
Authorization: SignatureToBeCalculated
Range: bytes=0-9
x-amz-content-sha256:e3b0c44298fc1c149afbf4c8996fb92427ae41e4649b934ca495991b7852b855
x-amz-date: 20130524T000000Z
```

Because this GET request does not provide any body content, the `x-amz-content-sha256` value is the hash of the empty request body. The following steps show signature calculations and construction of the `Authorization` header.

1. **StringToSign**

   a. **CanonicalRequest**

   ```
   GET
   /test.txt

   host:examplebucket.s3.amazonaws.com
   range:bytes=0-9
   x-amz-content-
   sha256:e3b0c44298fc1c149afbf4c8996fb92427ae41e4649b934ca495991b7852b855
   x-amz-date:20130524T000000Z

   host;range;x-amz-content-sha256;x-amz-date
   e3b0c44298fc1c149afbf4c8996fb92427ae41e4649b934ca495991b7852b855
   ```

   In the canonical request string, the last line is the hash of the empty request body. The third line is empty because there are no query parameters in the request.

   b. **StringToSign**

   ```
   AWS4-HMAC-SHA256
   20130524T000000Z
   20130524/us-east-1/s3/aws4_request
   ```

```
7344ae5b7ee6c3e7e6b0fe0640412a37625d1fbfff95c48bbb2dc43964946972
```

2. **SigningKey**

```
signing key = HMAC-SHA256(HMAC-SHA256(HMAC-SHA256(HMAC-SHA256("AWS4" +
 "<YourSecretAccessKey>","20130524"),"us-east-1"),"s3"),"aws4_request")
```

3. **Signature**

```
f0e8bdb87c964420e857bd35b5d6ed310bd44f0170aba48dd91039c6036bdb41
```

4. **Authorization header**

   The resulting `Authorization` header is as follows:

```
AWS4-HMAC-SHA256 Credential=AKIAIOSFODNN7EXAMPLE/20130524/us-east-1/
s3/aws4_request,SignedHeaders=host;range;x-amz-content-sha256;x-amz-
date,Signature=f0e8bdb87c964420e857bd35b5d6ed310bd44f0170aba48dd91039c6036bdb41
```

Example: PUT Object

This example PUT request creates an object (`test$file.text`) in `examplebucket` . The example assumes the following:

- You are requesting `REDUCED_REDUNDANCY` as the storage class by adding the `x-amz-storage-class` request header. For information about storage classes, see Storage Classes in the *Amazon Simple Storage Service User Guide*.
- The content of the uploaded file is a string, `"Welcome to Amazon S3."` The value of `x-amz-content-sha256` in the request is based on this string.

For information about the API action, see PutObject.

```
PUT test$file.text HTTP/1.1
Host: examplebucket.s3.amazonaws.com
```

```
Date: Fri, 24 May 2013 00:00:00 GMT
Authorization: SignatureToBeCalculated
x-amz-date: 20130524T000000Z
x-amz-storage-class: REDUCED_REDUNDANCY
x-amz-content-sha256: 44ce7dd67c959e0d3524ffac1771dfbba87d2b6b4b4e99e42034a8b803f8b072

<Payload>
```

The following steps show signature calculations.

1. **StringToSign**

   a. **CanonicalRequest**

   ```
   PUT
   /test%24file.text

   date:Fri, 24 May 2013 00:00:00 GMT
   host:examplebucket.s3.amazonaws.com
   x-amz-content-
   sha256:44ce7dd67c959e0d3524ffac1771dfbba87d2b6b4b4e99e42034a8b803f8b072
   x-amz-date:20130524T000000Z
   x-amz-storage-class:REDUCED_REDUNDANCY

   date;host;x-amz-content-sha256;x-amz-date;x-amz-storage-class
   44ce7dd67c959e0d3524ffac1771dfbba87d2b6b4b4e99e42034a8b803f8b072
   ```

   In the canonical request, the third line is empty because there are no query parameters in the request. The last line is the hash of the body, which should be same as the `x-amz-content-sha256 header` value.

   b. **StringToSign**

   ```
   AWS4-HMAC-SHA256
   20130524T000000Z
   20130524/us-east-1/s3/aws4_request
   9e0e90d9c76de8fa5b200d8c849cd5b8dc7a3be3951ddb7f6a76b4158342019d
   ```

2. **SigningKey**

```
signing key = HMAC-SHA256(HMAC-SHA256(HMAC-SHA256(HMAC-SHA256("AWS4" +
 "<YourSecretAccessKey>","20130524"),"us-east-1"),"s3"),"aws4_request")
```

3. **Signature**

```
98ad721746da40c64f1a55b78f14c238d841ea1380cd77a1b5971af0ece108bd
```

4. **Authorization header**

   The resulting `Authorization` header is as follows:

```
AWS4-HMAC-SHA256 Credential=AKIAIOSFODNN7EXAMPLE/20130524/us-east-1/s3/
aws4_request,SignedHeaders=date;host;x-amz-content-sha256;x-amz-date;x-amz-storage-
class,Signature=98ad721746da40c64f1a55b78f14c238d841ea1380cd77a1b5971af0ece108bd
```

Example: GET Bucket Lifecycle

The following GET request retrieves the lifecycle configuration of `examplebucket`. For information about the API action, see GetBucketLifecycleConfiguration.

```
GET ?lifecycle HTTP/1.1
Host: examplebucket.s3.amazonaws.com
Authorization: SignatureToBeCalculated
x-amz-date: 20130524T000000Z
x-amz-content-sha256:e3b0c44298fc1c149afbf4c8996fb92427ae41e4649b934ca495991b7852b855
```

Because the request does not provide any body content, the `x-amz-content-sha256` header value is the hash of the empty request body. The following steps show signature calculations.

1. **StringToSign**

   a. **CanonicalRequest**

```
GET
/
```

```
lifecycle=
host:examplebucket.s3.amazonaws.com
x-amz-content-
sha256:e3b0c44298fc1c149afbf4c8996fb92427ae41e4649b934ca495991b7852b855
x-amz-date:20130524T000000Z

host;x-amz-content-sha256;x-amz-date
e3b0c44298fc1c149afbf4c8996fb92427ae41e4649b934ca495991b7852b855
```

In the canonical request, the last line is the hash of the empty request body.

b. **StringToSign**

```
AWS4-HMAC-SHA256
20130524T000000Z
20130524/us-east-1/s3/aws4_request
9766c798316ff2757b517bc739a67f6213b4ab36dd5da2f94eaebf79c77395ca
```

2. **SigningKey**

```
signing key = HMAC-SHA256(HMAC-SHA256(HMAC-SHA256(HMAC-SHA256("AWS4" +
 "<YourSecretAccessKey>","20130524"),"us-east-1"),"s3"),"aws4_request")
```

3. **Signature**

```
fea454ca298b7da1c68078a5d1bdbfbbe0d65c699e0f91ac7a200a0136783543
```

4. **Authorization header**

The resulting `Authorization` header is as follows:

```
AWS4-HMAC-SHA256 Credential=AKIAIOSFODNN7EXAMPLE/20130524/us-east-1/
s3/aws4_request,SignedHeaders=host;x-amz-content-sha256;x-amz-
date,Signature=fea454ca298b7da1c68078a5d1bdbfbbe0d65c699e0f91ac7a200a0136783543
```

Example: Get Bucket (List Objects)

The following example retrieves a list of objects from `examplebucket` bucket. For information about the API action, see ListObjects.

```
GET ?max-keys=2&prefix=J HTTP/1.1
Host: examplebucket.s3.amazonaws.com
Authorization: SignatureToBeCalculated
x-amz-date: 20130524T000000Z
x-amz-content-sha256:e3b0c44298fc1c149afbf4c8996fb92427ae41e4649b934ca495991b7852b855
```

Because the request does not provide a body, the value of `x-amz-content-sha256` is the hash of the empty request body. The following steps show signature calculations.

1. **StringToSign**

   a. **CanonicalRequest**

   ```
   GET
   /
   max-keys=2&prefix=J
   host:examplebucket.s3.amazonaws.com
   x-amz-content-
   sha256:e3b0c44298fc1c149afbf4c8996fb92427ae41e4649b934ca495991b7852b855
   x-amz-date:20130524T000000Z

   host;x-amz-content-sha256;x-amz-date
   e3b0c44298fc1c149afbf4c8996fb92427ae41e4649b934ca495991b7852b855
   ```

   In the canonical string, the last line is the hash of the empty request body.

   b. **StringToSign**

   ```
   AWS4-HMAC-SHA256
   20130524T000000Z
   20130524/us-east-1/s3/aws4_request
   df57d21db20da04d7fa30298dd4488ba3a2b47ca3a489c74750e0f1e7df1b9b7
   ```

2. **SigningKey**

```
signing key = HMAC-SHA256(HMAC-SHA256(HMAC-SHA256(HMAC-SHA256("AWS4" +
 "<YourSecretAccessKey>","20130524"),"us-east-1"),"s3"),"aws4_request")
```

3. **Signature**

```
34b48302e7b5fa45bde8084f4b7868a86f0a534bc59db6670ed5711ef69dc6f7
```

4. **Authorization header**

   The resulting `Authorization` header is as follows:

```
AWS4-HMAC-SHA256 Credential=AKIAIOSFODNN7EXAMPLE/20130524/us-east-1/
s3/aws4_request,SignedHeaders=host;x-amz-content-sha256;x-amz-
date,Signature=34b48302e7b5fa45bde8084f4b7868a86f0a534bc59db6670ed5711ef69dc6f7
```

Signature Calculations for the Authorization Header: Transferring Payload in Multiple Chunks (Chunked Upload) (AWS Signature Version 4)

As described in the Overview, when authenticating requests using the `Authorization` header, you have an option of uploading the payload in chunks. You can send data in fixed size or variable size chunks. This section describes the signature calculation process in chunked upload, how you create the chunk body, and how the delayed signing works where you first upload the chunk, and send its signature in the subsequent chunk. The example section (see Example: PUT Object) shows signature calculations and resulting `Authorization` headers that you can use as a test suite to verify your code.

Note

When transferring data in a series of chunks, you must do one of the following:

- Explicitly specify the total content length (object length in bytes plus metadata in each chunk) using the `Content-Length` HTTP header. To do this, you must pre-compute the total length of the payload, including the metadata that you send in each chunk, before starting your request.
- Specify the `Transfer-Encoding` HTTP header. If you include the `Transfer-Encoding` header and specify any value other than `identity`, you must omit the `Content-Length` header.

For all requests, you must include the `x-amz-decoded-content-length` header, specifying the size of the object in bytes.

Each chunk signature calculation includes the signature of the previous chunk. To begin, you create a *seed* signature using only the headers. You use the seed signature in the signature calculation of the first chunk. For each subsequent chunk, you create a chunk signature that includes the signature of the previous chunk. Thus, the chunk signatures are chained together; that is, the signature of chunk *n* is a function *F(chunk n, signature(chunk n-1))*. The chaining ensures that you send the chunks in the correct order.

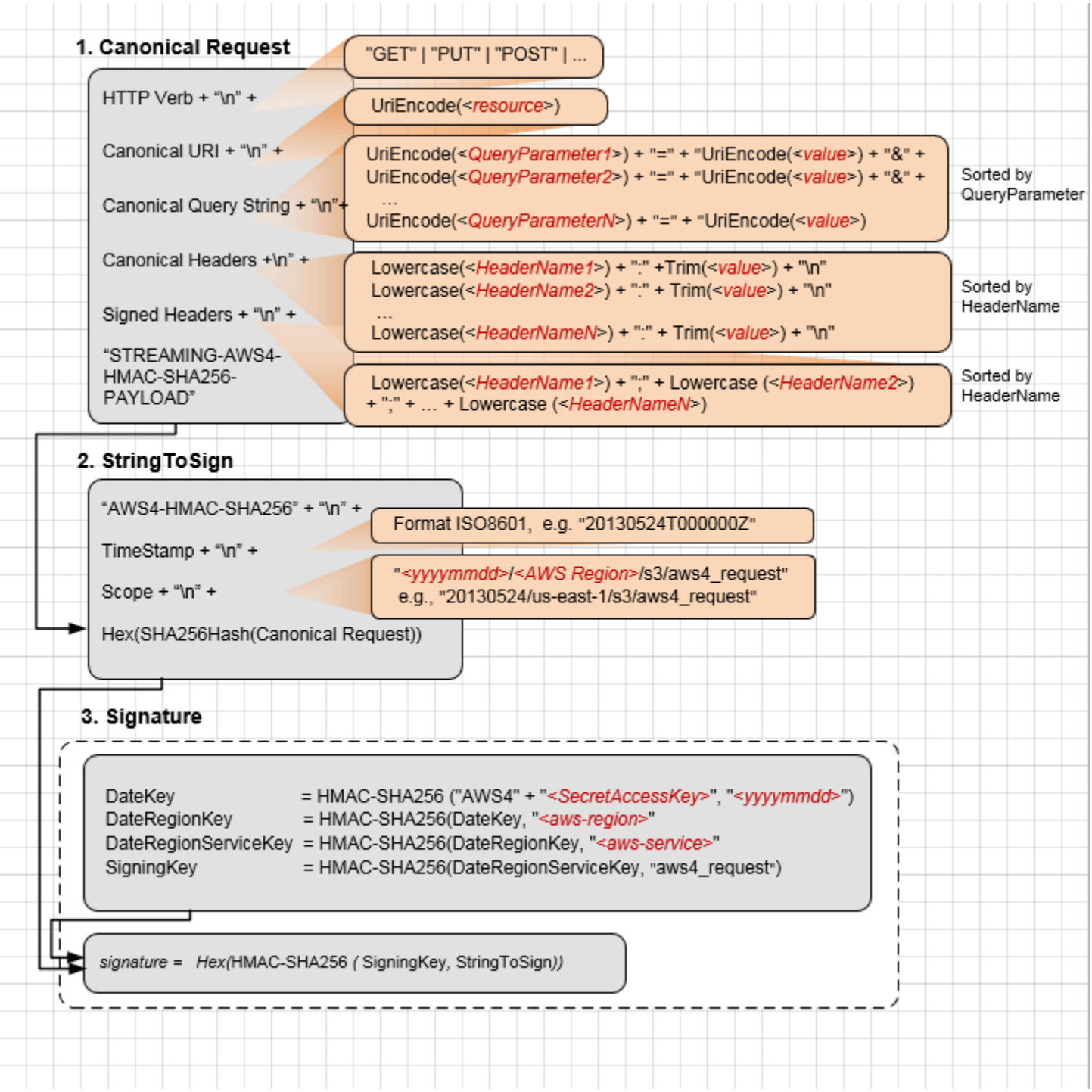
To perform a chunked upload, do the following:

1. Decide the payload chunk size. You need this when you write the code.

   The chunk size must be at least 8 KB. We recommend a chunk size of a least 64 KB for better performance. This chunk size applies to all chunks except the last one. The last chunk you send can be smaller than 8 KB. If your payload is small and can fit into one chunk, then it can be smaller than the 8 KB.
2. Create the seed signature for inclusion in the first chunk. For more information, see Calculating the Seed Signature.
3. Create the first chunk and stream it. For more information, see Defining the Chunk Body.
4. For each subsequent chunk, calculate the chunk signature that includes the previous signature in the string you sign, construct the chunk, and send it. For more information, see Defining the Chunk Body.
5. Send the final additional chunk, which is the same as the other chunks in the construction, but it has zero data bytes. For more information, see Defining the Chunk Body.

Calculating the Seed Signature

The following diagram illustrates the process of calculating the seed signature.



The following table describes the functions that are shown in the diagram. You need to implement code for these functions.

Function	Description
`Lowercase()`	Convert the string to lowercase.
`Hex()`	Lowercase base 16 encoding.
`SHA256Hash()`	Secure Hash Algorithm (SHA) cryptographic hash function.
`HMAC-SHA256()`	Computes HMAC by using the SHA256 algorithm with the signing key provided. This is the final signature.
`Trim()`	Remove any leading or trailing whitespace.
`UriEncode()`	URI encode every byte. UriEncode() must enforce the following rules: • URI encode every byte except the unreserved characters: 'A'-'Z', 'a'-'z', '0'-'9', '-', '.', '_', and '~'. • The space character is a reserved character and must be encoded as "%20" (and not as "+"). • Each URI encoded byte is formed by a '%' and the two-digit hexadecimal value of the byte. • Letters in the hexadecimal value must be uppercase, for example "%1A". • Encode the forward slash character, '/', everywhere except in the object key name. For example, if the object key name is `photos/Jan/sample.jpg` , the forward slash in the key name is not encoded. **Important** The standard UriEncode functions provided by your development platform may not work because of differences in implementation and related ambiguity in the underlying RFCs. We recommend that you write

Function	Description
	your own custom UriEncode function to ensure that your encoding will work. To see an example of a UriEncode function in Java, see Java Utilities on the GitHub website.

For information about the signing process, see Signature Calculations for the Authorization Header: Transferring Payload in a Single Chunk (AWS Signature Version 4). The process is the same, except that the creation of `CanonicalRequest` differs as follows:

- In addition to the request headers you plan to add, you must include the following headers:

Header	Description
`x-amz-content-sha256`	This header is required for all AWS Signature Version 4 requests. Set the value to `STREAMING-AWS4-HMAC-SHA256-PAYLOAD` to indicate that the signature covers only headers and that there is no payload.

Header	Description
`Content-Encoding`	Set the value to `aws-chunked` . Amazon S3 supports multiple content encodings. For example: `Content-Encoding : aws-chunked,gzip` That is, you can specify your custom content-encoding when using Signature Version 4 streaming API. **Note** Amazon S3 stores the resulting object without the `aws-chunked` encoding. Therefore, when you retrieve the object, it is not `aws-chunked` encoded.
`x-amz-decoded-content-length`	Set the value to the length, in bytes, of the data to be chunked, without counting any metadata. For example, if you are uploading a 4 GB file, set the value to 4294967296. This is the raw size of the object to be uploaded (data you want to store in Amazon S3).
`Content-Length`	Set the value to the actual size of the transmitted HTTP body, which includes the length of your data (value set for `x-amz-decoded-content-length`), plus chunk metadata. Each chunk has metadata, such as the signature of the previous chunk. Chunk calculations are discussed in the following section. If you include the `Transfer-Encoding` header and specify any value other than `identity`, you must not include the `Content-Length` header.

You send the first chunk with the seed signature. You must construct the chunk as described in the following section.

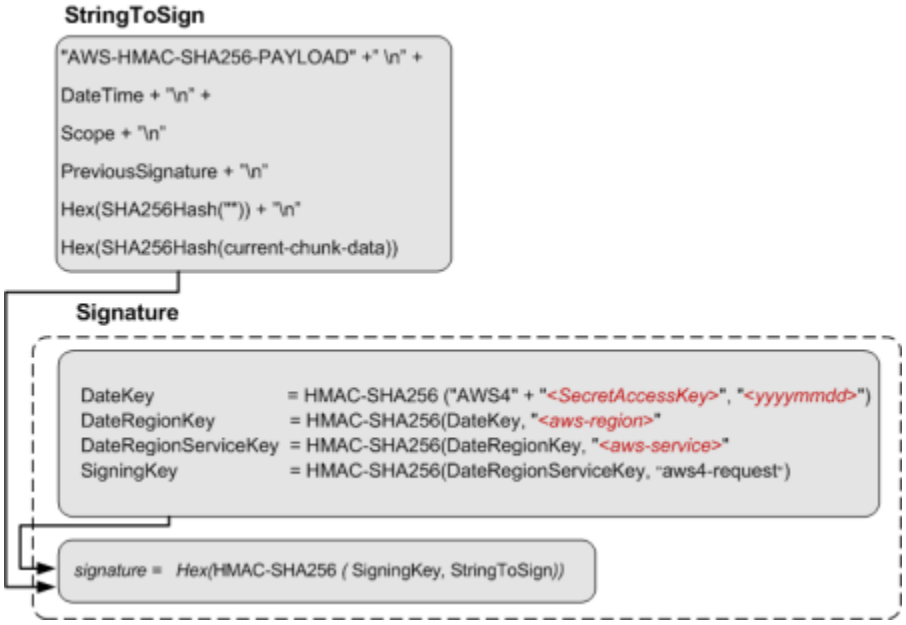
Defining the Chunk Body

All chunks include some metadata. Each chunk must conform to the following structure:

```
string(IntHexBase(chunk-size)) + ";chunk-signature=" + signature + \r\n + chunk-data +
 \r\n
```

Where:

- `IntHexBase()` is a function that you write to convert an integer chunk-size to hexadecimal. For example, if chunk-size is 65536, hexadecimal string is "10000".
- *chunk-size* is the size, in bytes, of the chunk-data, without metadata. For example, if you are uploading a 65 KB object and using a chunk size of 64 KB, you upload the data in three chunks: the first would be 64 KB, the second 1 KB, and the final chunk with 0 bytes.
- *signature* For each chunk, you calculate the signature using the following string to sign. For the first chunk, you use the seed-signature as the previous signature.



The size of the final chunk data that you send is 0, although the chunk body still contains metadata, including the signature of the previous chunk.

Example: PUT Object

You can use the examples in this section as a reference to check signature calculations in your code. Before you review the examples, note the following:

- The signature calculations in these examples use the following example security credentials.

Parameter	Value
`AWSAccessKeyId`	`AKIAIOSFODNN7EXAMPLE`
`AWSSecretAccessKey`	`wJalrXUtnFEMI/K7MDENG/bPxRfiCYEXAMPLEKEY`

- All examples use the request timestamp 20130524T000000Z (`Fri, 24 May 2013 00:00:00 GMT`).
- All examples use `examplebucket` as the bucket name.
- The bucket is assumed to be in the US East (N. Virginia) Region, and the credential `Scope` and the `Signing Key` calculations use `us-east-1` as the Region specifier. For more information, see Regions and Endpoints in the *Amazon Web Services General Reference*.
- You can use either path style or virtual-hosted style requests. The following examples use virtual-hosted style requests, for example:

  ```
  https://examplebucket.s3.amazonaws.com/photos/photo1.jpg
  ```

  For more information, see Virtual Hosting of Buckets in the *Amazon Simple Storage Service User Guide*.

The following example sends a PUT request to upload an object. The signature calculations assume the following:

- You are uploading a 65 KB text file, and the file content is a one-character string made up of the letter 'a'.
- The chunk size is 64 KB. As a result, the payload is uploaded in three chunks, 64 KB, 1 KB, and the final chunk with 0 bytes of chunk data.
- The resulting object has the key name `chunkObject.txt`.

- You are requesting REDUCED_REDUNDANCY as the storage class by adding the `x-amz-storage-class` request header.

For information about the API action, see PutObject. The general request syntax is as follows:

```
PUT /examplebucket/chunkObject.txt HTTP/1.1
Host: s3.amazonaws.com
x-amz-date: 20130524T000000Z
x-amz-storage-class: REDUCED_REDUNDANCY
Authorization: SignatureToBeCalculated
x-amz-content-sha256: STREAMING-AWS4-HMAC-SHA256-PAYLOAD
Content-Encoding: aws-chunked
x-amz-decoded-content-length: 66560
Content-Length: 66824
<Payload>
```

The following steps show signature calculations.

1. **Seed signature — Create String to Sign**

   a. **CanonicalRequest**

   ```
   PUT
   /examplebucket/chunkObject.txt

   content-encoding:aws-chunked
   content-length:66824
   host:s3.amazonaws.com
   x-amz-content-sha256:STREAMING-AWS4-HMAC-SHA256-PAYLOAD
   x-amz-date:20130524T000000Z
   x-amz-decoded-content-length:66560
   x-amz-storage-class:REDUCED_REDUNDANCY

   content-encoding;content-length;host;x-amz-content-sha256;x-amz-date;x-amz-
   decoded-content-length;x-amz-storage-class
   STREAMING-AWS4-HMAC-SHA256-PAYLOAD
   ```

   In the canonical request, the third line is empty because there are no query parameters in the request. The last line is the constant string provided as the value of the hashed Payload, which should be same as the value of `x-amz-content-sha256 header`.

b. **StringToSign**

```
AWS4-HMAC-SHA256
20130524T000000Z
20130524/us-east-1/s3/aws4_request
cee3fed04b70f867d036f722359b0b1f2f0e5dc0efadbc082b76c4c60e316455
```

> **Note**
>
> For information about each of line in the string to sign, see the diagram that explains seed signature calculation.

2. **SigningKey**

```
signing key = HMAC-SHA256(HMAC-SHA256(HMAC-SHA256(HMAC-SHA256("AWS4" +
 "<YourSecretAccessKey>","20130524"),"us-east-1"),"s3"),"aws4_request")
```

3. **Seed Signature**

```
4f232c4386841ef735655705268965c44a0e4690baa4adea153f7db9fa80a0a9
```

4. **Authorization header**

The resulting Authorization header is as follows:

```
AWS4-HMAC-SHA256 Credential=AKIAIOSFODNN7EXAMPLE/20130524/us-east-1/s3/
aws4_request,SignedHeaders=content-encoding;content-length;host;x-amz-
content-sha256;x-amz-date;x-amz-decoded-content-length;x-amz-storage-
class,Signature=4f232c4386841ef735655705268965c44a0e4690baa4adea153f7db9fa80a0a9
```

5. **Chunk 1: (65536 bytes, with value 97 for letter 'a')**

a. Chunk string to sign:

```
AWS4-HMAC-SHA256-PAYLOAD
20130524T000000Z
20130524/us-east-1/s3/aws4_request
4f232c4386841ef735655705268965c44a0e4690baa4adea153f7db9fa80a0a9
e3b0c44298fc1c149afbf4c8996fb92427ae41e4649b934ca495991b7852b855
bf718b6f653bebc184e1479f1935b8da974d701b893afcf49e701f3e2f9f9c5a
```

> **Note**
>
> For information about each line in the string to sign, see the preceding diagram that shows various components of the string to sign (for example, the last three lines are, `previous-signature`, `hash("")`, and `hash(current-chunk-data)`).

b. Chunk signature:

```
ad80c730a21e5b8d04586a2213dd63b9a0e99e0e2307b0ade35a65485a288648
```

c. Chunk data sent:

```
10000;chunk-
signature=ad80c730a21e5b8d04586a2213dd63b9a0e99e0e2307b0ade35a65485a288648
<65536-bytes>
```

6. **Chunk 2: (1024 bytes, with value 97 for letter 'a')**

a. Chunk string to sign:

```
AWS4-HMAC-SHA256-PAYLOAD
20130524T000000Z
20130524/us-east-1/s3/aws4_request
ad80c730a21e5b8d04586a2213dd63b9a0e99e0e2307b0ade35a65485a288648
e3b0c44298fc1c149afbf4c8996fb92427ae41e4649b934ca495991b7852b855
2edc986847e209b4016e141a6dc8716d3207350f416969382d431539bf292e4a
```

b. Chunk signature:

```
0055627c9e194cb4542bae2aa5492e3c1575bbb81b612b7d234b86a503ef5497
```

c. Chunk data sent:

```
400;chunk-
signature=0055627c9e194cb4542bae2aa5492e3c1575bbb81b612b7d234b86a503ef5497
<1024 bytes>
```

7. **Chunk 3: (0 byte data)**

a. Chunk string to sign:

```
AWS4-HMAC-SHA256-PAYLOAD
20130524T000000Z
20130524/us-east-1/s3/aws4_request
0055627c9e194cb4542bae2aa5492e3c1575bbb81b612b7d234b86a503ef5497
e3b0c44298fc1c149afbf4c8996fb92427ae41e4649b934ca495991b7852b855
e3b0c44298fc1c149afbf4c8996fb92427ae41e4649b934ca495991b7852b855
```

b. Chunk signature:

```
b6c6ea8a5354eaf15b3cb7646744f4275b71ea724fed81ceb9323e279d449df9
```

c. Chunk data sent:

```
0;chunk-
signature=b6c6ea8a5354eaf15b3cb7646744f4275b71ea724fed81ceb9323e279d449df9
```

Signature Calculations for the Authorization Header: Including Trailing Headers (Chunked Upload) (AWS Signature Version 4)

As described in the Overview, when authenticating requests using the `Authorization` header, you have an option of uploading the payload in chunks. This is covered in detail in Signature Calculations for the Authorization Header: Transferring Payload in Multiple Chunks (Chunked Upload) (AWS Signature Version 4). When you send the data for the object in chunks, you also have the option of including trailing headers. This section describes the steps you need to take when you want to include a trailing header at the end of your multiple chunk upload.

Important

When you are including trailing headers, you must send the following in your initial header:

- You must set `x-amz-content-sha256` to an appropriate value that indicates a trailer will be included. To see the acceptable values for `x-amz-content-sha256`, see Authenticating Requests: Using the Authorization Header (AWS Signature Version 4).
- You must set `x-amz-trailer` to indicate the contents your are including in your trailing header.

Trailing headers are only sent after the chunks have been uploaded. Previous chunks are sent as normal and signed as described in the previous sections, including sending the final chunk with a payload of 0 bytes. The trailing headers are included as their own chunk and sent after the final chunk with a payload of 0 bytes. For example, if your data ended with a 100 KB chunk, you would send the following:

- Previous data chunks
- 100 KB final chunk of the object
- 0 bytes chunk signifying the end of the object
- Trailing headers chunk

Example: PUT Object

You can use the examples in this section as a reference to check signature calculations in your code. Before you review the examples, note the following:

- The signature calculations in these examples use the following example security credentials.

Parameter	Value
AWSAccessKeyId	AKIAIOSFODNN7EXAMPLE
AWSSecret AccessKey	wJalrXUtnFEMI/K7MDENG/bPxRfiCYEXAMPLEKEY

- All examples use the request timestamp 20130524T000000Z (Fri, 24 May 2013 00:00:00 GMT).
- All examples use examplebucket as the bucket name.
- The bucket is assumed to be in the US East (N. Virginia) Region, and the credential Scope and the Signing Key calculations use us-east-1 as the Region specifier. For more information, see Regions and Endpoints in the *Amazon Web Services General Reference*.
- You can use either path style or virtual-hosted style requests. The following examples use virtual-hosted style requests, for example:

```
https://examplebucket.s3.amazonaws.com/photos/photo1.jpg
```

  For more information, see Virtual Hosting of Buckets in the *Amazon Simple Storage Service User Guide*.

The following example sends a PUT request to upload an object. The signature calculations assume the following:

- You are uploading a 65 KB text file, and the file content is a one-character string made up of the letter 'a'.
- The chunk size is 64 KB. As a result, the payload is uploaded in three chunks, 64 KB, 1 KB, and the final chunk with 0 bytes of chunk data.
- The resulting object has the key name chunkObject.txt.
- You are requesting REDUCED_REDUNDANCY as the storage class by adding the x-amz-storage-class request header.
- The transfer is including a CRC32 checksum value as a trailing header.

For information about the API action, see PutObject. The general request syntax is as follows:

```
PUT /examplebucket/chunkObject.txt HTTP/1.1
Host: s3.amazonaws.com
x-amz-date: 20130524T000000Z
x-amz-storage-class: REDUCED_REDUNDANCY
Authorization: SignatureToBeCalculated
x-amz-content-sha256: STREAMING-AWS4-HMAC-SHA256-PAYLOAD-TRAILER
Content-Encoding: aws-chunked
x-amz-decoded-content-length: 66560
x-amz-trailer: x-amz-checksum-crc32
Content-Length: 66824
<Payload>
```

The following steps show signature calculations.

1. **Seed signature — Create String to Sign**

   a. **CanonicalRequest**

   ```
   PUT
   /examplebucket/chunkObject.txt

   content-encoding:aws-chunked
   host:s3.amazonaws.com
   x-amz-content-sha256:STREAMING-AWS4-HMAC-SHA256-PAYLOAD-TRAILER
   x-amz-date:20130524T000000Z
   x-amz-decoded-content-length:66560
   x-amz-storage-class:REDUCED_REDUNDANCY
   x-amz-trailer:x-amz-checksum-crc32c

   content-encoding;host;x-amz-content-sha256;x-amz-date;x-amz-decoded-content-
   length;x-amz-storage-class;x-amz-trailer
   STREAMING-AWS4-HMAC-SHA256-PAYLOAD-TRAILER
   ```

   In the canonical request, the third line is empty because there are no query parameters in the request. The last line is the constant string provided as the value of the hashed Payload, which should be same as the value of `x-amz-content-sha256 header`.

   b. **StringToSign**

```
AWS4-HMAC-SHA256
20130524T000000Z
20130524/us-east-1/s3/aws4_request
44d48b8c2f70eae815a0198cc73d7a546a73a93359c070abbaa5e6c7de112559
```

> **Note**
>
> For information about each of line in the string to sign, see the diagram that explains seed signature calculation.

2. **SigningKey**

```
signing key = HMAC-SHA256(HMAC-SHA256(HMAC-SHA256(HMAC-SHA256("AWS4" +
 "<YourSecretAccessKey>","20130524"),"us-east-1"),"s3"),"aws4_request")
```

3. **Seed Signature**

```
106e2a8a18243abcf37539882f36619c00e2dfc72633413f02d3b74544bfeb8e
```

4. **Authorization header**

   The resulting Authorization header is as follows:

```
AWS4-HMAC-SHA256 Credential=AKIAIOSFODNN7EXAMPLE/20130524/us-east-1/s3/
aws4_request,SignedHeaders=content-encoding;content-length;host;x-amz-
content-sha256;x-amz-date;x-amz-decoded-content-length;x-amz-storage-
class,Signature=106e2a8a18243abcf37539882f36619c00e2dfc72633413f02d3b74544bfeb8e
```

5. **Chunk 1: (65536 bytes, with value 97 for letter 'a')**

   a. Chunk string to sign:

```
AWS4-HMAC-SHA256-PAYLOAD
20130524T000000Z
```

```
20130524/us-east-1/s3/aws4_request
106e2a8a18243abcf37539882f36619c00e2dfc72633413f02d3b74544bfeb8e
e3b0c44298fc1c149afbf4c8996fb92427ae41e4649b934ca495991b7852b855
bf718b6f653bebc184e1479f1935b8da974d701b893afcf49e701f3e2f9f9c5a
```

> **Note**
>
> For information about each line in the string to sign, see the preceding diagram that shows various components of the string to sign (for example, the last three lines are, `previous-signature`, `hash("")`, and `hash(current-chunk-data)`).

b. Chunk signature:

```
b474d8862b1487a5145d686f57f013e54db672cee1c953b3010fb58501ef5aa2
```

c. Chunk data sent:

```
10000;chunk-
signature=b474d8862b1487a5145d686f57f013e54db672cee1c953b3010fb58501ef5aa2
<65536-bytes>
```

6. **Chunk 2: (1024 bytes, with value 97 for letter 'a')**

a. Chunk string to sign:

```
AWS4-HMAC-SHA256-PAYLOAD
20130524T000000Z
20130524/us-east-1/s3/aws4_request
b474d8862b1487a5145d686f57f013e54db672cee1c953b3010fb58501ef5aa2
e3b0c44298fc1c149afbf4c8996fb92427ae41e4649b934ca495991b7852b855
41edece42d63e8d9bf515a9ba6932e1c20cbc9f5a5d134645adb5db1b9737ea3
```

b. Chunk signature:

```
041169d545f3f4a02fe2e3d066bfb1798dd5f3417ae8cecd0e43690aafbe79d1
```

c. Chunk data sent:

```
400;chunk-
signature=041169d545f3f4a02fe2e3d066bfb1798dd5f3417ae8cecd0e43690aafbe79d1
<1024 bytes>
```

7. **Chunk 3: (0 byte data)**

   a. Chunk string to sign:

   ```
   AWS4-HMAC-SHA256-PAYLOAD
   20130524T000000Z
   20130524/us-east-1/s3/aws4_request
   041169d545f3f4a02fe2e3d066bfb1798dd5f3417ae8cecd0e43690aafbe79d1
   e3b0c44298fc1c149afbf4c8996fb92427ae41e4649b934ca495991b7852b855
   e3b0c44298fc1c149afbf4c8996fb92427ae41e4649b934ca495991b7852b855
   ```

   b. Chunk signature:

   ```
   e05ab64fe1dfdbf0b5870abbaabdb063c371d4e96f2767e6934d90529c5ae850
   ```

   c. Chunk data sent:

   ```
   0;chunk-
   signature=e05ab64fe1dfdbf0b5870abbaabdb063c371d4e96f2767e6934d90529c5ae850
   ```

8. **Chunk 4: Trailing headers**

   a. Trailer chunk string to sign:

   ```
   AWS4-HMAC-SHA256-TRAILER
   20130524T000000Z
   20130524/us-east-1/s3/aws4_request
   e05ab64fe1dfdbf0b5870abbaabdb063c371d4e96f2767e6934d90529c5ae850
   2e4ab969aa65b1ad6def2db10e4d3a8260683d194dbaf757f90e8a37960a4b3c
   ```

   b. Chunk signature:

   ```
   41e14ac611e27a8bb3d66c3bad6856f209297767d5dd4fc87d8fa9e422e03faf
   ```

   c. Chunk data sent:

   ```
   x-amz-checksum-crc32c:wdBDMA==
   ```

```
x-amz-trailer-
signature:41e14ac611e27a8bb3d66c3bad6856f209297767d5dd4fc87d8fa9e422e03faf
```

Authenticating Requests: Using Query Parameters (AWS Signature Version 4)

As described in the authentication overview (see Authentication Methods), you can provide authentication information using query string parameters. Using query parameters to authenticate requests is useful when you want to express a request entirely in a URL. This method is also referred as presigning a URL.

A use case scenario for presigned URLs is that you can grant temporary access to your Amazon S3 resources. For example, you can embed a presigned URL on your website or alternatively use it in command line client (such as Curl) to download objects.

> **Note**
>
> You can also use the AWS CLI to create presigned URLs. For more information, see `presign` in the *AWS CLI Command Reference*.

The following is an example presigned URL.

```
https://s3.amazonaws.com/examplebucket/test.txt
?X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=<your-access-key-id>/20130721/us-east-1/s3/aws4_request
&X-Amz-Date=20130721T201207Z
&X-Amz-Expires=86400
&X-Amz-SignedHeaders=host
&X-Amz-Signature=<signature-value>
```

In the example URL, note the following:

- The line feeds are added for readability.
- The `X-Amz-Credential` value in the URL shows the "/" character only for readability. In practice, it should be encoded as `%2F`. For example:

```
&X-Amz-Credential=<your-access-key-id>%2F20130721%2Fus-east-1%2Fs3%2Faws4_request
```

The following table describes the query parameters in the URL that provide authentication information.

Query String Parameter Name	Example Value
`X-Amz-Algorithm`	Identifies the version of AWS Signature and the algorithm that you used to calculate the signature. For AWS Signature Version 4, you set this parameter value to `AWS4-HMAC-SHA256`. This string identifies AWS Signature Version 4 (AWS4) and the HMAC-SHA256 algorithm (HMAC-SHA256).

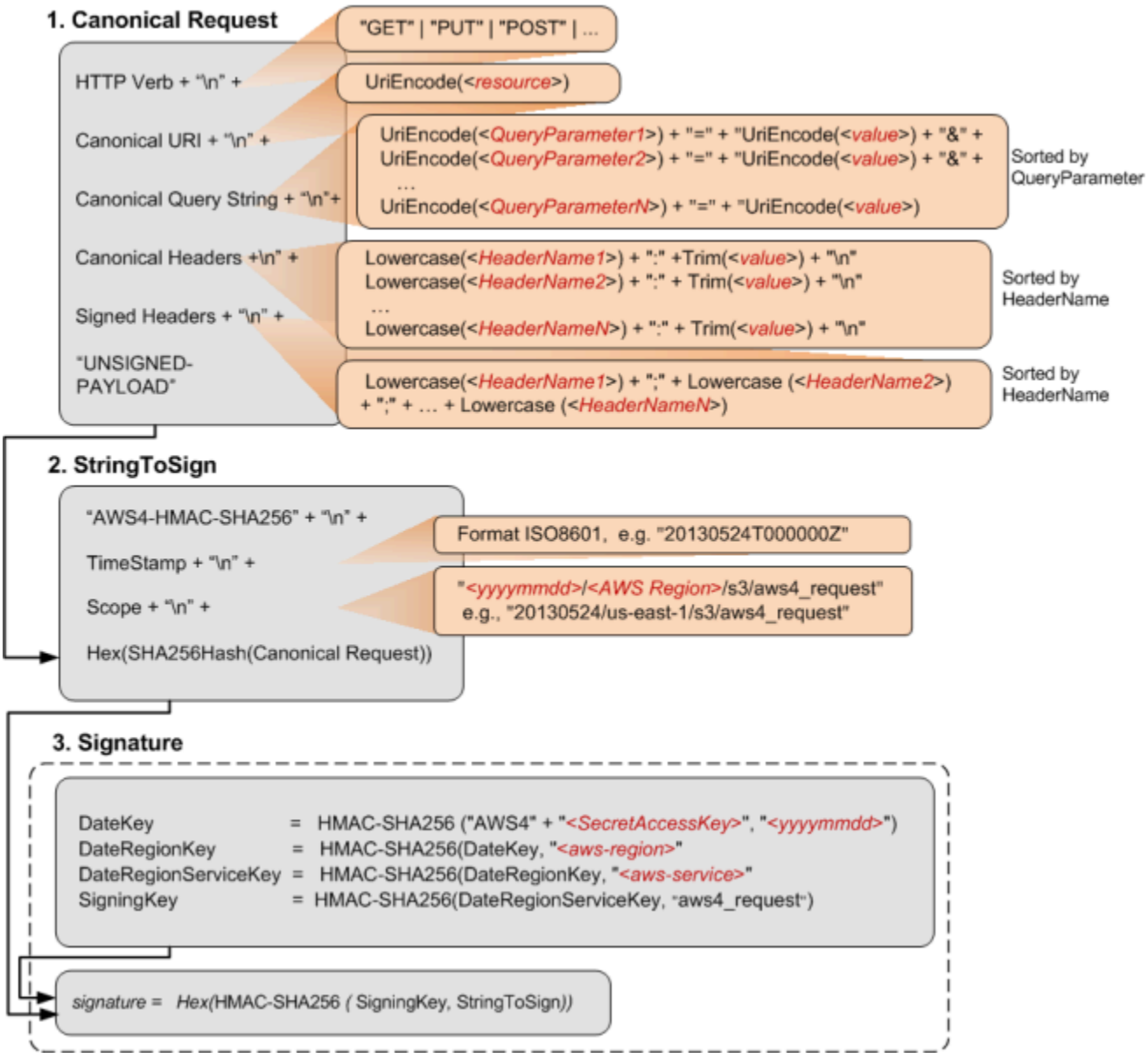
`X-Amz-Credential`	In addition to your access key ID, this parameter also provides scope (AWS Region and service) for which the signature is valid. This value must match the scope you use in signature calculations, discussed in the following section. The general form for this parameter value is as follows:
	
	`<your-access-key-id> /<date>/<AWS Region>/<AWS-service> /aws4_request`
	
	For example:
	
	`AKIAIOSFODNN7EXAMPLE/20130721/us-east-1/s3/aws4_request`
	
	For Amazon S3, the *AWS-service* string is `s3`. For a list of S3 `AWS-region` strings, see Regions and Endpoints in the *AWS General Reference*.

Query String Parameter Name	Example Value
`X-Amz-Date`	The date and time format must follow the ISO 8601 standard, and must be formatted with the "*yyyyMMdd*T*HHmmss*Z" format. For example if the date and time was "08/01/2016 15:32:41.982-700" then it must first be converted to UTC (Coordinated Universal Time) and then submitted as "20160801T223241Z".
`X-Amz-Expires`	Provides the time period, in seconds, for which the generated presigned URL is valid. For example, `86400` (24 hours). This value is an integer. The minimum value you can set is 1, and the maximum is 604800 (seven days). A presigned URL can be valid for a maximum of seven days because the signing key you use in signature calculation is valid for up to seven days.
`X-Amz-SignedHeaders`	Lists the headers that you used to calculate the signature. The following headers are required in the signature calculations: • The HTTP `host` header. • Any `x-amz-*` headers that you plan to add to the request. **Note** For added security, you should sign all the request headers that you plan to include in your request.

Query String Parameter Name	Example Value
X-Amz-Signature	Provides the signature to authenticate your request. This signature must match the signature Amazon S3 calculates; otherwise, Amazon S3 denies the request. For example, 733255ef022bec3f2a8701cd61d4b371f3f28c9f193a1f02279211d48d5193d7 Signature calculations are described in the following section.
X-Amz-Security-Token	Optional credential parameter if using credentials sourced from the STS service.

Calculating a Signature

The following diagram illustrates the signature calculation process.



The following table describes the functions that are shown in the diagram. You need to implement code for these functions.

Function	Description
`Lowercase()`	Convert the string to lowercase.
`Hex()`	Lowercase base 16 encoding.
`SHA256Hash()`	Secure Hash Algorithm (SHA) cryptographic hash function.

Function	Description
`HMAC-SHA256()`	Computes HMAC by using the SHA256 algorithm with the signing key provided. This is the final signature.
`Trim()`	Remove any leading or trailing whitespace.
`UriEncode()`	URI encode every byte. UriEncode() must enforce the following rules: • URI encode every byte except the unreserved characters: 'A'-'Z', 'a'-'z', '0'-'9', '-', '.', '_', and '~'. • The space character is a reserved character and must be encoded as "%20" (and not as "+"). • Each URI encoded byte is formed by a '%' and the two-digit hexadecimal value of the byte. • Letters in the hexadecimal value must be uppercase, for example "%1A". • Encode the forward slash character, '/', everywhere except in the object key name. For example, if the object key name is `photos/Jan/sample.jpg` , the forward slash in the key name is not encoded. **Important** The standard UriEncode functions provided by your development platform may not work because of differences in implementation and related ambiguity in the underlying RFCs. We recommend that you write your own custom UriEncode function to ensure that your encoding will work. To see an example of a UriEncode function in Java, see Java Utilities on the GitHub website.

For more information about the signing process (details of creating a canonical request, string to sign, and signature calculations), see Signature Calculations for the Authorization Header: Transferring Payload in a Single Chunk (AWS Signature Version 4). The process is generally the same except that the creation of **CanonicalRequest** in a presigned URL differs as follows:

- You don't include a payload hash in the **Canonical Request**, because when you create a presigned URL, you don't know the payload content because the URL is used to upload an arbitrary payload. Instead, you use a constant string `UNSIGNED-PAYLOAD`.
- The **Canonical Query String** must include all the query parameters from the preceding table except for `X-Amz-Signature`.
- For S3, you must include the `X-Amz-Security-Token` query parameter in the URL if using credentials sourced from the STS service.
- **Canonical Headers** must include the HTTP `host` header. If you plan to include any of the `x-amz-*` headers, these headers must also be added for signature calculation. You can optionally add all other headers that you plan to include in your request. For added security, you should sign as many headers as possible. If you add a signed header that is also a signed query parameter, and they differ in value, you will receive an `InvalidRequest` error as the input is conflicting.

An Example

Suppose you have an object `test.txt` in your `examplebucket` bucket. You want to share this object with others for a period of 24 hours (86400 seconds) by creating a presigned URL.

```
https://s3.amazonaws.com/examplebucket/test.txt
?X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE%2F20130524%2Fus-east-1%2Fs3%2Faws4_request
&X-Amz-Date=20130524T000000Z&X-Amz-Expires=86400&X-Amz-SignedHeaders=host
&X-Amz-Signature=<signature-value>
```

The following steps illustrate first the signature calculations and then construction of the presigned URL. The example makes the following additional assumptions:

- Request timestamp is `Fri, 24 May 2013 00:00:00 GMT`.

- The bucket is in the US East (N. Virginia) region, and the credential `Scope` and the `Signing Key` calculations use `us-east-1` as the region specifier. For more information, see Regions and Endpoints in the *AWS General Reference*.

You can use this example as a test case to verify the signature that your code calculates; however, you must use the same bucket name, object key, time stamp, and the following example credentials:

Parameter	Value
`AWSAccessKeyId`	`AKIAIOSFODNN7EXAMPLE`
`AWSSecret AccessKey`	`wJalrXUtnFEMI/K7MDENG/bPxRfiCYEXAMPLEKEY`

1. **StringToSign**

   a. **CanonicalRequest**

```
GET
/test.txt
X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE
%2F20130524%2Fus-east-1%2Fs3%2Faws4_request&X-Amz-Date=20130524T000000Z&X-Amz-
Expires=86400&X-Amz-SignedHeaders=host
host:examplebucket.s3.amazonaws.com

host
UNSIGNED-PAYLOAD
```

   b. **StringToSign**

```
AWS4-HMAC-SHA256
20130524T000000Z
20130524/us-east-1/s3/aws4_request
3bfa292879f6447bbcda7001decf97f4a54dc650c8942174ae0a9121cf58ad04
```

2. **SigningKey**

```
signing key = HMAC-SHA256(HMAC-SHA256(HMAC-SHA256(HMAC-SHA256("AWS4" +
 "<YourSecretAccessKey>","20130524"),"us-east-1"),"s3"),"aws4_request")
```

3. **Signature**

```
aeeed9bbccd4d02ee5c0109b86d86835f995330da4c265957d157751f604d404
```

Now you have all information to construct a presigned URL. The resulting URL for this example is shown as follows (you can use this to compare your presigned URL):

```
https://examplebucket.s3.amazonaws.com/test.txt?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-
Amz-Credential=AKIAIOSFODNN7EXAMPLE%2F20130524%2Fus-east-1%2Fs3%2Faws4_request&X-
Amz-Date=20130524T000000Z&X-Amz-Expires=86400&X-Amz-SignedHeaders=host&X-Amz-
Signature=aeeed9bbccd4d02ee5c0109b86d86835f995330da4c265957d157751f604d404
```

Example 2

The following is an example (unrelated to the previous example) showing a presigned URL with the `X-Amz-Security-Token` parameter.

```
https://examplebucket.s3.us-east-1.amazonaws.com/test.txt
?X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE%2F20130524%2Fus-east-1%2Fs3%2Faws4_request
&X-Amz-Date=20200524T000000Z&X-Amz-Expires=86400&X-Amz-SignedHeaders=host
&X-Amz-Security-Token=IQoJb3JpZ2luX2VjEMv%2F%2F%2F%2F%2F%2F%2F%2F%2F
%2FwEaCXVzLWVhc3QtMSJGMEQCIBSUbVdj9YGs2g0HkHsOHFdkwOozjARSKHL987NhhOC8AiBPepRU1obMvIbGU0T
%2BWphFPgK%2Fqpxaf5Snvm5M57XFkCqlAgjz%2F%2F%2F%2F%2F%2F%2F%2F%2F%2F
%2F8BEAAaDDQ3MjM4NTU0NDY2MCIM83pULBe5%2F
%2BNm1GZBKvkBVslSaJVgwSef7SsoZCJlfJ56weYl3QCwEGr2F4BmCZZyFpmWEYzWnhNK1AnHMj5nkfKlKBx30XAT5PZGVr
%2F3HhMOkpdanMXn%2B4PY8lvM8RgnzSu90jOUpGXEOAo
%2F6G8OqlMim3%2BZmaQmasn4VYRvESEd7O72QGZ3%2BvDnDVnss0lSYjlv8PP7IujnvhZRnj0WoeOyMe1lL0wTG
%2Fa9usH5hE52w%2FYUJccOn0OaZuyROuVsRV4Q70sbWQhUvYUt%2B0tUMKzm8vsFOp4BaNZFqobbjtb36Y92v
%2Bx5kY6i0s8QE886jJtUWMP5ldMziClGx3p0mN5dzsYlM3GyiJ
%2FO1mWkPQDwg3mtSpOA9oeeuAMPTA7qMqy9RNuTKBDSx9EW27wvPzBum3SJhEfxv48euadKgrIX3Z79ruQFSQOc9LUrDjR
%2B4SoWAJqK%2BGX8Q3vPSjsLxhqhEMWd6U4TXcM7ku3gxMbzqfT8NDg%3D
```

```
&X-Amz-Signature=<signature-value>
```

Examples: Signature Calculations in AWS Signature Version 4

Topics

- Signature Calculation Examples Using Java (AWS Signature Version 4)
- Examples of Signature Calculations Using C# (AWS Signature Version 4)

For authenticated requests, unless you are using the AWS SDKs, you have to write code to calculate signatures that provide authentication information in your requests. Signature calculation in AWS Signature Version 4 (see Authenticating Requests (AWS Signature Version 4)) can be a complex undertaking, and we recommend that you use the AWS SDKs whenever possible.

This section provides examples of signature calculations written in Java and C#. The code samples send the following requests and use the HTTP Authorization header to provide authentication information:

- **PUT object** – Separate examples illustrate both uploading the full payload at once and uploading the payload in chunks. For information about using the Authorization header for authentication, see Authenticating Requests: Using the Authorization Header (AWS Signature Version 4).
- **GET object** – This example generates a presigned URL to get an object. Query parameters provide the signature and other authentication information. Users can paste a presigned URL in their browser to retrieve the object, or you can use the URL to create a clickable link. For information about using query parameters for authentication, see Authenticating Requests: Using Query Parameters (AWS Signature Version 4).

The rest of this section describes the examples in Java and C#. The topics include instructions for downloading the samples and for executing them.

Signature Calculation Examples Using Java (AWS Signature Version 4)

The Java sample that shows signature calculation can be downloaded at https://docs.aws.amazon.com/AmazonS3/latest/API/samples/AWSS3SigV4JavaSamples.zip. In `RunAllSamples.java`, the `main()` function executes sample requests to create an object,

retrieve an object, and create a presigned URL for the object. The sample creates an object from the text string provided in the code:

```
PutS3ObjectSample.putS3Object(bucketName, regionName, awsAccessKey, awsSecretKey);
GetS3ObjectSample.getS3Object(bucketName, regionName, awsAccessKey, awsSecretKey);
PresignedUrlSample.getPresignedUrlToS3Object(bucketName, regionName, awsAccessKey,
 awsSecretKey);
PutS3ObjectChunkedSample.putS3ObjectChunked(bucketName, regionName, awsAccessKey,
 awsSecretKey);
```

To test the examples on a Linux-based computer

The following instructions are for the Linux operating system.

1. In a terminal, navigate to the directory that contains `AWSS3SigV4JavaSamples.zip`.
2. Extract the .zip file.
3. In a text editor, open the file `./com/amazonaws/services/s3/samples/RunAllSamples.java`. Update code with the following information:

   - The name of a bucket where the new object can be created.

     > **Note**
     >
     > The examples use a virtual-hosted style request to access the bucket. To avoid potential errors, ensure that your bucket name conforms to the bucket naming rules as explained in Bucket Restrictions and Limitations in the *Amazon Simple Storage Service User Guide*.

   - AWS Region where the bucket resides.

     If bucket is in the US East (N. Virginia) region, use us-east-1 to specify the region. For a list of other AWS Regions, go to Amazon Simple Storage Service (S3) in the *AWS General Reference*.
4. Compile the source code and store the compiled classes into the `bin/` directory.

   ```
   javac -d bin -source 6 -verbose com
   ```
5. Change the directory to `bin/`, and then run `RunAllSamples`.

```
java com.amazonaws.services.s3.sample.RunAllSamples
```

The code runs all the methods in `main()`. For each request, the output will show the canonical request, the string to sign, and the signature.

Examples of Signature Calculations Using C# (AWS Signature Version 4)

The C# sample that shows signature calculation can be downloaded at https://docs.aws.amazon.com/AmazonS3/latest/API/samples/AmazonS3SigV4_Samples_CSharp.zip. In `Program.cs`, the `main()` function executes sample requests to create an object, retrieve an object, and create a presigned URL for the object. The code for signature calculation is in the `\Signers` folder.

```
PutS3ObjectSample.Run(awsRegion, bucketName, "MySampleFile.txt");

Console.WriteLine("\n\n*********************************************");
PutS3ObjectChunkedSample.Run(awsRegion, bucketName, "MySampleFileChunked.txt");

Console.WriteLine("\n\n*********************************************");
GetS3ObjectSample.Run(awsRegion, bucketName, "MySampleFile.txt");

Console.WriteLine("\n\n*********************************************");
PresignedUrlSample.Run(awsRegion bucketName, "MySampleFile.txt");
```

To test the examples with Microsoft Visual Studio 2010 or later

1. Extract the .zip file.
2. Start Visual Studio, and then open the .sln file.
3. Update the App.config file with valid security credentials.
4. Update the code as follows:

   - In `Program.cs`, provide the bucket name and the AWS Region where the bucket resides. The sample creates an object in this bucket.
5. Run the code.
6. To verify that the object was created, copy the presigned URL that the program creates, and then paste it in a browser window.

Authenticating Requests: Browser-Based Uploads Using POST (AWS Signature Version 4)

Amazon S3 supports HTTP POST requests so that users can upload content directly to Amazon S3. Using HTTP POST to upload content simplifies uploads and reduces upload latency where users upload data to store in Amazon S3. This section describes how you authenticate HTTP POST requests. For more information about HTTP POST requests, how to create a form, create a POST policy, and an example, see Browser-Based Uploads Using POST (AWS Signature Version 4).

To authenticate an HTTP POST request you do the following:

1. The form must include the following fields to provide signature and relevant information that Amazon S3 can use to re-calculate the signature upon receiving the request:

Element Name	Description
`policy`	The Base64-encoded security policy that describes what is permitted in the request. For signature calculation this policy is the string you sign. Amazon S3 must get this policy so it can re-calculate the signature.
`x-amz-algorithm`	The signing algorithm used. For AWS Signature Version 4, the value is `AWS4-HMAC-SHA256` .
`x-amz-credential`	In addition to your access key ID, this provides scope information you used in calculating the signing key for signature calculation. It is a string of the following form: *<your-access-key-id> /<date>/<aws-region> /<aws-service>* /aws4_request For example:

Element Name	Description
	AKIAIOSFODNN7EXAMPLE/20130728/us-east-1/s3/aws4_request . . For Amazon S3, the *aws-service* string is s3. For a list of Amazon S3 aws-region strings, see Regions and Endpoints in the *AWS General Reference*.
x-amz-date	It is the date value in ISO8601 format. For example, 20130728T000000Z . It is the same date you used in creating the signing key. This must also be the same value you provide in the policy (x-amz-date) that you signed.
x-amz-signature	(AWS Signature Version 4) The HMAC-SHA256 hash of the security policy. For more information on options for the signature, see Add the signature to the HTTP request in the *AWS General Reference*.

2. The POST policy must include the following elements:

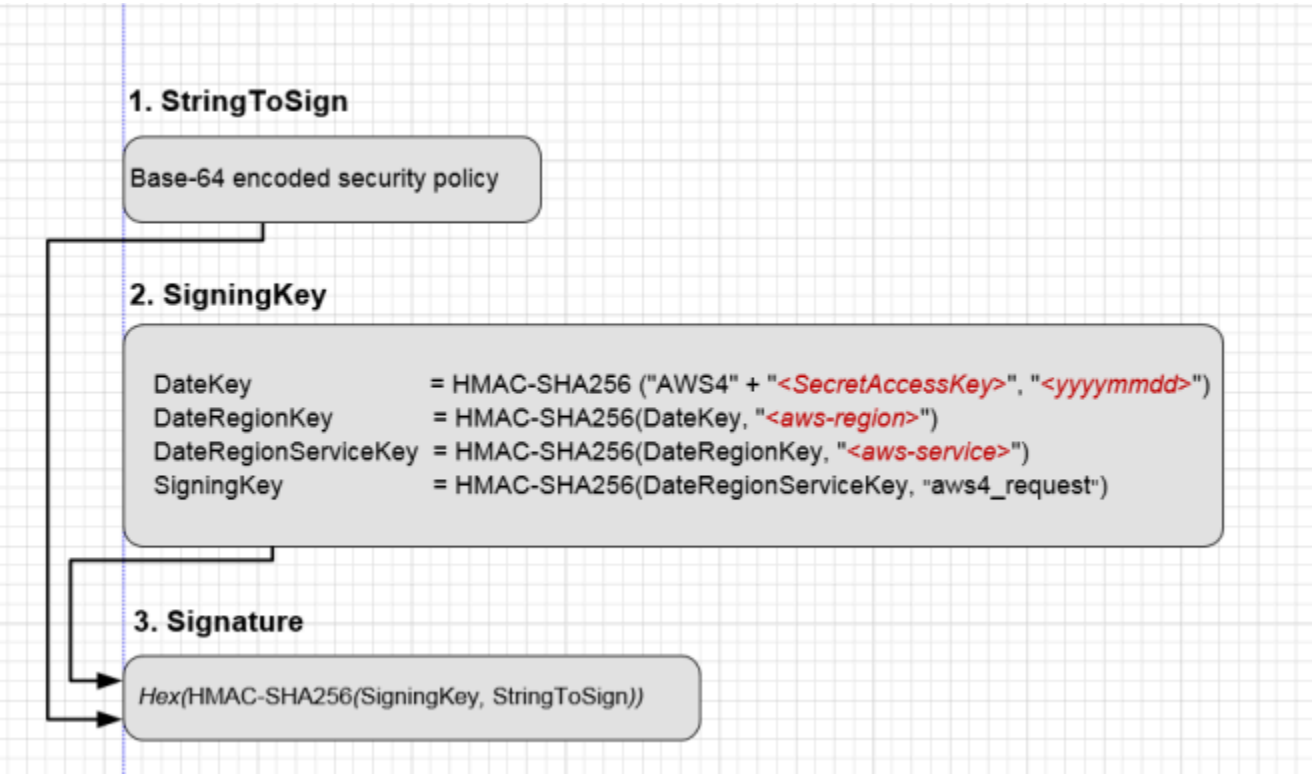
Element Name	Description
x-amz-algorithm	The signing algorithm that you used to calculation the signature. For AWS Signature Version 4, the value is AWS4-HMAC-SHA256 .
x-amz-credential	In addition to your access key ID, this provides scope information you used in calculating the signing key for signature calculation. It is a string of the following form:

Element Name	Description
	<your-access-key-id> /*<date>*/*<aws-region>* /*<aws-service>* /aws4_request For example, AKIAIOSFODNN7EXAMPLE/20130728/us-east-1/s3/aws4_request . .
x-amz-date	The date value specified in the ISO8601 formatted string. For example, "20130728T000000Z". The date must be the same that you used in creating the signing key for signature calculation.

3. For signature calculation the POST policy is the string to sign.

Calculating a Signature

The following diagram illustrates the signature calculation process.



To Calculate a signature

1. Create a policy using UTF-8 encoding.
2. Convert the UTF-8-encoded policy to Base64. The result is the string to sign.
3. Create the signature as an HMAC-SHA256 hash of the string to sign. You will provide the signing key as key to the hash function.
4. Encode the signature by using hex encoding.

For more information about creating HTML forms, security policies, and an example, see the following subtopics:

- Creating an HTML Form (Using AWS Signature Version 4)
- POST Policy
- Example: Browser-Based Upload using HTTP POST (Using AWS Signature Version 4)

Amazon S3 Signature Version 4 Authentication Specific Policy Keys

The following table shows the policy keys related Amazon S3 Signature Version 4 authentication that can be in Amazon S3 policies. In a bucket policy, you can add these conditions to enforce specific behavior when requests are authenticated by using Signature Version 4. For example policies, see Bucket Policy Examples Using Signature Version 4 Related Condition Keys.

Applicable Keys for `s3:*` Actions or any of the Amazon S3 Actions

Applicable Keys	Description
`s3:signatureversion`	Identifies the version of AWS Signature that you want to support for authentic ated requests. For authenticated requests, Amazon S3 supports both Signature Version 4 and Signature Version 2. You can add this condition in your bucket policy to require a specific signature version.

Applicable Keys	Description
	Valid values: "AWS" identifies Signature Version 2 "AWS4-HMAC-SHA256" identifies Signature Version 4
s3:authType	Amazon S3 supports various methods of authentication (see Authenticating Requests (AWS Signature Version 4). You can optionally use this condition key to restrict incoming requests to use a specific authentication method. For example, you can allow only the HTTP Authorization header to be used in request authentication. Valid values: REST-HEADER REST-QUERY-STRING POST

Applicable Keys	Description
`s3:signatureAge`	The length of time, in milliseconds, that a signature is valid in an authenticated request. This condition works for: • *Presigned URLs* — where the most restricti ve condition wins. For more information, see Working with presigned URLs. • *Presigned POST* — upload files directly to S3 using pre-signed POST. For more informati on, see Amazon S3 POST Policy. In Signature Version 2, this value is always set to 0. In Signature Version 4, the signing key is valid for up to seven days. Therefore, the signature s are also valid for up to seven days. You can use this condition to further limit the signature age. For more information, see Introduction to Signing Requests. Example value: `100`

Applicable Keys	Description
`s3:x-amz-content-sha256`	You can use this condition key to disallow unsigned content in your bucket. When you use Signature Version 4, for requests that use the `Authorization` header, you add the `x-amz-content-sha256` header in the signature calculation and then set its value to the hash payload. You can use this condition key in your bucket policy to deny any uploads where payloads are not signed. For example: • Deny uploads that use presigned URLs. For more information, see Authenticating Requests: Using Query Parameters (AWS Signature Version 4). • Deny uploads that use Authorization header to authenticate requests but don't sign the payload. For more information, see Signature Calculations for the Authorization Header: Transferring Payload in a Single Chunk (AWS Signature Version 4). Valid value: `UNSIGNED-PAYLOAD`

Bucket Policy Examples Using Signature Version 4 Related Condition Keys

The following bucket policy denies any Amazon S3 presigned URL request on objects in `examplebucket` if the signature is more than ten minutes old.

```
{
   "Version": "2012-10-17",
   "Statement": [
      {
         "Sid": "Deny a presigned URL request if the signature is more than 10 min
 old",
         "Effect": "Deny",
         "Principal": "*",
         "Action": "s3:*",
         "Resource": "arn:aws:s3:::examplebucket3/*",
         "Condition": {
            "NumericGreaterThan": {
               "s3:signatureAge": 600000
            }
         }
      }
   ]
}
```

The following bucket policy allows only requests that use the `Authorization` header for request authentication. Any POST or presigned URL requests will be denied.

```
{
   "Version": "2012-10-17",
   "Statement": [
         {
               "Sid": "Allow only requests that use Authorization header for request
 authentication. Deny POST or presigned URL requests.",
               "Effect": "Deny",
               "Principal": "*",
               "Action": "s3:*",
               "Resource": "arn:aws:s3:::examplebucket3/*",
               "Condition": {
                     "StringNotEquals": {
                           "s3:authType": "REST-HEADER"
                     }
               }
         }
   ]
}
```

The following bucket policy denies any uploads with unsigned payloads, such as uploads using presigned URLs.

```
{
   "Version": "2012-10-17",
   "Statement": [
         {
               "Sid": "Deny uploads with unsigned payloads.",
               "Effect": "Deny",
               "Principal": "*",
               "Action": "s3:*",
               "Resource": "arn:aws:s3:::examplebucket3/*",
               "Condition": {
                     "StringEquals": {
                           "s3:x-amz-content-sha256": "UNSIGNED-PAYLOAD"
                     }
               }
         }
   ]
}
```

Browser-Based Uploads Using POST (AWS Signature Version 4)

This section discusses how to upload files directly to Amazon S3 through a browser using HTTP POST requests. It also contains information about how to use the AWS Amplify JavaScript library for browser-based file uploads to Amazon S3.

Topics

- POST Object
- POST Object restore
- Browser-Based Uploads Using HTTP POST
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- Example: Browser-Based Upload using HTTP POST (Using AWS Signature Version 4)
- Browser-Based Uploads to Amazon S3 Using the AWS Amplify Library

POST Object

Description

The POST operation adds an object to a specified bucket by using HTML forms. POST is an alternate form of PUT that enables browser-based uploads as a way of putting objects in buckets. Parameters that are passed to PUT through HTTP headers are instead passed as form fields to POST in the multipart/form-data encoded message body. To add an object to a bucket, you must have WRITE access on the bucket. Amazon S3 never stores partial objects. If you receive a successful response, you can be confident that the entire object was stored.

Amazon S3 is a distributed system. Unless you've enabled versioning for a bucket, if Amazon S3 receives multiple write requests for the same object simultaneously, only the last version of the object written is stored.

To ensure that data is not corrupted while traversing the network, use the Content-MD5 form field. When you use this form field, Amazon S3 checks the object against the provided MD5 value. If they do not match, Amazon S3 returns an error. Additionally, you can calculate the MD5 value while posting an object to Amazon S3 and compare the returned ETag to the calculated MD5 value. The ETag reflects only changes to the contents of an object, not its metadata.

> **Note**
>
> To configure your application to send the request headers before sending the request body, use the HTTP status code 100 (Continue). For POST operations, using this status code helps you avoid sending the message body if the message is rejected based on the headers (for example, because of an authentication failure or redirect). For more information about the HTTP status code 100 (Continue), go to Section 8.2.3 of http://www.ietf.org/rfc/rfc2616.txt.

Amazon S3 automatically encrypts all new objects that are uploaded to an S3 bucket. The encryption setting of an uploaded object depends on the default encryption configuration of the destination bucket. By default, all buckets have a default encryption configuration that uses server-side encryption with Amazon S3 managed keys (SSE-S3).

If the destination bucket has an encryption configuration that uses server-side encryption with an AWS Key Management Service (AWS KMS) key (SSE-KMS), dual-layer server-side encryption with

an AWS KMS key (DSSE-KMS), or a customer-provided encryption key (SSE-C), Amazon S3 uses the corresponding KMS key or customer-provided key to encrypt the uploaded object. When uploading an object, if you want to change the encryption setting of the uploaded object, you can specify the type of server-side encryption. You can configure SSE-S3, SSE-KMS, DSSE-KMS, or SSE-C. For more information, see Protecting data using server-side encryption in the *Amazon Simple Storage Service User Guide*.

> **Important**
>
> When constructing your request, make sure that the `file` field is the last field in the form.

Versioning

If you enable versioning for a bucket, POST automatically generates a unique version ID for the object being added. Amazon S3 returns this ID in the response by using the `x-amz-version-id` response header.

If you suspend versioning for a bucket, Amazon S3 always uses `null` as the version ID of the object stored in a bucket.

For more information about returning the versioning state of a bucket, see GET Bucket (Versioning Status).

Amazon S3 is a distributed system. If you enable versioning for a bucket and Amazon S3 receives multiple write requests for the same object simultaneously, all versions of the object are stored.

To see sample requests that use versioning, see Sample Request.

Requests

Syntax

```
POST / HTTP/1.1
Host: destinationBucket.s3.amazonaws.com
User-Agent: browser_data
Accept: file_types
Accept-Language: Regions
Accept-Encoding: encoding
Accept-Charset: character_set
Keep-Alive: 300
```

```
Connection: keep-alive
Content-Type: multipart/form-data; boundary=9431149156168
Content-Length: length

--9431149156168
Content-Disposition: form-data; name="key"

acl
--9431149156168
Content-Disposition: form-data; name="tagging"

<Tagging><TagSet><Tag><Key>Tag Name</Key><Value>Tag Value</Value></Tag></TagSet></
Tagging>
--9431149156168
Content-Disposition: form-data; name="success_action_redirect"

success_redirect
--9431149156168
Content-Disposition: form-data; name="Content-Type"

content_type
--9431149156168
Content-Disposition: form-data; name="x-amz-meta-uuid"

uuid
--9431149156168
Content-Disposition: form-data; name="x-amz-meta-tag"

metadata
--9431149156168
Content-Disposition: form-data; name="AWSAccessKeyId"

access-key-id
--9431149156168
Content-Disposition: form-data; name="Policy"

encoded_policy
--9431149156168
Content-Disposition: form-data; name="Signature"

signature=
--9431149156168
Content-Disposition: form-data; name="file"; filename="MyFilename.jpg"
Content-Type: image/jpeg
```

```
file_content
--9431149156168
Content-Disposition: form-data; name="submit"

Upload to Amazon S3
--9431149156168--
```

Request Parameters

This implementation of the operation does not use request parameters.

Form Fields

This operation can use the following form fields.

Name	Description	Required
`AWSAccessKeyId`	The AWS access key ID of the owner of the bucket who grants an Anonymous user access for a request that satisfies the set of constraints in the policy. Type: String Default: None Constraints: Required if a policy document is included with the request.	Conditional
`acl`	The specified Amazon S3 access control list (ACL). If the specified ACL is not valid, an error is generated. For more information about ACLs, see Access control list (ACL) overview in the *Amazon Simple Storage Service User Guide*. Type: String Default: private	No

Name	Description	Required
	Valid Values: `private | public-read | public-read-write | aws-exec-read | authenticated-read | bucket-owner-read | bucket-owner-full-control`	
`Cache-Control` , `Content-Type` , `Content-Disposition` , `Content-Encoding` , `Expires`	The REST-specific headers. For more information, see PutObject. Type: String Default: None	No
`file`	The file or text content. The file or text content must be the last field in the form. You cannot upload more than one file at a time. Type: File or text content Default: None	Yes
`key`	The name of the uploaded key. To use the file name provided by the user, use the `${filename}` variable. For example, if a user named Mary uploads the file `example.jpg` and you specify `/user/mary/${filename}` , the key name is `/user/mary/example.jpg` . For more information, see Object key and metadata in the *Amazon Simple Storage Service User Guide*. Type: String Default: None	Yes

Name	Description	Required
`policy`	The security policy that describes what is permitted in the request. Requests without a security policy are considered anonymous and work only on publicly writable buckets. For more information, see HTML forms and Upload examples in the *Amazon Simple Storage Service User Guide*. Type: String Default: None Constraints: A security policy is required if the bucket is not publicly writable.	Conditional

Name	Description	Required
`success_action_redirect` , `redirect`	The URL to which the client is redirected upon a successful upload. If `success_action_redirect` is not specified , Amazon S3 returns the empty document type specified in the `success_action_status` field. If Amazon S3 cannot interpret the URL, it acts as if the field is not present. If the upload fails, Amazon S3 displays an error and does not redirect the user to a URL. Type: String Default: None **Note** The `redirect` field name is deprecated, and support for the `redirect` field name will be removed in the future.	No

Name	Description	Required
success_action_status	If you don't specify success_action_redirect , the status code is returned to the client when the upload succeeds. This field accepts the values 200, 201, or 204 (the default). If the value is set to 200 or 204, Amazon S3 returns an empty document with a 200 or 204 status code. If the value is set to 201, Amazon S3 returns an XML document with a 201 status code. If the value is not set or if it is set to a value that is not valid, Amazon S3 returns an empty document with a 204 status code. Type: String Default: None	No

Name	Description	Required

tagging	The specified set of tags to add to the object. To add tags, use the following encoding scheme.
	
	`<Tagging>`
	`  <TagSet>`
	`  <Tag>`
	`  <Key>TagName</Key>`
	`  <Value>TagValue</Value>`
	`  </Tag>`
	`  ...`
	`  </TagSet>`
	`</Tagging>`
	
	For more information, see Object tagging in the *Amazon Simple Storage Service User Guide*.
	
	Type: String
	
	Default: None
		No

x-amz-storage-class	The storage class to use for storing the object. If you don't specify a class, Amazon S3 uses the default storage class, STANDARD. Amazon S3 supports other storage classes. For more informati on, see Storage classes in the *Amazon Simple Storage Service User Guide*. Type: String Default: STANDARD Valid values: STANDARD | REDUCED_REDUNDANCY | GLACIER | GLACIER_IR | STANDARD_IA | ONEZONE_IA | INTELLIGENT_TIERING | DEEP_ARCHIVE	No

Name	Description	Required
`x-amz-meta-*`	Headers starting with this prefix are user-defined metadata. Each one is stored and returned as a set of key-value pairs. Amazon S3 doesn't validate or interpret user-defined metadata. For more information, see PutObject. Type: String Default: None	No
`x-amz-security-token`	The Amazon DevPay security token. Each request that uses Amazon DevPay requires two `x-amz-security-token` form fields: one for the product token and one for the user token. Type: String Default: None	No
`x-amz-signature`	(AWS Signature Version 4) The HMAC-SHA256 hash of the security policy. Type: String Default: None	Conditional

Name	Description	Required

`x-amz-website-redirect-location`	If the bucket is configured as a website, this field redirects requests for this object to another object in the same bucket or to an external URL. Amazon S3 stores the value of this header in the object metadata. For information about object metadata, see Object key and metadata in the *Amazon Simple Storage Service User Guide*.
	
	In the following example, the request header sets the redirect to an object (`anotherPage.html`) in the same bucket:
	
	`x-amz-website-redirect-location: /anotherPage.html`
	
	In the following example, the request header sets the object redirect to another website:
	
	`x-amz-website-redirect-location: http://www.example.com/`
	
	For more information about website hosting in Amazon S3, see Hosting websites on Amazon S3 and How to configure website page redirects in the *Amazon Simple Storage Service User Guide*.
	
	Type: String
	
	Default: None
	
	Constraints: The value must be prefixed by `/`, `http://`, or `https://`. The length of the value is limited to 2 KB.
		No

Additional Checksum Request Form Fields

When uploading an object, you can specify various checksums that you would like to use to verify your data integrity. You can specify one additional checksum algorithm for Amazon S3 to use. For more information about additional checksum values, see Checking object integrity in the *Amazon Simple Storage Service User Guide*.

Name	Description	Required
`x-amz-checksum-algorithm`	Indicates the algorithm used to create the checksum for the object. If a value is specified, you must include the matching checksum header. Otherwise, your request will generate a 400 error. Possible values include `CRC32`, `CRC32C`, `SHA1`, and `SHA256`.	No
`x-amz-checksum-crc32`	Specifies the base64-encoded, 32-bit CRC32 checksum of the object. This parameter is required if the value of `x-amz-checksum-algorithm` is `CRC32`.	Conditional
`x-amz-checksum-crc32c`	Specifies the base64-encoded, 32-bit CRC32C checksum of the object. This parameter is required if the value of `x-amz-checksum-algorithm` is `CRC32C`.	Conditional
`x-amz-checksum-sha1`	Specifies the base64-encoded, 160-bit SHA-1 digest of the object. This parameter is required if the value of `x-amz-checksum-algorithm` is `SHA1`.	Conditional
`x-amz-checksum-sha256`	Specifies the base64-encoded, 256-bit SHA-256 digest of the object. This parameter is required if the value of `x-amz-checksum-algorithm` is `SHA256`.	Conditional

Server-Side Encryption Specific Request Form Fields

Server-side encryption is data encryption at rest. Amazon S3 encrypts your data while writing it to disks in AWS data centers and decrypts your data when you access it. When uploading an object, you can specify the type of server-side encryption that you want Amazon S3 to use for encrypting the object.

There are four types of server-side encryption:

- **Server-side encryption with Amazon S3 managed keys (SSE-S3)** – Starting May 2022, all Amazon S3 buckets have encryption configured by default. The default option for server-side encryption is with SSE-S3. Each object is encrypted with a unique key. As an additional safeguard, SSE-S3 encrypts the key itself with a root key that it regularly rotates. SSE-S3 uses one of the strongest block ciphers available, 256-bit Advanced Encryption Standard (AES-256), to encrypt your data.
- **Server-side encryption with AWS KMS keys (SSE-KMS)** – SSE-KMS is provided through an integration of the AWS KMS service with Amazon S3. With AWS KMS, you have more control over your keys. For example, you can view separate keys, edit control policies, and follow the keys in AWS CloudTrail. Additionally, you can create and manage customer managed keys or use AWS managed keys that are unique to you, your service, and your Region.
- **Dual-layer server-side encryption with AWS KMS keys (DSSE-KMS)** – Dual-layer server-side encryption with AWS KMS keys (DSSE-KMS) is similar to SSE-KMS, but applies two individual layers of object-level encryption instead of one layer.
- **Server-side encryption with customer-provided keys (SSE-C)** – With SSE-C, you manage the encryption keys, and Amazon S3 manages the encryption as it writes to disks, and the decryption when you access your objects.

For more information, see Protecting data using server-side encryption in the *Amazon Simple Storage Service User Guide*.

Depending on which type of server-side encryption you want to use, specify the following form fields.

- **Use SSE-S3, SSE-KMS, or DSSE-KMS** – If you want to use these types of server-side encryption, specify the following form fields in the request.

Name	Description	Required
x-amz-server-side-encryption	Specifies the server-side encryption algorithm to use when Amazon S3 creates an object. To use SSE-S3, specify AES256. To use SSE-KMS, specify aws:kms. To use DSSE-KMS, specify aws:kms:dsse . Type: String Valid Value: aws:kms, AES256, aws:kms:dsse	Yes
x-amz-server-side-encryption-aws-kms-key-id	If the x-amz-server-side-encryption header has a valid value of aws:kms or aws:kms:dsse , this header specifies the ID of the AWS KMS key that was used to encrypt the object. Type: String	Yes, if the value of x-amz-server-side-encryption is aws:kms or aws:kms:dsse
x-amz-server-side-encryption-context	If x-amz-server-side-encryption has a valid value of aws:kms or aws:kms:dsse , this header specifies the encryption context for the object. The value of this header is a base64-encoded UTF-8 string that contains JSON-formatted key-value pairs for the encryption context. Type: String	No

Name	Description	Required
`x-amz-server-side-encryption-bucket-key-enabled`	If `x-amz-server-side-encryption` has a valid value of `aws:kms` or `aws:kms:dsse`, this header specifies whether Amazon S3 should use an S3 Bucket Key with SSE-KMS or DSSE-KMS. Setting this header to `true` causes Amazon S3 to use an S3 Bucket Key for object encryption with SSE-KMS or DSSE-KMS. Type: Boolean	No

> **Note**
>
> If you specify `x-amz-server-side-encryption:aws:kms` or `x-amz-server-side-encryption:aws:kms:dsse`, but do not provide `x-amz-server-side-encryption-aws-kms-key-id`, Amazon S3 uses the AWS managed key (`aws/S3`) to protect the data.

- **Use SSE-C** – If you want to manage your own encryption keys, you must provide all the following form fields in the request.

> **Note**
>
> If you use SSE-C, the `ETag` value that Amazon S3 returns in the response is not the MD5 of the object.

Name	Description	Required
`x-amz-server-side-encryption-customer-algorithm`	Specifies the algorithm to use to when encrypting the object. Type: String Default: None Valid Value: AES256	Yes

Name	Description	Required
	Constraints: Must be accompanied by valid `x-amz-server-side-encryption-customer-key` and `x-amz-server-side-encryption-customer-key-MD5` fields.	
`x-amz-server-side-encryption-customer-key`	Specifies the customer-provided base64-encoded encryption key for Amazon S3 to use in encrypting data. This value is used to store the object, and then it is discarded. Amazon does not store the encryption key. The key must be appropriate for use with the algorithm specified in the `x-amz-server-side-encryption-customer-algorithm` header. Type: String Default: None Constraints: Must be accompanied by valid `x-amz-server-side-encryption-customer-algorithm` and `x-amz-server-side-encryption-customer-key-MD5` fields.	Yes
`x-amz-server-side-encryption-customer-key-MD5`	Specifies the base64-encoded 128-bit MD5 digest of the encryption key according to RFC 1321. Amazon S3 uses this header for a message-integrity check to ensure that the encryption key was transmitted without error. Type: String Default: None Constraints: Must be accompanied by valid `x-amz-server-side-encryption-customer-algorithm` and `x-amz-server-side-encryption-customer-key` fields.	Yes

Responses

Response Headers

This implementation of the operation can include the following response headers in addition to the response headers common to all responses. For more information, see Common Response Headers.

Name	Description
`x-amz-checksum-crc32`	The base64-encoded, 32-bit CRC32 checksum of the object. Type: String
`x-amz-checksum-crc32c`	The base64-encoded, 32-bit CRC32C checksum of the object. Type: String
`x-amz-checksum-sha1`	The base64-encoded, 160-bit SHA-1 digest of the object. Type: String
`x-amz-checksum-sha256`	The base64-encoded, 256-bit SHA-256 digest of the object. Type: String
`x-amz-expiration`	If an `Expiration` action is configured for the object as part of the bucket's lifecycle configuration, Amazon S3 returns this header. The header value includes an `expiry-date` component and a URL-encoded `rule-id` component. For version-enabled buckets, this header applies only to current versions. Amazon S3 does not provide a header to indicate when a noncurrent version is eligible for permanent deletion. For more information, see PutBucketLifecycleConfiguration.

Name	Description
	Type: String
success_action_redirect, redirect	The URL to which the client is redirected on a successful upload. Type: String Ancestor: PostResponse
x-amz-server-side-encryption	The server-side encryption algorithm that was used when storing this object in Amazon S3 (for example, AES256, aws:kms, aws:kms:dsse). Type: String
x-amz-server-side-encryption-aws-kms-key-id	If the x-amz-server-side-encryption header has a valid value of aws:kms, this header specifies the ID of the KMS key that was used to encrypt the object. Type: String
x-amz-server-side-encryption-bucket-key-enabled	If x-amz-server-side-encryption has a valid value of aws:kms, this header indicates whether the object is encrypted with SSE-KMS by using an S3 Bucket Key. If this header is set to true, the object uses an S3 Bucket Key with SSE-KMS. Type: Boolean
x-amz-server-side-encryption-customer-algorithm	If SSE-C was requested, the response includes this header, which confirms the encryption algorithm that was used. Type: String Valid Values: AES256

Name	Description
x-amz-server-side-encryption-customer-key-MD5	If SSE-C was requested, the response includes this header to verify round-trip message integrity of the customer-provided encryption key. Type: String
x-amz-version-id	Version of the object. Type: String

Response Elements

Name	Description
Bucket	The name of the bucket that the object was stored in. Type: String Ancestor: PostResponse
ETag	The entity tag (ETag) is an MD5 hash of the object that you can use to do conditional GET operations by using the If-Modified request tag with the GET request operation. ETag reflects changes only to the contents of an object, not to its metadata. Type: String Ancestor: PostResponse
Key	The object key name. Type: String Ancestor: PostResponse
Location	The URI of the object.

Name	Description
	Type: String Ancestor: PostResponse

Special Errors

This implementation of the operation does not return special errors. For general information about Amazon S3 errors and a list of error codes, see Error Responses.

Examples

Sample Request

```
POST /Neo HTTP/1.1
Content-Length: 4
Host: quotes.s3.amazonaws.com
Date: Wed, 01 Mar  2006 12:00:00 GMT
Authorization: authorization string
Content-Type: text/plain
Expect: the 100-continue HTTP status code

ObjectContent
```

Sample Response with Versioning Suspended

The following is a sample response when bucket versioning is suspended:

```
HTTP/1.1 100 Continue
HTTP/1.1 200 OK
x-amz-id-2: LriYPLdmOdAiIfgSm/F1YsViT1LW94/xUQxMsF7xiEb1a0wiIOIxl+zbwZ163pt7
x-amz-request-id: 0A49CE4060975EAC
x-amz-version-id: default
Date: Wed, 12 Oct 2009 17:50:00 GMT
ETag: "1b2cf535f27731c974343645a3985328"
Content-Length: 0
Connection: close
Server: AmazonS3
```

In this response, the version ID is `null`.

Sample Response with Versioning Enabled

The following is a sample response when bucket versioning is enabled.

```
HTTP/1.1 100 Continue
HTTP/1.1 200 OK
x-amz-id-2: LriYPLdmOdAiIfgSm/F1YsViT1LW94/xUQxMsF7xiEb1a0wiIOIxl+zbwZ163pt7
x-amz-request-id: 0A49CE4060975EAC
x-amz-version-id: 43jfkodU8493jnFJD9fjj3HHNVfdsQUIFDNsidf038jfdsjGFDSIRp
Date: Wed, 01 Mar  2006 12:00:00 GMT
ETag: "828ef3fdfa96f00ad9f27c383fc9ac7f"
Content-Length: 0
Connection: close
Server: AmazonS3
```

Related Resources

- CopyObject
- POST Object
- GetObject

POST Object restore

Description

This operation performs the following types of requests:

- `select` – Perform a select query on an archived object
- `restore an archive` – Restore an archived object

To use this operation, you must have permissions to perform the `s3:RestoreObject` and `s3:GetObject` actions. The bucket owner has this permission by default and can grant this permission to others. For more information about permissions, see Permissions Related to Bucket Subresource Operations and Managing Access Permissions to Your Amazon S3 Resources in the *Amazon Simple Storage Service User Guide*.

Querying Archives with Select Requests

You use a select type of request to perform SQL queries on archived objects. The archived objects that are being queried by the select request must be formatted as uncompressed comma-separated values (CSV) files. You can run queries and custom analytics on your archived data without having to restore your data to a hotter Amazon S3 tier. For an overview about select requests, see Querying Archived Objects in the *Amazon Simple Storage Service User Guide*.

When making a select request, do the following:

- Define an output location for the select query's output. This must be an Amazon S3 bucket in the same AWS Region as the bucket that contains the archive object that is being queried. The AWS account that initiates the job must have permissions to write to the S3 bucket. You can specify the storage class and encryption for the output objects stored in the bucket. For more information about output, see Querying Archived Objects in the *Amazon Simple Storage Service User Guide*.

  For more information about the S3 structure in the request body, see the following:

  - PutObject
  - Managing Access with ACLs in the *Amazon Simple Storage Service User Guide*
  - Protecting Data Using Server-Side Encryption in the *Amazon Simple Storage Service User Guide*

- Define the SQL expression for the SELECT type of restoration for your query in the request body's SelectParameters structure. You can use expressions like the following examples.
  - The following expression returns all records from the specified object.

    ```
    SELECT * FROM Object
    ```

  - Assuming that you are not using any headers for data stored in the object, you can specify columns with positional headers.

    ```
    SELECT s._1, s._2 FROM Object s WHERE s._3 > 100
    ```

  - If you have headers and you set the fileHeaderInfo in the CSV structure in the request body to USE, you can specify headers in the query. (If you set the fileHeaderInfo field to IGNORE, the first row is skipped for the query.) You cannot mix ordinal positions with header column names.

    ```
    SELECT s.Id, s.FirstName, s.SSN FROM S3Object s
    ```

For more information about using SQL with S3 Glacier Select restore, see SQL Reference for Amazon S3 Select and S3 Glacier Select in the *Amazon Simple Storage Service User Guide*.

When making a select request, you can also do the following:

- To expedite your queries, specify the Expedited tier. For more information about tiers, see "Restoring Archives," later in this topic.
- Specify details about the data serialization format of both the input object that is being queried and the serialization of the CSV-encoded query results.

The following are additional important facts about the select feature:

- The output results are new Amazon S3 objects. Unlike archive retrievals, they are stored until explicitly deleted—manually or through a lifecycle policy.
- You can issue more than one select request on the same Amazon S3 object. Amazon S3 doesn't deduplicate requests, so avoid issuing duplicate requests.
- Amazon S3 accepts a select request even if the object has already been restored. A select request doesn’t return error response 409.

Restoring Archives

Objects in the GLACIER and DEEP_ARCHIVE storage classes are archived. To access an archived object, you must first initiate a restore request. This restores a temporary copy of the archived object. In a restore request, you specify the number of days that you want the restored copy to exist. After the specified period, Amazon S3 deletes the temporary copy but the object remains archived in the GLACIER or DEEP_ARCHIVE storage class that object was restored from.

To restore a specific object version, you can provide a version ID. If you don't provide a version ID, Amazon S3 restores the current version.

The time it takes restore jobs to finish depends on which storage class the object is being restored from and which data access tier you specify.

When restoring an archived object (or using a select request), you can specify one of the following data access tier options in the `Tier` element of the request body:

- **`Expedited`** - Expedited retrievals allow you to quickly access your data stored in the GLACIER storage class when occasional urgent requests for a subset of archives are required. For all but the largest archived objects (250 MB+), data accessed using Expedited retrievals are typically made available within 1–5 minutes. Provisioned capacity ensures that retrieval capacity for Expedited retrievals is available when you need it. Expedited retrievals and provisioned capacity are not available for the DEEP_ARCHIVE storage class.
- **`Standard`** - Standard retrievals allow you to access any of your archived objects within several hours. This is the default option for the GLACIER and DEEP_ARCHIVE retrieval requests that do not specify the retrieval option. Standard retrievals typically complete within 3-5 hours from the GLACIER storage class and typically complete within 12 hours from the DEEP_ARCHIVE storage class.
- **`Bulk`** - Bulk retrievals are Amazon S3 Glacier's lowest-cost retrieval option, enabling you to retrieve large amounts, even petabytes, of data inexpensively in a day. Bulk retrievals typically complete within 5-12 hours from the GLACIER storage class and typically complete within 48 hours from the DEEP_ARCHIVE storage class.

For more information about archive retrieval options and provisioned capacity for `Expedited` data access, see Restoring Archived Objects in the *Amazon Simple Storage Service User Guide*.

You can use Amazon S3 restore speed upgrade to change the restore speed to a faster speed while it is in progress. You upgrade the speed of an in-progress restoration by issuing another

restore request to the same object, setting a new `Tier` request element. When issuing a request to upgrade the restore tier, you must choose a tier that is faster than the tier that the in-progress restore is using. You must not change any other parameters, such as the `Days` request element. For more information, see Upgrading the Speed of an In-Progress Restore in the *Amazon Simple Storage Service User Guide*.

To get the status of object restoration, you can send a `HEAD` request. Operations return the `x-amz-restore` header, which provides information about the restoration status, in the response. You can use Amazon S3 event notifications to notify you when a restore is initiated or completed. For more information, see Configuring Amazon S3 Event Notifications in the *Amazon Simple Storage Service User Guide*.

After restoring an archived object, you can update the restoration period by reissuing the request with a new period. Amazon S3 updates the restoration period relative to the current time and charges only for the request—there are no data transfer charges. You cannot update the restoration period when Amazon S3 is actively processing your current restore request for the object.

If your bucket has a lifecycle configuration with a rule that includes an expiration action, the object expiration overrides the life span that you specify in a restore request. For example, if you restore an object copy for 10 days, but the object is scheduled to expire in 3 days, Amazon S3 deletes the object in 3 days. For more information about lifecycle configuration, see PutBucketLifecycleConfiguration and Object Lifecycle Management in *Amazon Simple Storage Service User Guide*.

Requests

Syntax

```
POST /ObjectName?restore&versionId=VersionID HTTP/1.1
Host: BucketName.s3.amazonaws.com
Date: date
Authorization: authorization string (see Authenticating Requests (AWS Signature Version 4))
Content-MD5: MD5

 request body
```

> **Note**
>
> The syntax shows some of the request headers. For a complete list, see "Request Headers," later in this topic.

Request Parameters

This implementation of the operation does not use request parameters.

Request Headers

Name	Description	Required
`Content-MD5`	The base64-encoded 128-bit MD5 digest of the data. You must use this header as a message integrity check to verify that the request body was not corrupted in transit. For more information, see RFC 1864. Type: String Default: None	Yes

Request Elements

The following is an XML example of a request body for restoring an archive.

```
<RestoreRequest>
   <Days>2</Days>
   <GlacierJobParameters>
     <Tier>Bulk</Tier>
   </GlacierJobParameters>
</RestoreRequest>
```

The following table explains the XML for archive restoration in the request body.

Name	Description	Required
`RestoreRequest`	Container for restore information. Type: Container	Yes
`Days`	Lifetime of the restored (active) copy. The minimum number of days that you can restore an object from S3 Glacier is 1. After the object copy reaches the specified lifetime, Amazon S3 removes it from the bucket. If you are restoring an archive, this element is required. Do not use this element with a `SELECT` type of request. Type: Positive integer Ancestors: `RestoreRequest`	Yes, if restoring an archive
`GlacierJobParameters`	Container for Glacier job parameters. Do not use this element with a `SELECT` type of request. Type: Container Ancestors: `RestoreRequest`	No
`Tier`	The data access tier to use when restoring the archive. `Standard` is the default. Type: Enum Valid values: `Expedited` | `Standard` | `Bulk` Ancestors: `GlacierJobParameters`	No

The following XML is the request body for a select query on an archived object:

```
<RestoreRequest>
    <Type>SELECT</Type>
    <Tier>Expedited</Tier>
    <Description>Job description</Description>
    <SelectParameters>
          <Expression>Select * from Object</Expression>
          <ExpressionType>SQL</ExpressionType>
          <InputSerialization>
              <CSV>
                  <FileHeaderInfo>IGNORE</FileHeaderInfo>
                  <RecordDelimiter>\n</RecordDelimiter>
                  <FieldDelimiter>,</FieldDelimiter>
                  <QuoteCharacter>"</QuoteCharacter>
                  <QuoteEscapeCharacter>"</QuoteEscapeCharacter>
                  <Comments>#</Comments>
              </CSV>
           </InputSerialization>
         <OutputSerialization>
             <CSV>
                 <QuoteFields>ASNEEDED</QuoteFields>
                 <RecordDelimiter>\n</RecordDelimiter>
                 <FieldDelimiter>,</FieldDelimiter>
                 <QuoteCharacter>"</QuoteCharacter>
                 <QuoteEscapeCharacter>"</QuoteEscapeCharacter>
             </CSV>
         </OutputSerialization>
    </SelectParameters>
    <OutputLocation>
        <S3>
      <BucketName>Name of bucket</BucketName>
            <Prefix>Key prefix</Prefix>
       <CannedACL>Canned ACL string</CannedACL>
       <AccessControlList>
      <Grantee>
          <Type>Grantee Type</Type>
    <ID>Grantee identifier</ID>
    <URI>Grantee URI</URI>
         <Permission>Granted permission</Permission>
                    <DisplayNmae>Display Name</DisplayName>
                    <EmailAddress>email</EmailAddress>
      </Grantee>
       </AccessControlList>
       <Encryption>
```

```
             <EncryptionType>Encryption type</EncryptionType>
       <KMSKeyId>KMS Key ID</KMSKeyId>
       <KMSContext>Base64-encoded JSON<KMSContext>
            </Encryption>
      <UserMetadata>
              <MetadataEntry>
                  <Name>Key</Name>
                  <Value>Value</Value>
              </MetadataEntry>
            </UserMetadata>
            <Tagging>
                <TagSet>
                    <Tag>
                        <Key>Tag name</Key>
                        <Value>Tag value</Value>
                    </Tag>
               </TagSet>
            </Tagging>
            <StorageClass>Storage class</StorageClass>
  </S3>
    </OutputLocation>
</RestoreRequest>
```

The following tables explain the XML for a SELECT type of restoration in the request body.

Name	Description	Required
RestoreRequest	Container for restore information. Type: Container	Yes
Tier	The data access tier to use when restoring the archive. Standard is the default. Type: Enum Valid values: Expedited | Standard | Bulk Ancestors: RestoreRequest	No

Name	Description	Required
`Description`	The optional description for the request. Type: String Ancestors: `RestoreRequest`	No
`SelectParameters`	Describes the parameters for the select job request. Type: Container Ancestors: `RestoreRequest`	Yes, if request type is `SELECT`
`OutputLocation`	Describes the location that receives the results of the select restore request. Type: Container for Amazon S3 Ancestors: `RestoreRequest`	Yes, if request type is `SELECT`

The `SelectParameters` container element contains the following elements.

Name	Description	Required

`Expression`	The SQL expression. For example:
	
	• The following SQL expression retrieves the first column of the data from the object stored in CSV format:
	
	`SELECT s._1 FROM Object s`
	
	• The following SQL expression returns everything from the object:
	
	`SELECT * FROM Object`
		Yes

Name	Description	Required
	Type: String Ancestors: `SelectParameters`	
`ExpressionType`	Identifies the expression type. Type: String Valid values: SQL Ancestors: `SelectParameters`	Yes
`InputSerialization`	Describes the serialization format of the object. Type: Container for CSV Ancestors: `SelectParameters`	Yes
`OutputSerialization`	Describes how the results of the select job are serialized. Type: Container for CSV Ancestors: `SelectParameters`	Yes

The CSV container element in the `InputSerialization` element contains the following elements.

Name	Description	Required
`RecordDelimiter`	A single character used to separate individual records in the input. Instead of the default value, you can specify an arbitrary delimiter. Type: String Default: \n	No

Name	Description	Required
	Ancestors: CSV	
`FieldDelimiter`	A single character used to separate individual fields in a record. You can specify an arbitrary delimiter. Type: String Default: `,` Ancestors: CSV	No
`QuoteCharacter`	A single character used for escaping when the field delimiter is part of the value. Consider this example in a CSV file: `"a, b"` Wrapping the value in quotation marks makes this value a single field. If you don't use the quotation marks, the comma is a field delimiter (which makes it two separate field values, a and b). Type: String Default: " Ancestors: CSV	No

Name	Description	Required
QuoteEscapeCharacter	A single character used for escaping the quotation mark character inside an already escaped value. For example, the value """ a , b """ is parsed as " a , b ". Type: String Default: " Ancestors: CSV	No
FileHeaderInfo	Describes the first line in the input data. It is one of the ENUM values. • NONE: First line is not a header. • IGNORE: First line is a header, but you can't use the header values to indicate the column in an expression. You can use column position (such as _1, _2, …) to indicate the column (SELECT s._1 FROM OBJECT s). • Use: First line is a header, and you can use the header value to identify a column in an expression (SELECT "name" FROM OBJECT). Type: Enum Valid values: NONE | USE | IGNORE Ancestors: CSV	No

Name	Description	Required
Comments	A single character used to indicate that a row should be ignored when the character is present at the start of that row. You can specify any character to indicate a comment line. Type: String Ancestors: CSV	No

The CSV container element (in the `OutputSerialization` elements) contains the following elements.

Name	Description	Required
QuoteFields	Indicates whether to use quotation marks around output fields. • ALWAYS: Always use quotation marks for output fields. • ASNEEDED: Use quotation marks for output fields when needed. Type: Enum Valid values: ALWAYS | ASNEEDED Default: AsNeeded Ancestors: CSV	No
RecordDelimiter	A single character used to separate individual records in the output. Instead of the default value, you can specify an arbitrary delimiter.	No

Name	Description	Required
	Type: String Default: \n Ancestors: CSV	
FieldDelimiter	A single character used to separate individual fields in a record. You can specify an arbitrary delimiter. Type: String Default: , Ancestors: CSV	No
QuoteCharacter	A single character used for escaping when the field delimiter is part of the value. For example, if the value is a, b, Amazon S3 wraps this field value in quotation marks, as follows: " a , b " . Type: String Default: " Ancestors: CSV	No
QuoteEscapeCharacter	A single character used for escaping the quotation mark character inside an already escaped value. For example, if the value is " a , b " , Amazon S3 wraps the value in quotation marks, as follows: """ a , b """. Type: String Ancestors: CSV	No

The S3 container element (in the `OutputLocation` element) contains the following elements.

Name	Description	Required
`AccessControlList`	A list of grants that control access to the staged results. Type: Container for Grant Ancestors: S3	No
`BucketName`	The name of the S3 bucket where the select restore results are stored. The bucket must be in the same AWS Region as the bucket that contains the input archive object. Type: String Ancestors: S3	Yes
`CannedACL`	The canned access control list (ACL) to apply to the select restore results. Type: String Valid values: `private | public-read | public-read-write | aws-exec-read | authenticated-read | bucket-owner-read | bucket-owner-full-control` Ancestors: S3	No
`Encryption`	Contains encryption information for the stored results. Type: Container for Encryption Ancestors: S3	No
`Prefix`		Yes

Name	Description	Required
	The prefix that is prepended to the select restore results. The maximum length for the prefix is 512 bytes. Type: String Ancestors: S3	
`StorageClass`	The class of storage used to store the select request results. Type: String Valid values: `STANDARD` | `REDUCED_REDUNDANCY` | `STANDARD_IA` | `ONEZONE_IA` Ancestors: S3	No
`Tagging`	Container for tag information. Type: Tag structure Ancestors: S3	No
`UserMetadata`	Contains a list of metadata to store with the select restore results. Type: MetadataEntry structure Ancestors: S3	No

The Grantee container element (in the `AccessControlList` element) contains the following elements.

Name	Description	Required
`DisplayName`	The screen name of the grantee.	No

Name	Description	Required
	Type: String Ancestors: `Grantee`	
`EmailAddress`	The email address of the grantee. Type: String Ancestors: `Grantee`	No
`ID`	The canonical user ID of the grantee. Type: String Ancestors: `Grantee`	No
`Type`	The type of the grantee. Type: String Ancestors: `Grantee`	No
`URI`	The URI of the grantee group. Type: String Ancestors: `Grantee`	No
`Permission`	Granted permission. Type: String Ancestors: `Grantee`	No

The `Encryption` container element (in S3) contains the following elements.

Name	Description	Required
`EncryptionType`	The server-side encryption algorithm used when storing job results. The default is no encryption. Type: String Valid Values `aws:kms` | `AES256` Ancestors: `Encryption`	No
`KMSContext`	Optional. If the encryption type is `aws:kms`, you can use this value to specify the encryption context for the select restore results. Type: String Ancestors: Encryption	No
`KMSKeyId`	The AWS Key Management Service (AWS KMS) key ID to use for object encryption. Type: String Ancestors: `Encryption`	No

The `TagSet` container element (in the `Tagging` element) contains the following element.

Name	Description	Required
`Tag`	Contains tags. Type: Container Ancestors: `TagSet`	No

The Tag container element (in the `TagSet` element) contains the following elements.

Name	Description	Required
`Key`	Name of the tag. Type: String Ancestors: `Tag`	No
`Value`	Value of the tag. Type: String Ancestors: `Tag`	No

The `MetadataEntry` container element (in the `UserMetadata` element) contains the following key-value pair elements to store with an object.

Name	Description	Required
`MetadataKey`	The metadata key. Type: String Ancestors:	No
`MetadataEntry`	The metadata value. Type: String Ancestors:	No

Responses

A successful operation returns either the `200 OK` or `202 Accepted` status code.

- If the object copy is not previously restored, then Amazon S3 returns `202 Accepted` in the response.
- If the object copy is previously restored, Amazon S3 returns `200 OK` in the response.

Response Headers

This implementation of the operation uses only response headers that are common to most responses. For more information, see Common Response Headers.

Response Elements

This operation does not return response elements.

Special Errors

Error Code	Description	HTTP Status Code	SOAP Fault Code Prefix
`RestoreAlreadyInProgress`	Object restore is already in progress. (This error does not apply to SELECT type requests.)	409 Conflict	Client
`GlacierExpeditedRetrievalNotAvailable`	Glacier expedited retrievals are currently not available. Try again later. (Returned if there is insufficient capacity to process the `Expedited` request. This error applies only to `Expedited` retrievals and not to `Standard` or `Bulk` retrievals.)	503	N/A

Examples

Restore an Object for Two Days Using the Expedited Retrieval Option

The following restore request restores a copy of the `photo1.jpg` object from S3 Glacier for a period of two days using the expedited retrieval option.

```
POST /photo1.jpg?restore HTTP/1.1
Host: examplebucket.s3.amazonaws.com
Date: Mon, 22 Oct 2012 01:49:52 GMT
Authorization: authorization string
Content-Length: content length

<RestoreRequest>
  <Days>2</Days>
  <GlacierJobParameters>
    <Tier>Expedited</Tier>
  </GlacierJobParameters>
</RestoreRequest>
```

If the `examplebucket` does not have a restored copy of the object, Amazon S3 returns the following `202 Accepted` response.

```
HTTP/1.1 202 Accepted
x-amz-id-2: GFihv3y6+kE7KG11GEkQhU7/2/cHR3Yb2fCb2S04nxI423Dqwg2XiQ0B/
UZlzYQvPiBlZNRcovw=
x-amz-request-id: 9F341CD3C4BA79E0
Date: Sat, 20 Oct 2012 23:54:05 GMT
Content-Length: 0
Server: AmazonS3
```

If a copy of the object is already restored, Amazon S3 returns a `200 OK` response, and updates only the restored copy's expiry time.

Query an Archive with a SELECT Request

The following is an example select restore request.

```
POST /object-one.csv?restore HTTP/1.1
Host: examplebucket.s3.amazonaws.com
Date: Date: Sat, 20 Oct 2012 23:54:05 GMT
Authorization: authorization string
Content-Length: content length

<RestoreRequest xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Type>SELECT</Type>
  <Tier>Expedited</Tier>
  <Description>this is a description</Description>
  <SelectParameters>
```

```
    <InputSerialization>
      <CSV>
        <FileHeaderInfo>IGNORE</FileHeaderInfo>
        <Comments>#</Comments>
        <QuoteEscapeCharacter>"</QuoteEscapeCharacter>
        <RecordDelimiter>\n</RecordDelimiter>
        <FieldDelimiter>,</FieldDelimiter>
        <QuoteCharacter>"</QuoteCharacter>
      </CSV>
    </InputSerialization>
    <ExpressionType>SQL</ExpressionType>
    <Expression>select * from object</Expression>
    <OutputSerialization>
      <CSV>
        <QuoteFields>ALWAYS</QuoteFields>
        <QuoteEscapeCharacter>"</QuoteEscapeCharacter>
        <RecordDelimiter>\n</RecordDelimiter>
        <FieldDelimiter>\t</FieldDelimiter>
        <QuoteCharacter>\'</QuoteCharacter>
      </CSV>
    </OutputSerialization>
  </SelectParameters>
  <OutputLocation>
    <S3>
      <BucketName>example-output-bucket</BucketName>
      <Prefix>test-s3</Prefix>
      <AccessControlList>
        <Grant>
          <Grantee xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:type="AmazonCustomerByEmail">
            <EmailAddress>jane-doe@example.com</EmailAddress>
          </Grantee>
          <Permission>FULL_CONTROL</Permission>
        </Grant>
      </AccessControlList>
      <UserMetadata>
        <MetadataEntry>
          <Name>test</Name>
          <Value>test-value</Value>
        </MetadataEntry>
        <MetadataEntry>
          <Name>other</Name>
          <Value>something else</Value>
        </MetadataEntry>
```

```
      </UserMetadata>
      <StorageClass>STANDARD</StorageClass>
    </S3>
  </OutputLocation>
</RestoreRequest>
```

Amazon S3 returns the following `202 Accepted` response.

```
HTTP/1.1 202 Accepted
x-amz-id-2: GFihv3y6+kE7KG11GEkQhU7/2/cHR3Yb2fCb2S04nxI423Dqwg2XiQ0B/
UZlzYQvPiBlZNRcovw=
x-amz-request-id: 9F341CD3C4BA79E0
x-amz-restore-output-path: js-test-s3/qE8nk5M0XIj-LuZE2HXNw6empQm3znLkHlMWInRYPS-
Orl2W0uj6LyYm-neTvm1-btz3wbBxfMhPykd3jkl-lvZE7w42/
Date: Sat, 20 Oct 2012 23:54:05 GMT
Content-Length: 0
Server: AmazonS3
```

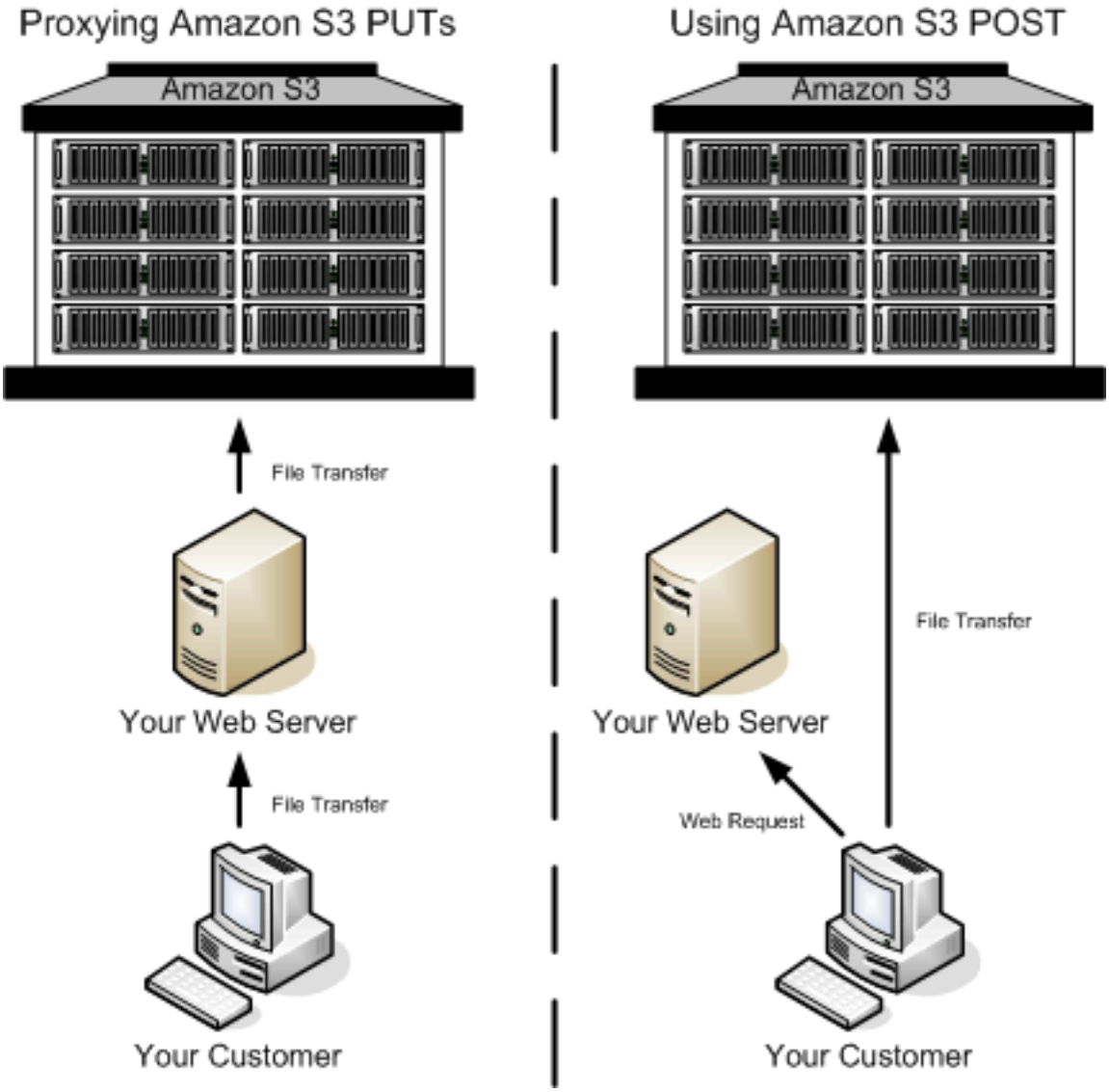
More Info

- GetBucketLifecycleConfiguration
- PutBucketLifecycleConfiguration
- SQL Reference for Amazon S3 Select and S3 Glacier Select in the *Amazon Simple Storage Service User Guide*

Browser-Based Uploads Using HTTP POST

Amazon S3 supports HTTP POST requests so that users can upload content directly to Amazon S3. By using POST, end users can authenticate requests without having to pass data through a secure intermediary node that protects your credentials. Thus, HTTP POST has the potential to reduce latency.

The following figure shows an Amazon S3 upload using a POST request.



Uploading Using POST

1	The user accesses your page from a web browser.
2	Your webpage contains an HTML form that contains all the information necessary for the user to upload content to Amazon S3.
3	The user uploads content to Amazon S3 through the web browser.

The process for sending browser-based POST requests is as follows:

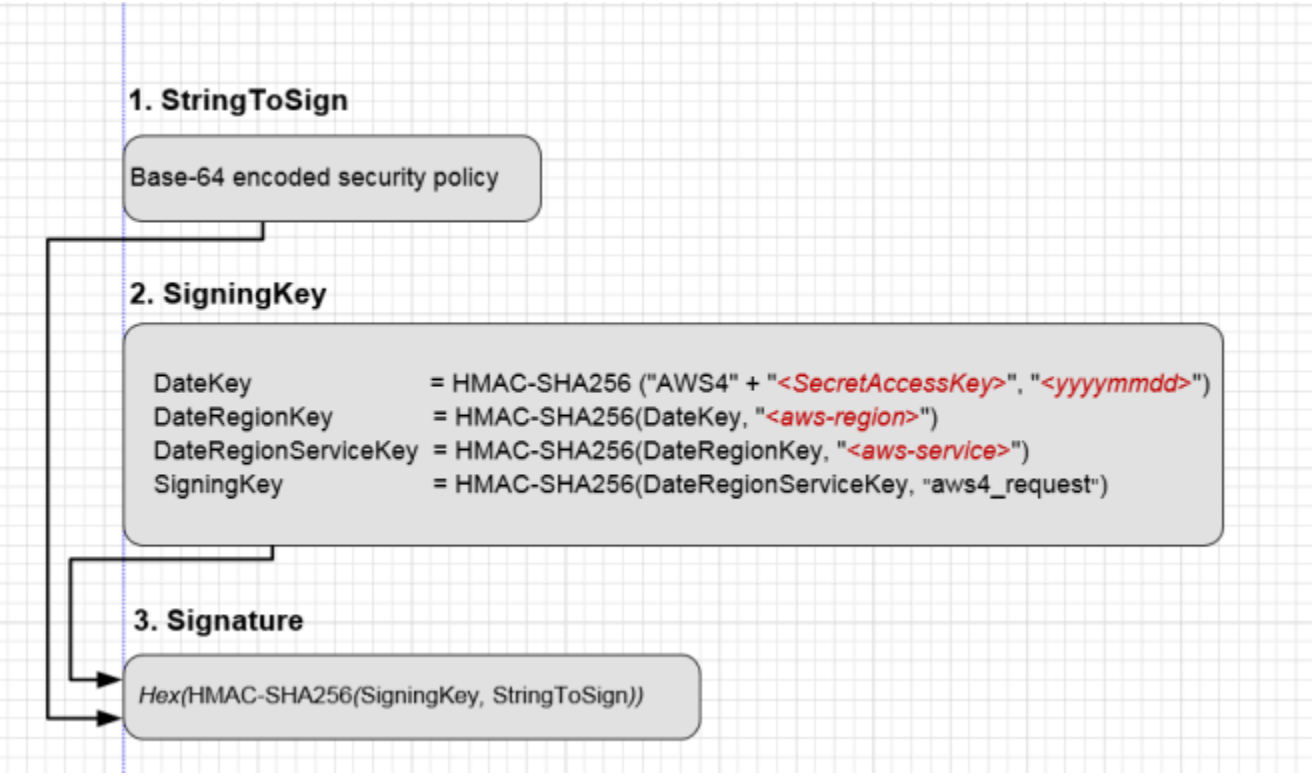
1. Create a security policy specifying conditions that restrict what you want to allow in the request, such as the bucket name where objects can be uploaded, and key name prefixes that you want to allow for the object that is being created.
2. Create a signature that is based on the policy. For authenticated requests, the form must include a valid signature and the policy.
3. Create an HTML form that your users can access in order to upload objects to your Amazon S3 bucket.

The following section describes how to create a signature to authenticate a request. For information about creating forms and security policies, see Creating an HTML Form (Using AWS Signature Version 4).

Calculating a Signature

For authenticated requests, the HTML form must include fields for a security policy and a signature.

- A security policy (see POST Policy) controls what is allowed in the request.
- The security policy is the `StringToSign` (see Introduction to Signing Requests) in your signature calculation.



To Calculate a signature

1. Create a policy using UTF-8 encoding.
2. Convert the UTF-8-encoded policy bytes to base64. The result is the `StringToSign`.
3. Create a signing key.
4. Use the signing key to sign the `StringToSign` using HMAC-SHA256 signing algorithm.

For more information about creating HTML forms, security policies, and an example, see the following:

- Creating an HTML Form (Using AWS Signature Version 4)
- POST Policy
- Example: Browser-Based Upload using HTTP POST (Using AWS Signature Version 4)

Creating an HTML Form (Using AWS Signature Version 4)

Topics

- HTML Form Declaration
- HTML Form Fields

To allow users to upload content to Amazon S3 by using their browsers (HTTP POST requests), you use HTML forms. HTML forms consist of a form declaration and form fields. The form declaration contains high-level information about the request. The form fields contain detailed request information.

This section describes how to create HTML forms. For a working example of browser-based upload using HTTP POST and related signature calculations for request authentication, see Example: Browser-Based Upload using HTTP POST (Using AWS Signature Version 4).

The form and policy must be UTF-8 encoded. You can apply UTF-8 encoding to the form by specifying `charset=UTF-8` in the `content` attribute. The following is an example of UTF-8 encoding in the HTML heading.

```
<html>
  <head>
    ...
    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />
    ...
  </head>
  <body>
```

Following is an example of UTF-8 encoding in a request header.

```
Content-Type: text/html; charset=UTF-8
```

Note

The form data and boundaries (excluding the contents of the file) cannot exceed 20KB.

HTML Form Declaration

The HTML form declaration has the following three attributes:

- `action` – The URL that processes the request, which must be set to the URL of the bucket. For example, if the name of your bucket is `examplebucket`, the URL is `http://examplebucket.s3.amazonaws.com/`.

  > **Note**
  >
  > The key name is specified in a form field.

- `method` – The method must be POST.
- `enctype` – The enclosure type (`enctype`) must be set to multipart/form-data for both file uploads and text area uploads. For more information about `enctype`, see RFC 1867.

This is a form declaration for the bucket `examplebucket`.

```
<form action="http://examplebucket.s3.amazonaws.com/" method="post"

enctype="multipart/form-data">
```

HTML Form Fields

The following table describes a list of fields that you can use within a form. Among other fields, there is a signature field that you can use to authenticate requests. There are fields for you to specify the signature calculation algorithm (`x-amz-algorithm`), the credential scope (`x-amz-credential`) that you used to generate the signing key, and the date (`x-amz-date`) used to calculate the signature. Amazon S3 uses this information to re-create the signature. If the signatures match, Amazon S3 processes the request.

> **Note**
>
> The variable `${filename}` is automatically replaced with the name of the file provided by the user and is recognized by all form fields. If the browser or client provides a full or partial path to the file, only the text following the last slash (/) or backslash (\) is used (for

example, `C:\Program Files\directory1\file.txt` is interpreted as `file.txt`). If no file or file name is provided, the variable is replaced with an empty string.

If you don't provide elements required for authenticated requests, such as the `policy` element, the request is assumed to be anonymous and will succeed only if you have configured the bucket for public read and write.

Element Name	Description	Required
`acl`	An Amazon S3 access control list (ACL). If an invalid ACL is specified, Amazon S3 denies the request. For more information about ACLs, see Using Amazon S3 ACLs. Type: String Default: private Valid Values: `private | public-read | public-read-write | aws-exec-read | authenticated-read | bucket-owner-read | bucket-owner-full-control`	No

`Cache-Control`
 	
`Content-Type`
 	
`Content-Disposition`
 	
`Content-Encoding`
 	
`Expires`
	REST-specific headers. For more information, see PutObject.	No

`key`	The key name of the uploaded object. To use the file name provided by the user, use the ${filename} variable. For example,	Yes

Element Name	Description	Required
	if you upload a file `photo1.jpg` and you specify `/user/user1/${filename}` as key name, the file is stored as `/user/user1/photo1.jpg` . For more information, see Object Key and Metadata in the *Amazon Simple Storage Service User Guide*.	
`policy`	The base64-encoded security policy that describes what is permitted in the request. For authenticated requests, a policy is required. Requests without a security policy are considered anonymous and will succeed only on a publicly writable bucket.	Required for authenticated requests
`success_action_redirect`	The URL to which the client is redirected upon successful upload. If `success_action_redirect` is not specified, or Amazon S3 cannot interpret the URL, Amazon S3 returns the empty document type that is specified in the `success_action_status` field. If the upload fails, Amazon S3 returns an error and does not redirect the user to another URL.	No

Element Name	Description	Required
`success_action_status`	The status code returned to the client upon successful upload if `success_action_redirect` is not specified. Valid values are `200`, `201`, or `204` (default). If the value is set to 200 or 204, Amazon S3 returns an empty document with the specified status code. If the value is set to 201, Amazon S3 returns an XML document with a 201 status code. For information about the content of the XML document, see POST Object. If the value is not set or is invalid, Amazon S3 returns an empty document with a 204 status code. **Note** Some versions of the Adobe Flash player do not properly handle HTTP responses with an empty body. To support uploads through Adobe Flash, we recommend setting `success_action_status` to 201.	No

Element Name	Description	Required
`x-amz-algorithm`	The signing algorithm used to authenticate the request. For AWS Signature Version 4, the value is `AWS4-HMAC-SHA256` . This field is required if a policy document is included with the request.	Required for authenticated requests
`x-amz-credential`	In addition to your access key ID, this field also provides scope information identifying region and service for which the signature is valid. This should be the same scope you used in calculating the signing key for signature calculation. It is a string of the following form: *<your-access-key-id>* /*<date>*/*<aws-region>* /*<aws-service>* /aws4_request For example: AKIAIOSFODNN7EXAMPLE/20130728/us-east-1/s3/aws4_request For Amazon S3, the *aws-service* string is s3. For a list of Amazon S3 aws-region strings, see Regions and Endpoints in the *AWS General Reference*. This is required if a policy document is included with the request.	Required for authenticated requests

Element Name	Description	Required
`x-amz-date`	It is the date value in ISO8601 format. For example, `20130728T000000Z` . It is the same date you used in creating the signing key (for example, 20130728). This must also be the same value you provide in the policy (`x-amz-date`) that you signed. This is required if a policy document is included with the request.	Required for authenticated requests
`x-amz-security-token`	A security token used by Amazon DevPay and session credentials If the request is using Amazon DevPay, it requires two `x-amz-security-token` form fields: one for the product token and one for the user token. For more information, see Using DevPay in the *Amazon Simple Storage Service User Guide*. If the request is using session credentials, it requires one `x-amz-security-token` form. For more information, see Requesting Temporary Security Credentials in the *IAM User Guide*.	No
`x-amz-signature`	(AWS Signature Version 4) The HMAC-SHA256 hash of the security policy. This field is required if a policy document is included with the request.	Required for authenticated requests

Element Name	Description	Required
`x-amz-meta-*`	Field names starting with this prefix are user-defined metadata. Each one is stored and returned as a set of key-value pairs. Amazon S3 doesn't validate or interpret user-defined metadata. For more information, see PutObject.	No
`x-amz-*`	See POST Object (POST Object for other `x-amz-*` headers.	No
`file`	File or text content. The file or content must be the last field in the form. You cannot upload more than one file at a time.	Yes

Conditional items are required for authenticated requests and are optional for anonymous requests.

Now that you know how to create forms, next you can create a security policy that you can sign. For more information, see POST Policy.

POST Policy

Topics

- Expiration
- Condition Matching
- Conditions
- Character Escaping

The policy required for making authenticated requests using HTTP POST is a UTF-8 and base64-encoded document written in JavaScript Object Notation (JSON) that specifies conditions that the request must meet. Depending on how you design your policy document, you can control the access granularity per-upload, per-user, for all uploads, or according to other designs that meet your needs.

This section describes the POST policy. For example signature calculations using POST policy, see Example: Browser-Based Upload using HTTP POST (Using AWS Signature Version 4).

> **Note**
>
> Although the policy document is optional, we highly recommend that you use one in order to control what is allowed in the request. If you make the bucket publicly writable, you have no control at all over which users can write to your bucket.

The following is an example of a POST policy document.

```
{ "expiration": "2007-12-01T12:00:00.000Z",
  "conditions": [
    {"acl": "public-read" },
    {"bucket": "johnsmith" },
    ["starts-with", "$key", "user/eric/"],
  ]
}
```

The POST policy always contains the `expiration` and `conditions` elements. The example policy uses two condition matching types (exact matching and starts-with matching). The following sections describe these elements.

Expiration

The `expiration` element specifies the expiration date and time of the POST policy in ISO8601 GMT date format. For example, `2013-08-01T12:00:00.000Z` specifies that the POST policy is not valid after midnight GMT on August 1, 2013.

Condition Matching

Following is a table that describes condition matching types that you can use to specify POST policy conditions (described in the next section). Although you must specify at least one condition

for each form field that you specify in the form, you can create more complex matching criteria by specifying multiple conditions for a form field.

Condition Match Type	Description

Exact Matches	The form field value must match the value specified. This example indicates that the ACL must be set to public-read:
	`{"acl": "public-read" }`
	This example is an alternate way to indicate that the ACL must be set to public-read:
	`[ "eq", "$acl", "public-read" ]`

Starts With	The value must start with the specified value. This example indicates that the object key must start with user/user1: `["starts-with", "$key", "user/user1/"]`

Matching Content-Types in a Comma-Separated List	Content-Types values for a `starts-with` condition that include commas are interpreted as lists. Each value in the list must meet the condition for the whole condition to pass. For example,given the following condition:
	`["starts-with", "$Content-Type", "image/"]`
	The following value would pass the condition:
	`"image/jpg,image/png,image/gif"`
	The following value would not pass the condition:
	`["image/jpg,text/plain"]`

Condition Match Type	Description
	Note Data elements other than `Content-Type` are treated as strings, regardless of the presence of commas.
Matching Any Content	To configure the POST policy to allow any content within a form field, use `starts-with` with an empty value (""). This example allows any value for `success_action_redirect` : `["starts-with", "$success_action_redirect", ""]`
Specifying Ranges	For form fields that accept a range, separate the upper and lower limit with a comma. This example allows a file size from 1 to 10 MiB: `["content-length-range", 1048576, 10485760]`

The specific conditions supported in a POST policy are described in Conditions.

Conditions

The `conditions` in a POST policy is an array of objects, each of which is used to validate the request. You can use these conditions to restrict what is allowed in the request. For example, the preceding policy conditions require the following:

- Request must specify the `johnsmith` bucket name.
- Object key name must have the `user/eric` prefix.
- Object ACL must be set to `public-read`.

Each form field that you specify in a form (except `x-amz-signature`, `file`, `policy`, and field names that have an `x-ignore-` prefix) must appear in the list of conditions.

Note

All variables within the form are expanded prior to validating the POST policy. Therefore, all condition matching should be against the expanded form fields. Suppose that you want to restrict your object key name to a specific prefix (`user/user1`). In this case, you set the key form field to `user/user1/${filename}`. Your POST policy should be `[ "starts-with", "$key", "user/user1/" ]` (do not enter `[ "starts-with", "$key", "user/user1/${filename}" ]`). For more information, see Condition Matching.

Policy document conditions are described in the following table.

Element Name	Description
`acl`	Specifies the ACL value that must be used in the form submission. This condition supports exact matching and `starts-with` condition match type discussed in the following section.
`bucket`	Specifies the acceptable bucket name. This condition supports exact matching condition match type.
`content-length-range`	The minimum and maximum allowable size for the uploaded content. This condition supports `content-length-range` condition match type.

`Cache-Control`
 	
`Content-Type`
 	
`Content-Disposition`
	REST-specific headers. For more information, see POST Object.

Element Name	Description

`Content-Encoding`
 	
`Expires`
	This condition supports exact matching and `starts-with` condition match type.

`key`	The acceptable key name or a prefix of the uploaded object. This condition supports exact matching and `starts-with` condition match type.

`success_action_redirect`
 	
`redirect`
	The URL to which the client is redirected upon successful upload.
	
	This condition supports exact matching and `starts-with` condition match type.

`success_action_status`	The status code returned to the client upon successful upload if `success_action_redirect` is not specified. This condition supports exact matching.
`x-amz-algorithm`	The signing algorithm that must be used during signature calculation. For AWS Signature Version 4, the value is `AWS4-HMAC-SHA256`. This condition supports exact matching.

Element Name	Description
x-amz-credential	The credentials that you used to calculate the signature. It provides access key ID and scope information identifying region and service for which the signature is valid. This should be the same scope you used in calculating the signing key for signature calculation. It is a string of the following form: *<your-access-key-id>* /*<date>*/*<aws-region>* /*<aws-service>* /aws4_request For example: AKIAIOSFODNN7EXAMPLE/20130728/us-east-1/s3/aws4_request For Amazon S3, the aws-service string is s3. For a list of Amazon S3 aws-region strings, see Regions and Endpoints in the *AWS General Reference*. This is required if a POST policy document is included with the request. This condition supports exact matching.
x-amz-date	The date value specified in the ISO8601 formatted string. For example, 20130728T000000Z . The date must be same that you used in creating the signing key for signature calculation. This is required if a POST policy document is included with the request. This condition supports exact matching.

Element Name	Description
`x-amz-security-token`	Amazon DevPay security token. Each request that uses Amazon DevPay requires two `x-amz-security-token` form fields: one for the product token and one for the user token. As a result, the values must be separated by commas. For example, if the user token is `eW91dHViZQ==` and the product token is `b0hnNVNKWVJIQTA=`, you set the POST policy entry to: `{ "x-amz-security-token": "eW91dHViZQ==,b0hnNVNKWVJIQTA=" }`. For more information about Amazon DevPay, see Using DevPay in the *Amazon Simple Storage Service User Guide*.
`x-amz-meta-*`	User-specified metadata. This condition supports exact matching and `starts-with` condition match type.
`x-amz-*`	See POST Object (POST Object for other `x-amz-*` headers. This condition supports exact matching.

Note

If your toolkit adds more form fields (for example, Flash adds `filename`), you must add them to the POST policy document. If you can control this functionality, prefix `x-ignore-` to the field so Amazon S3 ignores the feature and it won't affect future versions of this feature.

Character Escaping

Characters that must be escaped within a POST policy document are described in the following table.

Escape Sequence	Description
\\	Backslash
\$	Dollar symbol
\b	Backspace
\f	Form feed
\n	New line
\r	Carriage return
\t	Horizontal tab
\v	Vertical tab
\u*xxxx*	All Unicode characters

Now that you are acquainted with forms and policies, and understand how signing works, you can try a POST upload example. You need to write the code to calculate the signature. The example provides a sample form, and a POST policy that you can use to test your signature calculations. For more information, see Example: Browser-Based Upload using HTTP POST (Using AWS Signature Version 4).

Example: Browser-Based Upload using HTTP POST (Using AWS Signature Version 4)

This section shows an example of using an HTTP POST request to upload content directly to Amazon S3.

For more information on Signature Version 4, see Signature Version 4 Signing Process.

Uploading a File to Amazon S3 Using HTTP POST

This example provides a sample POST policy and a form that you can use to upload a file. The topic uses the example policy and fictitious credentials to show you the workflow and resulting signature and policy hash. You can use this data as test suite to verify your signature calculation code.

The example uses the following example credentials the signature calculations. You can use these credentials to verify your signature calculation code. However, you must then replace these with your own credentials when sending requests to AWS.

Parameter	Value
AWSAccessKeyId	AKIAIOSFODNN7EXAMPLE
AWSSecret AccessKey	wJalrXUtnFEMI/K7MDENG/bPxRfiCYEXAMPLEKEY

Sample Policy and Form

The following POST policy supports uploads to Amazon S3 with specific conditions.

```
{ "expiration": "2015-12-30T12:00:00.000Z",
  "conditions": [
    {"bucket": "sigv4examplebucket"},
    ["starts-with", "$key", "user/user1/"],
    {"acl": "public-read"},
    {"success_action_redirect": "http://sigv4examplebucket.s3.amazonaws.com/
successful_upload.html"},
    ["starts-with", "$Content-Type", "image/"],
    {"x-amz-meta-uuid": "14365123651274"},
```

```
    {"x-amz-server-side-encryption": "AES256"},
    ["starts-with", "$x-amz-meta-tag", ""],

    {"x-amz-credential": "AKIAIOSFODNN7EXAMPLE/20151229/us-east-1/s3/aws4_request"},
    {"x-amz-algorithm": "AWS4-HMAC-SHA256"},
    {"x-amz-date": "20151229T000000Z" }
  ]
}
```

This POST policy sets the following conditions on the request:

- The upload must occur before noon UTC on December 30, 2015.
- The content can be uploaded only to the `sigv4examplebucket`. The bucket must be in the region that you specified in the credential scope (`x-amz-credential` form parameter), because the signature you provided is valid only within this scope.
- You can provide any key name that starts with `user/user1`. For example, `user/user1/MyPhoto.jpg`.
- The ACL must be set to `public-read`.
- If the upload succeeds, the user's browser is redirected to `http://sigv4examplebucket.s3.amazonaws.com/successful_upload.html`.
- The object must be an image file.
- The `x-amz-meta-uuid` tag must be set to `14365123651274`.
- The `x-amz-meta-tag` can contain any value.

The following is a Base64-encoded version of this POST policy. You use this value as your StringToSign in signature calculation.

```
eyAiZXhwaXJhdGlvbiI6ICIyMDE1LTEyLTMwVDEyOjAwOjAwLjAwMFoiLA0KICAiY29uZGl0aW9ucyI6IFsNCiAgICB7ImJ
```

When you copy/paste the preceding policy, it should have carriage returns and new lines for your computed hash to match this value (ie. ASCII text, with CRLF line terminators).

Using example credentials to create a signature, the signature value is as follows (in signature calculation, the date is same as the `x-amz-date` in the policy (20151229):

```
8afdbf4008c03f22c2cd3cdb72e4afbb1f6a588f3255ac628749a66d7f09699e
```

The following example form specifies the preceding POST policy and supports a POST request to the `sigv4examplebucket`. Copy/paste the content in a text editor and save it as exampleform.html. You can then upload image files to the specific bucket using the exampleform.html. Your request will succeed if the signature you provide matches the signature Amazon S3 calculates.

> **Note**
>
> You must update the bucket name, dates, credential, policy, and signature with valid values for this to successfully upload to S3.

```
<html>
  <head>

    <meta http-equiv="Content-Type" content="text/html; charset=UTF-8" />

  </head>
  <body>

  <form action="http://sigv4examplebucket.s3.amazonaws.com/" method="post"
 enctype="multipart/form-data">
    Key to upload:
    <input type="input"  name="key" value="user/user1/${filename}" /><br />
    <input type="hidden" name="acl" value="public-read" />
    <input type="hidden" name="success_action_redirect" value="http://
sigv4examplebucket.s3.amazonaws.com/successful_upload.html" />
    Content-Type:
    <input type="input"  name="Content-Type" value="image/jpeg" /><br />
    <input type="hidden" name="x-amz-meta-uuid" value="14365123651274" />
    <input type="hidden" name="x-amz-server-side-encryption" value="AES256" />
    <input type="text"   name="X-Amz-Credential" value="AKIAIOSFODNN7EXAMPLE/20151229/
us-east-1/s3/aws4_request" />
    <input type="text"   name="X-Amz-Algorithm" value="AWS4-HMAC-SHA256" />
    <input type="text"   name="X-Amz-Date" value="20151229T000000Z" />

    Tags for File:
    <input type="input"  name="x-amz-meta-tag" value="" /><br />
    <input type="hidden" name="Policy" value='<Base64-encoded policy string>' />
    <input type="hidden" name="X-Amz-Signature" value="<signature-value>" />
    File:
    <input type="file"   name="file" /> <br />
```

```
    <!-- The elements after this will be ignored -->
    <input type="submit" name="submit" value="Upload to Amazon S3" />
  </form>

</html>
```

The post parameters are case insensitive. For example, you can specify `x-amz-signature` or `X-Amz-Signature`.

Browser-Based Uploads to Amazon S3 Using the AWS Amplify Library

This section describes how to upload files to Amazon S3 using the AWS Amplify JavaScript library.

For information about setting up the AWS Amplify library, see AWS Amplify Installation and Configuration.

Using the AWS Amplify JavaScript library to Upload Files to Amazon S3

The AWS Amplify library `Storage` module gives a simple browser-based upload mechanism for managing user content in public or private Amazon S3 storage.

Example : AWS Amplify Manual Setup

The following example shows the manual setup for using the AWS Amplify Storage module. The default implementation of the Storage module uses Amazon S3.

```
import Amplify from 'aws-amplify';
Amplify.configure(
    Auth: {
        identityPoolId: 'XX-XXXX-X:XXXXXXXX-XXXX-1234-abcd-1234567890ab', //REQUIRED -
 Amazon Cognito Identity Pool ID
        region: 'XX-XXXX-X', // REQUIRED - Amazon Cognito Region
        userPoolId: 'XX-XXXX-X_abcd1234', //OPTIONAL - Amazon Cognito User Pool ID
        userPoolWebClientId: 'XX-XXXX-X_abcd1234', //OPTIONAL - Amazon Cognito Web
 Client ID
    },
    Storage: {
        bucket: '', //REQUIRED -  Amazon S3 bucket
        region: 'XX-XXXX-X', //OPTIONAL -  Amazon service region
    }
```

```
);
```

Example : Put data into Amazon S3

The following example shows how to put public data into Amazon S3.

```
Storage.put('test.txt', 'Hello')
        .then (result => console.log(result))
        .catch(err => console.log(err));
```

The following example shows how to put private data into Amazon S3.

```
Storage.put('test.txt', 'Private Content', {
        level: 'private',
        contentType: 'text/plain'
    })
    .then (result => console.log(result))
    .catch(err => console.log(err));
```

For more information about using the AWS Amplify Storage module, see AWS Amplify Storage.

More Info

AWS Amplify Quick Start

Common Request Headers

The following table describes headers that can be used by various types of Amazon S3 REST requests.

Header Name	Description
`Authorization`	The information required for request authentication. For more information, go to The Authentication Header in the *Amazon Simple Storage Service Developer Guide*. For anonymous requests this header is not required.
`Content-Length`	Length of the message (without the headers) according to RFC 2616. This header is required for PUTs and operations that load XML, such as logging and ACLs.
`Content-Type`	The content type of the resource in case the request has content in the body. Example: `text/plain`
`Content-MD5`	The base64 encoded 128-bit MD5 digest of the message (without the headers) according to RFC 1864. This header can be used as a message integrity check to verify that the data is the same data that was originally sent. Although it is optional, we recommend using the Content-MD5 mechanism as an end-to-end integrity check. For more information about REST request authentication, go to REST Authentication in the *Amazon Simple Storage Service Developer Guide*.
`Date`	The date that can be used to create the signature contained in the `Authorization` header. If the `Date` header is to be used for signing it must be specified in the ISO 8601 basic format. In this case, the `x-amz-date` header is not needed. Note that when `x-amz-date` is present, it always overrides the value of the `Date` header. If the Date header is not used for signing, it can be one of the full date formats specified by RFC 2616, section 3.3. For

Header Name	Description
	example, the date/time `Wed, 01 Mar 2006 12:00:00 GMT` is a valid date/time header for use with Amazon S3. If you are using the `Date` header for signing, then it must be in the ISO 8601 basic `YYYYMMDD'T'HHMMSS'Z'` format. If `Date` is specified but is not in ISO 8601 basic format, then you must also include the `x-amz-date` header. If `Date` is specified in ISO 8601 basic format, then this is sufficient for signing requests and you do not need the `x-amz-date` header. For more information, see Handling Dates in Signature Version 4 in the *Amazon Web Services Glossary*.
`Expect`	When your application uses 100-continue, it does not send the request body until it receives an acknowledgment. If the message is rejected based on the headers, the body of the message is not sent. This header can be used only if you are sending a body. Valid Values: 100-continue
`Host`	For path-style requests, the value is `s3.amazonaws.com`. For virtual-style requests, the value is `BucketName.s3.amazonaws.com`. For more information, go to Virtual Hosting in the *Amazon Simple Storage Service User Guide*. This header is required for HTTP 1.1 (most toolkits add this header automatically); optional for HTTP/1.0 requests.

Header Name	Description
x-amz-content-sha256	When using signature version 4 to authenticate request, this header provides a hash of the request payload. For more information see Signature Calculations for the Authorization Header: Transferring Payload in a Single Chunk (AWS Signature Version 4). When uploading object in chunks, you set the value to STREAMING-AWS4-HMAC-SHA256-PAYLOAD to indicate that the signature covers only headers and that there is no payload. For more information, see Signature Calculations for the Authorization Header: Transferring Payload in Multiple Chunks (Chunked Upload) (AWS Signature Version 4).
x-amz-date	The date used to create the signature in the Authorization header. The format must be ISO 8601 basic in the YYYYMMDD'T'HHMMSS'Z' format. For example, the date/time 20170210T120000Z is a valid x-amz-date for use with Amazon S3. x-amz-date is optional for all requests; it can be used to override the date used for signing requests. If the Date header is specified in the ISO 8601 basic format, then x-amz-date is not needed. When x-amz-date is present, it always overrides the value of the Date header. For more information, see Handling Dates in Signature Version 4 in the *Amazon Web Services Glossary*.

Header Name	Description
`x-amz-security-token`	This header can be used in the following scenarios: • To provide security tokens for Amazon DevPay operations - Each request that uses Amazon DevPay requires two `x-amz-security-token` headers: one for the product token and one for the user token. When Amazon S3 receives an authenticated request, it compares the computed signature with the provided signature. Improperly formatted multi-value headers that are used to calculate a signature can cause authentication issues. • To provide a security token when using temporary security credentials - When making requests using temporary security credentials that you obtained from IAM, you must provide a security token by using this header. To learn more about temporary security credentials, see Making Requests. This header is required for requests that use Amazon DevPay and requests that are signed by using temporary security credentials.

Common Response Headers

The following table describes response headers that are common to most Amazon S3 responses.

Name	Description
`Content-Length`	The length in bytes of the body in the response. Type: String Default: None
`Content-Type`	The MIME type of the content. For example, `Content-Type: text/html; charset=utf-8` . Type: String Default: None
`Connection`	A value that specifies whether the connection to the server is open or closed. Type: Enum Valid Values: `open` | `close` Default: None
`Date`	The date and time that Amazon S3 responded; for example, Wed, 01 Mar 2006 12:00:00 GMT. Type: String Default: None
`ETag`	The entity tag (ETag) represents a specific version of the object. The ETag reflects changes only to the contents of an object, not its metadata. The ETag might or might not be an MD5 digest of the object data. Whether or not it is depends on how the object was created and how it is encrypted, as follows:

Name	Description

	• Objects created through the AWS Management Console or by the PUT Object, `POST Object`, or `Copy` operation:
	  • Objects that are plaintext or encrypted by server-side encryption with Amazon S3 managed keys (SSE-S3) have ETags that are an MD5 digest of their data.
	  • Objects encrypted by server-side encryption with customer-provided keys (SSE-C) or AWS Key Management Service (AWS KMS) keys (SSE-KMS) have ETags that are not an MD5 digest of their object data.
	• Objects created by either the Multipart Upload or Upload Part Copy operation have ETags that are not MD5 digests, regardless of the method of encryption.
	
	Type: String

`Server`	The name of the server that created the response. Type: String Default: `AmazonS3`
`x-amz-delete-marker`	A value that specifies whether the object returned was (`true`) or was not (`false`) a delete marker. Type: Boolean Valid Values: `true` | `false` Default: false
`x-amz-id-2`	A special token that is used together with the `x-amz-request-id` header to help AWS troubleshoot problems. For information about AWS Support using these request IDs, see Troubleshooting Amazon S3. Type: String Default: None

Name	Description
`x-amz-request-id`	A value created by Amazon S3 that uniquely identifies the request. This value is used together with the `x-amz-id-2` header to help AWS troubleshoot problems. For information about AWS Support using these request IDs, see Troubleshooting Amazon S3. Type: String Default: None
`x-amz-server-side-encryption`	The server-side encryption algorithm used when storing this object in Amazon S3 (for example, `AES256`, `aws:kms`). Valid Values: `AES256` | `aws:kms`
`x-amz-version-id`	The version of the object. When you enable versioning, Amazon S3 generates a random number for objects added to a bucket. The value is UTF-8 encoded and URL ready. When you PUT an object in a bucket where versioning has been suspended, the version ID is always `null`. Type: String Valid Values: `null` | any URL-ready, UTF-8 encoded string Default: null

Error responses

This section provides reference information about Amazon S3 errors.

> **Note**
>
> SOAP support over HTTP is deprecated, but it is still available over HTTPS. New Amazon S3 features will not be supported for SOAP. We recommend that you use either the REST API or the AWS SDKs.

Topics

- REST error responses
- List of error codes
- List of SELECT Object Content Error Codes
- List of Replication-related error codes
- List of Tagging-related error codes
- List of Amazon S3 on Outposts error codes
- List of Amazon S3 Storage Lens error codes
- List of Amazon S3 Object Lambda error codes
- List of Amazon S3 asynchronous error codes
- List of Amazon S3 Access Grants Error Codes

REST error responses

When an error occurs, the header information contains the following:

- Content-Type: application/xml
- An appropriate 3xx, 4xx, or 5xx HTTP status code

The body of the response also contains information about the error. The following sample error response shows the structure of response elements common to all REST error responses.

```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<Error>
  <Code>NoSuchKey</Code>
  <Message>The resource you requested does not exist</Message>
  <Resource>/mybucket/myfoto.jpg</Resource>
  <RequestId>4442587FB7D0A2F9</RequestId>
</Error>
```

The following table explains the REST error response elements.

Name	Description
`Code`	The error code is a string that uniquely identifies an error condition. It is meant to be read and understood by programs that detect and handle errors by type. For more information, see List of error codes. Type: String Ancestor: `Error`
`Error`	Container for all error elements. Type: Container Ancestor: None
`Message`	The error message contains a generic description of the error condition in English. It is intended for a human audience. Simple programs display the message directly to the end user if they encounter an error condition they don't know how or don't care to handle. Sophisticated programs with more exhaustive error handling and proper internationalization are more likely to ignore the error message. Type: String Ancestor: `Error`
`RequestId`	ID of the request associated with the error. Type: String Ancestor: `Error`

Name	Description
Resource	The bucket or object that is involved in the error. Type: String Ancestor: Error

Many error responses contain additional structured data meant to be read and understood by a developer diagnosing programming errors. For example, if you send a Content-MD5 header with a REST PUT request that doesn't match the digest calculated on the server, you receive a BadDigest error. The error response also includes as detail elements the digest that the server calculated, and the digest that you told the server to expect. During development, you can use this information to diagnose the error. In production, a well-behaved program might include this information in its error log.

For information about general response elements, go to Error responses.

List of error codes

The following table lists Amazon S3 error codes.

Error code	Description	HTTP status code	SOAP fault code prefix
AccessControlListNotSupported	The bucket does not allow ACLs.	400 Bad Request	Client
AccessDenied	Access Denied	403 Forbidde	Client

Error code	Description	HTTP status code	SOAP fault code prefix
AccessPointAlreadyOwnedByYou	An access point with an identical name already exists in your account.	409 Conflict	Client
AccountProblem	There is a problem with your AWS account that prevents the operation from completing successfully. For further assistance, see Contact Us.	403 Forbidde	Client
AllAccessDisabled	All access to this Amazon S3 resource has been disabled. For further assistance, see Contact Us.	403 Forbidde	Client
AmbiguousGrantByEmailAddress	The email address that you provided is associated with more than one account.	400 Bad Request	Client
AuthorizationHeaderMalformed	The authorization header that you provided is not valid.	400 Bad Request	N/A
BadDigest	The Content-MD5 or checksum value that you specified did not match what the server received.	400 Bad Request	Client
BucketAlreadyExists	The requested bucket name is not available. The bucket namespace is shared by all users of the system. Specify a different name and try again.	409 Conflict	Client

Error code	Description	HTTP status code	SOAP fault code prefix
BucketAlreadyOwnedByYou	The bucket that you tried to create already exists, and you own it. Amazon S3 returns this error in all AWS Regions except in the US East (N. Virginia) Region (us-east-1). For legacy compatibility, if you re-create an existing bucket that you already own in us-east-1, Amazon S3 returns 200 OK and resets the bucket access control lists (ACLs). For Amazon S3 on Outposts, the bucket that you tried to create already exists in your Outpost and you own it.	409 Conflict (in all Regions except us-east-1)	Client
BucketNotEmpty	The bucket that you tried to delete is not empty.	409 Conflict	Client
ClientTokenConflict	Your Multi-Region Access Point idempotency token was already used for a different request.	409 Conflict	Client
CredentialsNotSupported	This request does not support credentials.	400 Bad Request	Client
CrossLocationLoggingProhibited	Cross-Region logging is not allowed. Buckets in one AWS Region cannot log information to a bucket in another Region.	403 Forbidde	Client

Error code	Description	HTTP status code	SOAP fault code prefix
`EntityTooSmall`	Your proposed upload is smaller than the minimum allowed object size.	`400 Bad Request`	Client
`EntityTooLarge`	Your proposed upload exceeds the maximum allowed object size. For more information, see Amazon Simple Storage Service endpoints and quotas in the *AWS General Reference*.	`400 Bad Request`	Client
`ExpiredToken`	The provided token has expired.	`400 Bad Request`	Client
`IllegalLocationConstraintException`	You are trying to access a bucket from a different Region than where the bucket exists. To avoid this error, use the `--region` option. For example: `aws s3 cp awsexample.txt s3://DOC-EXAMPLE-BUCKET/ --region ap-east-1`.	`400 Bad Request`	Client
`IllegalVersioningConfigurationException`	The versioning configuration specified in the request is not valid.	`400 Bad Request`	Client
`IncompleteBody`	You did not provide the number of bytes specified by the Content-Length HTTP header.	`400 Bad Request`	Client

Error code	Description	HTTP status code	SOAP fault code prefix
IncorrectNumberOfFilesInPostRequest	POST requires exactly one file upload per request.	400 Bad Request	Client
InlineDataTooLarge	The inline data exceeds the maximum allowed size.	400 Bad Request	Client
InternalError	An internal error occurred. Try again.	500 Internal Server Error	Server
InvalidAccessKeyId	The AWS access key ID that you provided does not exist in our records.	403 Forbidde	Client
InvalidAccessPoint	The specified access point name or account is not valid.	400 Bad Request	Client
InvalidAccessPointAliasError	The specified access point alias name is not valid.	400 Bad Request	Client
InvalidAddressingHeader	You must specify the Anonymous role.	N/A	Client

Error code	Description	HTTP status code	SOAP fault code prefix
InvalidArgument	This error might occur for the following reasons: • The specified argument was not valid. • The request was missing a required header. • The specified argument was incomplete or in the wrong fo rmat. • The specified argument must have a length greater than or equal to 3.	400 Bad Request	Client
InvalidBucketAclWithObjectOwnership	Bucket cannot have ACLs set with ObjectOwnership's BucketOwnerEnforced setting.	400 Bad Request	Client
InvalidBucketName	The specified bucket is not valid.	400 Bad Request	Client
InvalidBucketState	The request is not valid for the current state of the bucket.	409 Conflict	Client
InvalidDigest	The Content-MD5 or checksum value that you specified is not valid.	400 Bad Request	Client

Error code	Description	HTTP status code	SOAP fault code prefix
InvalidEncryptionAlgorithmError	The encryption request that you specified is not valid. The valid value is AES256.	400 Bad Request	Client
InvalidLocationConstraint	The specified location (Region) constraint is not valid. For more information about selecting a Region for your buckets, see Buckets overview.	400 Bad Request	Client
InvalidObjectState	The operation is not valid for the current state of the object.	403 Forbidde	Client
InvalidPart	One or more of the specified parts could not be found. The part might not have been uploaded, or the specified entity tag might not have matched the part's entity tag.	400 Bad Request	Client
InvalidPartOrder	The list of parts was not in ascending order. The parts list must be specified in order by part number.	400 Bad Request	Client
InvalidPayer	All access to this object has been disabled. For further assistance, see Contact Us.	403 Forbidde	Client
InvalidPolicyDocument	The content of the form does not meet the conditions specified in the policy document.	400 Bad Request	Client

Error code	Description	HTTP status code	SOAP fault code prefix
`InvalidRange`	The requested range is not valid for the request. Try another range.	`416 RequestedRangeNotSatisfiable`	Client

Error code	Description	HTTP status code	SOAP fault code prefix
`InvalidRequest`	This error might occur for the following reasons: • The request is using the wrong signature version. Use `AWS4-HMAC-SHA256` (Signature Version 4). • An access point can be created only for an existing bucket. • The access point is not in a state where it can be deleted. • An access point can be listed only for an existing bucket. • The next token is not valid. • At least one action must be specified in a lifecycle rule. • At least one lifecycle rule must be specified. • The number of lifecycle rules must not exceed the allowed limit of 1000 rules. • The range for the `MaxResults` parameter is not valid. •	`400 Bad Request`	Client

Error code	Description	HTTP status code	SOAP fault code prefix
	SOAP requests must be made over an HTTPS connection. • Amazon S3 Transfer Acceleration is not supported for buckets with non-DNS compliant names. • Amazon S3 Transfer Acceleration is not supported for buckets with periods (.) in their names. • The Amazon S3 Transfer Acceleration endpoint supports only virtual style requests. • Amazon S3 Transfer Acceleration is not configured on this bucket. • Amazon S3 Transfer Acceleration is disabled on this bucket. • Amazon S3 Transfer Acceleration is not supported on this bucket. For assistance, contact AWS Support. • Amazon S3 Transfer Acceleration cannot be enabled on this bucket. For assistance, contact AWS Support. •		

Error code	Description	HTTP status code	SOAP fault code prefix
	Conflicting values provided in HTTP headers and query pa rameters. • Conflicting values provided in HTTP headers and POST form fields. • CopyObject request made on objects larger than 5GB in size.		
InvalidSecurity	The provided security credentials are not valid.	403 Forbidde	Client
InvalidSOAPRequest	The SOAP request body is not valid.	400 Bad Request	Client
InvalidStorageClass	The storage class that you specified is not valid.	400 Bad Request	Client
InvalidTargetBucke tForLogging	The target bucket for logging either does not exist, is not owned by you, or does not have the appropriate grants for the log-delivery group.	400 Bad Request	Client
InvalidToken	The provided token is malformed or otherwise not valid.	400 Bad Request	Client

Error code	Description	HTTP status code	SOAP fault code prefix
InvalidURI	The specified URI couldn't be parsed.	400 Bad Request	Client
KeyTooLongError	Your key is too long.	400 Bad Request	Client
MalformedACLError	The ACL that you provided was not well formed or did not validate against our published schema.	400 Bad Request	Client
MalformedPOSTRequest	The body of your POST request is not well-formed multipart/form-data.	400 Bad Request	Client
MalformedXML	The XML that you provided was not well formed or did not validate against our published schema.	400 Bad Request	Client
MaxMessageLengthExceeded	Your request was too large.	400 Bad Request	Client
MaxPostPreDataLengthExceededError	Your POST request fields preceding the upload file were too large.	400 Bad Request	Client
MetadataTooLarge	Your metadata headers exceed the maximum allowed metadata size.	400 Bad Request	Client

Error code	Description	HTTP status code	SOAP fault code prefix
MethodNotAllowed	The specified method is not allowed against this resource.	405 Method Not Allowed	Client
MissingAttachment	A SOAP attachment was expected, but none was found.	N/A	Client
MissingContentLength	You must provide the Content-L ength HTTP header.	411 Length Required	Client
MissingRequestBodyError	You sent an empty XML document as a request.	400 Bad Request	Client
MissingSecurityElement	The SOAP 1.1 request is missing a security element.	400 Bad Request	Client
MissingSecurityHeader	Your request is missing a required header.	400 Bad Request	Client
NoLoggingStatusForKey	There is no such thing as a logging status subresource for a key.	400 Bad Request	Client
NoSuchBucket	The specified bucket does not exist.	404 Not Found	Client

Error code	Description	HTTP status code	SOAP fault code prefix
NoSuchBucketPolicy	The specified bucket does not have a bucket policy.	404 Not Found	Client
NoSuchCORSConfiguration	The specified bucket does not have a CORS configuration.	404 Not Found	Client
NoSuchKey	The specified key does not exist.	404 Not Found	Client
NoSuchLifecycleConfiguration	The specified lifecycle configuration does not exist.	404 Not Found	Client
NoSuchMultiRegionAccessPoint	The specified Multi-Region Access Point does not exist.	404 Not Found	Client
NoSuchWebsiteConfiguration	The specified bucket does not have a website configuration.	404 Not Found	Client
NoSuchTagSet	The specified tag does not exist.	404 Not Found	Client
NoSuchUpload	The specified multipart upload does not exist. The upload ID might not be valid, or the multipart upload might have been aborted or completed.	404 Not Found	Client

Error code	Description	HTTP status code	SOAP fault code prefix
NoSuchVersion	The version ID specified in the request does not match an existing version.	404 Not Found	Client
NotImplemented	A header that you provided implies functionality that is not implemented.	501 Not Implemented	Server
NotModified	The resource was not changed.	304 Not Modified	Server
NotSignedUp	Your account is not signed up for the Amazon S3 service. You must sign up before you can use Amazon S3. You can sign up at the following URL: https://aws.amazon.com/s3	403 Forbidde	Client
OwnershipControlsNotFoundError	The bucket ownership controls were not found.	404 Not Found	Client
OperationAborted	A conflicting conditional operation is currently in progress against this resource. Try again.	409 Conflict	Client
PermanentRedirect	The bucket that you are attempting to access must be addressed using the specified endpoint. Send all future requests to this endpoint.	301 Moved Permanently	Client

Error code	Description	HTTP status code	SOAP fault code prefix
PreconditionFailed	At least one of the preconditions that you specified did not hold.	412 Precondition Failed	Client
Redirect	Temporary redirect. You are being redirected to the bucket while the Domain Name System (DNS) server is being updated.	307 Moved Temporarily	Client
RequestHeaderSectionTooLarge	The request header and query parameters used to make the request exceed the maximum all owed size.	400 Bad Request	Client
RequestIsNotMultiPartContent	A bucket POST request must be of the enclosure-type multipart/form-data.	400 Bad Request	Client
RequestTimeout	Your socket connection to the server was not read from or written to within the timeout period.	400 Bad Request	Client
RequestTimeTooSkewed	The difference between the request time and the server's time is too large.	403 Forbidde	Client
RequestTorrentOfBucketError	Requesting the torrent file of a bucket is not permitted.	400 Bad Request	Client

Error code	Description	HTTP status code	SOAP fault code prefix
RestoreAlreadyInProgress	The object restore is already in progress.	409 Conflict	Client
ServerSideEncryptionConfigurationNotFoundError	The server-side encryption configuration was not found.	400 Bad Request	Client
ServiceUnavailable	Service is unable to handle request.	503 Service Unavailable	Server
SignatureDoesNotMatch	The request signature that the server calculated does not match the signature that you provided. Check your AWS secret access key and signing method. For more information, see REST Authentication and SOAP Authentication.	403 Forbidde	Client
SlowDown	Please reduce your request rate.	503 Slow Down	Server
503 SlowDown	Slow Down	503 Slow Down	Server
TemporaryRedirect	You are being redirected to the bucket while the Domain Name System (DNS) server is being updated.	307 Moved Temporarily	Client

Error code	Description	HTTP status code	SOAP fault code prefix
TokenRefreshRequired	The provided token must be refreshed.	400 Bad Request	Client
TooManyAccessPoints	You have attempted to create more access points than are allowed for an account. For more information, see Amazon Simple Storage Service endpoints and quotas in the *AWS General Reference*.	400 Bad Request	Client
TooManyBuckets	You have attempted to create more buckets than are allowed for an account. For more information, see Amazon Simple Storage Service endpoints and quotas in the *AWS General Reference*.	400 Bad Request	Client
TooManyMultiRegion AccessPointregionsError	You have attempted to create a Multi-Region Access Point with more Regions than are allowed for an account. For more information, see Amazon Simple Storage Service endpoints and quotas in the *AWS General Reference*.	400 Bad Request	Client

Error code	Description	HTTP status code	SOAP fault code prefix
TooManyMultiRegionAccessPoints	You have attempted to create more Multi-Region Access Points than are allowed for an account. For more information, see Amazon Simple Storage Service endpoints and quotas in the *AWS General Reference*.	400 Bad Request	Client
UnexpectedContent	This request contains unsupported content.	400 Bad Request	Client
UnresolvableGrantByEmailAddress	The email address that you provided does not match any account on record.	400 Bad Request	Client
UserKeyMustBeSpecified	The bucket POST request must contain the specified field name. If it is specified, check the order of the fields.	400 Bad Request	Client
NoSuchAccessPoint	The specified access point does not exist.	404 Not Found	Client
InvalidTag	Your request contains tag input that is not valid. For example, your request might contain duplicate keys, keys or values that are too long, or system tags.	400 Bad Request	Client

Error code	Description	HTTP status code	SOAP fault code prefix
MalformedPolicy	Your policy contains a principal that is not valid.	400 Bad Request	Client

List of SELECT Object Content Error Codes

The following table contains special errors that SELECT Object Content might return. For general information about Amazon S3 errors and a list of error codes, see Error responses.

Error code	Description	HTTP status code	SOAP fault code prefix
AmbiguousFieldName	The field name matches to multiple fields in the file. Check the SQL expression and the file, and try again.	400	Client
Busy	The service is unavailable. Try again later.	503	Client
CastFailed	An attempt to convert from one data type to another using CAST failed in the SQL expression.	400	Client
ColumnTooLong	The length of a column in the result is greater than maxCharsPerColumn of 1 MB.	400	Client
CSVEscapingRecordDelimiter	A quoted record delimiter was found in the file. To allow quoted record delimiters, set AllowQuot	400	Client

Error code	Description	HTTP status code	SOAP fault code prefix
	edRecordDelimiter to 'TRUE'.		
CSVParsingError	An error occurred while parsing the CSV file. Check the file and try again.	400	Client
CSVUnescapedQuote	An unescaped quote was found while parsing the CSV file. To allow quoted record delimiters, set AllowQuotedRecordDelimiter to 'TRUE'.	400	Client
EmptyRequestBody	The request body cannot be empty.	400	Client
EvaluatorBindingDoesNotExist	A column name or a path provided does not exist in the SQL expression.	400	Client
EvaluatorInvalidArguments	There is an incorrect number of arguments in the function call in the SQL expression.	400	Client
EvaluatorInvalidTimestampFormatPattern	The timestamp format string in the SQL expression is not valid.	400	Client
EvaluatorInvalidTimestampFormatPatternSymbol	The timestamp format pattern contains a symbol in the SQL expression that is not valid.	400	Client

Error code	Description	HTTP status code	SOAP fault code prefix
EvaluatorInvalidTimestampFormatPatternSymbolForParsing	The timestamp format pattern contains a valid format symbol that cannot be applied to timestamp parsing in the SQL expression.	400	Client
EvaluatorInvalidTimestampFormatPatternToken	The timestamp format pattern contains a token in the SQL expression that is not valid.	400	Client
EvaluatorLikePatternInvalidEscapeSequence	An argument given to the LIKE expression was not valid.	400	Client
EvaluatorNegativeLimit	LIMIT must not be negative.	400	Client
EvaluatorTimestampFormatPatternDuplicateFields	The timestamp format pattern contains multiple format specifiers representing the timestamp field in the SQL expression.	400	Client
EvaluatorTimestampFormatPatternHourClockAmPmMismatch	The timestamp format pattern contains a 12-hour hour of day format symbol but doesn't also contain an AM/PM field, or it contains a 24-hour hour of day format specifier and contains an AM/PM field in the SQL expression.	400	Client
EvaluatorUnterminatedTimestampFormatPatternToken	The timestamp format pattern contains an unterminated token in the SQL expression.	400	Client

Error code	Description	HTTP status code	SOAP fault code prefix
ExpressionTooLong	The SQL expression is too long. The maximum byte-length for an SQL expression is 256 KB.	400	Client
ExternalEvalException	The query cannot be evaluated. Check the file and try again.	400	Client
IllegalSqlFunctionArgument	An illegal argument was used in the SQL function.	400	Client
IncorrectSqlFunctionArgumentType	An incorrect argument type was specified in a function call in the SQL expression.	400	Client
IntegerOverflow	An integer overflow or underflow occurred in the SQL expression.	400	Client
InternalError	An internal error occurred.	500	Client
InvalidCast	An attempt to convert from one data type to another using CAST failed in the SQL expression.	400	Client
InvalidColumnIndex	The column index in the SQL expression is not valid.	400	Client
InvalidCompressionFormat	The file is not in a supported compression format. Only GZIP and BZIP2 are supported.	400	Client
InvalidDataSource	The data source type is not valid. Only CSV, JSON, and Parquet are supported.	400	Client
InvalidDataType	The SQL expression contains a data type that is not valid.	400	Client

Error code	Description	HTTP status code	SOAP fault code prefix
InvalidExpressionType	The ExpressionType value is not valid. Only SQL expressions are supported.	400	Client
InvalidFileHeaderInfo	The FileHeaderInfo value is not valid. Only NONE, USE, and IGNORE are supported.	400	Client
InvalidJsonType	The JsonType value is not valid. Only DOCUMENT and LINES are supported.	400	Client
InvalidKeyPath	The key path in the SQL expression is not valid.	400	Client
InvalidQuoteFields	The QuoteFields value is not valid. Only ALWAYS and ASNEEDED are supported.	400	Client
InvalidRequestParameter	The value of a parameter in the SelectRequest element is not valid. Check the service API documentation and try again.	400	Client
InvalidScanRange	The provided scan range is not valid.	400	Client
InvalidTableAlias	The SQL expression contains a table alias that is not valid.	400	Client
InvalidTextEncoding	The encoding type is not valid. Only UTF-8 encoding is supported.	400	Client

Error code	Description	HTTP status code	SOAP fault code prefix
JSONParsingError	An error occurred while parsing the JSON file. Check the file and try again.	400	Client
LexerInvalidChar	The SQL expression contains a character that is not valid.	400	Client
LexerInvalidIONLiteral	The SQL expression contains an operator that is not valid.	400	Client
LexerInvalidLiteral	The SQL expression contains an operator that is not valid.	400	Client
LexerInvalidOperator	The SQL expression contains a literal that is not valid.	400	Client
LikeInvalidInputs	The argument given to the LIKE clause in the SQL expression is not valid.	400	Client
MalformedXML	The XML provided was not well formed or did not validate against our published schema. Check the service documentation and try again.	400	Client
MaxOperatorsExceeded	Failed to parse SQL expression, try reducing complexity. For example, reduce number of operators used.	400	Client
MissingRequiredParameter	The SelectRequest entity is missing a required parameter. Check the service documentation and try again.	400	Client

Error code	Description	HTTP status code	SOAP fault code prefix
MultipleDataSourcesUnsupported	Multiple data sources are not supported.	400	Client
NumberFormatError	An error occurred while parsing a number. This error can be caused by underflow or overflow of integers.	400	Client
ObjectSerializationConflict	InputSerialization specifies more than one format (CSV, JSON, or Parquet), or OutputSerialization specifies more than one format (CSV or JSON). For InputSerialization and OutputSerialization, you can specify only one format for each.	400	Client
OverMaxColumn	The number of columns in the result is greater than the maximum allowable number of columns.	400	Client
OverMaxParquetBlockSize	The Parquet file is above the max row group size.	400	Client
OverMaxRecordSize	The length of a record in the input or result is greater than the maxCharsPerRecord limit of 1 MB.	400	Client
ParquetParsingError	An error occurred while parsing the Parquet file. Check the file and try again.	400	Client

Error code	Description	HTTP status code	SOAP fault code prefix
ParquetUnsupportedCompressionCodec	The specified Parquet compression codec is not supported.	400	Client
ParseAsteriskIsNotAloneInSelectList	Other expressions are not allowed in the SELECT list when * is used without dot notation in the SQL expression.	400	Client
ParseCannotMixSqbAndWildcardInSelectList	Cannot mix [] and * in the same expression in a SELECT list in the SQL expression.	400	Client
ParseCastArity	The SQL expression CAST has incorrect arity.	400	Client
ParseEmptySelect	The SQL expression contains an empty SELECT clause.	400	Client
ParseExpected2TokenTypes	The expected token in the SQL expression was not found.	400	Client
ParseExpectedArgumentDelimiter	The expected argument delimiter in the SQL expression was not found.	400	Client
ParseExpectedDatePart	The expected date part in the SQL expression was not found.	400	Client
ParseExpectedExpression	The expected SQL expression was not found.	400	Client
ParseExpectedIdentForAlias	The expected identifier for the alias in the SQL expression was not found.	400	Client

Error code	Description	HTTP status code	SOAP fault code prefix
ParseExpectedIdentForAt	The expected identifier for AT name in the SQL expression was not found.	400	Client
ParseExpectedIdentForGroupName	GROUP is not supported in the SQL expression.	400	Client
ParseExpectedKeyword	The expected keyword in the SQL expression was not found.	400	Client
ParseExpectedLeftParenAfterCast	The expected left parenthesis after CAST in the SQL expression was not found.	400	Client
ParseExpectedLeftParenBuiltinFunctionCall	The expected left parenthesis in the SQL expression was not found.	400	Client
ParseExpectedLeftParenValueConstructor	The expected left parenthesis in the SQL expression was not found.	400	Client
ParseExpectedMember	The SQL expression contains an unsupported use of MEMBER.	400	Client
ParseExpectedNumber	The expected number in the SQL expression was not found.	400	Client
ParseExpectedRightParenBuiltinFunctionCall	The expected right parenthesis character in the SQL expression was not found.	400	Client
ParseExpectedTokenType	The expected token in the SQL expression was not found.	400	Client

Error code	Description	HTTP status code	SOAP fault code prefix
ParseExpectedTypeName	The expected type name in the SQL expression was not found.	400	Client
ParseExpectedWhenClause	The expected WHEN clause in the SQL expression was not found. CASE is not supported.	400	Client
ParseInvalidContextForWildcardInSelectList	The use of * in the SELECT list in the SQL expression is not valid.	400	Client
ParseInvalidPathComponent	The SQL expression contains a path component that is not valid.	400	Client
ParseInvalidTypeParam	The SQL expression contains a parameter value that is not valid.	400	Client
ParseMalformedJoin	JOIN is not supported in the SQL expression.	400	Client
ParseMissingIdentAfterAt	The expected identifier after the @ symbol in the SQL expression was not found.	400	Client
ParseNonUnaryAgregateFunctionCall	Only one argument is supported for aggregate functions in the SQL expression.	400	Client
ParseSelectMissingFrom	The SQL expression contains a missing FROM after the SELECT list.	400	Client
ParseUnExpectedKeyword	The SQL expression contains an unexpected keyword.	400	Client

Error code	Description	HTTP status code	SOAP fault code prefix
ParseUnexpectedOperator	The SQL expression contains an unexpected operator.	400	Client
ParseUnexpectedTerm	The SQL expression contains an unexpected term.	400	Client
ParseUnexpectedToken	The SQL expression contains an unexpected token.	400	Client
ParseUnknownOperator	The SQL expression contains an operator that is not valid.	400	Client
ParseUnsupportedAlias	The SQL expression contains an unsupported use of ALIAS.	400	Client
ParseUnsupportedCallWithStar	Only COUNT with (*) as a parameter is supported in the SQL expression.	400	Client
ParseUnsupportedCase	The SQL expression contains an unsupported use of CASE.	400	Client
ParseUnsupportedCaseClause	The SQL expression contains an unsupported use of CASE.	400	Client
ParseUnsupportedLiteralsGroupBy	The SQL expression contains an unsupported use of GROUP BY.	400	Client
ParseUnsupportedSelect	The SQL expression contains an unsupported use of SELECT.	400	Client
ParseUnsupportedSyntax	The SQL expression contains unsupported syntax.	400	Client
ParseUnsupportedToken	The SQL expression contains an unsupported token.	400	Client

Error code	Description	HTTP status code	SOAP fault code prefix
TruncatedInput	Object decompression failed. Check that the object is properly compressed using the format specified in the request.	400	Client
UnauthorizedAccess	You are not authorized to perform this operation.	401	Client
UnrecognizedFormatException	We encountered a record type that is not valid.	400	Client
UnsupportedFunction	We encountered an unsupported SQL function.	400	Client
UnsupportedParquetType	The specified Parquet type is not supported.	400	Client
UnsupportedRangeHeader	A range header is not supported for this operation.	400	Client
UnsupportedScanRangeInput	Scan range queries are not supported on this type of object.	400	Client
UnsupportedSqlOperation	We encountered an unsupported SQL operation.	400	Client
UnsupportedSqlStructure	We encountered an unsupported SQL structure. Check the SQL Reference.	400	Client
UnsupportedStorageClass	We encountered a storage class that is not supported. Only STANDARD, STANDARD_IA , and ONEZONE_IA storage classes are supported.	400	Client

Error code	Description	HTTP status code	SOAP fault code prefix
UnsupportedSyntax	We encountered syntax that is not valid.	400	Client
UnsupportedTypeForQuerying	Your query contains an unsupported type for comparison (e.g. verifying that a Parquet INT96 column type is greater than 0).	400	Client
ValueParseFailure	A timestamp parse failure occurred in the SQL expression.	400	Client

List of Replication-related error codes

The following table contains special errors that the Replication operation might return. For general information about Amazon S3 errors and a list of error codes, see Error responses.

Error code	Description	HTTP status code	SOAP fault code prefix
InvalidArgument	This error might occur for the following reasons: • The <Account> element is empty. It must contain a valid account ID. • The AWS account specified in the <Account> element must match the destination bucket owner. • ReplicationTime-Status must contain a value.	400	Client

Error code	Description	HTTP status code	SOAP fault code prefix
	• `ReplicationTime-ReplicationTimeValue` must contain a value. • `Replication-ReplicationTimeValue-Minutes` value must be 15. • `ReplicationMetrics` must contain a `Status`. • `ReplicationMetrics` must contain an `EventThreshold`. • `EventThreshold-ReplicationTimeValue-Minutes` value must be 15. • `Rule ID` must not contain non-ASCII characters.		

Error code	Description	HTTP status code	SOAP fault code prefix
`InvalidRequest`	This error might occur for the following reasons: • The <Owner> in <AccessControlTranslation> has a value, so the <Account> element must be specified. • The <Account> element is empty. It must contain a valid account ID. • The replication `destination` must contain both `ReplicationTime` and `Metrics`, or neither. • `ReplicationTime` and `ReplicationMetrics` must have the same status. • S3 Replication Time Control (S3 RTC) is not supported in this AWS Region.	400	Client
`ReplicationConfigurationNotFoundError`	There is no replication configuration for this bucket.	404 Not Found	Client

List of Tagging-related error codes

The following table contains special errors that the `TagResource`, `UntagResource`, and `ListTagsForResource` operations might return for Storage Lens groups. For general information about general Amazon S3 errors and a list of error codes, see Error responses.

Error Code	Description	HTTP Status Code	SOAP Fault Code Prefix
`InvalidRequest`	The AWS Region in the resource ARN doesn't match the Region that's specified in this request. The AWS account in the resource ARN doesn't match the account ID that's specified in this request. The AWS partition in the resourceArn is invalid.	`400 Bad Request`	Not supported
`InvalidTag`	This request contains a tag key or value that isn't valid. Valid characters include the following: `[a-zA-Z+-=._:/]`. Tag keys can contain up to 128 characters. Tag values can contain up to 256 characters. There are duplicate tag keys in your request. User-defined tag keys can't start with `aws:`.	`400 Bad Request`	Not supported
`NoSuchResource`	The specified resource doesn't exist.	`404 Not Found`	Not supported
`TooManyTags`	The number of tags exceeds the limit of 50 tags.	`400 Bad Request`	Not supported

List of Amazon S3 on Outposts error codes

The following table contains special errors that an Amazon S3 on Outposts operation might return. For general information about Amazon S3 errors and a list of error codes, see Error responses.

Error code	Description	HTTP status code	SOAP fault code prefix
BadRequest	The bucket is in a transitional state because of a previous deletion attempt. Try again later.	400 Bad Request	Not supported
InvalidRequest	This error might occur for the following reasons: • Amazon VPC configuration is required. • Public access is not allowed on S3 on Outposts access points.	400 Bad Request	Client
InvalidOutpostState	The request is not valid for the current state of the Outpost.	409 Conflict	Not supported
InvalidRequest	The access point is not in a state where it can be deleted.	400 Bad Request	Not supported
NoSuchOutpost	The specified Outpost does not exist.	404 Not Found	Not supported
UnsupportedOperation	The specified action was not supported.	404 Not Found	Not supported
InsufficientCapacity	Insufficient capacity.	507 Insufficient Storage	Not supported

List of Amazon S3 Storage Lens error codes

The following table contains special errors that Amazon S3 Storage Lens operations might return. For general information about general Amazon S3 errors and a list of error codes, see Error responses.

Error code	Description	HTTP status code	SOAP fault code prefix
AccessDenied	This Region is not supported as a home Region for S3 Storage Lens.	403 Forbidden	Not supported
AccountNotAuthorized	This account not authorized to use AWS Organizations. Use your management account or delegated administrator account.	403 Forbidden	Not supported
ActivityMetricsMustEnabled	Activity metrics must be enabled.	400 Bad Request	Not supported
AWSOrganizationsNotInUseException	This account is not part of your organization.	403 Forbidden	Not supported
DefaultConfigurationDeleteForbidden	The Default configuration cannot be deleted.	403 Forbidden	Not supported
DuplicateStorageLensGroupARN	There are two or more entries of the same Storage Lens group ARN in this configuration.	400 Bad Request	Not supported
EmptyExcludeContainer	This error occurs for the following reasons: • The exclude container cannot be empty.	400 Bad Request	Not supported

Error code	Description	HTTP status code	SOAP fault code prefix
	• The exclude container cannot have zero buckets. • The exclude container cannot have zero Regions.		
EmptyExcludeElement	You must specify a Storage Lens group with your Exclude element.	400 Bad Request	Not supported
EmptyIncludeContainer	This error occurs for the following reasons: • The include container cannot be empty. • The include container cannot have zero buckets. • The include container cannot have zero Regions.	400 Bad Request	Not supported
InvalidAWSOrgArn	There is a malformed AWS Organizations ARN in the configuration.	400 Bad Request	Not supported
EmptyIncludeElement	You must specify a Storage Lens group with your Include element.	400 Bad Request	Not supported
InvalidBucketFilter	Organization-level configurations do not support bucket filters.	400 Bad Request	Not supported
InvalidConfigId	The configuration ID is not valid.	400 Bad Request	Not supported

Error code	Description	HTTP status code	SOAP fault code prefix
InvalidDestination	The S3 bucket ARN is malformed.	400 Bad Request	Not supported
InvalidEncryptionMethod	Only one encryption method can be specified.	400 Bad Request	Not supported
InvalidFilterForDefaultConfiguration	The default configuration must not include any filters.	400 Bad Request	Not supported
InvalidIncludeExcludeContainers	You can specify either an Include container or an Exclude container in a configuration. You cannot specify both in a configuration.	400 Bad Request	Not supported
InvalidIncludeExcludeElements	Only one Include or Exclude element is allowed. At least one Include or Exclude element must be present.	400 Bad Request	Not supported
InvalidKMSEncryptionKeyId	The KMS key ID ARN is not valid.	400 Bad Request	Not supported
InvalidMaximumPrefixDepth	MaxDepth must be within the range [1,10].	400 Bad Request	Not supported
InvalidMinimumStorageBytesPercentage	MinStorageBytesPercentage must be within the range [1.00,100.00].	400 Bad Request	Not supported
InvalidOrganizationARN	The AWS Organizations ARN in the configuration is not valid.	400 Bad Request	Not supported
InvalidOrganizationForDefaultConfiguration	The default configuration does not support organization-level metrics.	400 Bad Request	Not supported

Error code	Description	HTTP status code	SOAP fault code prefix
InvalidRegionForDefaultConfiguration	The specified Region is not supported for default configuration.	400 Bad Request	Not supported
InvalidRegionName	The Region name is not valid.	400 Bad Request	Not supported
InvalidStorageLensArn	The S3 Storage Lens ARN is not required in input.	400 Bad Request	Not supported
InvalidStorageLensGroupARN	This Storage Lens group ARN isn't valid or only Storage Lens groups in your account are allowed. Additionally, you must follow the Storage Lens group ARN structure: arn::s3:::storage-lens-group/ and adhere to the 64 character limit. Storage Lens group names can also contain only the following characters: a-z, A-Z, 0-9, hyphens (-), and underscores (_).	400 Bad Request	Not supported
MissingAccountLevelActivityMetrics	Activity metrics must be enabled at the account level when activity metrics are enabled at the bucket level.	400 Bad Request	Not supported
MissingBucketLevelActivityMetrics	Activity metrics must be enabled at the bucket level when activity metrics are enabled at the account level.	400 Bad Request	Not supported

Error code	Description	HTTP status code	SOAP fault code prefix
MissingEncryptionMethod	The encryption method cannot be blank. Specify either SSE-KMS or SSE-S3.	400 Bad Request	Not supported
MissingPrefixLevelStorageMetrics	Storage metrics at the prefix level are mandatory when the prefix level is enabled.	400 Bad Request	Not supported
OrganizationAccessDenied	This account is not authorized to add AWS Organizations.	403 Forbidden	Not supported
OrgConfigurationNotSupported	The specified Region does not support AWS Organizations in the configuration.	403 Forbidden	Not supported
ServiceNotEnabledForOrg	The S3 Storage Lens service-linked role is not enabled for the organization.	403 Forbidden	Not supported
StorageMetricsMustEnabled	Prefix-level storage metrics must be enabled.	400 Bad Request	Not supported
TooManyBuckets	The buckets container cannot have more than 50 buckets.	400 Bad Request	Not supported
TooManyRegions	The Regions container cannot have more than 50 Regions.	400 Bad Request	Not supported
TooManyStorageLensGroups	You can't attach more than 50 Storage Lens groups to your Storage Lens dashboard.	400 Bad Request	Not supported

The following table contains special errors that S3 Storage Lens groups operations might return. For general information about general Amazon S3 errors and a list of error codes, see Error responses.

Error code	Description	HTTP status code	SOAP fault code prefix
AccessDenied	You don't have permission to perform Storage Lens group actions. This Region is not supported as home Region for S3 Storage Lens groups.	403 Forbidden	Not supported
ConfigurationAlreadyExists	The specified configuration already exists.	409 Conflict	Not supported
DuplicateElement	Tags must be unique. The And logical operator includes duplicate tag keys. The Or logical operator includes duplicate tags. Logical operator includes duplicate prefixes or suffixes.	400 Bad Request	Not supported
InvalidAge	DaysLessThan and DaysGreaterThan must be positive numbers.	400 Bad Request	Not supported
InvalidFilter	A filter must include one of the following elements: And, Or, MatchAnyTag , MatchAnyPrefix , MatchAnySuffix , MatchObjectAge , MatchObjectSize .	400 Bad Request	Not supported
InvalidLogicalOperator	At least two sub elements must be present in the logical operators And or Or.	400 Bad Request	Not supported
InvalidMatchAnyPrefix	The MatchAnyPrefix parameter can’t be empty.	400 Bad Request	Not supported

Error code	Description	HTTP status code	SOAP fault code prefix
InvalidMatchAnySuffix	The MatchAnySuffix parameter can't be empty.	400 Bad Request	Not supported
InvalidMatchAnyTag	The MatchAnyTag parameter can't be empty.	400 Bad Request	Not supported
InvalidMatchObjectAge	The MatchObjectAge parameter can't be empty.	400 Bad Request	Not supported
InvalidMatchObjectSize	The MatchObjectSize parameter can't be empty.	400 Bad Request	Not supported
InvalidName	Storage Lens group Name parameter must be between 1 and 64 characters. The Storage Lens group Name parameter must use the ^[a-zA-Z0-9\-_]+$ pattern.	400 Bad Request	Not supported
InvalidNumericCombination	This object age or object size combination isn't valid.	400 Bad Request	Not supported
InvalidPrefix	The maximum length of a prefix is 1,024 characters. The prefix string can't be empty.	400 Bad Request	Not supported
InvalidSize	BytesLessThan and BytesGreaterThan must be positive numbers. The maximum object size can't exceed 5 TB. The minimum object size can't be greater than or equal to 5 TB.	400 Bad Request	Not supported

Error code	Description	HTTP status code	SOAP fault code prefix
`InvalidSuffix`	The maximum length of a suffix is 1,024 characters. The suffix string can't be empty.	`400 Bad Request`	Not supported
`InvalidTag`	The object tag key can’t exceed 128 characters. The object tag key string can't be null or empty. The maximum length of a tag value is 256 characters. The object tag key contains characters that aren't valid. The object tag key must contain only a-z, A-Z, 0-9, spaces, and the following characters: `^(_.:/=+\-@]*)$ .`	`400 Bad Request`	Not supported
`MismatchedName`	The name specified in the request doesn't match the Storage Lens group name.	`400 Bad Request`	Not supported
`TooManyConfigurations`	You have attempted to create more Storage Lens group configurations than the 50 allowed.	`400 Bad Request`	Not supported
`TooManyElements`	The `Element` exceeds the maximum number of elements allowed within a logical operator. Only 10 prefixes, suffixes, or tags are allowed.	`400 Bad Request`	Not supported

List of Amazon S3 Object Lambda error codes

The following table contains special errors that S3 Object Lambda might return. For information about general Amazon S3 errors and a list of error codes, see Error responses.

Error responses received from the supporting access points during non-GetObject requests are sent to the caller unaltered.

Error code	Description	HTTP status code
LambdaInvalidResponse	Returned to the original caller when WriteGetObjectResponse responds with ValidationError to AWS Lambda. See the ValidationError message for more details. Not all cases of ValidationError result in a LambdaInvalidResponse error.	400 Bad Request
LambdaInvocationFailed	Lambda function invocation failed. Callers might receive the following error when S3 Object Lambda is unable to successfully invoke the configured Lambda function. The error message might contain details about an eventual error returned by the AWS Lambda service when invoking the function (for example, status code, error code, error message and request ID).	400 Bad Request
LambdaNotFound	The AWS Lambda function was not found. The configured Lambda function, version, or alias was not found when attempting to invoke it. Ensure that the S3 Object Lambda	404 Not Found

Error code	Description	HTTP status code	
	Access Point configuration points to the correct Lambda function ARN. The error message might contain details about an eventual error returned by the AWS Lambda service when invoking the function (for example, status code, error code, error message and request ID).		
`LambdaPermissionError`	The caller is not authorized to invoke the Lambda function. The caller must have permission to invoke the Lambda function. Check the policies attached to the caller and ensure that they've been allowed to use `lambda:Invoke` for the configured function. The error message might contain details about an eventual error returned by the AWS Lambda service when invoking the function (for example, status code, error code, error message and request ID).	`403 Forbidden`	

Error code	Description	HTTP status code
LambdaResponseNotReceived	The Lambda function exited without successfully calling WriteGetObjectResponse . GetObject response data is provided by the Lambda function by calling the WriteGetObjectResponse API operation . The Amazon CloudWatch logs for the function might provide more insight into why the function did not successfully call this API operation despite exiting normally.	500 Internal Service Error
LambdaRuntimeError	The Lambda function failed during execution. An explicit error was received from the Lambda function. For details about the failure, check the AWS CloudFormation logs.	500 Internal Service Error
LambdaTimeout	The Lambda function did not respond in the allowed time. The Lambda function failed to complete its call to WriteGetObjectResponse within 60 seconds.	500 Internal Service Error

Error code	Description	HTTP status code
SlowDown	Reduce your request rate for operations involving AWS Lambda. The function invocation was throttled by AWS Lambda, perhaps because it has reached its configured concurrency limitation. For more information, see Managing concurrency for a Lambda function in the *AWS Lambda Developer Guide*. The error message might contain details about an eventual error returned by the AWS Lambda service when invoking the function (for example, status code, error code, error message and request ID).	503 Slow Down
ValidationError	Validation errors might be returned from the WriteGetObjectResponse API operation and can occur for numerous reasons. See the error message for more details.	400 Bad Request

List of Amazon S3 asynchronous error codes

The following table contains special errors that asynchronous requests might return. For general information about Amazon S3 errors and a list of error codes, see Error responses.

These errors are returned when you query about the state of an asynchronous request, such as by using DescribeMultiRegionAccessPointOperation. Because these requests are asynchronous, all of these errors have a status code of 200 OK.

Error code	Description	HTTP status code
AccessDenied	Access denied.	200 OK
InternalErrors	An internal server error occurred.	200 OK
MalformedPolicy	The specified policy syntax is not valid.	200 OK
MultiRegionAccessPointAlreadyOwnedByYou	You already have a Multi-Region Access Point with the same name.	200 OK
MultiRegionAccessPointModifiedByAnotherRequest	The action failed because another request is modifying the specified resource. Try resubmitting your request after the previous request has been completed.	200 OK
MultiRegionAccessPointNotReady	The specified Multi-Region Access Point is not ready to be updated.	200 OK
MultiRegionAccessPointSameBucketRegion	The buckets used to create a Multi-Region Access Point cannot be in the same Region.	200 OK
MultiRegionAccessPointUnsupportedRegion	One of the buckets supplied to create the Multi-Region Access Point is in a Region that is not supported.	200 OK
NoSuchBucket	The specified bucket does not exist.	200 OK
NoSuchMultiRegionAccessPoint	The specified Multi-Region Access Point does not exist.	200 OK

List of Amazon S3 Access Grants Error Codes

The following table contains special errors that S3 Access Grants requests might return. For general information about Amazon S3 errors and a list of error codes, see Error responses.

Error Code	Description	HTTP Status Code	
AccessGrantAlreadyExists	The specified access grant already exists	409	
AccessGrantsInstanceAlreadyExists	Access Grants Instance already exists	409	
AccessGrantsInstanceNotEmptyError	Please clean up locations before deleting the access grants instance	400	
AccessGrantsInstanceNotExistsError	Access Grants Instance does not exist	404	
AccessGrantsInstanceResourcePolicyNotExists	Access Grants Instance Resource Policy does not exist	404	
AccessGrantsLocationAlreadyExistsError	The specified access grants location already exists	409	
AccessGrantsLocationNotEmptyError	Please clean up access grants before deleting access grants location	400	
AccessGrantsLocationsQuotaExceededError	The access grants location quota has been exceeded. Access Grants Locations Quota: *<value>*. Please reach out to S3 if an increase is required.	409	
AccessGrantsQuotaExceededError	The access grants quota has been exceeded. Access Grants Quota:	409	

Error Code	Description	HTTP Status Code	
	<value>. Please reach out to S3 if an increase is required.		
InvalidTag	There are duplicate tag keys in your request. Remove the duplicate tag keys and try again.	400	
InvalidAccessGrant	The specified Access Grant is invalid	400	
InvalidAccessGrantsLocation	The specified Access Grants Location is invalid	400	
InvalidIamRole	The specified IAM Role is invalid	400	
InvalidIdentityCenterInstance	The specified identity center instance is invalid	400	
InvalidResourcePolicy	The specified Resource Policy is invalid	400	
InvalidResourcePolicy	The specified Resource Policy is invalid	400	
InvalidTag	This request contains a tag key or value that isn't valid. Valid characters include the following: [a-zA-Z+-=._:/]. Tag keys can contain up to 128 characters. Tag values can contain up to 256 characters.	400	
NoSuchAccessGrantError	The specified access grant does not exist	404	
NoSuchAccessGrantsLocationError	The specified access grants location does not exist	404	

Error Code	Description	HTTP Status Code	
AccessDenied	You do not have *<requested permission>* permissions to the requested S3 Prefix: *<requested target>*	403 Forbidden	Client
StsNotAuthorizedError	An error occurred (StsNotAuthorizedError) when calling the GetDataAccess operation: User: access-grants.s3.amazonaws.com is not authorized to perform: sts:AssumeRole on resource: *<IAM Role ARN>*	403	
StsPackedPolicyTooLargeError	An error occurred (StsPackedPolicyTooLargeError) when calling the GetDataAccess operation: Serialized token too large for session	400	
StsValidationError	*The error message varies depending on the validation error.*	400	
InvalidTags	Tag keys cannot start with AWS reserved prefix for system tags."	400	
TooManyTags	The number of tags exceeds the limit of 50 tags. Remove some tags and try again.	400	

AWS Glossary

For the latest AWS terminology, see the AWS glossary in the *AWS Glossary Reference*.

Amazon S3 Resources

Following is a table that lists related resources that you'll find useful as you work with this service.

Resource	Description
Amazon Simple Storage Service User Guide	The getting started guide provides a quick tutorial of the service based on a simple use case.
Amazon Simple Storage Service User Guide	The developer guide describes how to accomplish tasks using Amazon S3 operations.
Amazon S3 Technical FAQ	The FAQ covers the top 20 questions developers have asked about this product.
Amazon S3 Release Notes	The Release Notes give a high-level overview of the current release. They specifically note any new features, corrections, and known issues.
Tools for Amazon Web Services	A central starting point to find documentation, code samples, release notes, and other information to help you build innovative applications with AWS SDKs and tools.
AWS Management Console	The console allows you to perform most of the functions of Amazon S3 without programming.
Discussion Forums	A community-based forum for developers to discuss technical questions related to Amazon Web Services.
AWS Support Center	The home page for AWS Technical Support, including access to our Developer Forums, Technical FAQs, Service Status page, and Premium Support.
AWS Support	The primary web page for information about AWS Support, a one-on-one, fast-response support channel to help you build and run applications on AWS Infrastru cture Services.

Resource	Description
Amazon S3 product information	The primary web page for information about Amazon S3.
Contact Us	A central contact point for inquiries concerning AWS billing, account, events, abuse, etc.
Conditions of Use	Detailed information about the copyright and trademark usage at Amazon.com and other topics.

Document History

The following table describes the important changes in each release of the *Amazon Simple Storage Service API Reference* up to March 27, 2019. For changes after March 27, 2019, see the consolidated Document History in the *Amazon Simple Storage Service User Guide*.

- **API version:** 2006-03-01
- **Latest documentation update:** March 27, 2019

Change	Description	Release Date
New archive storage class	Amazon S3 now offers a new archive storage class, DEEP_ARCHIVE, for storing rarely accessed objects. For more information, see Storage Classes in the *Amazon Simple Storage Service User Guide*.	March 27, 2019
Support for Parquet-formatted Amazon S3 inventory files	Amazon S3 now supports the Apache Parquet (Parquet) format in addition to the Apache optimized row columnar (ORC) and comma-separated values (CSV) file formats for inventory output files. For more information, see Amazon S3 Inventory in the *Amazon Simple Storage Service User Guide*. The following APIs were updated accordingly: • GetBucketInventoryConfiguration • PutBucketInventoryConfiguration	December 04, 2018
PUT directly to the GLACIER storage class	The Amazon S3 PUT and related operations now support specifying GLACIER as the storage class when creating objects. Previously, you had to transition to the GLACIER storage class from another Amazon S3 storage class. For more information about the GLACIER storage class, see	November 26, 2018

Change	Description	Release Date
	Storage Classes in the *Amazon Simple Storage Service User Guide*. The following APIs were updated accordingly: • PutObject • POST Object • CopyObject • CreateMultipartUpload	
Object Lock	Amazon S3 now supports locking objects using a Write Once Read Many (WORM) model. You can lock objects for a definite period of time using a retention period or indefinitely using a legal hold. For more information about Amazon S3 Object Lock, see Locking Objects in the *Amazon Simple Storage Service User Guide*. The following APIs were updated for S3 Object Lock: • PutObject • GetObject • HeadObject • CreateBucket • HeadBucket	November 26, 2018

Change	Description	Release Date
New storage class	Amazon S3 now offers a new storage class named INTELLIGENT_TIERING that is for storing data that has changing or unknown access patterns. For more informati on, see Storage Classes in the *Amazon Simple Storage Service User Guide*. The following APIs were updated accordingly: • PutObject • POST Object • CopyObject • CreateMultipartUpload	November 26, 2018
Block Public Access	Amazon S3 now includes the ability to block public access to buckets and objects on a per-bucket or account-wide basis. For more information, see Using Amazon S3 Block Public Access in the *Amazon Simple Storage Service User Guide*.	November 15, 2018

Change	Description	Release Date
Filtering enhancements in cross-region replication (CRR) rules	In a CRR rule configuration, you can specify an object filter to choose a subset of objects to apply the rule to. Previously, you could filter only on an object key prefix. In this release, you can filter on an object key prefix, one or more object tags, or both. For more information, see Replication Configuration Overview in the *Amazon Simple Storage Service User Guide*. The following APIs are updated accordingly: • PutBucketReplication • GetBucketReplication • DeleteBucketReplication	September 19, 2018
New storage class	Amazon S3 now offers a new storage class, ONEZONE_IA (IA, for infrequent access) for storing objects. For more information, see Storage Classes in the *Amazon Simple Storage Service User Guide*.	April 4, 2018
Amazon S3 Select	Amazon S3 Select is now generally available. This feature retrieves object content based on an SQL expression. For more information, see Selecting Content from Objects in the *Amazon Simple Storage Service User Guide*. The following API has been updated: • SelectObjectContent	April 4, 2018

Change	Description	Release Date
Asia Pacific (Osaka-Local) Region	Amazon S3 is now available in the Asia Pacific (Osaka-Local) Region. For more information about Amazon S3 Regions and endpoints, see Regions and Endpoints in the *AWS General Reference*. **Important** You can use the Asia Pacific (Osaka-Local) Region only in conjunction with the Asia Pacific (Tokyo) Region. To request access to Asia Pacific (Osaka-Local) Region, contact your sales representative.	February 12, 2018
Europe (Paris) Region	Amazon S3 is now available in the Europe (Paris) Region. For more information about Amazon S3 regions and endpoints, see Regions and Endpoints in the *AWS General Reference*.	December 18, 2017
China (Ningxia) Region	Amazon S3 is now available in the China (Ningxia) Region. For more information about Amazon S3 regions and endpoints, see Regions and Endpoints in the *AWS General Reference*.	December 11, 2017
Querying archives with SQL	Amazon S3 now supports querying S3 Glacier data archives with SQL. For more information, see Querying Archived Objects in the *Amazon Simple Storage Service User Guide*. The following API changed: • RestoreObject	November 29, 2017

Change	Description	Release Date
SELECT Object Content (Preview)	Amazon S3 now supports the SELECT Object Content functionality as part of a Preview program. This feature retrieves object content based on an SQL expression. The following API has been added: • SelectObjectContent	November 29, 2017
Support for ORC-formatted Amazon S3 inventory files	Amazon S3 now supports the Apache optimized row columnar (ORC) format in addition to comma-separated values (CSV) file format for inventory output files. For more information, see Amazon S3 Inventory in the *Amazon Simple Storage Service User Guide*. The following APIs are updated accordingly: • GetBucketInventoryConfiguration • PutBucketInventoryConfiguration	November 17, 2017

Change	Description	Release Date
Default encryption for S3 buckets	Amazon S3 default encryption provides a way to set the default encryption behavior for an S3 bucket. You can set default encryption on a bucket so that all objects are encrypted when they are stored in the bucket. The objects are encrypted using server-side encryption with either Amazon S3-managed keys (SSE-S3) or AWS KMS-managed keys (SSE-KMS). For more information, see Amazon S3 Default Encryption for S3 Buckets in the *Amazon Simple Storage Service User Guide*. The following APIs are updated accordingly: • DeleteBucketEncryption • GetBucketEncryption • PutBucketEncryption	November 06, 2017
Encryption status in Amazon S3 inventory	Amazon S3 now supports including encryption status in Amazon S3 inventory so you can see how your objects are encrypted at rest for compliance auditing or other purposes. You can also configure to encrypt Amazon S3 inventory with server-side encryption (SSE) or SSE-KMS so that all inventory files are encrypted accordingly. For more information, see Amazon S3 Inventory in the *Amazon Simple Storage Service User Guide*. The following APIs are updated accordingly: • GetBucketInventoryConfiguration • PutBucketInventoryConfiguration	November 06, 2017

Change	Description	Release Date
Cross-region replication (CRR) enhancements	Cross-region replication (CRR) now supports the following: • In a cross-account scenario, you can add a CRR configuration to change replica ownership to the AWS account that owns the destination bucket. For more information, see CRR: Change Replica Owner in the *Amazon Simple Storage Service User Guide*. • By default, Amazon S3 does not replicate objects in your source bucket that are created using server-side encryption using AWS KMS-managed keys. In your CRR configuration, you can now direct Amazon S3 to replicate these objects. For more information, see CRR: Replicating Objects Created with SEE Using AWS KMS-Managed Encryption Keys in the *Amazon Simple Storage Service User Guide*. The following APIs are updated accordingly: • GetBucketReplication • PutBucketReplication	November 06, 2017
Europe (London) Region	Amazon S3 is now available in the Europe (London) Region. For more information about Amazon S3 regions and endpoints, see Regions and Endpoints in the *AWS General Reference*.	December 13, 2016
Canada (Central) Region	Amazon S3 is now available in the Canada (Central) Region. For more information about Amazon S3 regions and endpoints, see Regions and Endpoints in the *AWS General Reference*.	December 8, 2016

Change	Description	Release Date
Object tagging support	Amazon S3 now supports object tagging. The following new API operations support object tagging: • PutObjectTagging • GetObjectTagging • DeleteObjectTagging In addition, other API operations are updated to support object tagging. For more information, see Object Tagging in the *Amazon Simple Storage Service User Guide*.	November 29, 2016
S3 lifecycle now supports object tag based filter	Amazon S3 now supports tag-based filtering in lifecycle configuration. You can now specify a lifecycle rule, in which you can specify a key prefix, one or more object tags, or a combination of both, to select a subset of objects to which the lifecycle rule applies. For more information, see Object Lifecycle Managementin the *Amazon Simple Storage Service User Guide*. Amazon S3 now supports Expedited and Bulk data retrievals in addition to Standard retrievals when restoring objects archived to S3 Glacier.	November 29, 2016

Change	Description	Release Date
CloudWatch request metrics for buckets	Amazon S3 now supports CloudWatch metrics for requests made on buckets. The following new API operations support configuring request metrics: • DeleteBucketMetricsConfiguration • GetBucketMetricsConfiguration • PutBucketMetricsConfiguration • ListBucketMetricsConfigurations For more information, see Monitoring Metrics with Amazon CloudWatch in the *Amazon Simple Storage Service User Guide*.	November 29, 2016
Amazon S3 Inventory	Amazon S3 now supports storage inventory. Amazon S3 inventory provides a flat-file output of your objects and their corresponding metadata on a daily or weekly basis for an S3 bucket or a shared prefix (that is, objects that have names that begin with a common string). The following new API operations are for storage inventory: • DeleteBucketInventoryConfiguration • GetBucketInventoryConfiguration • PutBucketInventoryConfiguration • ListBucketInventoryConfigurations For more information, see Amazon S3 Storage Inventory in the *Amazon Simple Storage Service User Guide*.	November 29, 2016

Change	Description	Release Date
Amazon S3 Analytics – Storage Class Analysis	The new Amazon S3 analytics – storage class analysis feature observes data access patterns to help you determine when to transition less frequently accessed STANDARD storage to the STANDARD_IA (IA, for infrequent access) storage class. After storage class analysis observes the infrequent access patterns of a filtered set of data over a period of time, you can use the analysis results to help you improve your lifecycle configurations. This feature also includes a detailed dai ly analysis of your storage usage at the specified bucket, prefix, or tag level that you can export to a S3 bucket. The following new API operations are for storage class analysis: • DeleteBucketAnalyticsConfiguration • GetBucketAnalyticsConfiguration • PutBucketAnalyticsConfiguration • ListBucketAnalyticsConfigurations For more information, see Amazon S3 Analytics – Storage Class Analysis in the *Amazon Simple Storage Service User Guide*.	November 29, 2016
Added S3 Glacier retrieval options to RestoreObject	Amazon S3 now supports Expedited and Bulk data retrievals in addition to Standard retrievals when restoring objects archived to S3 Glacier. For more information, see Restoring Archived Objects in the *Amazon Simple Storage Service User Guide*.	November 21, 2016

Change	Description	Release Date
US East (Ohio) Region	Amazon S3 is now available in the US East (Ohio) Region. For more information about Amazon S3 regions and endpoints, see Regions and Endpoints in the *AWS General Reference*.	October 17, 2016
Asia Pacific (Mumbai) region	Amazon S3 is now available in the Asia Pacific (Mumbai) region. For more information about Amazon S3 regions and endpoints, see Regions and Endpoints in the *AWS General Reference*.	June 27, 2016
GET Bucket (List Objects) API revised	The GET Bucket (List Objects) API has been revised. We recommend that you use the new version, GET Bucket (List Objects) version 2. For more information, see ListObjectsV2.	May 4, 2016
Amazon S3 Transfer Acceleration	Amazon S3 Transfer Acceleration enables fast, easy, and secure transfers of files over long distances between your client and an S3 bucket. Transfer Acceleration takes advantage of Amazon CloudFront's globally distributed edge locations. For more information, see Transfer Acceleration in the *Amazon Simple Storage Service User Guide*. The following new API operations support Transfer Acceleration: GetBucketAccelerateConfiguration and PutBucketAccelerateConfiguration.	April 19, 2016
Lifecycle support to remove expired object delete marker	Lifecycle configuration expiration action now allows you to direct Amazon S3 to remove expired object delete markers in versioned bucket. For more information, see Elements to Describe Lifecycle Actions in the *Amazon Simple Storage Service User Guide*.	March 16, 2016

Change	Description	Release Date
Bucket lifecycle configuration now supports the action to cancel incomplete multipart uploads	Bucket lifecycle configuration now supports the `AbortIncompleteMultipartUpload` action that you can use to direct Amazon S3 to cancel multipart uploads that don't complete within a specified number of days after being initiated. When a multipart upload becomes eligible for an abort operation, Amazon S3 deletes any uploaded parts and cancels the multipart upload. The following API operations have been updated to support the new action: • PutBucketLifecycleConfiguration – The XML configuration now allows you to specify the `AbortIncompleteMultipartUpload` action in a lifecycle configuration rule. • ListParts and CreateMultipartUpload – Both of these API operations now return two additional response headers (`x-amz-abort-date` , and `x-amz-abort-rule-id`) if the bucket has a lifecycle rule that specifies the `AbortIncompleteMultipartUpload` action. These headers in the response indicate when the initiated multipart upload will become eligible for an abort operation and which lifecycle rule is applicable. For conceptual information, see the following topics in the *Amazon Simple Storage Service User Guide*: •	March 16, 2016

Change	Description	Release Date
	Aborting Incomplete Multipart Uploads Using a Bucket Lifecycle configuration • Elements to Describe Lifecycle Actions	
Amazon S3 Signature Version 4 now supports unsigned payloads	Amazon S3 Signature Version 4 now supports unsigned payloads when authenticating requests using the `Authorization` header. Because you don't sign the payload, it does not provide the same security that comes with payload signing, but it provides similar performance characteristics as signature version 2. For more information, see Signature Calculations for the Authorization Header: Transferring Payload in a Single Chunk (AWS Signature Version 4).	January 15, 2016
Asia Pacific (Seoul) region	Amazon S3 is now available in the Asia Pacific (Seoul) region. For more information about Amazon S3 regions and endpoints, see Regions and Endpoints in the *AWS General Reference*.	January 6, 2016
Renamed the US Standard region	Changed the region name string from US Standard to US East (N. Virginia). This is only a region name update, there is no change in the functionality.	December 11, 2015

Change	Description	Release Date
New storage class	Amazon S3 now offers a new storage class, STANDARD_IA (IA, for infrequent access) for storing objects. This storage class is optimized for long-lived and less frequently accessed data. For more information, see Storage Classes in the *Amazon Simple Storage Service User Guide*. Lifecycle configuration feature updates now allow you to transition objects to the STANDARD_IA storage class. For more information, see Object Lifecycle Management in the *Amazon Simple Storage Service User Guide*. Previously, the cross-region replication feature used the storage class of the source object for object replicas. Now, when you configure cross-region replication you can specify a storage class for the object replica created in the destination bucket. For more information, see Cross-Region Replication in the *Amazon Simple Storage Service User Guide*.	September 16, 2015
Event notifications	Amazon S3 event notifications have been updated to add notifications when objects are deleted and to add filtering on object names with prefix and suffix matching. For the relevant API operations, see PutBucketNotificationConfiguration, and GetBucketNotificationConfiguration. For more information, see Configuring Amazon S3 Event Notifications in the *Amazon Simple Storage Service User Guide*.	July 28, 2015

Change	Description	Release Date
Cross-region replication	Amazon S3 now supports cross-region replication. Cross-region replication is the automatic, asynchronous copying of objects across buckets in different AWS Regions. For the relevant API operations, see PutBucketReplication, GetBucketReplication and DeleteBucketReplication. For more information, see Enabling Cross-Region Replication in the *Amazon Simple Storage Service User Guide*.	March 24, 2015
Event notifications	Amazon S3 now supports new event types and destinations in a bucket notification configuration. Prior to this release, Amazon S3 supported only the `s3:ReducedRedundancyLostObject` event type and an Amazon SNS topic as the destination. For more information about the new event types, go to Setting Up Notification of Bucket Events in the *Amazon Simple Storage Service User Guide*. For the relevant API operations, see PutBucketNotificationConfiguration and GetBucketNotificationConfiguration.	November 13, 2014

Change	Description	Release Date
Server-side encryption with AWS Key Management Service (KMS)	Amazon S3 now supports server-side encryption using AWS Key Management Service (KMS). With server-side encryption with KMS, you manage the envelope key through KMS, and Amazon S3 calls KMS to access the envelope key within the permissions you set. For more information about server-side encryption with KMS, see Protecting Data Using Server-Side Encryption with AWS Key Management Service in the *Amazon Simple Storage Service User Guide*. The following Amazon S3 REST API operations support headers related to KMS. • PutObject • CopyObject • POST Object • CreateMultipartUpload • UploadPart	November 12, 2014
Europe (Frankfurt) Region	Amazon S3 is now available in the Europe (Frankfurt) Region region.	October 23, 2014

Change	Description	Release Date
Server-side encryption with customer-provided encryption keys	Amazon S3 now supports server-side encryption using customer-provided encryption keys (SSE-C). Server-side encryption enables you to request Amazon S3 to encrypt your data at rest. When using SSE-C, Amazon S3 encrypts your objects with the custom encryption keys that you provide. Since Amazon S3 performs the encryption for you, you get the benefits of using your own encryption keys without the cost of writing or executing your own encryption code. For more information about SSE-C, go to Server-Side Encryption (Using Customer-Provided Encryption Keys) in the *Amazon Simple Storage Service User Guide*. The following Amazon S3 REST API operations support headers related to SSE-C. • GetObject • HeadObject • PutObject • CopyObject • POST Object • CreateMultipartUpload • UploadPart • UploadPartCopy	June 12, 2014

Change	Description	Release Date
Lifecycle support for versioning	Prior to this release lifecycle configuration was supported only on nonversioned buckets. Now you can configure lifecycle on both the nonversioned and versioning-enabled buckets. For more information, go to Object Lifecycle Management in the *Amazon Simple Storage Service User Guide*. The related API operations, see PutBucketLifecycleConfiguration, GetBucketLifecycleConfiguration, and DeleteBucketLifecycle.	May 20, 2014
Amazon S3 now supports Signature Version 4	Amazon S3 now supports Signature Version 4 (SigV4) in all regions, the latest specification for how to sign and authenticate AWS requests. For more information, see Authenticating Requests (AWS Signature Version 4).	January 30, 2014
Amazon S3 list actions now support `encoding-type` request parameter	The following Amazon S3 list actions now support `encoding-type` optional request parameter. ListObjects ListObjectVersions ListMultipartUploads ListParts An object key can contain any Unicode character; however, the XML 1.0 parser cannot parse some characters, such as characters with an ASCII value from 0 to 10. For characters that are not supported in XML 1.0, you can add this parameter to request that Amazon S3 encode the keys in the response.	November 1, 2013

Change	Description	Release Date
SOAP Support Over HTTP Deprecated	SOAP support over HTTP is deprecated, but it is still available over HTTPS. New Amazon S3 features will not be supported for SOAP. We recommend that you use ei ther the REST API or the AWS SDKs.	September 19, 2013
Root domain support for website hosting	Amazon S3 now supports hosting static websites at the root domain. Visitors to your website can access your site from their browser without specifying "www" in the web address (e.g., "example.com"). Many customers already host static websites on Amazon S3 that are accessible from a "www" subdomain (e.g., "www.example.com"). Previously, to support root domain access, you needed to run your own web server to proxy root domain requests from browsers to your website on Amazon S3. Running a web server to proxy requests introduces additional costs, operational burden, and another potential point of failure. Now, you can take advantage of the high availabil ity and durability of Amazon S3 for both "www" and root domain addresses. For an example walkthrough, go to Example: Setting Up a Static Website Using a Custom Domain in the *Amazon Simple Storage Service User Guide*. For conceptua l information, go to Hosting Static Websites on Amazon S3 in the *Amazon Simple Storage Service User Guide*.	December 27, 2012

Change	Description	Release Date
Support for Archiving Data to Amazon Glacier	Amazon S3 now supports a storage option that enables you to utilize Amazon Glacier's low-cost storage service for data archival. To archive objects, you define archival rules identifying objects and a timeline when you want Amazon S3 to archive these objects to S3 Glacier. You can easily set the rules on a bucket using the Amazon S3 console or programmatically using the Amazon S3 API or AWS SDKs. To support data archival rules, Amazon S3 lifecycle management API has been updated. For more informati on, see PutBucketLifecycleConfiguration. After you archive objects, you must first restore a copy before you can access the data. Amazon S3 offers a new API for you to initiate a restore. For more information, see RestoreObject. For conceptual information, go to Object Lifecycle Management in the *Amazon Simple Storage Service User Guide*.	November 13, 2012

Change	Description	Release Date
Support for Website Page Redirects	For a bucket that is configured as a website, Amazon S3 now supports redirecting a request for an object to another object in the same bucket or to an external URL. You can configure redirect by adding the `x-amz-website-redirect-location` metadata to the object. The object upload API operations PutObject, CreateMultipartUpload, and POST Object allow you to configure the `x-amz-website-redirect-location` object metadata. For conceptual information, go to How to Configure Website Page Redirects in the *Amazon Simple Storage Service User Guide*.	October 4, 2012
Cross-Origin Resource Sharing (CORS) support	Amazon S3 now supports Cross-Origin Resource Sharing (CORS). CORS defines a way in which client web applications that are loaded in one domain can interact with or access resources in a different domain. With CORS support in Amazon S3, you can build rich client-side web applications on top of Amazon S3 and selectively allow cross-domain access to your Amazon S3 resources. For more information, see Enabling Cross-Origin Resource Sharing in the *Amazon Simple Storage Service User Guide*.	August 31, 2012
Cost Allocation Tagging support	Amazon S3 now supports cost allocation tagging, which allows you to label S3 buckets so you can more easily track their cost against projects or other criteria. For more information, see Cost Allocation Tagging in the *Amazon Simple Storage Service User Guide*.	August 21, 2012

Change	Description	Release Date
Object Expiration support	You can use Object Expiration to schedule automatic removal of data after a configured time period. You set object expiration by adding lifecycle configuration to a bucket. For more information, see Transitioning Objects: General Considerations in the *Amazon Simple Storage Service User Guide*.	December 27, 2011
New Region supported	Amazon S3 now supports the South America (São Paulo) region. For more information, see Buckets and Regions in the *Amazon Simple Storage Service User Guide*.	December 14, 2011
Multi-Object Delete	Amazon S3 now supports Multi-Object Delete API that enables you to delete multiple objects in a single request. With this feature, you can remove large numbers of objects from Amazon S3 more quickly than using multiple individual DELETE requests. For more information about the API see, see DeleteObjects. For conceptual information about the delete operation, see Deleting Objects in the *Amazon Simple Storage Service User Guide*.	December 7, 2011
New region supported	Amazon S3 now supports the US West (Oregon) region. For more information, see Buckets and Regions in the *Amazon Simple Storage Service User Guide*.	November 8, 2011

Change	Description	Release Date
Server-side encryption support	Amazon S3 now supports server-side encryption. It enables you to request Amazon S3 to encrypt your data at rest, that is, encrypt your object data when Amazon S3 writes your data to disks in its data centers. To request server-side encryption, you must add the `x-amz-server-side-encryption` header to your request. To learn more about data encryption, go to Using Data Encryption in the *Amazon Simple Storage Service User Guide*.	October 17, 2011
Multipart Upload API extended to enable copying objects up to 5 TB	Prior to this release, Amazon S3 API supported copying objects (see CopyObject) of up to 5 GB in size. To enable copying objects larger than 5 GB, Amazon S3 extends the multipart upload API with a new operation, `Upload Part (Copy)`. You can use this multipart upload operation to copy objects up to 5 TB in size. For conceptual information about multipart upload, go to Uploading Objects Using Multipart Upload in the *Amazon Simple Storage Service User Guide*. To learn more about the new API, see UploadPartCopy.	June 21, 2011
SOAP API calls over HTTP disabled	To increase security, SOAP API calls over HTTP are disabled. Authenticated and anonymous SOAP requests must be sent to Amazon S3 using SSL.	June 6, 2011

Change	Description	Release Date
Support for hosting static websites in Amazon S3	Amazon S3 introduces enhanced support for hosting static websites. This includes support for index documents and custom error documents. When using these features, requests to the root of your bucket or a subfolder (e.g., `http://mywebsite.com/subfolder`) returns your index document instead of the list of objects in your bucket. If an error is encountered, Amazon S3 returns your custom error message instead of an Amazon S3 error message. For API information to configure your bucket as a website, see the following sections: • PutBucketWebsite • GetBucketWebsite • DeleteBucketWebsite For conceptual overview, go to Hosting Websites on Amazon S3 in the *Amazon Simple Storage Service User Guide*.	February 17, 2011
Response Header API Support	The GET Object REST API now allows you to change the response headers of the REST GET Object request for each request. That is, you can alter object metadata in the response, without altering the object itself. For more information, see GetObject.	January 14, 2011

Change	Description	Release Date
Large Object Support	Amazon S3 has increased the maximum size of an object you can store in an S3 bucket from 5 GB to 5 TB. If you are using the REST API you can upload objects of up to 5 GB size in a single PUT operation. For larger objects, you must use the Multipart Upload REST API to upload objects in parts. For conceptual information, go to Uploading Objects Using Multipart Upload in the *Amazon Simple Storage Service User Guide*. For multipart upload API information, see CreateMultipartUpload, UploadPart, CompleteMultipartUpload, ListParts, and ListMultipartUploads	December 9, 2010
Multipart upload	Multipart upload enables faster, more flexible uploads into Amazon S3. It allows you to upload a single object as a set of parts. For conceptual information, go to Uploading Objects Using Multipart Upload in the *Amazon Simple Storage Service User Guide*. For multipart upload API information, see CreateMultipartUpload, UploadPart, CompleteMultipartUpload, ListParts, and ListMultipartUploads	November 10, 2010
Notifications	The Amazon S3 notifications feature enables you to configure a bucket so that Amazon S3 publishes a message to an Amazon Simple Notification Service (SNS) topic when Amazon S3 detects a key event on a bucket. For more information, see GET Bucket notification and PUT Bucket notification.	July 14, 2010
Bucket policies	Bucket policies is an access management system you use to set access permissions on buckets, objects, and sets of objects. This functionality supplements and in many cases replaces access control lists.	July 6, 2010

Change	Description	Release Date
Reduced Redundancy	Amazon S3 now enables you to reduce your storage costs by storing objects in Amazon S3 with reduced redundancy. For more information, see PUT Object.	May 12, 2010
New region supported	Amazon S3 now supports the Asia Pacific (Singapore) region and therefore new location constraints. For more information, see GET Bucket location and PUT Bucket.	April 28, 2010
Object Versioning	This release introduces object Versioning. All objects now have a key and a version. If you enable versioning for a bucket, Amazon S3 gives all objects added to a bucket a unique version ID. This feature enables you to recover from unintended overwrites and deletions. For more information, see GET Object, DELETE Object, PUT Object, PUT Object Copy, or POST Object. The SOAP API does not support versioned objects.	February 8, 2010
New region supported	Amazon S3 now supports the US-West (Northern California) region. The new endpoint is `s3-us-west-1.amazonaws.com`. For more information, see How to Select a Region for Your Buckets in the *Amazon Simple Storage Service User Guide*.	December 2, 2009
C# Library Support	AWS now provides Amazon S3 C# libraries, sample code, tutorials, and other resources for software developers who prefer to build applications using language-specific API operations instead of REST or SOAP. These libraries provide basic functions (not included in the REST or SOAP APIs), such as request authentication, request retries, and error handling so that it's easier to get started.	November 11, 2009

Change	Description	Release Date
Technical documents reorganized	The API reference has been split out of the *Amazon S3 Developer Guide*. Now, on the documentation landing page, Amazon Simple Storage Service Documentation, you can select the document you want to view. When viewing the documents online, the links in one document will take you, when appropriate, to one of the other guides.	September 16, 2009

Appendix

Topics

- Appendix: SelectObjectContent Response
- Appendix: OPTIONS object
- Appendix: SOAP API
- Appendix: Lifecycle Configuration APIs (Deprecated)

Appendix: SelectObjectContent Response

Description

The Amazon S3 Select operation filters the contents of an Amazon S3 object based on a simple structured query language (SQL) statement. Given the response size of this operation is unknown, Amazon S3 Select streams the response as a series of messages and includes a `Transfer-Encoding` header with **chunked** as its value in the response.

For more information about Amazon S3 Select, see Selecting Content from Objects in the *Amazon Simple Storage Service User Guide*.

For more information about using SQL with Amazon S3 Select, see SQL Reference for Amazon S3 Select and S3 Glacier Select in the *Amazon Simple Storage Service User Guide*.

Responses

A successful Amazon S3 Select Operation returns `200 OK` status code.

Response Headers

This implementation of the operation uses only response headers that are common to most responses. For more information, see Common Response Headers.

Response Body

Since the Amazon S3 Select response size is unknown, Amazon S3 streams the response as a series of messages and includes a `Transfer-Encoding` header with **chunked** as its value in the response. The following example shows the response format at the top level:

```
<Message 1>
<Message 2>
<Message 3>
......
<Message n>
```

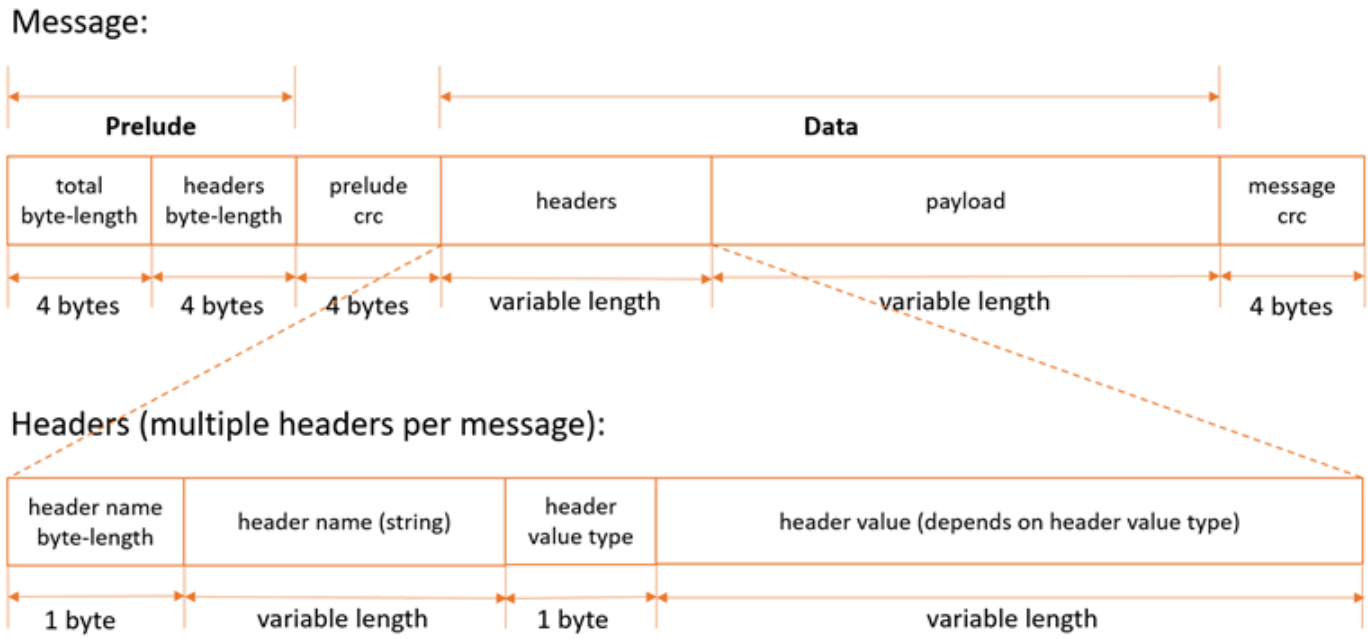
Each message consists of two sections: the prelude and the data. The prelude section consists of 1) the total byte-length of the message, and 2) the combined byte-length of all the headers. The data section consists of 1) the headers, and 2) a payload.

Each section ends with a 4-byte big-endian integer checksum (CRC). Amazon S3 Select uses CRC32 (often referred to as GZIP CRC32) to calculate both CRCs. For more information about CRC32, see *GZIP file format specification version 4.3*.

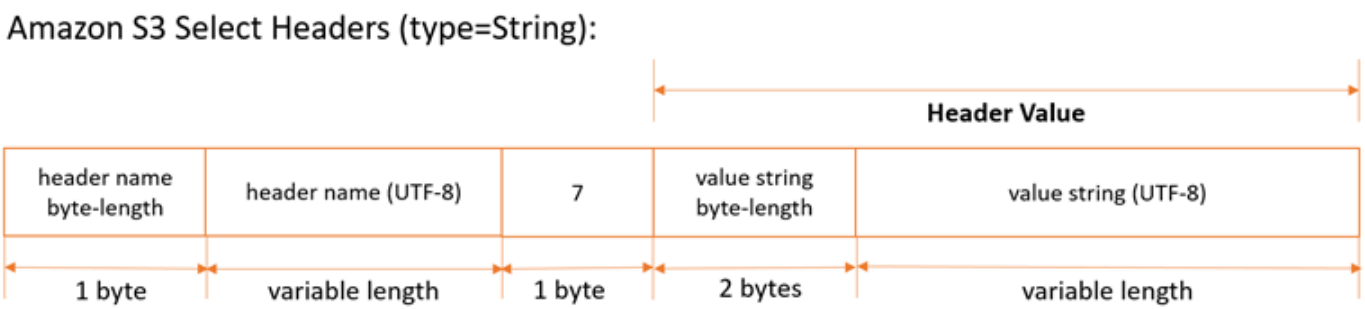
Total message overhead including the prelude and both checksums is 16 bytes.

> **Note**
>
> All `integer` values within messages are in network byte order, or big-endian order.

The following diagram shows the components that make up a message and a header. Note that there are multiple headers per message.



> **Note**
>
> For Amazon S3 Select, the header value type is always 7 (type=String). For this type, the header value consists of two components, a 2-byte big-endian integer length, and a UTF-8 string that is of that byte-length. The following diagram shows the components that make up Amazon S3 Select headers.



Payload byte-length calculations (these two calculations are equivalent):

- payload_length = total_length - header_length - sizeOf(total_length) - sizeOf(header_length) - sizeOf(prelude_crc) - sizeOf(message_crc)
- payload_length = total_length - header_length - 16

Each message contains the following components:

- **Prelude**: Always fixed size of 8 bytes (two fields of 4 bytes each):
  - *First four bytes*: Total byte-length: Big-endian integer byte-length of the entire message (including the 4-byte total length field itself).
  - *Second four bytes*: Headers byte-length: Big-endian integer byte-length of the headers portion of the message (excluding the headers length field itself).
- **Prelude CRC**: 4-byte big-endian integer checksum (CRC) for the prelude portion of the message (excluding the CRC itself). The prelude has a separate CRC from the message CRC (see below), to ensure that corrupted byte-length information can be detected immediately, without causing pathological buffering behavior.
- **Headers**: A set of metadata annotating the message, such as the message type, payload format, and so on. Messages can have multiple headers, so this portion of the message can have different byte-lengths depending on the message type. Headers are key-value pairs, where both the key and value are UTF-8 strings. Headers can appear in any order within the headers portion of the message, and any given header type can only appear once.

  For Amazon S3 Select, following is a list of header names and the set of valid values depending on the message type.

  - *MessageType Header*:

    - HeaderName => ":message-type"
    - Valid HeaderValues => "error", "event"
  - *EventType Header*:
    - HeaderName => ":event-type"
    - Valid HeaderValues => "Records", "Cont", "Progress", "Stats", "End"
  - *ErrorCode Header*:
    - HeaderName => ":error-code"
    - Valid HeaderValues => Error Code from the table in the List of SELECT Object Content Error Codes section.
  - *ErrorMessage Header*:
    - HeaderName => ":error-message"
    - Valid HeaderValues => Error message returned by the service, to help diagnose request-level errors.
- **Payload**: Can be anything.
- **Message CRC**: 4-byte big-endian integer checksum (CRC) from the start of the message to the start of the checksum (that is, everything in the message excluding the message CRC itself).

Each header contains the following components. There can be multiple headers per message.

- **Header Name Byte-Length**: Byte-length of the header name.
- **Header Name**: Name of the header, indicating the header type. Valid values: ":message-type" ":event-type" ":error-code" ":error-message"
- **Header Value Type**: Enum indicating the header value type. For Amazon S3 Select, this is always 7.
- **Value String Byte-Length**: (For Amazon S3 Select) Byte-length of the header value string.
- **Header Value String**: (For Amazon S3 Select) Value of the header string. Valid values for this field vary based on the type of the header. See the sections below for valid values for each header type and message type.

For Amazon S3 Select, responses can be messages of the following types:

- **Records message**: Can contain a single record, partial records, or multiple records. Depending on the size of the result, a response can contain one or more of these messages.

- **Continuation message**: Amazon S3 periodically sends this message to keep the TCP connection open. These messages appear in responses at random. The client must detect the message type and process accordingly.
- **Progress message**: Amazon S3 periodically sends this message, if requested. It contains information about the progress of a query that has started but has not yet completed.
- **Stats message**: Amazon S3 sends this message at the end of the request. It contains statistics about the query.
- **End message**: Indicates that the request is complete, and no more messages will be sent. You should not assume that the request is complete until the client receives an End message.
- **RequestLevelError message**: Amazon S3 sends this message if the request failed for any reason. It contains the error code and error message for the failure. If Amazon S3 sends a `RequestLevelError` message, it doesn't send an End message.

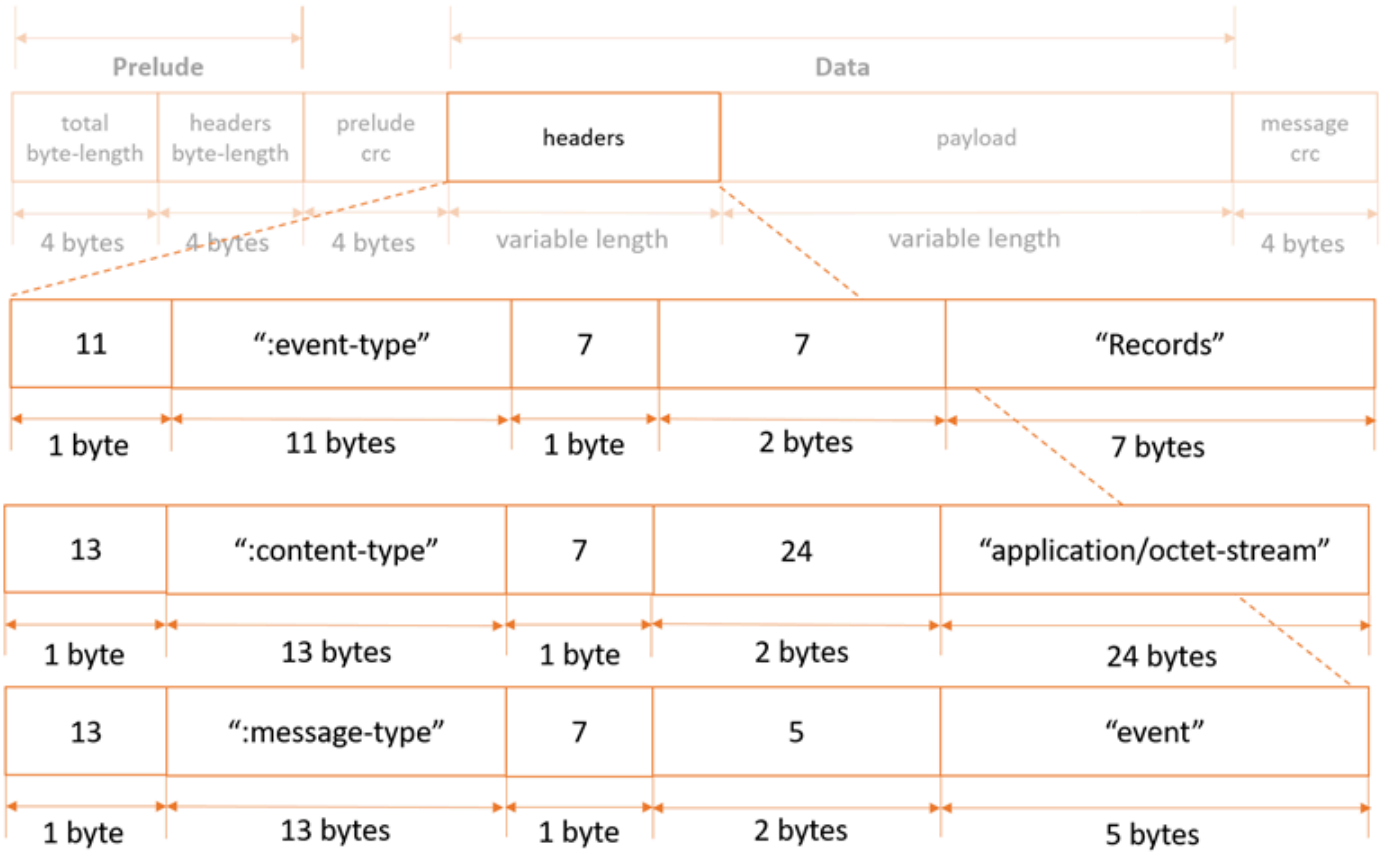
The following sections explain the structure of each message type in more detail.

For sample code and unit tests that use this protocol, see AWS C Event Stream on the GitHub website.

Records Message

Header specification

Records messages contain three headers, as follows:



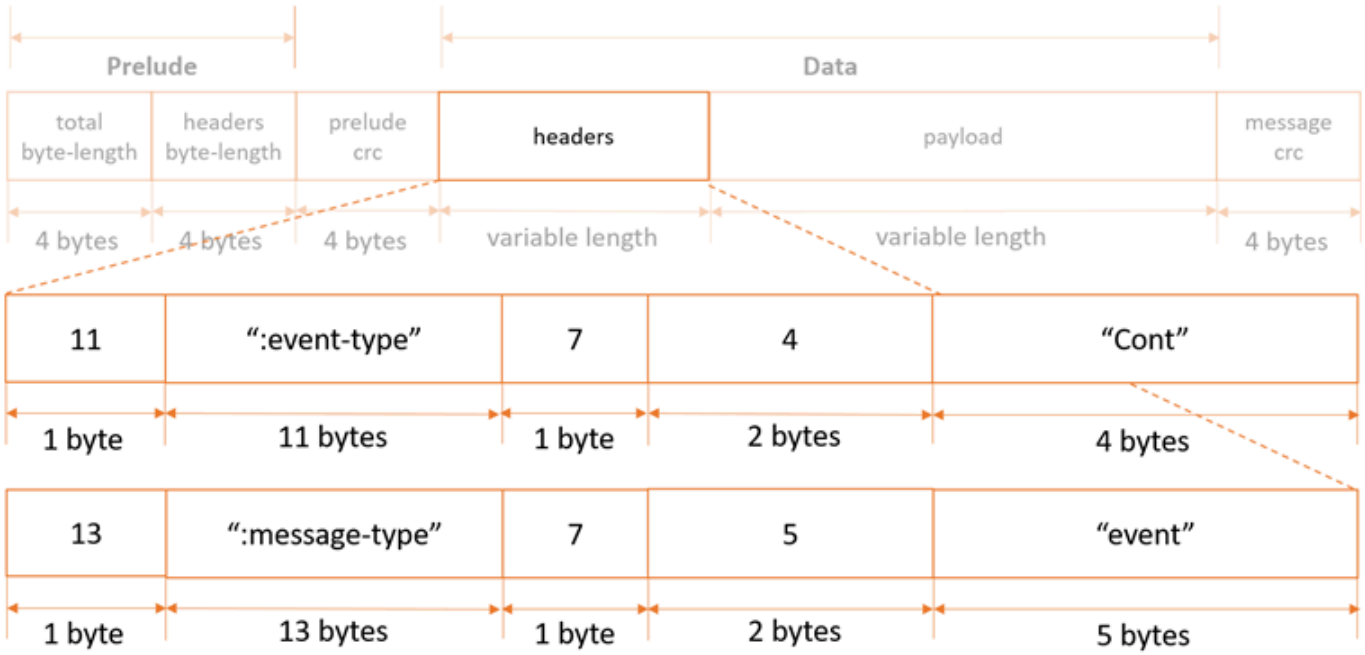
Payload specification

Records message payloads can contain a single record, partial records, or multiple records.

Continuation Message

Header specification

Continuation messages contain two headers, as follows:



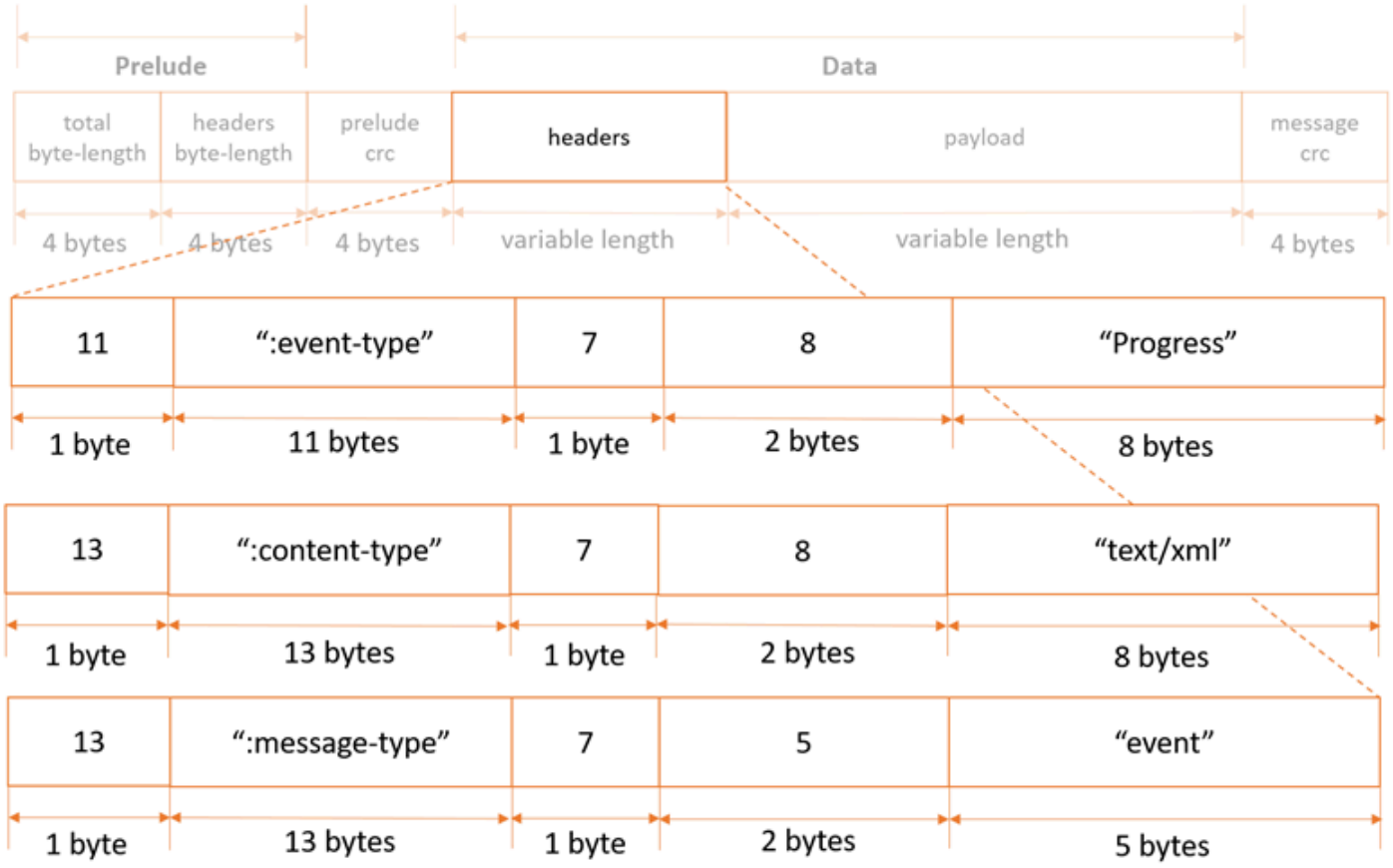
Payload specification

Continuation messages have no payload.

Progress Message

Header specification

Progress messages contain three headers, as follows:



Payload specification

Progress message payload is an XML document containing information about the progress of a request.

- *BytesScanned* => Number of bytes that have been processed before being uncompressed (if the file is compressed).
- *BytesProcessed* => Number of bytes that have been processed after being uncompressed (if the file is compressed).
- *BytesReturned* => Current number of bytes of records payload data returned by Amazon S3.

For uncompressed files, `BytesScanned` and `BytesProcessed` are equal.

Example:

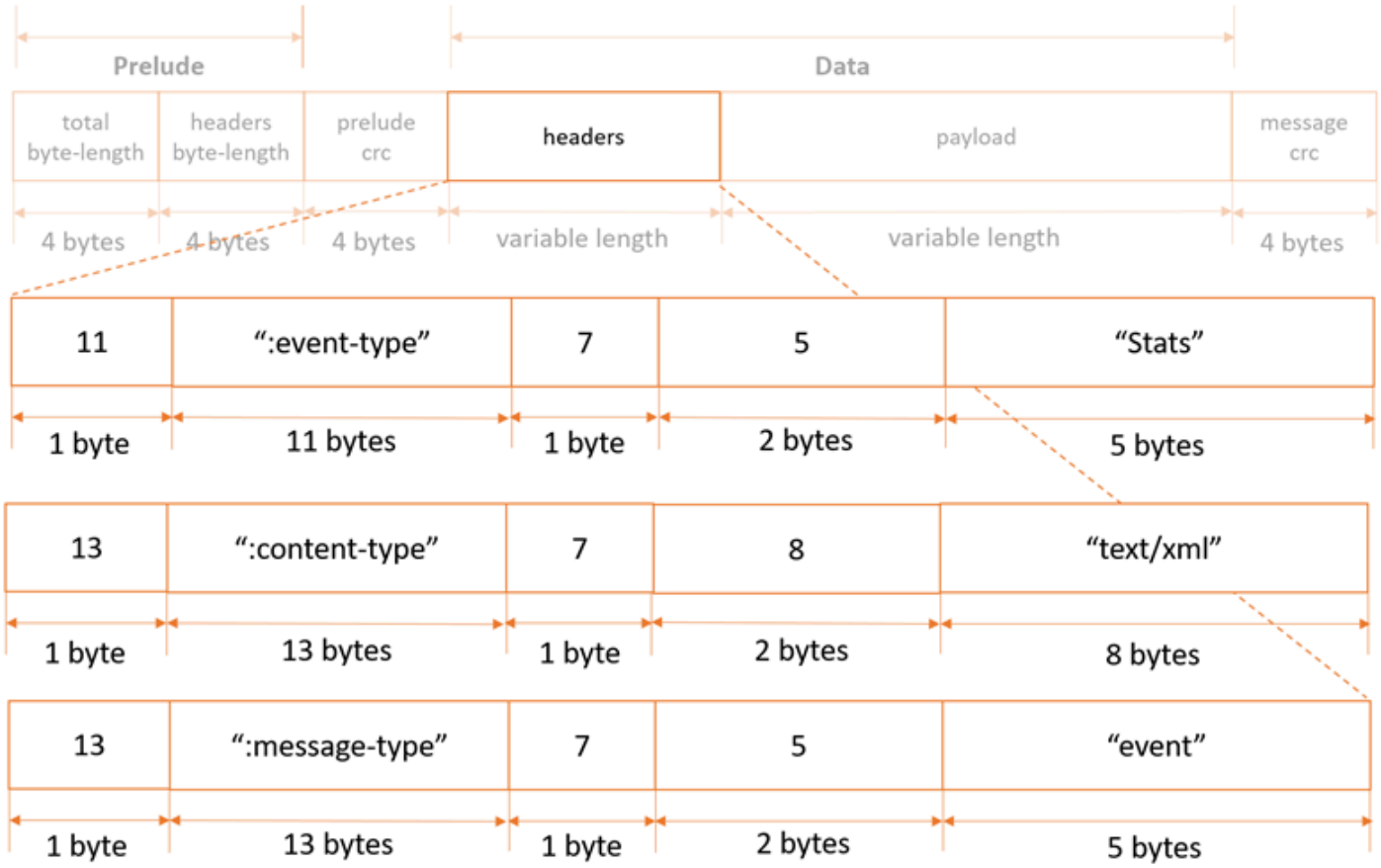
```
<?xml version="1.0" encoding="UTF-8"?>
```

```
<Progress>
      <BytesScanned>512</BytesScanned>
      <BytesProcessed>1024</BytesProcessed>
      <BytesReturned>1024</BytesReturned>
</Progress>
```

Stats Message

Header specification

Stats messages contain three headers, as follows:



Payload specification

Stats message payload is an XML document containing information about a request's stats when processing is complete.

- *BytesScanned* => Number of bytes that have been processed before being uncompressed (if the file is compressed).

- *BytesProcessed* => Number of bytes that have been processed after being uncompressed (if the file is compressed).
- *BytesReturned* => Total number of bytes of records payload data returned by Amazon S3.

For uncompressed files, `BytesScanned` and `BytesProcessed` are equal.

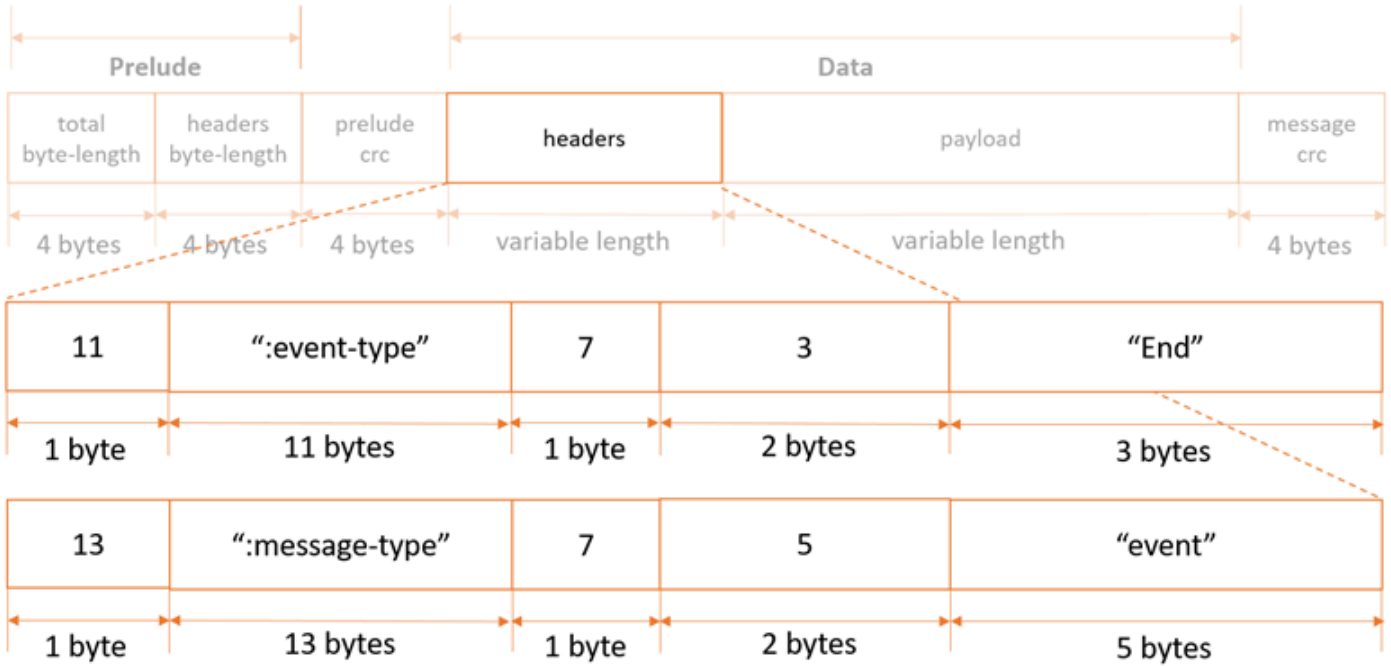
Example:

```
<?xml version="1.0" encoding="UTF-8"?>
<Stats>
     <BytesScanned>512</BytesScanned>
     <BytesProcessed>1024</BytesProcessed>
     <BytesReturned>1024</BytesReturned>
</Stats>
```

End Message

Header specification

End messages contain two headers, as follows:



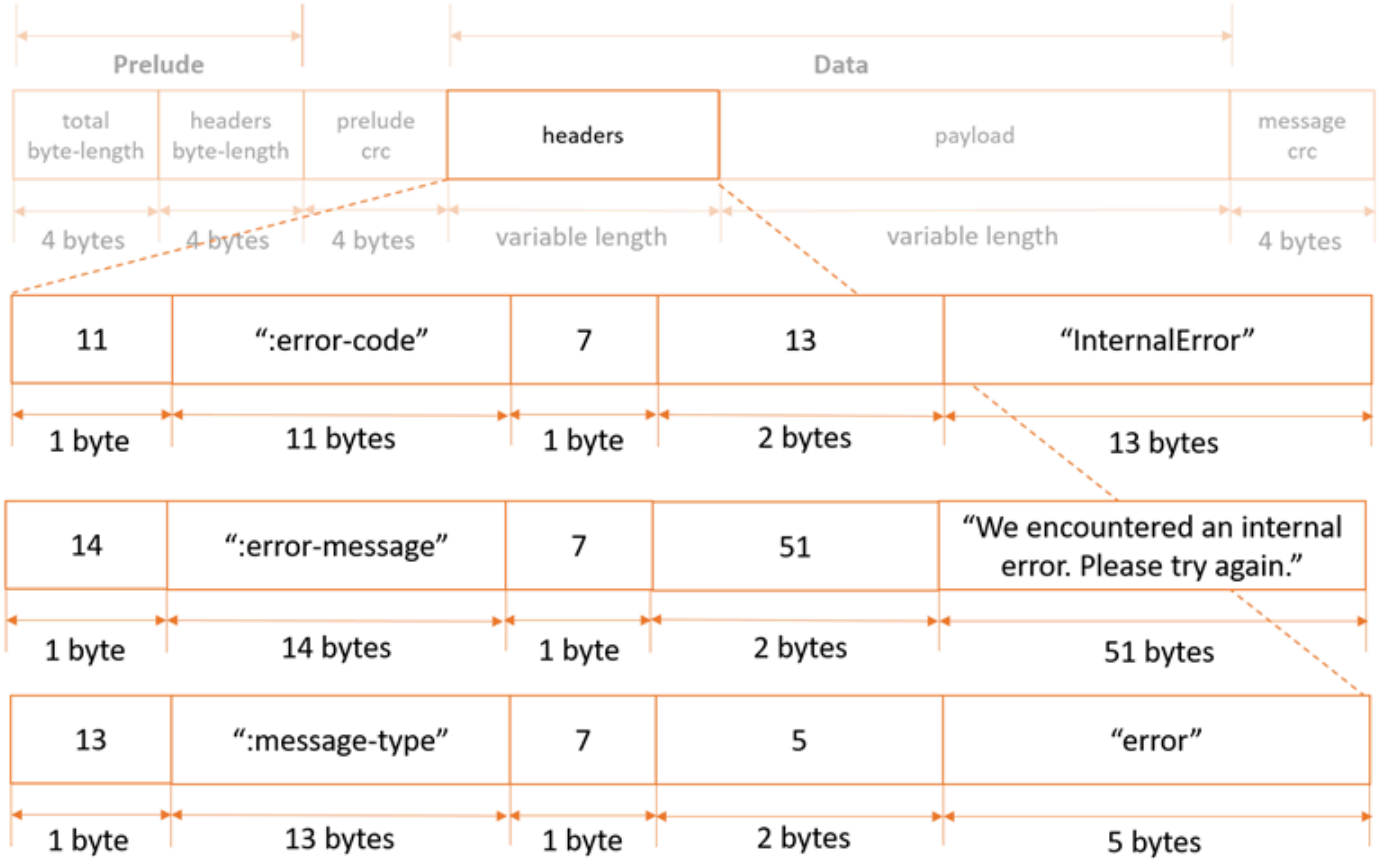
Payload specification

End messages have no payload.

Request Level Error Message

Header specification

Request-level error messages contain three headers, as follows:



For a list of possible error codes and error messages, see the List of SELECT Object Content Error Codes.

Payload specification

Request-level error messages have no payload.

Related Resources

- the section called "SelectObjectContent"

- the section called “GetObject”
- the section called “GetBucketLifecycleConfiguration”
- the section called “PutBucketLifecycleConfiguration”

Appendix: OPTIONS object

Description

A browser can send this preflight request to Amazon S3 to determine if it can send an actual request with the specific origin, HTTP method, and headers.

Amazon S3 supports cross-origin resource sharing (CORS) by enabling you to add a `cors` subresource on a bucket. When a browser sends this preflight request, Amazon S3 responds by evaluating the rules that are defined in the `cors` configuration.

If `cors` is not enabled on the bucket, then Amazon S3 returns a `403 Forbidden` response.

For more information about CORS, go to Enabling Cross-Origin Resource Sharing in the *Amazon Simple Storage Service User Guide*.

Requests

Syntax

```
OPTIONS /ObjectName HTTP/1.1
Host: BucketName.s3.amazonaws.com
Origin: Origin
Access-Control-Request-Method: HTTPMethod
Access-Control-Request-Headers: RequestHeader
```

Request Parameters

This operation does not introduce any specific request parameters, but it may contain any request parameters that are required by the actual request.

Request Headers

Name	Description	Required
`Origin`	Identifies the origin of the cross-origin request to Amazon S3. For example, http://www.example.com. Type: String	Yes

Name	Description	Required
	Default: None	
`Access-Control-Request-Method`	Identifies what HTTP method will be used in the actual request. Type: String Default: None	Yes
`Access-Control-Request-Headers`	A comma-delimited list of HTTP headers that will be sent in the actual request. For example, to put an object with server-side encryption, this preflight request will determine if it can include the `x-amz-server-side-encryption` header with the request. Type: String Default: None	No

Request Elements

This implementation of the operation does not use request elements.

Responses

Response Headers

Header	Description
`Access-Control-Allow-Origin`	The origin you sent in your request. If the origin in your request is not allowed, Amazon S3 will not include this header in the response.

Header	Description
	Type: String
`Access-Control-Max-Age`	How long, in seconds, the results of the preflight request can be cached. Type: String
`Access-Control-Allow-Methods`	The HTTP method that was sent in the original request. If the method in the request is not allowed, Amazon S3 will not include this header in the response. Type: String
`Access-Control-Allow-Headers`	A comma-delimited list of HTTP headers that the browser can send in the actual request. If any of the requested headers is not allowed, Amazon S3 will not include that header in the response, nor will the response contain any of the headers with the `Access-Control` prefix. Type: String
`Access-Control-Expose-Headers`	A comma-delimited list of HTTP headers. This header provides the JavaScript client with access to these headers in the response to the actual request. Type: String

Response Elements

This implementation of the operation does not return response elements.

Examples

Example : Send a preflight OPTIONS request to a `cors` enabled bucket

A browser can send this preflight request to Amazon S3 to determine if it can send the actual PUT request from http://www.example.com origin to the Amazon S3 bucket named `examplebucket`.

Sample Request

```
OPTIONS /exampleobject HTTP/1.1
Host: examplebucket.s3.amazonaws.com
Origin: http://www.example.com
Access-Control-Request-Method: PUT
```

Sample Response

```
HTTP/1.1 200 OK
x-amz-id-2: 6SvaESv3VULYPLik5LLl7lSPPtSnBvDdGmnklX1HfUl7uS2m1DF6td6KWKNjYMXZ
x-amz-request-id: BDC4B83DF5096BBE
Date: Wed, 21 Aug 2012 23:09:55 GMT
Etag: "1f1a1af1f1111111111111c11aed1da1"
Access-Control-Allow-Origin: http://www.example.com
Access-Control-Allow-Methods: PUT
Access-Control-Expose-Headers: x-amz-request-id
Content-Length: 0
Server: AmazonS3
```

Related Resources

- GetBucketCors
- DeleteBucketCors
- PutBucketCors

Appendix: SOAP API

> **Note**
>
> SOAP support over HTTP is deprecated, but it is still available over HTTPS. New Amazon S3 features will not be supported for SOAP. We recommend that you use either the REST API or the AWS SDKs.

This section describes the SOAP API with respect to service, bucket, and object operations. Note that SOAP requests, both authenticated and anonymous, must be sent to Amazon S3 using SSL. Amazon S3 returns an error when you send a SOAP request over HTTP.

The latest Amazon S3 WSDL is available at http://doc.s3.amazonaws.com/2006-03-01/AmazonS3.wsdl.

Topics

- Operations on the Service (SOAP API)
- Operations on Buckets (SOAP API)
- Operations on Objects (SOAP API)
- SOAP Error Responses

Operations on the Service (SOAP API)

> **Note**
>
> SOAP support over HTTP is deprecated, but it is still available over HTTPS. New Amazon S3 features will not be supported for SOAP. We recommend that you use either the REST API or the AWS SDKs.

This section describes operations you can perform on the Amazon S3 service.

Topics

- ListAllMyBuckets (SOAP API)

ListAllMyBuckets (SOAP API)

> **Note**
>
> SOAP support over HTTP is deprecated, but it is still available over HTTPS. New Amazon S3 features will not be supported for SOAP. We recommend that you use either the REST API or the AWS SDKs.

The `ListAllMyBuckets` operation returns a list of all buckets owned by the sender of the request.

Example

Sample Request

```
<ListAllMyBuckets xmlns="http://doc.s3.amazonaws.com/2006-03-01">
  <AWSAccessKeyId>AKIAIOSFODNN7EXAMPLE</AWSAccessKeyId>
  <Timestamp>2006-03-01T12:00:00.183Z</Timestamp>
  <Signature>Iuyz3d3P0aTou39dzbqaEXAMPLE=</Signature>
</ListAllMyBuckets>
```

Sample Response

```
<ListAllMyBucketsResult xmlns="http://s3.amazonaws.com/doc/2006-03-01">
  <Owner>
    <ID>bcaf1ffd86f41161ca5fb16fd081034f</ID>
    <DisplayName>webfile</DisplayName>
  </Owner>
  <Buckets>
    <Bucket>
      <Name>quotes;/Name>
      <CreationDate>2006-02-03T16:45:09.000Z</CreationDate>
    </Bucket>
    <Bucket>
      <Name>samples</Name>
      <CreationDate>2006-02-03T16:41:58.000Z</CreationDate>
    </Bucket>
 </Buckets>
</ListAllMyBucketsResult>
```

Response Body

- `Owner:`

  This provides information that Amazon S3 uses to represent your identity for purposes of authentication and access control. ID is a unique and permanent identifier for the developer who made the request. DisplayName is a human-readable name representing the developer who made the request. It is not unique, and might change over time.We recommend that you match your DisplayName to your Forum name.

- `Name:`

  The name of a bucket. Note that if one of your buckets was recently deleted, the name of the deleted bucket might still be present in this list for a period of time.

- `CreationDate:`

  The time that the bucket was created.

Access Control

You must authenticate with a valid AWS Access Key ID. Anonymous requests are never allowed to list buckets, and you can only list buckets for which you are the owner.

Operations on Buckets (SOAP API)

> **Note**
>
> SOAP support over HTTP is deprecated, but it is still available over HTTPS. New Amazon S3 features will not be supported for SOAP. We recommend that you use either the REST API or the AWS SDKs.

This section describes operations you can perform on Amazon S3 buckets.

Topics

- CreateBucket (SOAP API)
- DeleteBucket (SOAP API)
- ListBucket (SOAP API)

- GetBucketAccessControlPolicy (SOAP API)
- SetBucketAccessControlPolicy (SOAP API)
- GetBucketLoggingStatus (SOAP API)
- SetBucketLoggingStatus (SOAP API)

CreateBucket (SOAP API)

> **Note**
>
> SOAP support over HTTP is deprecated, but it is still available over HTTPS. New Amazon S3 features will not be supported for SOAP. We recommend that you use either the REST API or the AWS SDKs.

The `CreateBucket` operation creates a bucket. Not every string is an acceptable bucket name. For information on bucket naming restrictions, see Working with Amazon S3 Buckets .

> **Note**
>
> To determine whether a bucket name exists, use `ListBucket` and set `MaxKeys` to 0. A NoSuchBucket response indicates that the bucket is available, an AccessDenied response indicates that someone else owns the bucket, and a Success response indicates that you own the bucket or have permission to access it.

Example Create a bucket named "quotes"

`Sample Request`

```
<CreateBucket xmlns="http://doc.s3.amazonaws.com/2006-03-01">
  <Bucket>quotes</Bucket>
  <AWSAccessKeyId>AKIAIOSFODNN7EXAMPLE</AWSAccessKeyId>
  <Timestamp>2006-03-01T12:00:00.183Z</Timestamp>
  <Signature>Iuyz3d3P0aTou39dzbqaEXAMPLE=</Signature>
</CreateBucket>
```

`Sample Response`

```
<CreateBucketResponse xmlns="http://s3.amazonaws.com/doc/2006-03-01">
  <CreateBucketResponse>
    <Bucket>quotes</Bucket>
  </CreateBucketResponse>
</CreateBucketResponse>
```

Elements

- `Bucket:` The name of the bucket you are trying to create.
- `AccessControlList:` The access control list for the new bucket. This element is optional. If not provided, the bucket is created with an access policy that give the requester FULL_CONTROL access.

Access Control

You must authenticate with a valid AWS Access Key ID. Anonymous requests are never allowed to create buckets.

Related Resources

- ListBucket (SOAP API)

DeleteBucket (SOAP API)

> **Note**
>
> SOAP support over HTTP is deprecated, but it is still available over HTTPS. New Amazon S3 features will not be supported for SOAP. We recommend that you use either the REST API or the AWS SDKs.

The `DeleteBucket` operation deletes a bucket. All objects in the bucket must be deleted before the bucket itself can be deleted.

Example

This example deletes the "quotes" bucket.

Sample Request

```
<DeleteBucket xmlns="http://doc.s3.amazonaws.com/2006-03-01">
  <Bucket>quotes</Bucket>
  <AWSAccessKeyId> AKIAIOSFODNN7EXAMPLE</AWSAccessKeyId>
  <Timestamp>2006-03-01T12:00:00.183Z</Timestamp>
  <Signature>Iuyz3d3P0aTou39dzbqaEXAMPLE=</Signature>
</DeleteBucket>
```

Sample Response

```
<DeleteBucketResponse xmlns="http://s3.amazonaws.com/doc/2006-03-01">
  <DeleteBucketResponse>
    <Code>204</Code>
    <Description>No Content</Description>
  </DeleteBucketResponse>
</DeleteBucketResponse>
```

Elements

- `Bucket`: The name of the bucket you want to delete.

Access Control

Only the owner of a bucket is allowed to delete it, regardless the access control policy on the bucket.

ListBucket (SOAP API)

> **Note**
>
> SOAP support over HTTP is deprecated, but it is still available over HTTPS. New Amazon S3 features will not be supported for SOAP. We recommend that you use either the REST API or the AWS SDKs.

The `ListBucket` operation returns information about some of the items in the bucket.

For a general introduction to the list operation, see the Listing Object Keys.

Requests

This example lists up to 1000 keys in the "quotes" bucket that have the prefix "notes."

Syntax

```
<ListBucket xmlns="http://doc.s3.amazonaws.com/2006-03-01">
  <Bucket>quotes</Bucket>
  <Prefix>notes/</Prefix>
  <Delimiter>/</Delimiter>
  <MaxKeys>1000</MaxKeys>
  <AWSAccessKeyId>AKIAIOSFODNN7EXAMPLE</AWSAccessKeyId>
  <Timestamp>2006-03-01T12:00:00.183Z</Timestamp>
  <Signature>Iuyz3d3P0aTou39dzbqaEXAMPLE=</Signature>
</ListBucket>
```

Parameters

Name	Description	Required
`prefix`	Limits the response to keys which begin with the indicated prefix. You can use prefixes to separate a bucket into different sets of keys in a way similar to how a file system uses folders. **Important** Replacement must be made for object keys containing special characters (such as carriage returns) when using XML requests. For more information, see XML related object key constraints. Type: String Default: None	No
`marker`	Indicates where in the bucket to begin listing. The list will only include keys that occur lexicographically after marker. This is	No

Name	Description	Required
	convenient for pagination: To get the next page of results use the last key of the current page as the marker. Type: String Default: None	
`max-keys`	The maximum number of keys you'd like to see in the response body. The server might return fewer than this many keys, but will not return more. Type: String Default: None	No
`delimiter`	Causes keys that contain the same string between the prefix and the first occurrence of the delimiter to be rolled up into a single result element in the CommonPrefixes collection. These rolled-up keys are not returned elsewhere in the response. Type: String Default: None	No

Success Response

This response assumes the bucket contains the following keys:

```
notes/todos.txt
notes/2005-05-23/customer_mtg_notes.txt
notes/2005-05-23/phone_notes.txt
notes/2005-05-28/sales_notes.txt
```

Syntax

```
<?xml version="1.0" encoding="UTF-8"?>
<ListBucketResult xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
  <Name>backups</Name>
  <Prefix>notes/</Prefix>
```

```
  <MaxKeys>1000</MaxKeys>
  <Delimiter>/</Delimiter>
  <IsTruncated>false</IsTruncated>
  <Contents>
    <Key>notes/todos.txt</Key>
    <LastModified>2006-01-01T12:00:00.000Z</LastModified>
    <ETag>&amp;quot;828ef3fdfa96f00ad9f27c383fc9ac7f&amp;quot;</ETag>
    <Size>5126</Size>
    <StorageClass>STANDARD</StorageClass>
    <Owner>
      <ID>75aa57f09aa0c8caeab4f8c24e99d10f8e7faeebf76c078efc7c6caea54ba06a</ID>
      <DisplayName>webfile</DisplayName>
    </Owner>
    <StorageClass>STANDARD</StorageClass>
  </Contents>
  <CommonPrefixes>
    <Prefix>notes/2005-05-23/</Prefix>
  </CommonPrefixes>
  <CommonPrefixes>
    <Prefix>notes/2005-05-28/</Prefix>
  </CommonPrefixes>
  </ListBucketResult>
```

As you can see, many of the fields in the response echo the request parameters. `IsTruncated`, `Contents`, and `CommonPrefixes` are the only response elements that can contain new information.

Response Elements

Name	Description
`Contents`	Metadata about each object returned. Type: XML metadata Ancestor: ListBucketResult
`CommonPrefixes`	A response can contain `CommonPrefixes` only if you specify a `delimiter`. When you do, `CommonPrefixes` contains all (if there are any) keys between `Prefix` and the next occurrence of the string specified by `delimiter`. In effect, `CommonPrefixes` lists keys that act like subdirectories in the directory specified by `Prefix`. For example, if `prefix` is

Name	Description
	notes/ and delimiter is a slash (/), in notes/summer/july , the common prefix is notes/summer/ . Type: String Ancestor: ListBucketResult
Delimiter	Causes keys that contain the same string between the prefix and the first occurrence of the delimiter to be rolled up into a single result element in the CommonPrefixes collection. These rolled-up keys are not returned elsewhere in the response. Type: String Ancestor: ListBucketResult
IsTruncated	Specifies whether (true) or not (false) all of the results were returned. All of the results may not be returned if the number of results exceeds that specified by MaxKeys. Type: String Ancestor: boolean
Marker	Indicates where in the bucket to begin listing. Type: String Ancestor: ListBucketResult
MaxKeys	The maximum number of keys returned in the response body. Type: String Ancestor: ListBucketResult

Name	Description
Name	Name of the bucket. Type: String Ancestor: ListBucketResult
Prefix	Keys that begin with the indicated prefix. Type: String Ancestor: ListBucketResult

Response Body

For information about the list response, see Listing Keys Response.

Access Control

To list the keys of a bucket you need to have been granted READ access on the bucket.

GetBucketAccessControlPolicy (SOAP API)

> **Note**
>
> SOAP support over HTTP is deprecated, but it is still available over HTTPS. New Amazon S3 features will not be supported for SOAP. We recommend that you use either the REST API or the AWS SDKs.

The GetBucketAccessControlPolicy operation fetches the access control policy for a bucket.

Example

This example retrieves the access control policy for the "quotes" bucket.

Sample Request

```
<GetBucketAccessControlPolicy xmlns="http://doc.s3.amazonaws.com/2006-03-01">
```

```
  <Bucket>quotes</Bucket>
  <AWSAccessKeyId>AKIAIOSFODNN7EXAMPLE</AWSAccessKeyId>
  <Timestamp>2006-03-01T12:00:00.183Z</Timestamp>
  <Signature>Iuyz3d3P0aTou39dzbqaEXAMPLE=</Signature>
</GetBucketAccessControlPolicy>
```

Sample Response

```
<AccessControlPolicy>
  <Owner>
    <ID>a9a7b886d6fd2441bf9b1c61be666e9</ID>
    <DisplayName>chriscustomer</DisplayName>
  </Owner>
  <AccessControlList>
    <Grant>
      <Grantee xsi:type="CanonicalUser">
        <ID>a9a7b886d6f41bf9b1c61be666e9</ID>
        <DisplayName>chriscustomer</DisplayName>
      </Grantee>
      <Permission>FULL_CONTROL</Permission>
    </Grant>
    <Grant>
      <Grantee xsi:type="Group">
        <URI>http://acs.amazonaws.com/groups/global/AllUsers<URI>
      </Grantee>
      <Permission>READ</Permission>
    </Grant>
  </AccessControlList>
<AccessControlPolicy>
```

Response Body

The response contains the access control policy for the bucket. For an explanation of this response, see SOAP Access Policy .

Access Control

You must have READ_ACP rights to the bucket in order to retrieve the access control policy for a bucket.

SetBucketAccessControlPolicy (SOAP API)

> **Note**
>
> SOAP support over HTTP is deprecated, but it is still available over HTTPS. New Amazon S3 features will not be supported for SOAP. We recommend that you use either the REST API or the AWS SDKs.

The `SetBucketAccessControlPolicy` operation sets the Access Control Policy for an existing bucket. If successful, the previous Access Control Policy for the bucket is entirely replaced with the specified Access Control Policy.

Example

Give the specified user (usually the owner) `FULL_CONTROL` access to the "quotes" bucket.

`Sample Request`

```
<SetBucketAccessControlPolicy xmlns="http://doc.s3.amazonaws.com/2006-03-01">
  <Bucket>quotes</Bucket>
  <AccessControlList>
    <Grant>
      <Grantee xsi:type="CanonicalUser">
        <ID>a9a7b8863000e241bf9b1c61be666e9</ID>
        <DisplayName>chriscustomer</DisplayName>
      </Grantee>
      <Permission>FULL_CONTROL</Permission>
    </Grant>
  </AccessControlList>
  <AWSAccessKeyId>AKIAIOSFODNN7EXAMPLE</AWSAccessKeyId>
  <Timestamp>2006-03-01T12:00:00.183Z</Timestamp>
  <Signature>Iuyz3d3P0aTou39dzbqaEXAMPLE=</Signature>
</SetBucketAccessControlPolicy >
```

`Sample Response`

```
<GetBucketAccessControlPolicyResponse xmlns="http://s3.amazonaws.com/doc/2006-03-01">
  <GetBucketAccessControlPolicyResponse>
    <Code>200</Code>
```

```
    <Description>OK</Description>
  </GetBucketAccessControlPolicyResponse>
</GetBucketAccessControlPolicyResponse>
```

Access Control

You must have WRITE_ACP rights to the bucket in order to set the access control policy for a bucket.

GetBucketLoggingStatus (SOAP API)

> **Note**
>
> SOAP support over HTTP is deprecated, but it is still available over HTTPS. New Amazon S3 features will not be supported for SOAP. We recommend that you use either the REST API or the AWS SDKs.

The GetBucketLoggingStatus retrieves the logging status for an existing bucket.

For a general introduction to this feature, see Server Logs.

Example

Sample Request

```
<?xml version="1.0" encoding="utf-8"?>
    <soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://
www.w3.org/2001/XMLSchema">
      <soap:Body>
        <GetBucketLoggingStatus xmlns="http://doc.s3.amazonaws.com/2006-03-01">
          <Bucket>mybucket</Bucket>
          <AWSAccessKeyId>YOUR_AWS_ACCESS_KEY_ID</AWSAccessKeyId>
          <Timestamp>2006-03-01T12:00:00.183Z</Timestamp>
          <Signature>YOUR_SIGNATURE_HERE</Signature>
        </GetBucketLoggingStatus>
      </soap:Body>
    </soap:Envelope>
```

Sample Response

```
<?xml version="1.0" encoding="utf-8"?>
    <soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
 xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/
XMLSchema-instance" >
      <soapenv:Header>
      </soapenv:Header>
      <soapenv:Body>
        <GetBucketLoggingStatusResponse xmlns="http://s3.amazonaws.com/doc/2006-03-01">
          <GetBucketLoggingStatusResponse>
            <LoggingEnabled>
              <TargetBucket>mylogs</TargetBucket>
              <TargetPrefix>mybucket-access_log-</TargetPrefix>
            </LoggingEnabled>
          </GetBucketLoggingStatusResponse>
        </GetBucketLoggingStatusResponse>
      </soapenv:Body>
    </soapenv:Envelope>
```

Access Control

Only the owner of a bucket is permitted to invoke this operation.

SetBucketLoggingStatus (SOAP API)

> **Note**
>
> SOAP support over HTTP is deprecated, but it is still available over HTTPS. New Amazon S3 features will not be supported for SOAP. We recommend that you use either the REST API or the AWS SDKs.

The `SetBucketLoggingStatus` operation updates the logging status for an existing bucket.

For a general introduction to this feature, see Server Logs.

Example

This sample request enables server access logging for the 'mybucket' bucket, and configures the logs to be delivered to 'mylogs' under prefix 'access_log-'

Sample Request

```
<?xml version="1.0" encoding="utf-8"?>
    <soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"
 xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://
www.w3.org/2001/XMLSchema">
    <soap:Body>
    <SetBucketLoggingStatus xmlns="http://doc.s3.amazonaws.com/2006-03-01">
      <Bucket>myBucket</Bucket>
      <AWSAccessKeyId>YOUR_AWS_ACCESS_KEY_ID</AWSAccessKeyId>
      <Timestamp>2006-03-01T12:00:00.183Z</Timestamp>
      <Signature>YOUR_SIGNATURE_HERE</Signature>
      <BucketLoggingStatus>
        <LoggingEnabled>
          <TargetBucket>mylogs</TargetBucket>
          <TargetPrefix>mybucket-access_log-</TargetPrefix>
        </LoggingEnabled>
      </BucketLoggingStatus>
    </SetBucketLoggingStatus>
    </soap:Body>
    :</soap:Envelope>
```

Sample Response

```
<?xml version="1.0" encoding="utf-8"?>
    <soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
 xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/
XMLSchema-instance" >
      <soapenv:Header>
      </soapenv:Header>
      <soapenv:Body>
        <SetBucketLoggingStatusResponse xmlns="http://s3.amazonaws.com/doc/2006-03-01"/
>
      </soapenv:Body>
    </soapenv:Envelope>
```

Access Control

Only the owner of a bucket is permitted to invoke this operation.

Operations on Objects (SOAP API)

> **Note**
>
> SOAP support over HTTP is deprecated, but it is still available over HTTPS. New Amazon S3 features will not be supported for SOAP. We recommend that you use either the REST API or the AWS SDKs.

This section describes operations you can perform on Amazon S3 objects.

Topics

- PutObjectInline (SOAP API)
- PutObject (SOAP API)
- CopyObject (SOAP API)
- GetObject (SOAP API)
- GetObjectExtended (SOAP API)
- DeleteObject (SOAP API)
- GetObjectAccessControlPolicy (SOAP API)
- SetObjectAccessControlPolicy (SOAP API)

PutObjectInline (SOAP API)

> **Note**
>
> SOAP support over HTTP is deprecated, but it is still available over HTTPS. New Amazon S3 features will not be supported for SOAP. We recommend that you use either the REST API or the AWS SDKs.

The `PutObjectInline` operation adds an object to a bucket. The data for the object is provided in the body of the SOAP message.

If an object already exists in a bucket, the new object will overwrite it because Amazon S3 stores the last write request. However, Amazon S3 is a distributed system. If Amazon S3 receives multiple

write requests for the same object nearly simultaneously, all of the objects might be stored, even though only one wins in the end. Amazon S3 does not provide object locking; if you need this, make sure to build it into your application layer.

To ensure an object is not corrupted over the network, you can calculate the MD5 of an object, PUT it to Amazon S3, and compare the returned Etag to the calculated MD5 value.

PutObjectInline is not suitable for use with large objects. The system limits this operation to working with objects 1MB or smaller. PutObjectInline will fail with the `InlineDataTooLargeError` status code if the Data parameter encodes an object larger than 1MB. To upload large objects, consider using the non-inline PutObject API, or the REST API instead.

Example

This example writes some text and metadata into the "Nelson" object in the "quotes" bucket, give a user (usually the owner) `FULL_CONTROL` access to the object, and make the object readable by anonymous parties.

`Sample Request`

```
<PutObjectInline xmlns="http://doc.s3.amazonaws.com/2006-03-01">
  <Bucket>quotes</Bucket>
  <Key>Nelson</Key>
  <Metadata>
    <Name>Content-Type</Name>
    <Value>text/plain</Value>
  </Metadata>
  <Metadata>
    <Name>family</Name>
    <Value>Muntz</Value>
  </Metadata>
  <Data>aGEtaGE=</Data>
  <ContentLength>5</ContentLength>
  <AccessControlList>
    <Grant>
      <Grantee xsi:type="CanonicalUser">
        <ID>a9a7b886d6fde241bf9b1c61be666e9</ID>
        <DisplayName>chriscustomer</DisplayName>
      </Grantee>
      <Permission>FULL_CONTROL</Permission>
    </Grant>
    <Grant>
```

```
      <Grantee xsi:type="Group">
        <URI>http://acs.amazonaws.com/groups/global/AllUsers</URI>
      </Grantee>
      <Permission>READ</Permission>
    </Grant>
  </AccessControlList>
  <AWSAccessKeyId>AKIAIOSFODNN7EXAMPLE</AWSAccessKeyId>
  <Timestamp>2006-03-01T12:00:00.183Z</Timestamp>
  <Signature>Iuyz3d3P0aTou39dzbqaEXAMPLE=</Signature>
</PutObjectInline>
```

Sample Response

```
<PutObjectInlineResponse xmlns="http://s3.amazonaws.com/doc/2006-03-01">
  <PutObjectInlineResponse>
    <ETag>&quot828ef3fdfa96f00ad9f27c383fc9ac7f&quot</ETag>
    <LastModified>2006-01-01T12:00:00.000Z</lastModified>
  </PutObjectInlineResponse>
</PutObjectInlineResponse>
```

Elements

- `Bucket:` The bucket in which to add the object.
- `Key:` The key to assign to the object.

> **Important**
>
> Replacement must be made for object keys containing special characters (such as carriage returns) when using XML requests. For more information, see XML related object key constraints.

- `Metadata:` You can provide name-value metadata pairs in the metadata element. These will be stored with the object.
- `Data:` The base 64 encoded form of the data.
- `ContentLength:` The length of the data in bytes.

- `AccessControlList:` An Access Control List for the resource. This element is optional. If omitted, the requester is given `FULL_CONTROL` access to the object. If the object already exists, the preexisting access control policy is replaced.

Responses

- `ETag:` The entity tag is an MD5 hash of the object that you can use to do conditional fetches of the object using `GetObjectExtended`. The ETag only reflects changes to the contents of an object, not its metadata.
- `LastModified:` The Amazon S3 timestamp for the saved object.

Access Control

You must have `WRITE` access to the bucket in order to put objects into the bucket.

Related Resources

- PutObject (SOAP API)
- CopyObject (SOAP API)

PutObject (SOAP API)

> **Note**
>
> SOAP support over HTTP is deprecated, but it is still available over HTTPS. New Amazon S3 features will not be supported for SOAP. We recommend that you use either the REST API or the AWS SDKs.

The `PutObject` operation adds an object to a bucket. The data for the object is attached as a DIME attachment.

To ensure an object is not corrupted over the network, you can calculate the MD5 of an object, PUT it to Amazon S3, and compare the returned Etag to the calculated MD5 value.

If an object already exists in a bucket, the new object will overwrite it because Amazon S3 stores the last write request. However, Amazon S3 is a distributed system. If Amazon S3 receives multiple

write requests for the same object nearly simultaneously, all of the objects might be stored, even though only one wins in the end. Amazon S3 does not provide object locking; if you need this, make sure to build it into your application layer.

Example

This example puts some data and metadata in the "Nelson" object of the "quotes" bucket, give a user (usually the owner) FULL_CONTROL access to the object, and make the object readable by anonymous parties. In this sample, the actual attachment is not shown.

Sample Request

```
<PutObject xmlns="http://doc.s3.amazonaws.com/2006-03-01">
  <Bucket>quotes</Bucket>
  <Key>Nelson</Key>
  <Metadata>
    <Name>Content-Type</Name>
    <Value>text/plain</Value>
  </Metadata>
  <Metadata>
    <Name>family</Name>
    <Value>Muntz</Value>
  </Metadata>
  <ContentLength>5</ContentLength>
  <AccessControlList>
    <Grant>
      <Grantee xsi:type="CanonicalUser">
        <ID>a9a7b886d6241bf9b1c61be666e9</ID>
        <DisplayName>chriscustomer</DisplayName>
      </Grantee>
      <Permission>FULL_CONTROL</Permission>
    </Grant>
    <Grant>
      <Grantee xsi:type="Group">
        <URI>http://acs.amazonaws.com/groups/global/AllUsers<URI>
      </Grantee>
      <Permission>READ</Permission>
    </Grant>
  </AccessControlList>
  <AWSAccessKeyId>AKIAIOSFODNN7EXAMPLE</AWSAccessKeyId>
  <Timestamp>2007-05-11T12:00:00.183Z</Timestamp>
  <Signature>Iuyz3d3P0aTou39dzbqaEXAMPLE=</Signature>
</PutObject>
```

Sample Response

```
<PutObjectResponse xmlns="http://s3.amazonaws.com/doc/2006-03-01">
  <PutObjectResponse>
    <ETag>&amp;quot;828ef3fdfa96f00ad9f27c383fc9ac7f&amp;quot;</ETag>
    <LastModified>2006-03-01T12:00:00.183Z</LastModified>
  </PutObjectResponse>
</PutObjectResponse>
```

Elements

- `Bucket:` The bucket in which to add the object.
- `Key:` The key to assign to the object.

> **Important**
>
> Replacement must be made for object keys containing special characters (such as carriage returns) when using XML requests. For more information, see XML related object key constraints.

- `Metadata:` You can provide name-value metadata pairs in the metadata element. These will be stored with the object.
- `ContentLength:` The length of the data in bytes.
- `AccessControlList:` An Access Control List for the resource. This element is optional. If omitted, the requester is given `FULL_CONTROL` access to the object. If the object already exists, the preexisting Access Control Policy is replaced.

Responses

- `ETag:` The entity tag is an MD5 hash of the object that you can use to do conditional fetches of the object using `GetObjectExtended`. The ETag only reflects changes to the contents of an object, not its metadata.
- `LastModified:` The Amazon S3 timestamp for the saved object.

Access Control

To put objects into a bucket, you must have `WRITE` access to the bucket.

Related Resources

- CopyObject (SOAP API)

CopyObject (SOAP API)

> **Note**
>
> SOAP support over HTTP is deprecated, but it is still available over HTTPS. New Amazon S3 features will not be supported for SOAP. We recommend that you use either the REST API or the AWS SDKs.

Description

The `CopyObject` operation creates a copy of an object when you specify the key and bucket of a source object and the key and bucket of a target destination.

When copying an object, you can preserve all metadata (default) or specify new metadata. However, the ACL is not preserved and is set to `private` for the user making the request. To override the default ACL setting, specify a new ACL when generating a copy request. For more information, see Using ACLs.

All copy requests must be authenticated. Additionally, you must have *read* access to the source object and *write* access to the destination bucket. For more information, see Using Auth Access.

To only copy an object under certain conditions, such as whether the Etag matches or whether the object was modified before or after a specified date, use the request parameters `CopySourceIfUnmodifiedSince`, `CopyIfUnmodifiedSince`, `CopySourceIfMatch`, or `CopySourceIfNoneMatch`.

> **Note**
>
> You might need to configure the SOAP stack socket timeout for copying large objects.

Request Syntax

```
<CopyObject xmlns="http://bucket_name.s3.amazonaws.com/2006-03-01">
```

```
  <SourceBucket>source_bucket</SourceBucket>
  <SourceObject>source_object</SourceObject>
  <DestinationBucket>destination_bucket</DestinationBucket>
  <DestinationObject>destination_object</DestinationObject>
  <MetadataDirective>{REPLACE | COPY}</MetadataDirective>
  <Metadata>
    <Name>metadata_name</Name>
    <Value>metadata_value</Value>
  </Metadata>
  ...
  <AccessControlList>
    <Grant>
      <Grantee xsi:type="user_type">
        <ID>user_id</ID>
        <DisplayName>display_name</DisplayName>
      </Grantee>
      <Permission>permission</Permission>
    </Grant>
    ...
  </AccessControlList>
  <CopySourceIfMatch>etag</CopySourceIfMatch>
  <CopySourceIfNoneMatch>etag</CopySourceIfNoneMatch>
  <CopySourceIfModifiedSince>date_time</CopySourceIfModifiedSince>
  <CopySourceIfUnmodifiedSince>date_time</CopySourceIfUnmodifiedSince>
  <AWSAccessKeyId>AWSAccessKeyId</AWSAccessKeyId>
  <Timestamp>TimeStamp</Timestamp>
  <Signature>Signature</Signature>
</CopyObject>
```

Request Parameters

Name	Description	Required
SourceBucket	The name of the source bucket. Type: String Default: None Constraints: A valid source bucket.	Yes
SourceKey	The key name of the source object.	Yes

Name	Description	Required
	Type: String Default: None Constraints: The key for a valid source object to which you have READ access. **Important** Replacement must be made for object keys containing special characters (such as carriage returns) when using XML requests. For more informati on, see XML related object key constraints.	
`DestinationBucket`	The name of the destination bucket. Type: String Default: None Constraints: You must have WRITE access to the destination bucket.	Yes
`DestinationKey`	The key of the destination object. Type: String Default: None Constraints: You must have WRITE access to the destination bucket.	Yes

Name	Description	Required
MetadataDirective	Specifies whether the metadata is copied from the source object or replaced with metadata provided in the request. Type: String Default: COPY Valid values: COPY | REPLACE Constraints: Values other than COPY or REPLACE will result in an immediate error. You cannot copy an object to itself unless the MetadataDirective header is specified and its value set to REPLACE.	No
Metadata	Specifies metadata name-value pairs to set for the object.If MetadataDirective is set to COPY, all metadata is ignored. Type: String Default: None Constraints: None.	No
AccessControlList	Grants access to users by e-mail addresses or canonical user ID. Type: String Default: None Constraints: None	No

Name	Description	Required
CopySourceIfMatch	Copies the object if its entity tag (ETag) matches the specified tag; otherwise return a PreconditionFailed. Type: String Default: None Constraints: None. If the Etag does not match, the object is not copied.	No
CopySourceIfNoneMatch	Copies the object if its entity tag (ETag) is different than the specified Etag; otherwise returns an error. Type: String Default: None Constraints: None.	No
CopySourceIfUnmodifiedSince	Copies the object if it hasn't been modified since the specified time; otherwise returns a PreconditionFailed. Type: dateTime Default: None	No
CopySourceIfModifiedSince	Copies the object if it has been modified since the specified time; otherwise returns an error. Type: dateTime Default: None	No

Response Syntax

```
<CopyObjectResponse xmlns="http://bucket_name.s3.amazonaws.com/2006-03-01">
  <CopyObjectResponse>
    <ETag>"etag"</ETag>
    <LastModified>timestamp</LastModified>
  </CopyObjectResponse>
</CopyObjectResponse>
```

Response Elements

Following is a list of response elements.

> **Note**
>
> The SOAP API does not return extra whitespace. Extra whitespace is only returned by the REST API.

Name	Description
`Etag`	Returns the etag of the new object. The ETag only reflects changes to the contents of an object, not its metadata. Type: String Ancestor: CopyObjectResult
`LastModified`	Returns the date the object was last modified. Type: String Ancestor: CopyObjectResult

For information about general response elements, see Using REST Error Response Headers.

Special Errors

There are no special errors for this operation. For information about general Amazon S3 errors, see List of error codes.

Examples

This example copies the `flotsam` object from the `pacific` bucket to the `jetsam` object of the `atlantic` bucket, preserving its metadata.

Sample Request

```
<CopyObject xmlns="http://doc.s3.amazonaws.com/2006-03-01">
  <SourceBucket>pacific</SourceBucket>
  <SourceObject>flotsam</SourceObject>
  <DestinationBucket>atlantic</DestinationBucket>
  <DestinationObject>jetsam</DestinationObject>
  <AWSAccessKeyId>AKIAIOSFODNN7EXAMPLE</AWSAccessKeyId>
  <Timestamp>2008-02-18T13:54:10.183Z</Timestamp>
  <Signature>Iuyz3d3P0aTou39dzbq7RrtSFmw=</Signature>
</CopyObject>
```

Sample Response

```
<CopyObjectResponse xmlns="http://doc.s3.amazonaws.com/2006-03-01">
  <CopyObjectResponse>
    <ETag>"828ef3fdfa96f00ad9f27c383fc9ac7f"</ETag>
    <LastModified>2008-02-18T13:54:10.183Z</LastModified>
  </CopyObjectResponse>
</CopyObjectResponse>
```

This example copies the "tweedledee" object from the wonderland bucket to the "tweedledum" object of the wonderland bucket, replacing its metadata.

Sample Request

```
<CopyObject xmlns="http://doc.s3.amazonaws.com/2006-03-01">
  <SourceBucket>wonderland</SourceBucket>
  <SourceObject>tweedledee</SourceObject>
  <DestinationBucket>wonderland</DestinationBucket>
  <DestinationObject>tweedledum</DestinationObject>
  <MetadataDirective >REPLACE</MetadataDirective >
```

```
  <Metadata>
    <Name>Content-Type</Name>
    <Value>text/plain</Value>
  </Metadata>
  <Metadata>
    <Name>relationship</Name>
    <Value>twins</Value>
  </Metadata>
  <AWSAccessKeyId>AKIAIOSFODNN7EXAMPLE</AWSAccessKeyId>
  <Timestamp>2008-02-18T13:54:10.183Z</Timestamp>
  <Signature>Iuyz3d3P0aTou39dzbq7RrtSFmw=</Signature>
</CopyObject>
```

Sample Response

```
<CopyObjectResponse xmlns="http://doc.s3.amazonaws.com/2006-03-01">
  <CopyObjectResponse>
    <ETag>"828ef3fdfa96f00ad9f27c383fc9ac7f"</ETag>
    <LastModified>2008-02-18T13:54:10.183Z</LastModified>
  </CopyObjectResponse>
</CopyObjectResponse>
```

Related Resources

- PutObject (SOAP API)
- PutObjectInline (SOAP API)

GetObject (SOAP API)

> **Note**
>
> SOAP support over HTTP is deprecated, but it is still available over HTTPS. New Amazon S3 features will not be supported for SOAP. We recommend that you use either the REST API or the AWS SDKs.

The `GetObject` operation returns the current version of an object. If you try to `GetObject` an object that has a delete marker as its current version, S3 returns a 404 error. You cannot use the SOAP API to retrieve a specified version of an object. To do that, use the REST API. For more information, see Versioning. For more options, use the GetObjectExtended (SOAP API) operation.

> **Note**
>
> Object key names with the value "soap" aren't supported for virtual-hosted-style requests. For object key name values where "soap" is used, a path-style URL must be used instead.

Example

This example gets the "Nelson" object from the "quotes" bucket.

Sample Request

```
<GetObject xmlns="http://doc.s3.amazonaws.com/2006-03-01">
  <Bucket>quotes</Bucket>
  <Key>Nelson</Key>
  <GetMetadata>true</GetMetadata>
  <GetData>true</GetData>
  <InlineData>true</InlineData>
  <AWSAccessKeyId>AKIAIOSFODNN7EXAMPLE</AWSAccessKeyId>
  <Timestamp>2006-03-01T12:00:00.183Z</Timestamp>
  <Signature>Iuyz3d3P0aTou39dzbqaEXAMPLE=</Signature>
</GetObject>
```

Sample Response

```
<GetObjectResponse xmlns="http://s3.amazonaws.com/doc/2006-03-01">
  <GetObjectResponse>
    <Status>
      <Code>200</Code>
      <Description>OK</Description>
    </Status>
    <Metadata>
      <Name>Content-Type</Name>
      <Value>text/plain</Value>
    </Metadata>
    <Metadata>
      <Name>family</Name>
      <Value>Muntz</Value>
    </Metadata>
    <Data>aGEtaGE=</Data>
    <LastModified>2006-01-01T12:00:00.000Z</LastModified>
    <ETag>&amp;quot;828ef3fdfa96f00ad9f27c383fc9ac7f&amp;quot;</ETag>
```

```
  </GetObjectResponse>
</GetObjectResponse>
```

Elements

- `Bucket:` The bucket from which to retrieve the object.
- `Key:` The key that identifies the object.

> **Important**
>
> Replacement must be made for object keys containing special characters (such as carriage returns) when using XML requests. For more information, see XML related object key constraints.

- `GetMetadata:` The metadata is returned with the object if this is true.
- `GetData:` The object data is returned if this is true.
- `InlineData:` If this is true, then the data is returned, base 64-encoded, as part of the SOAP body of the response. If false, then the data is returned as a SOAP attachment. The InlineData option is not suitable for use with large objects. The system limits this operation to working with 1MB of data or less. A GetObject request with the InlineData flag set will fail with the `InlineDataTooLargeError` status code if the resulting Data parameter would have encoded more than 1MB. To download large objects, consider calling GetObject without setting the InlineData flag, or use the REST API instead.

Returned Elements

- `Metadata:` The name-value paired metadata stored with the object.
- `Data:` If InlineData was true in the request, this contains the base 64 encoded object data.
- `LastModified:` The time that the object was stored in Amazon S3.
- `ETag:` The object's entity tag. This is a hash of the object that can be used to do conditional gets. The ETag only reflects changes to the contents of an object, not its metadata.

Access Control

You can read an object only if you have been granted `READ` access to the object.

SOAP Chunked and Resumable Downloads

To provide GET flexibility, Amazon S3 supports chunked and resumable downloads.

Select from the following:

- For large object downloads, you might want to break them into smaller chunks. For more information, see Range GETs
- For GET operations that fail, you can design your application to download the remainder instead of the entire file. For more information, see REST GET Error Recovery

Range GETs

For some clients, you might want to break large downloads into smaller downloads. To break a GET into smaller units, use Range.

Before you can break a GET into smaller units, you must determine its size. For example, the following request gets the size of the bigfile object.

```
<ListBucket xmlns="http://doc.s3.amazonaws.com/2006-03-01">
  <Bucket>bigbucket</Bucket>
  <Prefix>bigfile</Prefix>
  <MaxKeys>1</MaxKeys>
  <AWSAccessKeyId>AKIAIOSFODNN7EXAMPLE</AWSAccessKeyId>
  <Timestamp>2006-03-01T12:00:00.183Z</Timestamp>
  <Signature>Iuyz3d3P0aTou39dzbqaEXAMPLE=</Signature>
</ListBucket>
```

Amazon S3 returns the following response.

```
<ListBucketResult xmlns="http://s3.amazonaws.com/doc/2006-03-01">
  <Name>quotes</Name>
  <Prefix>N</Prefix>
  <MaxKeys>1</MaxKeys>
  <IsTruncated>false</IsTruncated>
  <Contents>
    <Key>bigfile</Key>
    <LastModified>2006-01-01T12:00:00.000Z</LastModified>
    <ETag>&amp;quot;828ef3fdfa96f00ad9f27c383fc9ac7f&amp;quot;</ETag>
    <Size>2023276</Size>
```

```
    <StorageClass>STANDARD</StorageClass>
    <Owner>
      <ID>bcaf1ffd86f41161ca5fb16fd081034f</ID>
      <DisplayName>bigfile</DisplayName>
     </Owner>
  </Contents>
</ListBucketResult>
```

Following is a request that downloads the first megabyte from the bigfile object.

```
<GetObject xmlns="http://doc.s3.amazonaws.com/2006-03-01">
  <Bucket>bigbucket</Bucket>
  <Key>bigfile</Key>
  <GetMetadata>true</GetMetadata>
  <GetData>true</GetData>
  <InlineData>true</InlineData>
  <ByteRangeStart>0</ByteRangeStart>
  <ByteRangeEnd>1048576</ByteRangeEnd>
  <AWSAccessKeyId>AKIAIOSFODNN7EXAMPLE</AWSAccessKeyId>
  <Timestamp>2006-03-01T12:00:00.183Z</Timestamp>
  <Signature>Iuyz3d3P0aTou39dzbqaEXAMPLE=</Signature>
</GetObject>
```

Amazon S3 returns the first megabyte of the file and the Etag of the file.

```
<GetObjectResponse xmlns="http://s3.amazonaws.com/doc/2006-03-01">
  <GetObjectResponse>
    <Status>
      <Code>200</Code>
      <Description>OK</Description>
    </Status>
    <Metadata>
      <Name>Content-Type</Name>
      <Value>text/plain</Value>
    </Metadata>
    <Metadata>
      <Name>family</Name>
      <Value>Muntz</Value>
    </Metadata>
    <Data>--first megabyte of bigfile--</Data>
    <LastModified>2006-01-01T12:00:00.000Z</LastModified>
    <ETag>"828ef3fdfa96f00ad9f27c383fc9ac7f"</ETag>
  </GetObjectResponse>
```

```
</GetObjectResponse>
```

To ensure the file did not change since the previous portion was downloaded, specify the IfMatch element. Although the IfMatch element is not required, it is recommended for content that is likely to change.

The following is a request that gets the remainder of the file, using the IfMatch request header.

```
<GetObject xmlns="http://doc.s3.amazonaws.com/2006-03-01">
  <Bucket>bigbucket</Bucket>
  <Key>bigfile</Key>
  <GetMetadata>true</GetMetadata>
  <GetData>true</GetData>
  <InlineData>true</InlineData>
  <ByteRangeStart>10485761</ByteRangeStart>
  <ByteRangeEnd>2023276</ByteRangeEnd>
  <IfMatch>"828ef3fdfa96f00ad9f27c383fc9ac7f"</IfMatch>
  <AWSAccessKeyId>AKIAIOSFODNN7EXAMPLE</AWSAccessKeyId>
  <Timestamp>2006-03-01T12:00:00.183Z</Timestamp>
  <Signature>Iuyz3d3P0aTou39dzbqaEXAMPLE=</Signature>
</GetObject>
```

Amazon S3 returns the following response and the remainder of the file.

```
<GetObjectResponse xmlns="http://s3.amazonaws.com/doc/2006-03-01">
  <GetObjectResponse>
    <Status>
      <Code>200</Code>
      <Description>OK</Description>
    </Status>
    <Metadata>
      <Name>Content-Type</Name>
      <Value>text/plain</Value>
    </Metadata>
    <Metadata>
      <Name>family</Name>
      <Value>>Muntz</Value>
    </Metadata>
    <Data>--remainder of bigfile--</Data>
    <LastModified>2006-01-01T12:00:00.000Z</LastModified>
    <ETag>"828ef3fdfa96f00ad9f27c383fc9ac7f"</ETag>
  </GetObjectResponse>
```

```
</GetObjectResponse>
```

Versioned GetObject

The following request returns the specified version of the object in the bucket.

```
<GetObject xmlns="http://doc.s3.amazonaws.com/2006-03-01">
<Bucket>quotes</Bucket>
<Key>Nelson</Key>
<GetMetadata>true</GetMetadata>
<GetData>true</GetData>
<InlineData>true</InlineData>
<AWSAccessKeyId>AKIAIOSFODNN7EXAMPLE</AWSAccessKeyId>
<Timestamp>2006-03-01T12:00:00.183Z</Timestamp>
<Signature>Iuyz3d3P0aTou39dzbqaEXAMPLE=</Signature>
</GetObject>
```

Sample Response

```
<GetObjectResponse xmlns="http://s3.amazonaws.com/doc/2006-03-01">
<GetObjectResponse>
<Status>
<Code>200</Code>
<Description>OK</Description>
</Status>
<Metadata>
<Name>Content-Type</Name>
<Value>text/plain</Value>
</Metadata>
<Metadata>
<Name>family</Name>
<Value>Muntz</Value>
</Metadata>
<Data>aGEtaGE=</Data>
<LastModified>2006-01-01T12:00:00.000Z</LastModified>
<ETag>&amp;quot;828ef3fdfa96f00ad9f27c383fc9ac7f&amp;quot;</ETag>
</GetObjectResponse>
</GetObjectResponse>
```

REST GET Error Recovery

If an object GET fails, you can get the rest of the file by specifying the range to download. To do so, you must get the size of the object using `ListBucket` and perform a range `GET` on the remainder of the file. For more information, see GetObjectExtended (SOAP API).

Related Resources

Operations on Objects (SOAP API)

GetObjectExtended (SOAP API)

> **Note**
>
> SOAP support over HTTP is deprecated, but it is still available over HTTPS. New Amazon S3 features will not be supported for SOAP. We recommend that you use either the REST API or the AWS SDKs.

`GetObjectExtended` is exactly like GetObject (SOAP API), except that it supports the following additional elements that can be used to accomplish much of the same functionality provided by HTTP GET headers (go to http://www.w3.org/Protocols/rfc2616/rfc2616-sec14.html).

GetObjectExtended supports the following elements in addition to those supported by GetObject:

- `ByteRangeStart, ByteRangeEnd:` These elements specify that only a portion of the object data should be retrieved. They follow the behavior of the HTTP byte ranges (go to http://www.w3.org/Protocols/rfc2616/rfc2616-sec14.html#sec14.35).
- `IfModifiedSince:` Return the object only if the object's timestamp is later than the specified timestamp. (http://www.w3.org/Protocols/rfc2616/rfc2616-sec14.html#sec14.25)
- `IfUnmodifiedSince:` Return the object only if the object's timestamp is earlier than or equal to the specified timestamp. (go to http://www.w3.org/Protocols/rfc2616/rfc2616-sec14.html#sec14.28)
- `IfMatch:` Return the object only if its ETag matches the supplied tag(s). (go to http://www.w3.org/Protocols/rfc2616/rfc2616-sec14.html#sec14.24)
- `IfNoneMatch:` Return the object only if its ETag does not match the supplied tag(s). (go to http://www.w3.org/Protocols/rfc2616/rfc2616-sec14.html#sec14.26)

- `ReturnCompleteObjectOnConditionFailure`:ReturnCompleteObjectOnConditionFailure: If true, then if the request includes a range element and one or both of IfUnmodifiedSince/IfMatch elements, and the condition fails, return the entire object rather than a fault. This enables the If-Range functionality (go to http://www.w3.org/Protocols/rfc2616/rfc2616-sec14.html#sec14.27).

DeleteObject (SOAP API)

> **Note**
>
> SOAP support over HTTP is deprecated, but it is still available over HTTPS. New Amazon S3 features will not be supported for SOAP. We recommend that you use either the REST API or the AWS SDKs.

The `DeleteObject` operation removes the specified object from Amazon S3. Once deleted, there is no method to restore or undelete an object.

> **Note**
>
> If you delete an object that does not exist, Amazon S3 will return a success (not an error message).

Example

This example deletes the "Nelson" object from the "quotes" bucket.

`Sample Request`

```
<DeleteObject xmlns="http://doc.s3.amazonaws.com/2006-03-01">
  <Bucket>quotes</Bucket>
  <Key>Nelson</Key>
  <AWSAccessKeyId> AKIAIOSFODNN7EXAMPLE</AWSAccessKeyId>
  <Timestamp>2006-03-01T12:00:00.183Z</Timestamp>
  <Signature>Iuyz3d3P0aTou39dzbqaEXAMPLE=</Signature>
</DeleteObject>
```

`Sample Response`

```
<DeleteObjectResponse xmlns="http://s3.amazonaws.com/doc/2006-03-01">
  <DeleteObjectResponse>
    <Code>200</Code>
    <Description>OK</Description>
  </DeleteObjectResponse>
</DeleteObjectResponse>
```

Elements

- `Bucket`: The bucket that holds the object.
- `Key`: The key that identifies the object.

> **Important**
>
> Replacement must be made for object keys containing special characters (such as carriage returns) when using XML requests. For more information, see XML related object key constraints.

Access Control

You can delete an object only if you have `WRITE` access to the bucket, regardless of who owns the object or what rights are granted to it.

GetObjectAccessControlPolicy (SOAP API)

> **Note**
>
> SOAP support over HTTP is deprecated, but it is still available over HTTPS. New Amazon S3 features will not be supported for SOAP. We recommend that you use either the REST API or the AWS SDKs.

The `GetObjectAccessControlPolicy` operation fetches the access control policy for an object.

Important

Replacement must be made for object keys containing special characters (such as carriage returns) when using XML requests. For more information, see XML related object key constraints.

Example

This example retrieves the access control policy for the "Nelson" object from the "quotes" bucket.

Sample Request

```
<GetObjectAccessControlPolicy xmlns="http://doc.s3.amazonaws.com/2006-03-01">
  <Bucket>quotes</Bucket>
  <Key>Nelson</Key>
  <AWSAccessKeyId>AKIAIOSFODNN7EXAMPLE</AWSAccessKeyId>
  <Timestamp>2006-03-01T12:00:00.183Z</Timestamp>
  <Signature>Iuyz3d3P0aTou39dzbqaEXAMPLE=</Signature>
</GetObjectAccessControlPolicy>
```

Sample Response

```
<AccessControlPolicy>
  <Owner>
    <ID>a9a7b886d6fd24a541bf9b1c61be666e9</ID>
    <DisplayName>chriscustomer</DisplayName>
  </Owner>
  <AccessControlList>
    <Grant>
      <Grantee xsi:type="CanonicalUser">
        <ID>a9a7b841bf9b1c61be666e9</ID>
        <DisplayName>chriscustomer</DisplayName>
      </Grantee>
      <Permission>FULL_CONTROL</Permission>
    </Grant>
    <Grant>
      <Grantee xsi:type="Group">
        <URI>http://acs.amazonaws.com/groups/global/AllUsers<URI>
      </Grantee>
      <Permission>READ</Permission>
    </Grant>
```

```
  </AccessControlList>
</AccessControlPolicy>
```

Response Body

The response contains the access control policy for the bucket. For an explanation of this response, SOAP Access Policy .

Access Control

You must have READ_ACP rights to the object in order to retrieve the access control policy for an object.

SetObjectAccessControlPolicy (SOAP API)

> **Note**
>
> SOAP support over HTTP is deprecated, but it is still available over HTTPS. New Amazon S3 features will not be supported for SOAP. We recommend that you use either the REST API or the AWS SDKs.

The SetObjectAccessControlPolicy operation sets the access control policy for an existing object. If successful, the previous access control policy for the object is entirely replaced with the specified access control policy.

Example

This example gives the specified user (usually the owner) FULL_CONTROL access to the "Nelson" object from the "quotes" bucket.

Sample Request

```
<SetObjectAccessControlPolicy xmlns="http://doc.s3.amazonaws.com/2006-03-01">
  <Bucket>quotes</Bucket>
  <Key>Nelson</Key>
  <AccessControlList>
    <Grant>
      <Grantee xsi:type="CanonicalUser">
        <ID>a9a7b886d6fd24a52fe8ca5bef65f89a64e0193f23000e241bf9b1c61be666e9</ID>
        <DisplayName>chriscustomer</DisplayName>
```

```
      </Grantee>
      <Permission>FULL_CONTROL</Permission>
    </Grant>
  </AccessControlList>
  <AWSAccessKeyId>AKIAIOSFODNN7EXAMPLE</AWSAccessKeyId>
  <Timestamp>2006-03-01T12:00:00.183Z</Timestamp>
  <Signature>Iuyz3d3P0aTou39dzbqaEXAMPLE=</Signature>
</SetObjectAccessControlPolicy>
```

Sample Response

```
<SetObjectAccessControlPolicyResponse xmlns="http://s3.amazonaws.com/doc/2006-03-01">
  <SetObjectAccessControlPolicyResponse>
    <Code>200</Code>
    <Description>OK</Description>
  </SetObjectAccessControlPolicyResponse>
</SetObjectAccessControlPolicyResponse>
```

Key

Important

Replacement must be made for object keys containing special characters (such as carriage returns) when using XML requests. For more information, see XML related object key constraints.

Access Control

You must have WRITE_ACP rights to the object in order to set the access control policy for a bucket.

SOAP Error Responses

Note

SOAP support over HTTP is deprecated, but it is still available over HTTPS. New Amazon S3 features will not be supported for SOAP. We recommend that you use either the REST API or the AWS SDKs.

In SOAP, an error result is returned to the client as a SOAP fault, with the HTTP response code 500. If you do not receive a SOAP fault, then your request was successful. The Amazon S3 SOAP fault code is comprised of a standard SOAP 1.1 fault code (either "Server" or "Client") concatenated with the Amazon S3-specific error code. For example: "Server.InternalError" or "Client.NoSuchBucket". The SOAP fault string element contains a generic, human readable error message in English. Finally, the SOAP fault detail element contains miscellaneous information relevant to the error.

For example, if you attempt to delete the object "Fred", which does not exist, the body of the SOAP response contains a "NoSuchKey" SOAP fault.

The following example shows a sample SOAP error response.

```
<soapenv:Body>
  <soapenv:Fault>
    <Faultcode>soapenv:Client.NoSuchKey</Faultcode>
    <Faultstring>The specified key does not exist.</Faultstring>
    <Detail>
      <Key>Fred</Key>
    </Detail>
  </soapenv:Fault>
  </soapenv:Body>
```

The following table explains the SOAP error response elements

Name	Description
`Detail`	Container for the key involved in the error Type: Container Ancestor: Body.Fault
`Fault`	Container for error information. Type: Container Ancestor: Body
`Faultcode`	The fault code is a string that uniquely identifies an error condition. It is meant to be read and understood by programs that detect and handle errors by type. For more information, see List of Error Codes.

Name	Description
	Type: String Ancestor: Body.Fault
`Faultstring`	The fault string contains a generic description of the error condition in English. It is intended for a human audience. Simple programs display the message directly to the end user if they encounter an error condition they don't know how or don't care to handle. Sophisticated programs with more exhaustive error handling and proper internationalization are more likely to ignore the fault string. Type: String Ancestor: Body.Fault
`Key`	Identifies the key involved in the error Type: String Ancestor: Body.Fault

Appendix: Lifecycle Configuration APIs (Deprecated)

Bucket lifecycle configuration is updated to support filters based on object tags. That is, you can now specify a rule that specifies key name prefix, one or more object tags, or both to select a subset of objects to which the rule applies. The APIs have been updated accordingly. The following topics describes the prior version of the PUT and GET bucket lifecycle operations for backward compatibility.

Topics

- PUT Bucket lifecycle (Deprecated)
- GET Bucket lifecycle (Deprecated)

PUT Bucket lifecycle (Deprecated)

Description

> **Important**
>
> For an updated version of this API, see PutBucketLifecycleConfiguration. This version has been deprecated. Existing lifecycle configurations will work. For new lifecycle configurations, use the updated API.

Creates a new lifecycle configuration for the bucket or replaces an existing lifecycle configuration. For information about lifecycle configuration, see Object Lifecycle Management in the *Amazon Simple Storage Service User Guide*.

Permissions

By default, all Amazon S3 resources, including buckets, objects, and related subresources (for example, lifecycle configuration and website configuration) are private. Only the resource owner, the AWS account that created the resource, can access it. The resource owner can optionally grant access permissions to others by writing an access policy. For this operation, users must get the `s3:PutLifecycleConfiguration` permission.

You can also explicitly deny permissions. Explicit denial also supersedes any other permissions. If you want to prevent users or accounts from removing or deleting objects from your bucket, you must deny them permissions for the following actions:

- `s3:DeleteObject`
- `s3:DeleteObjectVersion`
- `s3:PutLifecycleConfiguration`

For more information about permissions, see Managing Access Permissions to Your Amazon S3 Resources in the *Amazon Simple Storage Service User Guide*.

Requests

Syntax

```
PUT /?lifecycle HTTP/1.1
Host: bucketname.s3.amazonaws.com
Content-Length: length
Date: date
Authorization: authorization string
Content-MD5: MD5

Lifecycle configuration in the request body
```

For details about authorization strings, see Authenticating Requests (AWS Signature Version 4).

Request Parameters

This implementation of the operation does not use request parameters.

Request Headers

Name	Description	Required
Content-MD5	The base64-encoded 128-bit MD5 digest of the data. You must use this header as a message integrity check to verify that the request body was not corrupted in transit. For more information, see RFC 1864. Type: String Default: None	Yes

Request Body

In the request, you specify the lifecycle configuration in the request body. The lifecycle configuration is specified as XML. The following is an example of a basic lifecycle configuration. It specifies one rule. The `Prefix` in the rule identifies objects to which the rule applies. The rule also specifies two actions (`Transition`and `Expiration`). Each action specifies a timeline when

Amazon S3 should perform the action. The `Status` indicates whether the rule is enabled or disabled.

```
<LifecycleConfiguration>
    <Rule>
        <ID>sample-rule</ID>
        <Prefix>key-prefix</Prefix>
        <Status>rule-status</Status>
        <Transition>
           <Date>value</Date>
           <StorageClass>storage class</StorageClass>
        </Transition>
        <Expiration>
           <Days>value</Days>
        </Expiration>
    </Rule>
</LifecycleConfiguration>
```

If the state of your bucket is versioning-enabled or versioning-suspended, you can have many versions of the same object: one current version and zero or more noncurrent versions. The following lifecycle configuration specifies the actions (`NoncurrentVersionTransition`, `NoncurrentVersionExpiration`) that are specific to noncurrent object versions.

```
<LifecycleConfiguration>
    <Rule>
        <ID>sample-rule</ID>
        <Prefix>key-prefix</Prefix>
        <Status>rule-status</Status>
        <NoncurrentVersionTransition>
           <NoncurrentDays>value</NoncurrentDays>
           <StorageClass>storage class</StorageClass>
        </NoncurrentVersionTransition>
        <NoncurrentVersionExpiration>
           <NoncurrentDays>value</NoncurrentDays>
        </NoncurrentVersionExpiration>
    </Rule>
</LifecycleConfiguration>
```

You can use the multipart upload API to upload large objects in parts. For more information about multipart uploads, see Multipart Upload Overview in the *Amazon Simple Storage Service User Guide*. With lifecycle configuration, you can tell Amazon S3 to cancel incomplete multipart

uploads, which are identified by the key name prefix specified in the rule, if they don't complete within a specified number of days. When Amazon S3 cancels a multipart upload, it deletes all parts associated with the upload. This ensures that you don't have incomplete multipart uploads that have left parts stored in Amazon S3, so you don't have to pay storage costs for them. The following is an example lifecycle configuration that specifies a rule with the `AbortIncompleteMultipartUpload` action. This action tells Amazon S3 to cancel incomplete multipart uploads seven days after initiation.

```
<LifecycleConfiguration>
    <Rule>
        <ID>sample-rule</ID>
        <Prefix>SomeKeyPrefix/</Prefix>
        <Status>rule-status</Status>
        <AbortIncompleteMultipartUpload>
          <DaysAfterInitiation>7</DaysAfterInitiation>
        </AbortIncompleteMultipartUpload>
    </Rule>
</LifecycleConfiguration>
```

The following table describes the XML elements in the lifecycle configuration.

Name	Description	Required
`AbortIncompleteMultipartUpload`	Container for specifying when an incomplete multipart upload becomes eligible for an abort operation. Child: `DaysAfterInitiation` Type: Container Ancestor: `Rule`	Yes, if no other action is specified for the rule
`Date`	Date when you want Amazon S3 to take the action. For more information, see Lifecycle Rules: Based on a Specific Date in the *Amazon Simple Storage Service User Guide*.	Yes, if `Days` and `ExpiredObjectDelet`

Name	Description	Required
	The date value must conform to ISO 8601 format. The time is always midnight UTC. Type: String Ancestor: `Expiration` or `Transition`	`eMarker` are absent
`Days`	Specifies the number of days after object creation when the specific rule action takes effect. Type: Nonnegative Integer when used with `Transition`, Positive Integer when used with `Expiration` Ancestor: `Expiration`, `Transition`	Yes, if `Date` and `ExpiredObjectDeleteMarker` are absent
`DaysAfterInitiation`	Specifies the number of days after initiating a multipart upload when the multipart upload must be completed. If it does not complete by the specified number of days, it becomes eligible for an abort operation and Amazon S3 cancels the incomplete multipart upload. Type: Positive Integer Ancestor: `AbortIncompleteMultipartUpload`	Yes, if a parent tag is specified

Name	Description	Required
`Expiration`	This action specifies a period in an object's lifetime when Amazon S3 should take the appropriate expiration action. The action Amazon S3 takes depends on whether the bucket is versioning-enabled. • If versioning has never been enabled on the bucket, Amazon S3 deletes the only copy of the object permanently. • If the bucket is versioning-enabled (or versioning is suspended), the action applies only to the current version of the object. A versioning-enabled bucket can have many versions of the same object: one current version and zero or more noncurrent versions. Instead of deleting the current version, Amazon S3 makes it a noncurrent version by adding a delete marker as the new current version. **Important** If a bucket's state is versioning-suspended, Amazon S3 creates a delete marker with version ID `null`. If you have a version with version ID `null`, Amazon S3 overwrites that version.	Yes, if no other action is present in the `Rule`.

Name	Description	Required
	Note To set the expiration for noncurrent objects, use the `NoncurrentVersionExpiration` action. Type: Container Children: Days or Date Ancestor: Rule	
`ID`	Unique identifier for the rule. The value cannot be longer than 255 characters. Type: String Ancestor: Rule	No
`LifecycleConfiguration`	Container for lifecycle rules. You can add as many as 1000 rules. Type: Container Children: Rule Ancestor: None	Yes

Name	Description	Required
`ExpiredObjectDeleteMarker`	On a versioned bucket (a versioning-enabled or versioning-suspended bucket), you can add this element in the lifecycle configuration to tell Amazon S3 to delete expired object delete markers. For an example, see Example 8: Removing Expired Object Delete Markers in the *Amazon Simple Storage Service User Guide*. Don't add it to a non-versioned bucket, because that type of bucket cannot include delete markers. Type: String Valid values: true | false (the value `false` is allowed, but it is no-op, which means that Amazon S3 will not take action) Ancestor: `Expiration`	Yes, if `Date` and `Days` are absent
`NoncurrentDays`	Specifies the number of days an object is noncurrent before Amazon S3 can perform the associated action. For information about the noncurrent days calculations, see How Amazon S3 Calculates When an Object Became Noncurrent in the *Amazon Simple Storage Service User Guide*. Type: Nonnegative Integer when used with `NoncurrentVersionTransition`, Positive Integer when used with `NoncurrentVersionExpiration` Ancestor: `NoncurrentVersionExpiration` or `NoncurrentVersionTransition`	Yes

Name	Description	Required
NoncurrentVersionExpiration	Specifies when noncurrent object versions expire. Upon expiration, Amazon S3 permanently deletes the noncurrent object versions. Set this lifecycle configuration action on a bucket that has versioning enabled (or suspended) to tell Amazon S3 to delete noncurrent object versions at a specific period in the object's lifetime. Type: Container Children: NoncurrentDays Ancestor: Rule	Yes, if no other action is present in the Rule
NoncurrentVersionTransition	Container for the transition rule that describes when noncurrent objects transition to the STANDARD_IA , ONEZONE_IA , or GLACIER storage class. If your bucket is versioning-enabled (or if versioning is suspended), you can set this action to tell Amazon S3 to transition noncurrent object versions at a specific period in the object's lifetime. Type: Container Children: NoncurrentDays and StorageClass Ancestor: Rule	Yes, if no other action is present in the Rule

Name	Description	Required
`Prefix`	Object key prefix that identifies one or more objects to which the rule applies. Type: String Ancestor: Rule	Yes
`Rule`	Container for a lifecycle rule. A lifecycle configuration can contain as many as 1000 rules. Type: Container Ancestor:LifecycleConfiguration	Yes
`Status`	If enabled, Amazon S3 executes the rule as scheduled. If it is disabled, Amazon S3 ignores the rule. Type: String Ancestor: Rule Valid values: Enabled, Disabled	Yes
`StorageClass`	Specifies the Amazon S3 storage class to which you want the object to transition. Type: String Ancestor: Transition and NoncurrentVersionTransition Valid values: STANDARD_IA | ONEZONE_IA | GLACIER	Yes This element is required only if you specify one or both its ancestors.

Name	Description	Required
`Transition`	This action specifies a period in the objects' lifetime when Amazon S3 should transition them to the `STANDARD_IA` , `ONEZONE_IA` , or GLACIER storage class. When this action is in effect, what Amazon S3 does depends on whether the bucket is versioning-enabled. • If versioning has never been enabled on the bucket, Amazon S3 transitions the only copy of the object to the specified storage class. • If your bucket is versioning-enabled (or versioning is suspended), Amazon S3 transitions only the current versions of objects identified in the rule. **Note** A versioning-enabled bucket can have many versions of an object. This action has no effect on noncurrent object versions. To transition noncurrent objects, you must use the `NoncurrentVersionTransition` action. Type: Container Children: Days or Date, and StorageClass	Yes, if no other action is present in the `Rule`

Name	Description	Required
	Ancestor: Rule	

Responses

Response Headers

This implementation of the operation uses only response headers that are common to most responses. For more information, see Common Response Headers.

Response Elements

This implementation of the operation does not return response elements.

Special Errors

This implementation of the operation does not return special errors. For general information about Amazon S3 errors and a list of error codes, see Error Responses.

Examples

Example 1: Add Lifecycle Configuration to a Bucket That Is Not Versioning-enabled

The following lifecycle configuration specifies two rules, each with one action.

- The Transition action tells Amazon S3 to transition objects with the "documents/" prefix to the GLACIER storage class 30 days after creation.
- The Expiration action tells Amazon S3 to delete objects with the "logs/" prefix 365 days after creation.

```
<LifecycleConfiguration>
  <Rule>
    <ID>id1</ID>
    <Prefix>documents/</Prefix>
    <Status>Enabled</Status>
    <Transition>
      <Days>30</Days>
      <StorageClass>GLACIER</StorageClass>
    </Transition>
```

```
  </Rule>
  <Rule>
    <ID>id2</ID>
    <Prefix>logs/</Prefix>
    <Status>Enabled</Status>
    <Expiration>
      <Days>365</Days>
    </Expiration>
  </Rule>
</LifecycleConfiguration>
```

The following is a sample PUT /?lifecycle request that adds the preceding lifecycle configuration to the examplebucket bucket.

```
PUT /?lifecycle HTTP/1.1
Host: examplebucket.s3.amazonaws.com
x-amz-date: Wed, 14 May 2014 02:11:21 GMT
Content-MD5: q6yJDlIkcBaGGfb3QLY69A==
Authorization: authorization string
Content-Length: 415

<LifecycleConfiguration>
  <Rule>
    <ID>id1</ID>
    <Prefix>documents/</Prefix>
    <Status>Enabled</Status>
    <Transition>
      <Days>30</Days>
      <StorageClass>GLACIER</StorageClass>
    </Transition>
  </Rule>
  <Rule>
    <ID>id2</ID>
    <Prefix>logs/</Prefix>
    <Status>Enabled</Status>
    <Expiration>
      <Days>365</Days>
    </Expiration>
  </Rule>
</LifecycleConfiguration>
```

The following is a sample response.

```
HTTP/1.1 200 OK
x-amz-id-2: r+qR7+nhXtJDDIJ0JJYcd+1j5nM/rUFiiiZ/fNbDOsd3JUE8NWMLNHXmvPfwMpdc
x-amz-request-id: 9E26D08072A8EF9E
Date: Wed, 14 May 2014 02:11:22 GMT
Content-Length: 0
Server: AmazonS3
```

Example 2: Add Lifecycle Configuration to a Versioning-enabled Bucket

The following lifecycle configuration specifies two rules, each with one action for Amazon S3 to perform. You specify these actions when your bucket is versioning-enabled or versioning is suspended:

- The `NoncurrentVersionExpiration` action tells Amazon S3 to expire noncurrent versions of objects with the "logs/" prefix 100 days after the objects become noncurrent.
- The `NoncurrentVersionTransition` action tells Amazon S3 to transition noncurrent versions of objects with the "documents/" prefix to the GLACIER storage class 30 days after they become noncurrent.

```
<LifeCycleConfiguration>
  <Rule>
    <ID>DeleteAfterBecomingNonCurrent</ID>
    <Prefix>logs/</Prefix>
    <Status>Enabled</Status>
    <NoncurrentVersionExpiration>
      <NoncurrentDays>100</NoncurrentDays>
    </NoncurrentVersionExpiration>
  </Rule>
  <Rule>
    <ID>TransitionAfterBecomingNonCurrent</ID>
    <Prefix>documents/</Prefix>
    <Status>Enabled</Status>
    <NoncurrentVersionTransition>
      <NoncurrentDays>30</NoncurrentDays>
      <StorageClass>GLACIER</StorageClass>
    </NoncurrentVersionTransition>
  </Rule>
</LifeCycleConfiguration>
```

The following is a sample PUT /?lifecycle request that adds the preceding lifecycle configuration to the examplebucket bucket.

```
PUT /?lifecycle HTTP/1.1
Host: examplebucket.s3.amazonaws.com
x-amz-date: Wed, 14 May 2014 02:21:48 GMT
Content-MD5: 96rxH9mDqVNKkaZDddgnw==
Authorization: authorization string
Content-Length: 598

<LifeCycleConfiguration>
  <Rule>
    <ID>DeleteAfterBecomingNonCurrent</ID>
    <Prefix>logs/</Prefix>
    <Status>Enabled</Status>
    <NoncurrentVersionExpiration>
      <NoncurrentDays>1</NoncurrentDays>
    </NoncurrentVersionExpiration>
  </Rule>
  <Rule>
    <ID>TransitionSoonAfterBecomingNonCurrent</ID>
    <Prefix>documents/</Prefix>
    <Status>Enabled</Status>
    <NoncurrentVersionTransition>
      <NoncurrentDays>0</NoncurrentDays>
      <StorageClass>GLACIER</StorageClass>
    </NoncurrentVersionTransition>
  </Rule>
</LifeCycleConfiguration>
```

The following is a sample response.

```
HTTP/1.1 200 OK
x-amz-id-2: aXQ+KbIrmMmoO//3bMdDTw/CnjArwje+J49Hf+j44yRb/VmbIkgIO5A+PT98Cp/6k07hf
+LD2mY=
x-amz-request-id: 02D7EC4C10381EB1
Date: Wed, 14 May 2014 02:21:50 GMT
Content-Length: 0
Server: AmazonS3
```

Additional Examples

For more examples of transitioning objects to storage classes such as STANDARD_IA or ONEZONE_IA, see Examples of Lifecycle Configuration.

Related Resources

- GetBucketLifecycleConfiguration
- POST Object restore
- By default, a resource owner—in this case, a bucket owner, which is the AWS account that created the bucket—can perform any of the operations. A resource owner can also grant others permission to perform the operation. For more information, see the following topics in the *Amazon Simple Storage Service User Guide*:
  - Specifying Permissions in a Policy
  - Managing Access Permissions to Your Amazon S3 Resources

GET Bucket lifecycle (Deprecated)

Description

> **Important**
>
> For an updated version of this API, see GetBucketLifecycleConfiguration. If you configured a bucket lifecycle using the <filter> element, you should see an updated version of this topic. This topic is provided for backward compatibility.

Returns the `lifecycle` configuration information set on the bucket. For information about lifecycle configuration, go to Object Lifecycle Management in the *Amazon Simple Storage Service User Guide*.

To use this operation, you must have permission to perform the `s3:GetLifecycleConfiguration` action. The bucket owner has this permission by default. The bucket owner can grant this permission to others. For more information about permissions, see Managing Access Permissions to Your Amazon S3 Resources in the *Amazon Simple Storage Service User Guide*.

Requests

Syntax

```
GET /?lifecycle HTTP/1.1
Host: bucketname.s3.amazonaws.com
Date: date
Authorization: authorization string (see Authenticating Requests (AWS Signature Version 4))
```

Request Parameters

This implementation of the operation does not use request parameters.

Request Headers

This implementation of the operation uses only request headers that are common to all operations. For more information, see Common Request Headers.

Request Elements

This implementation of the operation does not use request elements.

Responses

Response Headers

This implementation of the operation uses only response headers that are common to most responses. For more information, see Common Response Headers.

Response Elements

This implementation of GET returns the following response elements.

Name	Description	Required
AbortIncompleteMultipartUpload	Container for specifying when an incomplete multipart upload becomes eligible for an abort operation. Child: DaysAfterInitiation Type: Container Ancestor: Rule	Yes, if no other action is specified for the rule
Date	Date when you want Amazon S3 to take the action. For more information, see Lifecycle Rules: Based on a Specific Date in the *Amazon Simple Storage Service User Guide*. The date value must conform to the ISO 8601 format. The time is always midnight UTC. Type: String Ancestor: Expiration or Transition	Yes, if Days and ExpiredObjectDeleteMarker are absent

Name	Description	Required
Days	Specifies the number of days after object creation when the specific rule action takes effect. The object's eligibility time is calculated as creation time + the number of days with the resulting time rounded to midnight UTC of the next day. Type: Non-negative Integer when used with Transition , Positive Integer when used with Expiration . Ancestor: Transition or Expiration	Yes, if Date and ExpiredObjectDeleteMarker are absent
DaysAfterInitiation	Specifies the number of days after initiating a multipart upload when the multipart upload must be completed. If it does not complete by the specified number of days, it becomes eligible for an abort operation and Amazon S3 cancels the incomplete multipart upload. Type: Positive Integer Ancestor: AbortIncompleteMultipartUpload	Yes, if Date is absent

Name	Description	Required
`Expiration`	This action specifies a period in the object's lifetime when Amazon S3 should take the appropriate expiration action. The expiration action occurs only on objects that are eligible according to the period specified in the child `Date` or `Days` element. The action Amazon S3 takes depends on whether the bucket is versioning enabled. • If versioning has never been enabled on the bucket, Amazon S3 deletes the only copy of the object permanently. • Otherwise, if your bucket is versioning-enabled (or versioning is suspended), the action applies only to the current version of the object. Buckets that are versioning-enabled or versioning-suspended can have many versions of the same object: one current version, and zero or more noncurrent versions. Instead of deleting the current version, Amazon S3 makes it a noncurrent version by adding a delete marker as the new current version. **Important** If the state of a bucket is versioning-suspended, Amazon S3 creates a delete marker with version ID `null`. If you have a version with	Yes, if the parent tag is specified

Name	Description	Required
	version ID `null`, then Amazon S3 overwrites that version. **Note** To set the expiration for noncurrent objects, you must use the `NoncurrentVersionExpiration` action. Type: Container Children: Days or Date Ancestor: Rule	
`ID`	Unique identifier for the rule. The value cannot be longer than 255 characters. Type: String Ancestor: Rule	No
`LifecycleConfiguration`	Container for lifecycle rules. You can add as many as 1000 rules. Type: Container Children: Rule Ancestor: None	Yes

Name	Description	Required
`ExpiredObjectDeleteMarker`	On a versioned bucket (versioning-enabled or versioning-suspended bucket), this element indicates whether Amazon S3 will delete any expired object delete markers in the bucket. For an example, go to Example 8: Specify Expiration Action to Remove Expired Object Delete Markers in the *Amazon Simple Storage Service User Guide*. Type: String Valid values: true | false (the value false is allowed but it is no-op, Amazon S3 doesn't take action if the value is false) Ancestor: `Expiration`	Yes, if `Date` and `Days` are absent
`NoncurrentDays`	Specifies the number of days that an object is noncurrent before Amazon S3 can perform the associated action. For information about calculating noncurrent days, see Lifecycle Rules Based on the Number of Days in the *Amazon Simple Storage Service User Guide*. Type: Nonnegative Integer when used with `NoncurrentVersionTransition`, Positive Integer when used with `NoncurrentVersionExpiration` Ancestor: `NoncurrentVersionExpiration` or `NoncurrentVersionTransition`	Yes, only if the ancestor is present

Name	Description	Required
NoncurrentVersionExpiration	Specifies when noncurrent object versions expire. Upon expiration, Amazon S3 permanently deletes the noncurrent object versions. Set this lifecycle configuration action on a bucket that has versioning enabled (or suspended) to request that Amazon S3 delete noncurrent object versions at a specific period in the object's lifetime. Type: Container Children: NoncurrentDays Ancestor: Rule	Yes, if no other action is present in the Rule
NoncurrentVersionTransition	Container for the transition rule that describes when noncurrent objects transition to the STANDARD_IA, ONEZONE_IA, or the GLACIER storage class. If your bucket is versioning-enabled (or versioning is suspended), you can set this action to request Amazon S3 to transition noncurrent object versions to the GLACIER storage class at a specific period in the object's lifetime. Type: Container Children: NoncurrentDays and StorageClass Ancestor: Rule	Yes, if no other action is present in the Rule

Name	Description	Required
`Prefix`	Object key prefix identifying one or more objects to which the rule applies. Type: String Ancestor: Rule	Yes
`Rule`	Container for a lifecycle rule. Type: Container Ancestor: LifecycleConfiguration	Yes
`Status`	If Enabled, Amazon S3 executes the rule as scheduled. If Disabled, Amazon S3 ignores the rule. Type: String Ancestor: Rule Valid values: Enabled or Disabled	Yes
`StorageClass`	Specifies the Amazon S3 storage class to which you want to transition the object. Type: String Ancestor: Transition and NoncurrentVersionTransition Valid values: `STANDARD_IA` | `ONEZONE_IA` | GLACIER	Yes

Name	Description	Required
`Transition`	This action specifies a period in the objects' lifetime when Amazon S3 should transition them to the `STANDARD_IA` , `ONEZONE_IA` , or GLACIER storage class. When this action is in effect, what Amazon S3 does depends on whether the bucket is versioning-enabled. • If versioning has never been enabled on the bucket, Amazon S3 transitions the only copy of the object to the specified storage class. • When your bucket is versioning-enabled (or versioning is suspended), Amazon S3 transitions only the current versions of the objects identified in the rule. **Note** A versioning-enabled or versioning-suspended bucket can contain many versions of an object. This action has no effect on the noncurrent object versions. To transition noncurrent objects, you must use the `NoncurrentVersionTransition` action. Type: Container	Yes, if no other action is present in the `Rule`

Name	Description	Required
	Children: Days or Date, and StorageClass Ancestor: Rule	

Special Errors

Error Code	Description	HTTP Status Code	SOAP Fault Code Prefix
`NoSuchLifecycleConfiguration`	The lifecycle configuration does not exist.	404 Not Found	Client

For general information about Amazon S3 errors and a list of error codes, see Error responses.

Examples

Example 1: Retrieve a Lifecycle Subresource

This example is a GET request to retrieve the `lifecycle` subresource from the specified bucket, and an example response with the returned lifecycle configuration.

Sample Request

```
GET /?lifecycle HTTP/1.1
Host: examplebucket.s3.amazonaws.com
x-amz-date: Thu, 15 Nov 2012 00:17:21 GMT
Authorization: signatureValue
```

Sample Response

```
HTTP/1.1 200 OK
x-amz-id-2: ITnGT1y4RyTmXa3rPi4hklTXouTf0hccUjo0iCPjz6FnfIutBj3M7fPGlWO2SEWp
x-amz-request-id: 51991C342C575321
Date: Thu, 15 Nov 2012 00:17:23 GMT
Server: AmazonS3
Content-Length: 358
```

```
<?xml version="1.0" encoding="UTF-8"?>
<LifecycleConfiguration xmlns="http://s3.amazonaws.com/doc/2006-03-01/">
    <Rule>
        <ID>Archive and then delete rule</ID>
        <Prefix>projectdocs/</Prefix>
        <Status>Enabled</Status>
       <Transition>
           <Days>30</Days>
           <StorageClass>STANDARD_IA</StorageClass>
        </Transition>
        <Transition>
           <Days>365</Days>
           <StorageClass>GLACIER</StorageClass>
        </Transition>
        <Expiration>
           <Days>3650</Days>
        </Expiration>
    </Rule>
</LifecycleConfiguration>
```

Related Resources

- PutBucketLifecycleConfiguration
- DeleteBucketLifecycle