API Reference

# AWS Lambda



**API Version 2015-03-31**

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# AWS Lambda: API Reference

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# Welcome

### Overview

AWS Lambda is a compute service that lets you run code without provisioning or managing servers. Lambda runs your code on a high-availability compute infrastructure and performs all of the administration of the compute resources, including server and operating system maintenance, capacity provisioning and automatic scaling, code monitoring and logging. With Lambda, you can run code for virtually any type of application or backend service. For more information about the Lambda service, see What is Lambda in the **AWS Lambda Developer Guide**.

Lambda Event Functions, previously known as Lambda functions, run your code in response to events and API calls. In the Lambda API, the AWS SDKs, and the AWS CLI, Event Functions are still called *functions*, for example in `CreateFunction` and `Invoke`. You don't need to change any existing code.

The *AWS Lambda API Reference* provides information about each of the API methods for Lambda Event Functions, including details about the parameters in each API request and response.

You can use Software Development Kits (SDKs), Integrated Development Environment (IDE) Toolkits, and command line tools to access the API. For installation instructions, see Tools for Amazon Web Services.

For a list of Region-specific endpoints that Lambda supports, see Lambda endpoints and quotas in the *AWS General Reference.*.

When making the API calls, you will need to authenticate your request by providing a signature. Lambda supports signature version 4. For more information, see Signature Version 4 signing process in the *AWS General Reference.*.

### CA certificates

Because AWS SDKs use the CA certificates from your computer, changes to the certificates on the AWS servers can cause connection failures when you attempt to use an SDK. You can prevent these failures by keeping your computer's CA certificates and operating system up-to-date. If you encounter this issue in a corporate environment and do not manage your own computer, you might need to ask an administrator to assist with the update process. The following list shows minimum operating system and Java versions:

- Microsoft Windows versions that have updates from January 2005 or later installed contain at least one of the required CAs in their trust list.
- Mac OS X 10.4 with Java for Mac OS X 10.4 Release 5 (February 2007), Mac OS X 10.5 (October 2007), and later versions contain at least one of the required CAs in their trust list.
- Red Hat Enterprise Linux 5 (March 2007), 6, and 7 and CentOS 5, 6, and 7 all contain at least one of the required CAs in their default trusted CA list.
- Java 1.4.2_12 (May 2006), 5 Update 2 (March 2005), and all later versions, including Java 6 (December 2006), 7, and 8, contain at least one of the required CAs in their default trusted CA list.

When accessing the Lambda management console or Lambda API endpoints, whether through browsers or programmatically, you will need to ensure your client machines support any of the following CAs:

- Amazon Root CA 1
- Starfield Services Root Certificate Authority - G2
- Starfield Class 2 Certification Authority

Root certificates from the first two authorities are available from Amazon trust services, but keeping your computer up-to-date is the more straightforward solution. To learn more about ACM-provided certificates, see AWS Certificate Manager FAQs.

This document was last published on November 17, 2026.

# Actions

The following actions are supported:

- AddLayerVersionPermission
- AddPermission
- CheckpointDurableExecution
- CreateAlias
- CreateCapacityProvider
- CreateCodeSigningConfig
- CreateEventSourceMapping
- CreateFunction
- CreateFunctionUrlConfig
- DeleteAlias
- DeleteCapacityProvider
- DeleteCodeSigningConfig
- DeleteDurableExecution
- DeleteEventSourceMapping
- DeleteFunction
- DeleteFunctionCodeSigningConfig
- DeleteFunctionConcurrency
- DeleteFunctionEventInvokeConfig
- DeleteFunctionUrlConfig
- DeleteLayerVersion
- DeleteProvisionedConcurrencyConfig
- DeleteResourcePolicy
- GetAccountSettings
- GetAlias
- GetCapacityProvider
- GetCodeSigningConfig
- GetDurableExecution

- GetDurableExecutionHistory
- GetDurableExecutionState
- GetEventSourceMapping
- GetFunction
- GetFunctionCodeSigningConfig
- GetFunctionConcurrency
- GetFunctionConfiguration
- GetFunctionEventInvokeConfig
- GetFunctionRecursionConfig
- GetFunctionScalingConfig
- GetFunctionUrlConfig
- GetLayerVersion
- GetLayerVersionByArn
- GetLayerVersionPolicy
- GetPolicy
- GetProvisionedConcurrencyConfig
- GetResourcePolicy
- GetRuntimeManagementConfig
- Invoke
- InvokeAsync
- InvokeWithResponseStream
- ListAliases
- ListCapacityProviders
- ListCodeSigningConfigs
- ListDurableExecutionsByFunction
- ListEventSourceMappings
- ListFunctionEventInvokeConfigs
- ListFunctions
- ListFunctionsByCodeSigningConfig
- ListFunctionUrlConfigs

- ListFunctionVersionsByCapacityProvider
- ListLayers
- ListLayerVersions
- ListProvisionedConcurrencyConfigs
- ListTags
- ListVersionsByFunction
- PauseDurableExecution
- PublishLayerVersion
- PublishVersion
- PutFunctionCodeSigningConfig
- PutFunctionConcurrency
- PutFunctionEventInvokeConfig
- PutFunctionRecursionConfig
- PutFunctionScalingConfig
- PutProvisionedConcurrencyConfig
- PutResourcePolicy
- PutRuntimeManagementConfig
- RemoveLayerVersionPermission
- RemovePermission
- ResumeDurableExecution
- SendDurableExecutionCallbackFailure
- SendDurableExecutionCallbackHeartbeat
- SendDurableExecutionCallbackSuccess
- StopDurableExecution
- TagResource
- UntagResource
- UpdateAlias
- UpdateCapacityProvider
- UpdateCodeSigningConfig
- UpdateEventSourceMapping

- UpdateFunctionCode
- UpdateFunctionConfiguration
- UpdateFunctionEventInvokeConfig
- UpdateFunctionUrlConfig

# AddLayerVersionPermission

Adds permissions to the resource-based policy of a version of an AWS Lambda layer. Use this action to grant layer usage permission to other accounts. You can grant permission to a single account, all accounts in an organization, or all AWS accounts.

To revoke permission, call RemoveLayerVersionPermission with the statement ID that you specified when you added it.

## Request Syntax

```
POST /2018-10-31/layers/LayerName/versions/VersionNumber/policy?RevisionId=RevisionId
 HTTP/1.1
Content-type: application/json

{
   "Action": "string",
   "OrganizationId": "string",
   "Principal": "string",
   "StatementId": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### LayerName

The name or Amazon Resource Name (ARN) of the layer.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+)|[a-zA-Z0-9-_]+`

Required: Yes

### RevisionId

Only update the policy if the revision ID matches the ID specified. Use this option to avoid modifying a policy that has changed since you last read it.

### VersionNumber

The version number.

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### Action

The API action that grants access to the layer. For example, `lambda:GetLayerVersion`.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 22.

Pattern: `lambda:GetLayerVersion`

Required: Yes

### OrganizationId

With the principal set to `*`, grant permission to all accounts in the specified organization.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 34.

Pattern: `o-[a-z0-9]{10,32}`

Required: No

### Principal

An account ID, or `*` to grant layer usage permission to all accounts in an organization, or all AWS accounts (if `organizationId` is not specified). For the last case, make sure that you really do want all AWS accounts to have usage permission to this layer.

Type: String

Pattern: `\d{12}|\*|arn:(aws[a-zA-Z-]*):iam::\d{12}:root`

Required: Yes

**StatementId**

An identifier that distinguishes the policy from others on the same layer version.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 100.

Pattern: `([a-zA-Z0-9-_]+)`

Required: Yes

## Response Syntax

```
HTTP/1.1 201
Content-type: application/json

{
   "RevisionId": "string",
   "Statement": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 201 response.

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

**RevisionId**

A unique identifier for the current revision of the policy.

Type: String

**Statement**

The permission statement.

Type: String

# Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**PolicyLengthExceededException**

The permissions policy for the resource is too large. For more information, see Lambda quotas.

HTTP Status Code: 400

**PreconditionFailedException**

The RevisionId provided does not match the latest RevisionId for the Lambda function or alias.

- **For AddPermission and RemovePermission API operations:** Call `GetPolicy` to retrieve the latest RevisionId for your resource.
- **For all other API operations:** Call `GetFunction` or `GetAlias` to retrieve the latest RevisionId for your resource.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 412

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# AddPermission

Grants a principal permission to use a function. You can apply the policy at the function level, or specify a qualifier to restrict access to a single version or alias. If you use a qualifier, the invoker must use the full Amazon Resource Name (ARN) of that version or alias to invoke the function. Note: Lambda does not support adding policies to version $LATEST.

To grant permission to another account, specify the account ID as the `Principal`. To grant permission to an organization defined in AWS Organizations, specify the organization ID as the `PrincipalOrgID`. For AWS services, the principal is a domain-style identifier that the service defines, such as `s3.amazonaws.com` or `sns.amazonaws.com`. For AWS services, you can also specify the ARN of the associated resource as the `SourceArn`. If you grant permission to a service principal without specifying the source, other accounts could potentially configure resources in their account to invoke your Lambda function.

This operation adds a statement to a resource-based permissions policy for the function. For more information about function policies, see Using resource-based policies for Lambda.

## Request Syntax

```
POST /2015-03-31/functions/FunctionName/policy?Qualifier=Qualifier HTTP/1.1
Content-type: application/json

{
   "Action": "string",
   "EventSourceToken": "string",
   "FunctionUrlAuthType": "string",
   "InvokedViaFunctionUrl": boolean,
   "Principal": "string",
   "PrincipalOrgID": "string",
   "RevisionId": "string",
   "SourceAccount": "string",
   "SourceArn": "string",
   "StatementId": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function, version, or alias.

**Name formats**

- **Function name** – `my-function` (name-only), `my-function:v1` (with alias).
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

You can append a version number or alias to any of the formats. The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

Required: Yes

### Qualifier

Specify a version or alias to add permissions to a published version of the function.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `\$(LATEST(\.PUBLISHED)?)|[a-zA-Z0-9-_$]+`

## Request Body

The request accepts the following data in JSON format.

### Action

The action that the principal can use on the function. For example, `lambda:InvokeFunction` or `lambda:GetFunction`.

Type: String

Pattern: `(lambda:[*]|lambda:[a-zA-Z]+|[*])`

Required: Yes

**EventSourceToken**

For Alexa Smart Home functions, a token that the invoker must supply.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: `[a-zA-Z0-9._\-]+`

Required: No

**FunctionUrlAuthType**

The type of authentication that your function URL uses. Set to `AWS_IAM` if you want to restrict access to authenticated users only. Set to `NONE` if you want to bypass IAM authentication to create a public endpoint. For more information, see Control access to Lambda function URLs.

Type: String

Valid Values: `NONE | AWS_IAM`

Required: No

**InvokedViaFunctionUrl**

Indicates whether the permission applies when the function is invoked through a function URL.

Type: Boolean

Required: No

**Principal**

The AWS service, AWS account, IAM user, or IAM role that invokes the function. If you specify a service, use `SourceArn` or `SourceAccount` to limit who can invoke the function through that service.

Type: String

Pattern: `[^\s]+`

Required: Yes

**PrincipalOrgID**

The identifier for your organization in AWS Organizations. Use this to grant permissions to all the AWS accounts under this organization.

Type: String

Length Constraints: Minimum length of 12. Maximum length of 34.

Pattern: `o-[a-z0-9]{10,32}`

Required: No

**RevisionId**

Update the policy only if the revision ID matches the ID that's specified. Use this option to avoid modifying a policy that has changed since you last read it.

Type: String

Required: No

**SourceAccount**

For AWS service, the ID of the AWS account that owns the resource. Use this together with `SourceArn` to ensure that the specified account owns the resource. It is possible for an Amazon S3 bucket to be deleted by its owner and recreated by another account.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 12.

Pattern: `\d{12}`

Required: No

**SourceArn**

For AWS services, the ARN of the AWS resource that invokes the function. For example, an Amazon S3 bucket or Amazon SNS topic.

Note that Lambda configures the comparison using the `StringLike` operator.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

Required: No

**StatementId**

A statement identifier that differentiates the statement from others in the same policy.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 100.

Pattern: `([a-zA-Z0-9-_]+)`

Required: Yes

## Response Syntax

```
HTTP/1.1 201
Content-type: application/json

{
   "Statement": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 201 response.

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

**Statement**

The permission statement that's added to the function policy.

Type: String

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**PolicyLengthExceededException**

The permissions policy for the resource is too large. For more information, see Lambda quotas.

HTTP Status Code: 400

**PreconditionFailedException**

The RevisionId provided does not match the latest RevisionId for the Lambda function or alias.

- **For AddPermission and RemovePermission API operations:** Call `GetPolicy` to retrieve the latest RevisionId for your resource.
- **For all other API operations:** Call `GetFunction` or `GetAlias` to retrieve the latest RevisionId for your resource.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 412

**PublicPolicyException**

The resource-based policy you tried to add to the Lambda resource would grant public access to it, which isn't allowed.

**Message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# CheckpointDurableExecution

Saves the progress of a durable function execution during runtime. This API is used by the Lambda durable functions SDK to checkpoint completed steps and schedule asynchronous operations. You typically don't need to call this API directly as the SDK handles checkpointing automatically.

Each checkpoint operation consumes the current checkpoint token and returns a new one for the next checkpoint. This ensures that checkpoints are applied in the correct order and prevents duplicate or out-of-order state updates.

## Request Syntax

```
POST /2025-12-01/durable-executions/DurableExecutionArn/checkpoint HTTP/1.1
Content-type: application/json

{
   "CheckpointToken": "string",
   "ClientToken": "string",
   "Updates": [
      {
         "Action": "string",
         "CallbackOptions": {
            "HeartbeatTimeoutSeconds": number,
            "TimeoutSeconds": number
         },
         "ChainedInvokeOptions": {
            "FunctionName": "string",
            "TenantId": "string",
            "XAmznTraceId": "string"
         },
         "ContextOptions": {
            "ReplayChildren": boolean
         },
         "Error": {
            "ErrorData": "string",
            "ErrorMessage": "string",
            "ErrorType": "string",
            "StackTrace": [ "string" ]
         },
         "Id": "string",
         "Name": "string",
         "ParentId": "string",
```

```
            "Payload": "string",
            "StepOptions": {
               "NextAttemptDelaySeconds": number
            },
            "SubType": "string",
            "Type": "string",
            "WaitOptions": {
               "WaitSeconds": number
            }
         }
   ]
}
```

## URI Request Parameters

The request uses the following URI parameters.

### DurableExecutionArn

The Amazon Resource Name (ARN) of the durable execution.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `arn:([a-zA-Z0-9-]+):lambda:([a-zA-Z0-9-]+):(\d{12}):function:([a-zA-Z0-9_-]+):(\$LATEST(?:\.PUBLISHED)?|[0-9]+)/durable-execution/([a-zA-Z0-9_-]+)/([a-zA-Z0-9_-]+)`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### CheckpointToken

A unique token that identifies the current checkpoint state. This token is provided by the Lambda runtime and must be used to ensure checkpoints are applied in the correct order. Each checkpoint operation consumes this token and returns a new one.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `[A-Za-z0-9+/]+={0,2}`

Required: Yes

### ClientToken

An optional idempotency token to ensure that duplicate checkpoint requests are handled correctly. If provided, Lambda uses this token to detect and handle duplicate requests within a 15-minute window.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[\x21-\x7E]+`

Required: No

### Updates

An array of state updates to apply during this checkpoint. Each update represents a change to the execution state, such as completing a step, starting a callback, or scheduling a timer. Updates are applied atomically as part of the checkpoint operation.

Type: Array of OperationUpdate objects

Required: No

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "CheckpointToken": "string",
   "NewExecutionState": {
      "NextMarker": "string",
      "Operations": [
         {
            "CallbackDetails": {
               "CallbackId": "string",
               "Error": {
                  "ErrorData": "string",
                  "ErrorMessage": "string",
```

```
            "ErrorType": "string",
            "StackTrace": [ "string" ]
         },
         "Result": "string"
      },
      "ChainedInvokeDetails": {
         "Error": {
            "ErrorData": "string",
            "ErrorMessage": "string",
            "ErrorType": "string",
            "StackTrace": [ "string" ]
         },
         "Result": "string"
      },
      "ContextDetails": {
         "Error": {
            "ErrorData": "string",
            "ErrorMessage": "string",
            "ErrorType": "string",
            "StackTrace": [ "string" ]
         },
         "ReplayChildren": boolean,
         "Result": "string"
      },
      "EndTimestamp": number,
      "ExecutionDetails": {
         "InputPayload": "string"
      },
      "Id": "string",
      "Name": "string",
      "ParentId": "string",
      "StartTimestamp": number,
      "Status": "string",
      "StepDetails": {
         "Attempt": number,
         "Error": {
            "ErrorData": "string",
            "ErrorMessage": "string",
            "ErrorType": "string",
            "StackTrace": [ "string" ]
         },
         "NextAttemptTimestamp": number,
         "Result": "string"
      },
```

```
            "SubType": "string",
            "Type": "string",
            "WaitDetails": {
               "ScheduledEndTimestamp": number
            }
         }
      ]
   }
}
```

## 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.

**CheckpointToken**

A new checkpoint token to use for the next checkpoint operation. This token replaces the one provided in the request and must be used for subsequent checkpoints to maintain proper ordering.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `[A-Za-z0-9+/]+={0,2}`

**NewExecutionState**

Updated execution state information that includes any changes that occurred since the last checkpoint, such as completed callbacks or expired timers. This allows the SDK to update its internal state during replay.

Type: CheckpointUpdatedExecutionState object

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**KMSAccessDeniedException**

Lambda couldn't decrypt the environment variables because AWS KMS access was denied. Check the Lambda function's KMS permissions.

HTTP Status Code: 502

**KMSDisabledException**

Lambda couldn't decrypt the environment variables because the AWS KMS key used is disabled. Check the Lambda function's KMS key settings.

HTTP Status Code: 502

**KMSInvalidStateException**

Lambda couldn't decrypt the environment variables because the state of the AWS KMS key used is not valid for Decrypt. Check the function's KMS key settings.

HTTP Status Code: 502

**KMSNotFoundException**

Lambda couldn't decrypt the environment variables because the AWS KMS key was not found. Check the function's KMS key settings.

HTTP Status Code: 502

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# CreateAlias

Creates an alias for a Lambda Event Function version. Use aliases to provide clients with a function identifier that you can update to invoke a different version.

You can also map an alias to split invocation requests between two versions. Use the `RoutingConfig` parameter to specify a second version and the percentage of invocation requests that it receives.

## Request Syntax

```
POST /2015-03-31/functions/FunctionName/aliases HTTP/1.1
Content-type: application/json

{
   "Description": "string",
   "FunctionVersion": "string",
   "Name": "string",
   "RoutingConfig": {
      "AdditionalVersionWeights": {
         "string" : number
      }
   }
}
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** - `MyFunction`.
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:MyFunction`.
- **Partial ARN** - `123456789012:function:MyFunction`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### Description

A description of the alias.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Required: No

### FunctionVersion

The function version that the alias invokes.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST(\.PUBLISHED)?|[0-9]+)`

Required: Yes

### Name

The name of the alias.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `(?!^[0-9]+$)([a-zA-Z0-9-_]+)`

Required: Yes

### RoutingConfig

The routing configuration of the alias.

Type: AliasRoutingConfiguration object

Required: No

## Response Syntax

```
HTTP/1.1 201
Content-type: application/json

{
   "AliasArn": "string",
   "Description": "string",
   "FunctionVersion": "string",
   "Name": "string",
   "RevisionId": "string",
   "RoutingConfig": {
      "AdditionalVersionWeights": {
         "string" : number
      }
   }
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 201 response.

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

### AliasArn

The Amazon Resource Name (ARN) of the alias.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

### Description

A description of the alias.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

### FunctionVersion

The function version that the alias invokes.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST|[0-9]+)`

### Name

The name of the alias.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `(?!^[0-9]+$)([a-zA-Z0-9-_]+)`

### RevisionId

A unique identifier that changes when you update the alias.

Type: String

### RoutingConfig

The routing configuration of the alias.

Type: AliasRoutingConfiguration object

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**AliasLimitExceededException**

Lambda couldn't create the alias because your AWS account has exceeded the maximum number of aliases allowed per Lambda function. For more information, see Lambda quotas.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# CreateCapacityProvider

Creates a capacity provider that manages compute resources for Lambda Event Functions

## Request Syntax

```
POST /2025-11-30/capacity-providers HTTP/1.1
Content-type: application/json

{
   "CapacityProviderName": "string",
   "CapacityProviderScalingConfig": {
      "MaxVCpuCount": number,
      "ScalingMode": "string",
      "ScalingPolicies": [
         {
            "PredefinedMetricType": "string",
            "TargetValue": number
         }
      ]
   },
   "InstanceRequirements": {
      "AllowedInstanceTypes": [ "string" ],
      "Architectures": [ "string" ],
      "ExcludedInstanceTypes": [ "string" ]
   },
   "KmsKeyArn": "string",
   "PermissionsConfig": {
      "CapacityProviderOperatorRoleArn": "string"
   },
   "PropagateTags": {
      "ExplicitTags": {
         "string" : "string"
      },
      "Mode": "string"
   },
   "Tags": {
      "string" : "string"
   },
   "TelemetryConfig": {
      "LoggingConfig": {
         "LogGroup": "string",
         "SystemLogLevel": "string"
```

```
      }
   },
   "VpcConfig": {
      "SecurityGroupIds": [ "string" ],
      "SubnetIds": [ "string" ]
   }
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### CapacityProviderName

The name of the capacity provider.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:aws[a-zA-Z-]*:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:capacity-provider:[a-zA-Z0-9-_]+)|[a-zA-Z0-9-_]+`

Required: Yes

### CapacityProviderScalingConfig

The scaling configuration that defines how the capacity provider scales compute instances, including maximum vCPU count and scaling policies.

Type: CapacityProviderScalingConfig object

Required: No

### InstanceRequirements

The instance requirements that specify the compute instance characteristics, including architectures and allowed or excluded instance types.

Type: InstanceRequirements object

Required: No

**KmsKeyArn**

The ARN of the KMS key used to encrypt data associated with the capacity provider.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*`

Required: No

**PermissionsConfig**

The permissions configuration that specifies the IAM role ARN used by the capacity provider to manage compute resources.

Type: CapacityProviderPermissionsConfig object

Required: Yes

**PropagateTags**

The tag propagation configuration for the capacity provider. Specifies tags to apply to managed resources at launch.

Type: PropagateTags object

Required: No

**Tags**

A list of tags to associate with the capacity provider.

Type: String to string map

Required: No

**TelemetryConfig**

The telemetry configuration for the capacity provider. Specifies logging settings for managed resources.

Type: CapacityProviderTelemetryConfig object

Required: No

**VpcConfig**

The VPC configuration for the capacity provider, including subnet IDs and security group IDs where compute instances will be launched.

Type: CapacityProviderVpcConfig object

Required: Yes

## Response Syntax

```
HTTP/1.1 202
Content-type: application/json

{
   "CapacityProvider": {
      "CapacityProviderArn": "string",
      "CapacityProviderScalingConfig": {
         "MaxVCpuCount": number,
         "ScalingMode": "string",
         "ScalingPolicies": [
            {
               "PredefinedMetricType": "string",
               "TargetValue": number
            }
         ]
      },
      "InstanceRequirements": {
         "AllowedInstanceTypes": [ "string" ],
         "Architectures": [ "string" ],
         "ExcludedInstanceTypes": [ "string" ]
      },
      "KmsKeyArn": "string",
      "LastModified": "string",
      "PermissionsConfig": {
         "CapacityProviderOperatorRoleArn": "string"
      },
      "PropagateTags": {
         "ExplicitTags": {
            "string" : "string"
         },
```

```
         "Mode": "string"
      },
      "State": "string",
      "TelemetryConfig": {
         "LoggingConfig": {
            "LogGroup": "string",
            "SystemLogLevel": "string"
         }
      },
      "VpcConfig": {
         "SecurityGroupIds": [ "string" ],
         "SubnetIds": [ "string" ]
      }
   }
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 202 response.

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

**CapacityProvider**

Information about the capacity provider that was created.

Type: CapacityProvider object

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**CapacityProviderLimitExceededException**

The maximum number of capacity providers for your account has been exceeded. For more information, see Lambda quotas

**Type**

The exception type.

HTTP Status Code: 400

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# CreateCodeSigningConfig

Creates a code signing configuration. A code signing configuration defines a list of allowed signing profiles and defines the code-signing validation policy (action to be taken if deployment validation checks fail).

## Request Syntax

```
POST /2020-04-22/code-signing-configs HTTP/1.1
Content-type: application/json

{
   "AllowedPublishers": {
      "SigningProfileVersionArns": [ "string" ]
   },
   "CodeSigningPolicies": {
      "UntrustedArtifactOnDeployment": "string"
   },
   "Description": "string",
   "Tags": {
      "string" : "string"
   }
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

**AllowedPublishers**

Signing profiles for this code signing configuration.

Type: AllowedPublishers object

Required: Yes

**CodeSigningPolicies**

The code signing policies define the actions to take if the validation checks fail.

Type: CodeSigningPolicies object

Required: No

### Description

Descriptive name for this code signing configuration.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Required: No

### Tags

A list of tags to add to the code signing configuration.

Type: String to string map

Required: No

## Response Syntax

```
HTTP/1.1 201
Content-type: application/json

{
   "CodeSigningConfig": {
      "AllowedPublishers": {
         "SigningProfileVersionArns": [ "string" ]
      },
      "CodeSigningConfigArn": "string",
      "CodeSigningConfigId": "string",
      "CodeSigningPolicies": {
         "UntrustedArtifactOnDeployment": "string"
      },
      "Description": "string",
      "LastModified": "string"
   }
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 201 response.

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

**CodeSigningConfig**

The code signing configuration.

Type: CodeSigningConfig object

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4

- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# CreateEventSourceMapping

Creates a mapping between an event source and an AWS Lambda Event Function. Lambda reads items from the event source and invokes the function.

For details about how to configure different event sources, see the following topics.

- Amazon DynamoDB Streams
- Amazon Kinesis
- Amazon SQS
- Amazon MQ and RabbitMQ
- Amazon MSK
- Apache Kafka
- Amazon DocumentDB

The following error handling options are available for stream sources (DynamoDB, Kinesis, Amazon MSK, and self-managed Apache Kafka):

- `BisectBatchOnFunctionError` – If the function returns an error, split the batch in two and retry.
- `MaximumRecordAgeInSeconds` – Discard records older than the specified age. The default value is infinite (-1). When set to infinite (-1), failed records are retried until the record expires
- `MaximumRetryAttempts` – Discard records after the specified number of retries. The default value is infinite (-1). When set to infinite (-1), failed records are retried until the record expires.
- `OnFailure` – Send discarded records to an Amazon SQS queue, Amazon SNS topic, Kafka topic, or Amazon S3 bucket. For more information, see Adding a destination.

The following option is available only for DynamoDB and Kinesis event sources:

- `ParallelizationFactor` – Process multiple batches from each shard concurrently.

For information about which configuration parameters apply to each event source, see the following topics.

- Amazon DynamoDB Streams

- Amazon Kinesis
- Amazon SQS
- Amazon MQ and RabbitMQ
- Amazon MSK
- Apache Kafka
- Amazon DocumentDB

## Request Syntax

```
POST /2015-03-31/event-source-mappings HTTP/1.1
Content-type: application/json

{
   "AmazonManagedKafkaEventSourceConfig": {
      "ConsumerGroupId": "string",
      "SchemaRegistryConfig": {
         "AccessConfigs": [
            {
               "Type": "string",
               "URI": "string"
            }
         ],
         "EventRecordFormat": "string",
         "SchemaRegistryURI": "string",
         "SchemaValidationConfigs": [
            {
               "Attribute": "string"
            }
         ]
      }
   },
   "BatchSize": number,
   "BisectBatchOnFunctionError": boolean,
   "DestinationConfig": {
      "OnFailure": {
         "Destination": "string"
      },
      "OnSuccess": {
         "Destination": "string"
      }
```

```
    },
    "DocumentDBEventSourceConfig": {
       "CollectionName": "string",
       "DatabaseName": "string",
       "FullDocument": "string"
    },
    "Enabled": boolean,
    "EventSourceArn": "string",
    "FilterCriteria": {
       "Filters": [
          {
             "Pattern": "string"
          }
       ]
    },
    "FunctionName": "string",
    "FunctionResponseTypes": [ "string" ],
    "KMSKeyArn": "string",
    "LoggingConfig": {
       "SystemLogLevel": "string"
    },
    "MaximumBatchingWindowInSeconds": number,
    "MaximumRecordAgeInSeconds": number,
    "MaximumRetryAttempts": number,
    "MetricsConfig": {
       "Metrics": [ "string" ]
    },
    "ParallelizationFactor": number,
    "ProvisionedPollerConfig": {
       "MaximumPollers": number,
       "MinimumPollers": number,
       "PollerGroupName": "string"
    },
    "Queues": [ "string" ],
    "ScalingConfig": {
       "MaximumConcurrency": number
    },
    "SelfManagedEventSource": {
       "Endpoints": {
          "string" : [ "string" ]
       }
    },
    "SelfManagedKafkaEventSourceConfig": {
       "ConsumerGroupId": "string",
```

```
      "ConsumptionMode": "string",
      "SchemaRegistryConfig": {
         "AccessConfigs": [
            {
               "Type": "string",
               "URI": "string"
            }
         ],
         "EventRecordFormat": "string",
         "SchemaRegistryURI": "string",
         "SchemaValidationConfigs": [
            {
               "Attribute": "string"
            }
         ]
      }
   },
   "SourceAccessConfigurations": [
      {
         "Type": "string",
         "URI": "string"
      }
   ],
   "StartingPosition": "string",
   "StartingPositionTimestamp": number,
   "Tags": {
      "string" : "string"
   },
   "Topics": [ "string" ],
   "TumblingWindowInSeconds": number
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### AmazonManagedKafkaEventSourceConfig

Specific configuration settings for an Amazon Managed Streaming for Apache Kafka (Amazon MSK) event source.

Type: AmazonManagedKafkaEventSourceConfig object

Required: No

### BatchSize

The maximum number of records in each batch that Lambda pulls from your stream or queue and sends to your function. Lambda passes all of the records in the batch to the function in a single call, up to the payload limit for synchronous invocation (6 MB).

- **Amazon Kinesis** – Default 100. Max 10,000.
- **Amazon DynamoDB Streams** – Default 100. Max 10,000.
- **Amazon Simple Queue Service** – Default 10. For standard queues the max is 10,000. For FIFO queues the max is 10.
- **Amazon Managed Streaming for Apache Kafka** – Default 100. Max 10,000.
- **Self-managed Apache Kafka** – Default 100. Max 10,000.
- **Amazon MQ (ActiveMQ and RabbitMQ)** – Default 100. Max 10,000.
- **DocumentDB** – Default 100. Max 10,000.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10000.

Required: No

### BisectBatchOnFunctionError

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) If the function returns an error, split the batch in two and retry.

Type: Boolean

Required: No

### DestinationConfig

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) A configuration object that specifies the destination of an event after Lambda processes it.

Type: DestinationConfig object

Required: No

**DocumentDBEventSourceConfig**

Specific configuration settings for a DocumentDB event source.

Type: DocumentDBEventSourceConfig object

Required: No

**Enabled**

When true, the event source mapping is active. When false, Lambda pauses polling and invocation.

Default: True

Type: Boolean

Required: No

**EventSourceArn**

The Amazon Resource Name (ARN) of the event source.

- **Amazon Kinesis** – The ARN of the data stream or a stream consumer.
- **Amazon DynamoDB Streams** – The ARN of the stream.
- **Amazon Simple Queue Service** – The ARN of the queue.
- **Amazon Managed Streaming for Apache Kafka** – The ARN of the cluster or the ARN of the VPC connection (for cross-account event source mappings).
- **Amazon MQ** – The ARN of the broker.
- **Amazon DocumentDB** – The ARN of the DocumentDB change stream.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

Required: No

### FilterCriteria

An object that defines the filter criteria that determine whether Lambda should process an event. For more information, see Lambda event filtering.

Type: FilterCriteria object

Required: No

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** – `MyFunction`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:MyFunction`.
- **Version or Alias ARN** – `arn:aws:lambda:us-west-2:123456789012:function:MyFunction:PROD`.
- **Partial ARN** – `123456789012:function:MyFunction`.

The length constraint applies only to the full ARN. If you specify only the function name, it's limited to 64 characters in length.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

Required: Yes

### FunctionResponseTypes

(Kinesis, DynamoDB Streams, Amazon MSK, self-managed Apache Kafka, and Amazon SQS) A list of current response type enums applied to the event source mapping.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 1 item.

Valid Values: `ReportBatchItemFailures`

Required: No

**KMSKeyArn**

The ARN of the AWS Key Management Service (AWS KMS) customer managed key that Lambda uses to encrypt your function's filter criteria. By default, Lambda does not encrypt your filter criteria object. Specify this property to encrypt data using your own customer managed key.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

Required: No

**LoggingConfig**

(Amazon MSK, and self-managed Apache Kafka only) The logging configuration for your event source. For more information, see Event source mapping logging.

Type: EventSourceMappingLoggingConfig object

Required: No

**MaximumBatchingWindowInSeconds**

The maximum amount of time, in seconds, that Lambda spends gathering records before invoking the function. You can configure `MaximumBatchingWindowInSeconds` to any value from 0 seconds to 300 seconds in increments of seconds.

For Kinesis, DynamoDB, and Amazon SQS event sources, the default batching window is 0 seconds. For Amazon MSK, Self-managed Apache Kafka, Amazon MQ, and DocumentDB event sources, the default batching window is 500 ms. Note that because you can only change `MaximumBatchingWindowInSeconds` in increments of seconds, you cannot revert back to the 500 ms default batching window after you have changed it. To restore the default batching window, you must create a new event source mapping.

Related setting: For Kinesis, DynamoDB, and Amazon SQS event sources, when you set `BatchSize` to a value greater than 10, you must set `MaximumBatchingWindowInSeconds` to at least 1.

Not supported for Kafka event source mappings when `ConsumptionMode` is `Queue`.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 300.

Required: No

**MaximumRecordAgeInSeconds**

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) Discard records older than the specified age. The default value is infinite (-1).

Type: Integer

Valid Range: Minimum value of -1. Maximum value of 604800.

Required: No

**MaximumRetryAttempts**

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) Discard records after the specified number of retries. The default value is infinite (-1). When set to infinite (-1), failed records are retried until the record expires.

For Kafka event source mappings with `ConsumptionMode` set to `Queue`, the value -1 (infinite retries) is not supported and the default is 0 (no retries). Lambda releases failed records back to the broker, which redelivers them up to the share group's `group.share.delivery.count.limit`.

Type: Integer

Valid Range: Minimum value of -1. Maximum value of 10000.

Required: No

**MetricsConfig**

The metrics configuration for your event source. For more information, see Event source mapping metrics.

Type: EventSourceMappingMetricsConfig object

Required: No

**ParallelizationFactor**

(Kinesis and DynamoDB Streams only) The number of batches to process from each shard concurrently.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10.

Required: No

**ProvisionedPollerConfig**

(Amazon SQS, Amazon MSK, and self-managed Apache Kafka only) The provisioned mode configuration for the event source. For more information, see provisioned mode.

Type: ProvisionedPollerConfig object

Required: No

**Queues**

(MQ) The name of the Amazon MQ broker destination queue to consume.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 1000.

Pattern: `[\s\S]*`

Required: No

**ScalingConfig**

(Amazon SQS only) The scaling configuration for the event source. For more information, see Configuring maximum concurrency for Amazon SQS event sources.

Type: ScalingConfig object

Required: No

**SelfManagedEventSource**

The self-managed Apache Kafka cluster to receive records from.

Type: SelfManagedEventSource object

Required: No

**SelfManagedKafkaEventSourceConfig**

Specific configuration settings for a self-managed Apache Kafka event source.

Type: SelfManagedKafkaEventSourceConfig object

Required: No

### SourceAccessConfigurations

An array of authentication protocols or VPC components required to secure your event source.

Type: Array of SourceAccessConfiguration objects

Array Members: Minimum number of 0 items. Maximum number of 22 items.

Required: No

### StartingPosition

The position in a stream from which to start reading. Required for Amazon Kinesis and Amazon DynamoDB Stream event sources. `AT_TIMESTAMP` is supported only for Amazon Kinesis streams, Amazon DocumentDB, Amazon MSK, and self-managed Apache Kafka.

Not supported for Kafka event source mappings when `ConsumptionMode` is `Queue`.

Type: String

Valid Values: `TRIM_HORIZON | LATEST | AT_TIMESTAMP`

Required: No

### StartingPositionTimestamp

With `StartingPosition` set to `AT_TIMESTAMP`, the time from which to start reading, in Unix time seconds. `StartingPositionTimestamp` cannot be in the future.

Not supported for Kafka event source mappings when `ConsumptionMode` is `Queue`.

Type: Timestamp

Required: No

### Tags

A list of tags to apply to the event source mapping.

Type: String to string map

Required: No

### Topics

The name of the Kafka topic.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 249.

Pattern: `[^.]([a-zA-Z0-9\-_.]+)`

Required: No

**TumblingWindowInSeconds**

(Kinesis and DynamoDB Streams only) The duration in seconds of a processing window for DynamoDB and Kinesis Streams event sources. A value of 0 seconds indicates no tumbling window.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 900.

Required: No

## Response Syntax

```
HTTP/1.1 202
Content-type: application/json

{
   "AmazonManagedKafkaEventSourceConfig": {
      "ConsumerGroupId": "string",
      "SchemaRegistryConfig": {
         "AccessConfigs": [
            {
               "Type": "string",
               "URI": "string"
            }
         ],
         "EventRecordFormat": "string",
         "SchemaRegistryURI": "string",
         "SchemaValidationConfigs": [
            {
               "Attribute": "string"
            }
         ]
      }
   },
```

```
   "BatchSize": number,
   "BisectBatchOnFunctionError": boolean,
   "DestinationConfig": {
      "OnFailure": {
         "Destination": "string"
      },
      "OnSuccess": {
         "Destination": "string"
      }
   },
   "DocumentDBEventSourceConfig": {
      "CollectionName": "string",
      "DatabaseName": "string",
      "FullDocument": "string"
   },
   "EventSourceArn": "string",
   "EventSourceMappingArn": "string",
   "FilterCriteria": {
      "Filters": [
         {
            "Pattern": "string"
         }
      ]
   },
   "FilterCriteriaError": {
      "ErrorCode": "string",
      "Message": "string"
   },
   "FunctionArn": "string",
   "FunctionResponseTypes": [ "string" ],
   "KMSKeyArn": "string",
   "LastModified": number,
   "LastProcessingResult": "string",
   "LoggingConfig": {
      "SystemLogLevel": "string"
   },
   "MaximumBatchingWindowInSeconds": number,
   "MaximumRecordAgeInSeconds": number,
   "MaximumRetryAttempts": number,
   "MetricsConfig": {
      "Metrics": [ "string" ]
   },
   "ParallelizationFactor": number,
   "ProvisionedPollerConfig": {
```

```
      "MaximumPollers": number,
      "MinimumPollers": number,
      "PollerGroupName": "string"
   },
   "Queues": [ "string" ],
   "ScalingConfig": {
      "MaximumConcurrency": number
   },
   "SelfManagedEventSource": {
      "Endpoints": {
         "string" : [ "string" ]
      }
   },
   "SelfManagedKafkaEventSourceConfig": {
      "ConsumerGroupId": "string",
      "ConsumptionMode": "string",
      "SchemaRegistryConfig": {
         "AccessConfigs": [
            {
               "Type": "string",
               "URI": "string"
            }
         ],
         "EventRecordFormat": "string",
         "SchemaRegistryURI": "string",
         "SchemaValidationConfigs": [
            {
               "Attribute": "string"
            }
         ]
      }
   },
   "SourceAccessConfigurations": [
      {
         "Type": "string",
         "URI": "string"
      }
   ],
   "StartingPosition": "string",
   "StartingPositionTimestamp": number,
   "State": "string",
   "StateTransitionReason": "string",
   "Topics": [ "string" ],
   "TumblingWindowInSeconds": number,
```

```
    "UUID": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 202 response.

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

**AmazonManagedKafkaEventSourceConfig**

Specific configuration settings for an Amazon Managed Streaming for Apache Kafka (Amazon MSK) event source.

Type: AmazonManagedKafkaEventSourceConfig object

**BatchSize**

The maximum number of records in each batch that Lambda pulls from your stream or queue and sends to your function. Lambda passes all of the records in the batch to the function in a single call, up to the payload limit for synchronous invocation (6 MB).

Default value: Varies by service. For Amazon SQS, the default is 10. For all other services, the default is 100.

Related setting: When you set `BatchSize` to a value greater than 10, you must set `MaximumBatchingWindowInSeconds` to at least 1.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10000.

**BisectBatchOnFunctionError**

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) If the function returns an error, split the batch in two and retry. The default value is false.

Type: Boolean

**DestinationConfig**

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) A configuration object that specifies the destination of an event after Lambda processes it.

Type: DestinationConfig object

**DocumentDBEventSourceConfig**

Specific configuration settings for a DocumentDB event source.

Type: DocumentDBEventSourceConfig object

**EventSourceArn**

The Amazon Resource Name (ARN) of the event source.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

**EventSourceMappingArn**

The Amazon Resource Name (ARN) of the event source mapping.

Type: String

Length Constraints: Minimum length of 85. Maximum length of 120.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:event-source-mapping:[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}`

**FilterCriteria**

An object that defines the filter criteria that determine whether Lambda should process an event. For more information, see Lambda event filtering.

If filter criteria is encrypted, this field shows up as `null` in the response of ListEventSourceMapping API calls. You can view this field in plaintext in the response of GetEventSourceMapping and DeleteEventSourceMapping calls if you have `kms:Decrypt` permissions for the correct AWS KMS key.

Type: FilterCriteria object

**FilterCriteriaError**

An object that contains details about an error related to filter criteria encryption.

Type: FilterCriteriaError object

**FunctionArn**

The ARN of the Lambda function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

**FunctionResponseTypes**

(Kinesis, DynamoDB Streams, Amazon MSK, self-managed Apache Kafka, and Amazon SQS) A list of current response type enums applied to the event source mapping.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 1 item.

Valid Values: `ReportBatchItemFailures`

**KMSKeyArn**

The ARN of the AWS Key Management Service (AWS KMS) customer managed key that Lambda uses to encrypt your function's filter criteria.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

**LastModified**

The date that the event source mapping was last updated or that its state changed, in Unix time seconds.

Type: Timestamp

**LastProcessingResult**

The result of the event source mapping's last processing attempt.

Type: String

### LoggingConfig

(Amazon MSK, and self-managed Apache Kafka only) The logging configuration for your event source. For more information, see Event source mapping logging.

Type: EventSourceMappingLoggingConfig object

### MaximumBatchingWindowInSeconds

The maximum amount of time, in seconds, that Lambda spends gathering records before invoking the function. You can configure `MaximumBatchingWindowInSeconds` to any value from 0 seconds to 300 seconds in increments of seconds.

For streams and Amazon SQS event sources, the default batching window is 0 seconds. For Amazon MSK, Self-managed Apache Kafka, Amazon MQ, and DocumentDB event sources, the default batching window is 500 ms. Note that because you can only change `MaximumBatchingWindowInSeconds` in increments of seconds, you cannot revert back to the 500 ms default batching window after you have changed it. To restore the default batching window, you must create a new event source mapping.

Related setting: For streams and Amazon SQS event sources, when you set `BatchSize` to a value greater than 10, you must set `MaximumBatchingWindowInSeconds` to at least 1.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 300.

### MaximumRecordAgeInSeconds

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) Discard records older than the specified age. The default value is -1, which sets the maximum age to infinite. When the value is set to infinite, Lambda never discards old records.

> **Note**
>
> The minimum valid value for maximum record age is 60s. Although values less than 60 and greater than -1 fall within the parameter's absolute range, they are not allowed

Type: Integer

Valid Range: Minimum value of -1. Maximum value of 604800.

### MaximumRetryAttempts

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) Discard records after the specified number of retries. The default value is -1, which sets the maximum number of retries to infinite. When MaximumRetryAttempts is infinite, Lambda retries failed records until the record expires in the event source.

Type: Integer

Valid Range: Minimum value of -1. Maximum value of 10000.

### MetricsConfig

The metrics configuration for your event source. For more information, see Event source mapping metrics.

Type: EventSourceMappingMetricsConfig object

### ParallelizationFactor

(Kinesis and DynamoDB Streams only) The number of batches to process concurrently from each shard. The default value is 1.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10.

### ProvisionedPollerConfig

(Amazon SQS, Amazon MSK, and self-managed Apache Kafka only) The provisioned mode configuration for the event source. For more information, see provisioned mode.

Type: ProvisionedPollerConfig object

### Queues

(Amazon MQ) The name of the Amazon MQ broker destination queue to consume.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 1000.

Pattern: `[\s\S]*`

### ScalingConfig

(Amazon SQS only) The scaling configuration for the event source. For more information, see Configuring maximum concurrency for Amazon SQS event sources.

Type: ScalingConfig object

### SelfManagedEventSource

The self-managed Apache Kafka cluster for your event source.

Type: SelfManagedEventSource object

### SelfManagedKafkaEventSourceConfig

Specific configuration settings for a self-managed Apache Kafka event source.

Type: SelfManagedKafkaEventSourceConfig object

### SourceAccessConfigurations

An array of the authentication protocol, VPC components, or virtual host to secure and define your event source.

Type: Array of SourceAccessConfiguration objects

Array Members: Minimum number of 0 items. Maximum number of 22 items.

### StartingPosition

The position in a stream from which to start reading. Required for Amazon Kinesis and Amazon DynamoDB Stream event sources. `AT_TIMESTAMP` is supported only for Amazon Kinesis streams, Amazon DocumentDB, Amazon MSK, and self-managed Apache Kafka.

Type: String

Valid Values: `TRIM_HORIZON | LATEST | AT_TIMESTAMP`

### StartingPositionTimestamp

With `StartingPosition` set to `AT_TIMESTAMP`, the time from which to start reading, in Unix time seconds. `StartingPositionTimestamp` cannot be in the future.

Type: Timestamp

**State**

The state of the event source mapping. It can be one of the following: `Creating`, `Enabling`, `Enabled`, `Disabling`, `Disabled`, `Updating`, or `Deleting`.

Type: String

**StateTransitionReason**

Indicates whether a user or Lambda made the last change to the event source mapping.

Type: String

**Topics**

The name of the Kafka topic.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 249.

Pattern: `[^.]([a-zA-Z0-9\-_.]+)`

**TumblingWindowInSeconds**

(Kinesis and DynamoDB Streams only) The duration in seconds of a processing window for DynamoDB and Kinesis Streams event sources. A value of 0 seconds indicates no tumbling window.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 900.

**UUID**

The identifier of the event source mapping.

Type: String

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# CreateFunction

Creates a Lambda Event Function. To create a function, you need a deployment package and an execution role. The deployment package is a .zip file archive or container image that contains your function code. The execution role grants the function permission to use AWS services, such as Amazon CloudWatch Logs for log streaming and AWS X-Ray for request tracing.

If the deployment package is a container image, then you set the package type to `Image`. For a container image, the code property must include the URI of a container image in the Amazon ECR registry. You do not need to specify the handler and runtime properties.

If the deployment package is a .zip file archive, then you set the package type to `Zip`. For a .zip file archive, the code property specifies the location of the .zip file. You must also specify the handler and runtime properties. The code in the deployment package must be compatible with the target instruction set architecture of the function (`x86-64` or `arm64`). If you do not specify the architecture, then the default value is `x86-64`.

When you create a function, Lambda provisions an instance of the function and its supporting resources. If your function connects to a VPC, this process can take a minute or so. During this time, you can't invoke or modify the function. The `State`, `StateReason`, and `StateReasonCode` fields in the response from GetFunctionConfiguration indicate when the function is ready to invoke. For more information, see Lambda function states.

A function has an unpublished version, and can have published versions and aliases. The unpublished version changes when you update your function's code and configuration. A published version is a snapshot of your function code and configuration that can't be changed. An alias is a named resource that maps to a version, and can be changed to map to a different version. Use the `Publish` parameter to create version `1` of your function from its initial configuration.

The other parameters let you configure version-specific and function-level settings. You can modify version-specific settings later with UpdateFunctionConfiguration. Function-level settings apply to both the unpublished and published versions of the function, and include tags (TagResource) and per-function concurrency limits (PutFunctionConcurrency).

You can use code signing if your deployment package is a .zip file archive. To enable code signing for this function, specify the ARN of a code-signing configuration. When a user attempts to deploy a code package with UpdateFunctionCode, Lambda checks that the code package has a valid signature from a trusted publisher. The code-signing configuration includes set of signing profiles, which define the trusted publishers for this function.

If another AWS account or an AWS service invokes your function, use AddPermission to grant permission by creating a resource-based AWS Identity and Access Management (IAM) policy. You can grant permissions at the function level, on a version, or on an alias.

To invoke your function directly, use Invoke. To invoke your function in response to events in other AWS services, create an event source mapping (CreateEventSourceMapping), or configure a function trigger in the other service. For more information, see Invoking Lambda functions.

## Request Syntax

```
POST /2015-03-31/functions HTTP/1.1
Content-type: application/json

{
   "Architectures": [ "string" ],
   "CapacityProviderConfig": {
      "LambdaManagedInstancesCapacityProviderConfig": {
         "CapacityProviderArn": "string",
         "ExecutionEnvironmentMemoryGiBPerVCpu": number,
         "PerExecutionEnvironmentMaxConcurrency": number
      }
   },
   "Code": {
      "ImageUri": "string",
      "S3Bucket": "string",
      "S3Key": "string",
      "S3ObjectStorageMode": "string",
      "S3ObjectVersion": "string",
      "SourceKMSKeyArn": "string",
      "ZipFile": blob
   },
   "CodeSigningConfigArn": "string",
   "DeadLetterConfig": {
      "TargetArn": "string"
   },
   "Description": "string",
   "DurableConfig": {
      "ExecutionTimeout": number,
      "KMSKeyArn": "string",
      "RetentionPeriodInDays": number
   },
   "Environment": {
      "Variables": {
```

```
        "string" : "string"
      }
   },
   "EphemeralStorage": {
      "Size": number
   },
   "FileSystemConfigs": [
      {
         "Arn": "string",
         "LocalMountPath": "string",
         "S3FilesConfig": {
            "DirectS3Read": "string"
         }
      }
   ],
   "FunctionName": "string",
   "Handler": "string",
   "ImageConfig": {
      "Command": [ "string" ],
      "EntryPoint": [ "string" ],
      "WorkingDirectory": "string"
   },
   "KMSKeyArn": "string",
   "Layers": [ "string" ],
   "LoggingConfig": {
      "ApplicationLogLevel": "string",
      "LogFormat": "string",
      "LogGroup": "string",
      "SystemLogLevel": "string"
   },
   "MemorySize": number,
   "PackageType": "string",
   "Publish": boolean,
   "PublishTo": "string",
   "Role": "string",
   "Runtime": "string",
   "SnapStart": {
      "ApplyOn": "string"
   },
   "Tags": {
      "string" : "string"
   },
   "TenancyConfig": {
      "TenantIsolationMode": "string"
```

```
    },
    "Timeout": number,
    "TracingConfig": {
       "Mode": "string"
    },
    "VpcConfig": {
       "Ipv6AllowedForDualStack": boolean,
       "SecurityGroupIds": [ "string" ],
       "SubnetIds": [ "string" ]
    }
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

**Architectures**

The instruction set architecture that the function supports. Enter a string array with one of the valid values (arm64 or x86_64). The default value is `x86_64`.

Type: Array of strings

Array Members: Fixed number of 1 item.

Valid Values: `x86_64 | arm64`

Required: No

**CapacityProviderConfig**

Configuration for the capacity provider that manages compute resources for Lambda functions.

Type: CapacityProviderConfig object

Required: No

**Code**

The code for the function.

Type: FunctionCode object

Required: Yes

**CodeSigningConfigArn**

To enable code signing for this function, specify the ARN of a code-signing configuration. A code-signing configuration includes a set of signing profiles, which define the trusted publishers for this function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 200.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}:\d{12}:code-signing-config:csc-[a-z0-9]{17}`

Required: No

**DeadLetterConfig**

A dead-letter queue configuration that specifies the queue or topic where Lambda sends asynchronous events when they fail processing. For more information, see Dead-letter queues.

Type: DeadLetterConfig object

Required: No

**Description**

A description of the function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Required: No

**DurableConfig**

Configuration settings for durable functions. Enables creating functions with durability that can remember their state and continue execution even after interruptions.

Type: DurableConfig object

Required: No

**Environment**

Environment variables that are accessible from function code during execution.

Type: Environment object

Required: No

**EphemeralStorage**

The size of the function's `/tmp` directory in MB. The default value is 512, but can be any whole number between 512 and 10,240 MB. For more information, see Configuring ephemeral storage (console).

Type: EphemeralStorage object

Required: No

**FileSystemConfigs**

Connection settings for an Amazon EFS file system or an Amazon S3 Files file system.

Type: Array of FileSystemConfig objects

Array Members: Minimum number of 0 items. Maximum number of 1 item.

Required: No

**FunctionName**

The name or ARN of the Lambda function.

**Name formats**

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

**Handler**

The name of the method within your code that Lambda calls to run your function. Handler is required if the deployment package is a .zip file archive. The format includes the file name. It can also include namespaces and other qualifiers, depending on the runtime. For more information, see Lambda programming model.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: `[^\s]+`

Required: No

**ImageConfig**

Container image configuration values that override the values in the container image Dockerfile.

Type: ImageConfig object

Required: No

**KMSKeyArn**

The ARN of the AWS Key Management Service (AWS KMS) customer managed key that's used to encrypt the following resources:

- The function's environment variables.
- The function's Lambda SnapStart snapshots.
- When used with `SourceKMSKeyArn`, the unzipped version of the .zip deployment package that's used for function invocations. For more information, see Specifying a customer managed key for Lambda.
- The optimized version of the container image that's used for function invocations. Note that this is not the same key that's used to protect your container image in the Amazon Elastic Container Registry (Amazon ECR). For more information, see Function lifecycle.

If you don't provide a customer managed key, Lambda uses an AWS owned key or an AWS managed key.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

Required: No

**Layers**

A list of function layers to add to the function's execution environment. Specify each layer by its ARN, including the version.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+:[0-9]+`

Required: No

**LoggingConfig**

The function's Amazon CloudWatch Logs configuration settings.

Type: LoggingConfig object

Required: No

**MemorySize**

The amount of memory available to the function at runtime. Increasing the function memory also increases its CPU allocation. The default value is 128 MB. The value can be any multiple of 1 MB.

Type: Integer

Valid Range: Minimum value of 128. Maximum value of 32768.

Required: No

**PackageType**

The type of deployment package. Set to `Image` for container image and set to `Zip` for .zip file archive.

Type: String

Valid Values: `Zip | Image`

Required: No

**Publish**

Set to true to publish the first version of the function during creation.

Type: Boolean

Required: No

**PublishTo**

Specifies where to publish the function version or configuration.

Type: String

Valid Values: `LATEST_PUBLISHED`

Required: No

**Role**

The Amazon Resource Name (ARN) of the function's execution role.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:iam::\d{12}:role/?[a-zA-Z_0-9+=,.@\-_/]+`

Required: Yes

**Runtime**

The identifier of the function's runtime. Runtime is required if the deployment package is a .zip file archive. Specifying a runtime results in an error if you're deploying a function using a container image.

The following list includes deprecated runtimes. Lambda blocks creating new functions and updating existing functions shortly after each runtime is deprecated. For more information, see Runtime use after deprecation.

For a list of all currently supported runtimes, see Supported runtimes.

Type: String

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11 | python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6`

`| dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3 | ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21 | python3.13 | nodejs22.x | nodejs24.x | python3.14 | java25 | dotnet10 | ruby4.0`

Required: No

**SnapStart**

The function's SnapStart setting.

Type: SnapStart object

Required: No

**Tags**

A list of tags to apply to the function.

Type: String to string map

Required: No

**TenancyConfig**

Configuration for multi-tenant applications that use Lambda functions. Defines tenant isolation settings and resource allocations. Required for functions supporting multiple tenants.

Type: TenancyConfig object

Required: No

**Timeout**

The amount of time (in seconds) that Lambda allows a function to run before stopping it. The default is 3 seconds, and the maximum allowed value is 900 seconds. For functions using Lambda Managed Instances, asynchronous invocations and event source mapping invocations (except Amazon MQ and Amazon DocumentDB) support a maximum allowed value of 5,400 seconds (90 minutes). For more information, see Lambda execution environment.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

**TracingConfig**

Set Mode to Active to sample and trace a subset of incoming requests with X-Ray.

Type: TracingConfig object

Required: No

**VpcConfig**

For network connectivity to AWS resources in a VPC, specify a list of security groups and subnets in the VPC. When you connect a function to a VPC, it can access resources and the internet only through that VPC. For more information, see Configuring a Lambda function to access resources in a VPC.

Type: VpcConfig object

Required: No

## Response Syntax

```
HTTP/1.1 201
Content-type: application/json

{
   "Architectures": [ "string" ],
   "CapacityProviderConfig": {
      "LambdaManagedInstancesCapacityProviderConfig": {
         "CapacityProviderArn": "string",
         "ExecutionEnvironmentMemoryGiBPerVCpu": number,
         "PerExecutionEnvironmentMaxConcurrency": number
      }
   },
   "CodeSha256": "string",
   "CodeSize": number,
   "ConfigSha256": "string",
   "DeadLetterConfig": {
      "TargetArn": "string"
   },
   "Description": "string",
   "DurableConfig": {
      "ExecutionTimeout": number,
      "KMSKeyArn": "string",
```

```
      "RetentionPeriodInDays": number
   },
   "Environment": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "Variables": {
         "string" : "string"
      }
   },
   "EphemeralStorage": {
      "Size": number
   },
   "FileSystemConfigs": [
      {
         "Arn": "string",
         "LocalMountPath": "string",
         "S3FilesConfig": {
            "DirectS3Read": "string"
         }
      }
   ],
   "FunctionArn": "string",
   "FunctionName": "string",
   "Handler": "string",
   "ImageConfigResponse": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "ImageConfig": {
         "Command": [ "string" ],
         "EntryPoint": [ "string" ],
         "WorkingDirectory": "string"
      }
   },
   "KMSKeyArn": "string",
   "LastModified": "string",
   "LastUpdateStatus": "string",
   "LastUpdateStatusReason": "string",
   "LastUpdateStatusReasonCode": "string",
   "Layers": [
      {
```

```
        "Arn": "string",
        "CodeSize": number,
        "SigningJobArn": "string",
        "SigningProfileVersionArn": "string"
      }
   ],
   "LoggingConfig": {
      "ApplicationLogLevel": "string",
      "LogFormat": "string",
      "LogGroup": "string",
      "SystemLogLevel": "string"
   },
   "MasterArn": "string",
   "MemorySize": number,
   "PackageType": "string",
   "RevisionId": "string",
   "Role": "string",
   "Runtime": "string",
   "RuntimeVersionConfig": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "RuntimeVersionArn": "string"
   },
   "SigningJobArn": "string",
   "SigningProfileVersionArn": "string",
   "SnapStart": {
      "ApplyOn": "string",
      "OptimizationStatus": "string"
   },
   "State": "string",
   "StateReason": "string",
   "StateReasonCode": "string",
   "TenancyConfig": {
      "TenantIsolationMode": "string"
   },
   "Timeout": number,
   "TracingConfig": {
      "Mode": "string"
   },
   "Version": "string",
   "VpcConfig": {
      "Ipv6AllowedForDualStack": boolean,
```

```
      "SecurityGroupIds": [ "string" ],
      "SubnetIds": [ "string" ],
      "VpcId": "string"
   }
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 201 response.

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

**Architectures**

The instruction set architecture that the function supports. Architecture is a string array with one of the valid values. The default architecture value is `x86_64`.

Type: Array of strings

Array Members: Fixed number of 1 item.

Valid Values: `x86_64 | arm64`

**CapacityProviderConfig**

Configuration for the capacity provider that manages compute resources for Lambda functions.

Type: CapacityProviderConfig object

**CodeSha256**

The SHA256 hash of the function's deployment package.

Type: String

**CodeSize**

The size of the function's deployment package, in bytes.

Type: Long

**ConfigSha256**

The SHA256 hash of the function configuration.

Type: String

**DeadLetterConfig**

The function's dead letter queue.

Type: DeadLetterConfig object

**Description**

The function's description.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

**DurableConfig**

The function's durable execution configuration settings, if the function is configured for durability.

Type: DurableConfig object

**Environment**

The function's environment variables. Omitted from AWS CloudTrail logs.

Type: EnvironmentResponse object

**EphemeralStorage**

The size of the function's `/tmp` directory in MB. The default value is 512, but can be any whole number between 512 and 10,240 MB. For more information, see Configuring ephemeral storage (console).

Type: EphemeralStorage object

**FileSystemConfigs**

Connection settings for an Amazon EFS file system or an Amazon S3 file system.

Type: Array of FileSystemConfig objects

Array Members: Minimum number of 0 items. Maximum number of 1 item.

**FunctionArn**

The function's Amazon Resource Name (ARN).

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_\.]+(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

**FunctionName**

The name of the function.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

**Handler**

The function that Lambda calls to begin running your function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: `[^\s]+`

**ImageConfigResponse**

The function's image configuration values.

Type: ImageConfigResponse object

**KMSKeyArn**

The ARN of the AWS Key Management Service (AWS KMS) customer managed key that's used to encrypt the following resources:

- The function's environment variables.
- The function's Lambda SnapStart snapshots.
- When used with `SourceKMSKeyArn`, the unzipped version of the .zip deployment package that's used for function invocations. For more information, see Specifying a customer managed key for Lambda.

- The optimized version of the container image that's used for function invocations. Note that this is not the same key that's used to protect your container image in the Amazon Elastic Container Registry (Amazon ECR). For more information, see Function lifecycle.

If you don't provide a customer managed key, Lambda uses an AWS owned key or an AWS managed key.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

**LastModified**

The date and time that the function was last updated, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

**LastUpdateStatus**

The status of the last update that was performed on the function. This is first set to `Successful` after function creation completes.

Type: String

Valid Values: `Successful | Failed | InProgress`

**LastUpdateStatusReason**

The reason for the last update that was performed on the function.

Type: String

**LastUpdateStatusReasonCode**

The reason code for the last update that was performed on the function.

Type: String

Valid Values: `EniLimitExceeded | InsufficientRolePermissions | InvalidConfiguration | InternalError | SubnetOutOfIPAddresses | InvalidSubnet | InvalidSecurityGroup | ImageDeleted | ImageAccessDenied | InvalidImage | KMSKeyAccessDenied | KMSKeyNotFound | InvalidStateKMSKey | DisabledKMSKey | EFSIOError | EFSMountConnectivityError | EFSMountFailure | EFSMountTimeout`

```
| InvalidRuntime | InvalidZipFileException | FunctionError
| VcpuLimitExceeded | CapacityProviderScalingLimitExceeded
| InsufficientCapacity | EC2RequestLimitExceeded |
FunctionError.InitTimeout | FunctionError.RuntimeInitError |
FunctionError.ExtensionInitError | FunctionError.InvalidEntryPoint |
FunctionError.InvalidWorkingDirectory | FunctionError.PermissionDenied |
FunctionError.TooManyExtensions | FunctionError.InitResourceExhausted |
DisallowedByVpcEncryptionControl | DependencyError
```

**Layers**

The function's layers.

Type: Array of Layer objects

**LoggingConfig**

The function's Amazon CloudWatch Logs configuration settings.

Type: LoggingConfig object

**MasterArn**

For Lambda@Edge functions, the ARN of the main function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

**MemorySize**

The amount of memory available to the function at runtime.

Type: Integer

Valid Range: Minimum value of 128. Maximum value of 32768.

**PackageType**

The type of deployment package. Set to `Image` for container image and set `Zip` for .zip file archive.

Type: String

Valid Values: `Zip | Image`

**RevisionId**

The latest updated revision of the function or alias.

Type: String

**Role**

The function's execution role.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:iam::\d{12}:role/?[a-zA-Z_0-9+=,.@\-_/]+`

**Runtime**

The identifier of the function's runtime. Runtime is required if the deployment package is a .zip file archive. Specifying a runtime results in an error if you're deploying a function using a container image.

The following list includes deprecated runtimes. Lambda blocks creating new functions and updating existing functions shortly after each runtime is deprecated. For more information, see Runtime use after deprecation.

For a list of all currently supported runtimes, see Supported runtimes.

Type: String

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11 | python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6 | dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3 | ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21 | python3.13 | nodejs22.x | nodejs24.x | python3.14 | java25 | dotnet10 | ruby4.0`

**RuntimeVersionConfig**

The ARN of the runtime and any errors that occured.

Type: RuntimeVersionConfig object

### SigningJobArn

The ARN of the signing job.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

### SigningProfileVersionArn

The ARN of the signing profile version.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

### SnapStart

Set `ApplyOn` to `PublishedVersions` to create a snapshot of the initialized execution environment when you publish a function version. For more information, see Improving startup performance with Lambda SnapStart.

Type: SnapStartResponse object

### State

The current state of the function. When the state is `Inactive`, you can reactivate the function by invoking it.

Type: String

Valid Values: `Pending | Active | Inactive | Failed | Deactivating | Deactivated | ActiveNonInvocable | Deleting`

### StateReason

The reason for the function's current state.

Type: String

### StateReasonCode

The reason code for the function's current state. When the code is `Creating`, you can't invoke or modify the function.

Type: String

Valid Values: `Idle | Creating | Restoring | EniLimitExceeded | InsufficientRolePermissions | InvalidConfiguration | InternalError | SubnetOutOfIPAddresses | InvalidSubnet | InvalidSecurityGroup | ImageDeleted | ImageAccessDenied | InvalidImage | KMSKeyAccessDenied | KMSKeyNotFound | InvalidStateKMSKey | DisabledKMSKey | EFSIOError | EFSMountConnectivityError | EFSMountFailure | EFSMountTimeout | InvalidRuntime | InvalidZipFileException | FunctionError | DrainingDurableExecutions | VcpuLimitExceeded | CapacityProviderScalingLimitExceeded | InsufficientCapacity | EC2RequestLimitExceeded | FunctionError.InitTimeout | FunctionError.RuntimeInitError | FunctionError.ExtensionInitError | FunctionError.InvalidEntryPoint | FunctionError.InvalidWorkingDirectory | FunctionError.PermissionDenied | FunctionError.TooManyExtensions | FunctionError.InitResourceExhausted | DisallowedByVpcEncryptionControl | DependencyError`

**TenancyConfig**

The function's tenant isolation configuration settings. Determines whether the Lambda function runs on a shared or dedicated infrastructure per unique tenant.

Type: TenancyConfig object

**Timeout**

The amount of time in seconds that Lambda allows a function to run before stopping it.

Type: Integer

Valid Range: Minimum value of 1.

**TracingConfig**

The function's AWS X-Ray tracing configuration.

Type: TracingConfigResponse object

**Version**

The version of the Lambda function.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST|[0-9]+)`

**VpcConfig**

The function's networking configuration.

Type: VpcConfigResponse object

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**CodeSigningConfigNotFoundException**

The specified code signing configuration does not exist.

HTTP Status Code: 404

**CodeStorageExceededException**

Your AWS account has exceeded its maximum total code size. For more information, see Lambda quotas.

**Type**

The exception type.

HTTP Status Code: 400

**CodeVerificationFailedException**

The code signature failed one or more of the validation checks for signature mismatch or expiry, and the code signing policy is set to ENFORCE. Lambda blocks the deployment.

HTTP Status Code: 400

**FunctionVersionsPerCapacityProviderLimitExceededException**

The maximum number of function versions that can be associated with a single capacity provider has been exceeded. For more information, see Lambda quotas.

**Type**

The exception type.

HTTP Status Code: 400

**InvalidCodeSignatureException**

The code signature failed the integrity check. If the integrity check fails, then Lambda blocks deployment, even if the code signing policy is set to WARN.

HTTP Status Code: 400

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# CreateFunctionUrlConfig

Creates a Lambda function URL with the specified configuration parameters. A function URL is a dedicated HTTP(S) endpoint that you can use to invoke your function.

## Request Syntax

```
POST /2021-10-31/functions/FunctionName/url?Qualifier=Qualifier HTTP/1.1
Content-type: application/json

{
   "AuthType": "string",
   "Cors": {
      "AllowCredentials": boolean,
      "AllowHeaders": [ "string" ],
      "AllowMethods": [ "string" ],
      "AllowOrigins": [ "string" ],
      "ExposeHeaders": [ "string" ],
      "MaxAge": number
   },
   "InvokeMode": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?((eusc-)?[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]{1,64})(:((?!\d+$)[0-9a-zA-Z-_]+))?`

Required: Yes

**Qualifier**

The alias name.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `((?!^\d+$)^[0-9a-zA-Z-_]+$)`

## Request Body

The request accepts the following data in JSON format.

**AuthType**

The type of authentication that your function URL uses. Set to `AWS_IAM` if you want to restrict access to authenticated users only. Set to `NONE` if you want to bypass IAM authentication to create a public endpoint. For more information, see Control access to Lambda function URLs.

Type: String

Valid Values: `NONE | AWS_IAM`

Required: Yes

**Cors**

The cross-origin resource sharing (CORS) settings for your function URL.

Type: Cors object

Required: No

**InvokeMode**

Use one of the following options:

- `BUFFERED` – This is the default option. Lambda invokes your function using the `Invoke` API operation. Invocation results are available when the payload is complete. The maximum payload size is 6 MB.

- `RESPONSE_STREAM` – Your function streams payload results as they become available. Lambda invokes your function using the `InvokeWithResponseStream` API operation. The maximum response payload size is 200 MB.

Type: String

Valid Values: `BUFFERED` | `RESPONSE_STREAM`

Required: No

## Response Syntax

```
HTTP/1.1 201
Content-type: application/json

{
   "AuthType": "string",
   "Cors": {
      "AllowCredentials": boolean,
      "AllowHeaders": [ "string" ],
      "AllowMethods": [ "string" ],
      "AllowOrigins": [ "string" ],
      "ExposeHeaders": [ "string" ],
      "MaxAge": number
   },
   "CreationTime": "string",
   "FunctionArn": "string",
   "FunctionUrl": "string",
   "InvokeMode": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 201 response.

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

### AuthType

The type of authentication that your function URL uses. Set to `AWS_IAM` if you want to restrict access to authenticated users only. Set to `NONE` if you want to bypass IAM authentication to create a public endpoint. For more information, see Control access to Lambda function URLs.

Type: String

Valid Values: `NONE | AWS_IAM`

**Cors**

The cross-origin resource sharing (CORS) settings for your function URL.

Type: Cors object

**CreationTime**

When the function URL was created, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

**FunctionArn**

The Amazon Resource Name (ARN) of your function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

**FunctionUrl**

The HTTP URL endpoint for your function.

Type: String

Length Constraints: Minimum length of 40. Maximum length of 100.

**InvokeMode**

Use one of the following options:

- `BUFFERED` – This is the default option. Lambda invokes your function using the `Invoke` API operation. Invocation results are available when the payload is complete. The maximum payload size is 6 MB.
- `RESPONSE_STREAM` – Your function streams payload results as they become available. Lambda invokes your function using the `InvokeWithResponseStream` API operation. The maximum response payload size is 200 MB.

Type: String

Valid Values: `BUFFERED | RESPONSE_STREAM`

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# DeleteAlias

Deletes a Lambda Event Function alias.

## Request Syntax

```
DELETE /2015-03-31/functions/FunctionName/aliases/Name HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** - `MyFunction`.
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:MyFunction`.
- **Partial ARN** - `123456789012:function:MyFunction`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

### Name

The name of the alias.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `(?!^[0-9]+$)([a-zA-Z0-9-_]+)`

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.

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# DeleteCapacityProvider

Deletes a capacity provider. You cannot delete a capacity provider that is currently being used by Lambda functions.

## Request Syntax

```
DELETE /2025-11-30/capacity-providers/CapacityProviderName HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### CapacityProviderName

The name of the capacity provider to delete.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:aws[a-zA-Z-]*:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:capacity-provider:[a-zA-Z0-9-_]+)|[a-zA-Z0-9-_]+`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 202
Content-type: application/json

{
   "CapacityProvider": {
      "CapacityProviderArn": "string",
      "CapacityProviderScalingConfig": {
         "MaxVCpuCount": number,
         "ScalingMode": "string",
         "ScalingPolicies": [
            {
```

```
                "PredefinedMetricType": "string",
                "TargetValue": number
            }
         ]
      },
      "InstanceRequirements": {
         "AllowedInstanceTypes": [ "string" ],
         "Architectures": [ "string" ],
         "ExcludedInstanceTypes": [ "string" ]
      },
      "KmsKeyArn": "string",
      "LastModified": "string",
      "PermissionsConfig": {
         "CapacityProviderOperatorRoleArn": "string"
      },
      "PropagateTags": {
         "ExplicitTags": {
            "string" : "string"
         },
         "Mode": "string"
      },
      "State": "string",
      "TelemetryConfig": {
         "LoggingConfig": {
            "LogGroup": "string",
            "SystemLogLevel": "string"
         }
      },
      "VpcConfig": {
         "SecurityGroupIds": [ "string" ],
         "SubnetIds": [ "string" ]
      }
   }
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 202 response.

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

### CapacityProvider

Information about the deleted capacity provider.

Type: CapacityProvider object

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# DeleteCodeSigningConfig

Deletes the code signing configuration. You can delete the code signing configuration only if no function is using it.

## Request Syntax

```
DELETE /2020-04-22/code-signing-configs/CodeSigningConfigArn HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

**CodeSigningConfigArn**

The The Amazon Resource Name (ARN) of the code signing configuration.

Length Constraints: Minimum length of 0. Maximum length of 200.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}:\d{12}:code-signing-config:csc-[a-z0-9]{17}`

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.

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

## See Also

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

- AWS Command Line Interface V2

- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# DeleteDurableExecution

Deletes a completed Lambda durable execution and its data. The execution must be in a terminal state (SUCCEEDED, FAILED, STOPPED, or TIMED_OUT). Otherwise, this operation returns a ResourceConflictException.

The execution has DELETING status until the deletion finishes. For more information, see Deleting durable executions.

## Request Syntax

```
DELETE /2025-12-01/durable-executions/DurableExecutionArn HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

**DurableExecutionArn**

The Amazon Resource Name (ARN) of the durable execution.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `arn:([a-zA-Z0-9-]+):lambda:([a-zA-Z0-9-]+):(\d{12}):function:([a-zA-Z0-9_-]+):(\$LATEST(?:\.PUBLISHED)?|[0-9]+)/durable-execution/([a-zA-Z0-9_-]+)/([a-zA-Z0-9_-]+)`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 202
Content-type: application/json

{
```

```
    "DeletionRequestTimestamp": number
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 202 response.

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

**DeletionRequestTimestamp**

The timestamp when Lambda accepted the deletion request (ISO 8601 format).

Type: Timestamp

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# DeleteEventSourceMapping

Deletes an event source mapping. You can get the identifier of a mapping from the output of ListEventSourceMappings.

When you delete an event source mapping, it enters a `Deleting` state and might not be completely deleted for several seconds.

## Request Syntax

```
DELETE /2015-03-31/event-source-mappings/UUID HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### UUID

The identifier of the event source mapping.

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 202
Content-type: application/json

{
   "AmazonManagedKafkaEventSourceConfig": {
      "ConsumerGroupId": "string",
      "SchemaRegistryConfig": {
         "AccessConfigs": [
            {
               "Type": "string",
               "URI": "string"
            }
         ],
```

```
        "EventRecordFormat": "string",
        "SchemaRegistryURI": "string",
        "SchemaValidationConfigs": [
           {
              "Attribute": "string"
           }
        ]
     }
  },
  "BatchSize": number,
  "BisectBatchOnFunctionError": boolean,
  "DestinationConfig": {
     "OnFailure": {
        "Destination": "string"
     },
     "OnSuccess": {
        "Destination": "string"
     }
  },
  "DocumentDBEventSourceConfig": {
     "CollectionName": "string",
     "DatabaseName": "string",
     "FullDocument": "string"
  },
  "EventSourceArn": "string",
  "EventSourceMappingArn": "string",
  "FilterCriteria": {
     "Filters": [
        {
           "Pattern": "string"
        }
     ]
  },
  "FilterCriteriaError": {
     "ErrorCode": "string",
     "Message": "string"
  },
  "FunctionArn": "string",
  "FunctionResponseTypes": [ "string" ],
  "KMSKeyArn": "string",
  "LastModified": number,
  "LastProcessingResult": "string",
  "LoggingConfig": {
     "SystemLogLevel": "string"
```

```
    },
    "MaximumBatchingWindowInSeconds": number,
    "MaximumRecordAgeInSeconds": number,
    "MaximumRetryAttempts": number,
    "MetricsConfig": {
       "Metrics": [ "string" ]
    },
    "ParallelizationFactor": number,
    "ProvisionedPollerConfig": {
       "MaximumPollers": number,
       "MinimumPollers": number,
       "PollerGroupName": "string"
    },
    "Queues": [ "string" ],
    "ScalingConfig": {
       "MaximumConcurrency": number
    },
    "SelfManagedEventSource": {
       "Endpoints": {
          "string" : [ "string" ]
       }
    },
    "SelfManagedKafkaEventSourceConfig": {
       "ConsumerGroupId": "string",
       "ConsumptionMode": "string",
       "SchemaRegistryConfig": {
          "AccessConfigs": [
             {
                "Type": "string",
                "URI": "string"
             }
          ],
          "EventRecordFormat": "string",
          "SchemaRegistryURI": "string",
          "SchemaValidationConfigs": [
             {
                "Attribute": "string"
             }
          ]
       }
    },
    "SourceAccessConfigurations": [
       {
          "Type": "string",
```

```
            "URI": "string"
        }
    ],
    "StartingPosition": "string",
    "StartingPositionTimestamp": number,
    "State": "string",
    "StateTransitionReason": "string",
    "Topics": [ "string" ],
    "TumblingWindowInSeconds": number,
    "UUID": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 202 response.

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

**AmazonManagedKafkaEventSourceConfig**

Specific configuration settings for an Amazon Managed Streaming for Apache Kafka (Amazon MSK) event source.

Type: AmazonManagedKafkaEventSourceConfig object

**BatchSize**

The maximum number of records in each batch that Lambda pulls from your stream or queue and sends to your function. Lambda passes all of the records in the batch to the function in a single call, up to the payload limit for synchronous invocation (6 MB).

Default value: Varies by service. For Amazon SQS, the default is 10. For all other services, the default is 100.

Related setting: When you set `BatchSize` to a value greater than 10, you must set `MaximumBatchingWindowInSeconds` to at least 1.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10000.

**BisectBatchOnFunctionError**

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) If the function returns an error, split the batch in two and retry. The default value is false.

Type: Boolean

**DestinationConfig**

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) A configuration object that specifies the destination of an event after Lambda processes it.

Type: DestinationConfig object

**DocumentDBEventSourceConfig**

Specific configuration settings for a DocumentDB event source.

Type: DocumentDBEventSourceConfig object

**EventSourceArn**

The Amazon Resource Name (ARN) of the event source.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

**EventSourceMappingArn**

The Amazon Resource Name (ARN) of the event source mapping.

Type: String

Length Constraints: Minimum length of 85. Maximum length of 120.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:event-source-mapping:[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}`

**FilterCriteria**

An object that defines the filter criteria that determine whether Lambda should process an event. For more information, see Lambda event filtering.

If filter criteria is encrypted, this field shows up as `null` in the response of ListEventSourceMapping API calls. You can view this field in plaintext in the response of GetEventSourceMapping and DeleteEventSourceMapping calls if you have `kms:Decrypt` permissions for the correct AWS KMS key.

Type: FilterCriteria object

**FilterCriteriaError**

An object that contains details about an error related to filter criteria encryption.

Type: FilterCriteriaError object

**FunctionArn**

The ARN of the Lambda function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

**FunctionResponseTypes**

(Kinesis, DynamoDB Streams, Amazon MSK, self-managed Apache Kafka, and Amazon SQS) A list of current response type enums applied to the event source mapping.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 1 item.

Valid Values: `ReportBatchItemFailures`

**KMSKeyArn**

The ARN of the AWS Key Management Service (AWS KMS) customer managed key that Lambda uses to encrypt your function's filter criteria.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

**LastModified**

The date that the event source mapping was last updated or that its state changed, in Unix time seconds.

Type: Timestamp

### LastProcessingResult

The result of the event source mapping's last processing attempt.

Type: String

### LoggingConfig

(Amazon MSK, and self-managed Apache Kafka only) The logging configuration for your event source. For more information, see Event source mapping logging.

Type: EventSourceMappingLoggingConfig object

### MaximumBatchingWindowInSeconds

The maximum amount of time, in seconds, that Lambda spends gathering records before invoking the function. You can configure `MaximumBatchingWindowInSeconds` to any value from 0 seconds to 300 seconds in increments of seconds.

For streams and Amazon SQS event sources, the default batching window is 0 seconds. For Amazon MSK, Self-managed Apache Kafka, Amazon MQ, and DocumentDB event sources, the default batching window is 500 ms. Note that because you can only change `MaximumBatchingWindowInSeconds` in increments of seconds, you cannot revert back to the 500 ms default batching window after you have changed it. To restore the default batching window, you must create a new event source mapping.

Related setting: For streams and Amazon SQS event sources, when you set `BatchSize` to a value greater than 10, you must set `MaximumBatchingWindowInSeconds` to at least 1.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 300.

### MaximumRecordAgeInSeconds

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) Discard records older than the specified age. The default value is -1, which sets the maximum age to infinite. When the value is set to infinite, Lambda never discards old records.

> **Note**
>
> The minimum valid value for maximum record age is 60s. Although values less than 60 and greater than -1 fall within the parameter's absolute range, they are not allowed

Type: Integer

Valid Range: Minimum value of -1. Maximum value of 604800.

**MaximumRetryAttempts**

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) Discard records after the specified number of retries. The default value is -1, which sets the maximum number of retries to infinite. When MaximumRetryAttempts is infinite, Lambda retries failed records until the record expires in the event source.

Type: Integer

Valid Range: Minimum value of -1. Maximum value of 10000.

**MetricsConfig**

The metrics configuration for your event source. For more information, see Event source mapping metrics.

Type: EventSourceMappingMetricsConfig object

**ParallelizationFactor**

(Kinesis and DynamoDB Streams only) The number of batches to process concurrently from each shard. The default value is 1.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10.

**ProvisionedPollerConfig**

(Amazon SQS, Amazon MSK, and self-managed Apache Kafka only) The provisioned mode configuration for the event source. For more information, see provisioned mode.

Type: ProvisionedPollerConfig object

**Queues**

(Amazon MQ) The name of the Amazon MQ broker destination queue to consume.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 1000.

Pattern: `[\s\S]*`

**ScalingConfig**

(Amazon SQS only) The scaling configuration for the event source. For more information, see Configuring maximum concurrency for Amazon SQS event sources.

Type: ScalingConfig object

**SelfManagedEventSource**

The self-managed Apache Kafka cluster for your event source.

Type: SelfManagedEventSource object

**SelfManagedKafkaEventSourceConfig**

Specific configuration settings for a self-managed Apache Kafka event source.

Type: SelfManagedKafkaEventSourceConfig object

**SourceAccessConfigurations**

An array of the authentication protocol, VPC components, or virtual host to secure and define your event source.

Type: Array of SourceAccessConfiguration objects

Array Members: Minimum number of 0 items. Maximum number of 22 items.

**StartingPosition**

The position in a stream from which to start reading. Required for Amazon Kinesis and Amazon DynamoDB Stream event sources. `AT_TIMESTAMP` is supported only for Amazon Kinesis streams, Amazon DocumentDB, Amazon MSK, and self-managed Apache Kafka.

Type: String

Valid Values: `TRIM_HORIZON | LATEST | AT_TIMESTAMP`

**StartingPositionTimestamp**

With `StartingPosition` set to `AT_TIMESTAMP`, the time from which to start reading, in Unix time seconds. `StartingPositionTimestamp` cannot be in the future.

Type: Timestamp

**State**

The state of the event source mapping. It can be one of the following: `Creating`, `Enabling`, `Enabled`, `Disabling`, `Disabled`, `Updating`, or `Deleting`.

Type: String

**StateTransitionReason**

Indicates whether a user or Lambda made the last change to the event source mapping.

Type: String

**Topics**

The name of the Kafka topic.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 249.

Pattern: `[^.]([a-zA-Z0-9\-_.]+)`

**TumblingWindowInSeconds**

(Kinesis and DynamoDB Streams only) The duration in seconds of a processing window for DynamoDB and Kinesis Streams event sources. A value of 0 seconds indicates no tumbling window.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 900.

**UUID**

The identifier of the event source mapping.

Type: String

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceInUseException**

The operation conflicts with the resource's availability. For example, you tried to update an event source mapping in the CREATING state, or you tried to delete an event source mapping currently UPDATING.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# DeleteFunction

Deletes a Lambda Event Function. To delete a specific function version, use the `Qualifier` parameter. Otherwise, all versions and aliases are deleted. This doesn't require the user to have explicit permissions for DeleteAlias.

> **Note**
>
> A deleted Lambda function cannot be recovered. Ensure that you specify the correct function name and version before deleting.

To delete Lambda event source mappings that invoke a function, use DeleteEventSourceMapping. For AWS services and resources that invoke your function directly, delete the trigger in the service where you originally configured it.

## Request Syntax

```
DELETE /2015-03-31/functions/FunctionName?Qualifier=Qualifier HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function or version.

**Name formats**

- **Function name** – `my-function` (name-only), `my-function:1` (with version).
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

You can append a version number or alias to any of the formats. The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

Required: Yes

**Qualifier**

Specify a version to delete. You can't delete a version that an alias references.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `\$(LATEST(\.PUBLISHED)?)|[a-zA-Z0-9-_$]+`

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 StatusCode
```

## Response Elements

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

**StatusCode**

The HTTP status code returned by the operation.

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# DeleteFunctionCodeSigningConfig

Removes the code signing configuration from the function.

## Request Syntax

```
DELETE /2020-06-30/functions/FunctionName/code-signing-config HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** - `MyFunction`.
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:MyFunction`.
- **Partial ARN** - `123456789012:function:MyFunction`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

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.

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**CodeSigningConfigNotFoundException**

The specified code signing configuration does not exist.

HTTP Status Code: 404

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# DeleteFunctionConcurrency

Removes a concurrent execution limit from a Lambda Event Function.

## Request Syntax

```
DELETE /2017-10-31/functions/FunctionName/concurrency HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

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.

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# DeleteFunctionEventInvokeConfig

Deletes the configuration for asynchronous invocation for a function, version, or alias.

To configure options for asynchronous invocation, use PutFunctionEventInvokeConfig.

## Request Syntax

```
DELETE /2019-09-25/functions/FunctionName/event-invoke-config?Qualifier=Qualifier
 HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function, version, or alias.

**Name formats**

- **Function name** - `my-function` (name-only), `my-function:v1` (with alias).
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** - `123456789012:function:my-function`.

You can append a version number or alias to any of the formats. The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

Required: Yes

### Qualifier

A version number or alias name.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `\$(LATEST(\.PUBLISHED)?)|[a-zA-Z0-9-_$]+`

## 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.

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# DeleteFunctionUrlConfig

Deletes a Lambda function URL. When you delete a function URL, you can't recover it. Creating a new function URL results in a different URL address.

## Request Syntax

```
DELETE /2021-10-31/functions/FunctionName/url?Qualifier=Qualifier HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?((eusc-)?[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]{1,64})(:((?!\d+$)[0-9a-zA-Z-_]+))?`

Required: Yes

### Qualifier

The alias name.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `((?!^\d+$)^[0-9a-zA-Z-_]+$)`

## 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.

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# DeleteLayerVersion

Deletes a version of an AWS Lambda layer. Deleted versions can no longer be viewed or added to functions. To avoid breaking functions, a copy of the version remains in Lambda until no functions refer to it.

## Request Syntax

```
DELETE /2018-10-31/layers/LayerName/versions/VersionNumber HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

**LayerName**

The name or Amazon Resource Name (ARN) of the layer.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+)|[a-zA-Z0-9-_]+`

Required: Yes

**VersionNumber**

The version number.

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.

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# DeleteProvisionedConcurrencyConfig

Deletes the provisioned concurrency configuration for a function.

## Request Syntax

```
DELETE /2019-09-30/functions/FunctionName/provisioned-concurrency?Qualifier=Qualifier
 HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

### Qualifier

The version number or alias name.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `(|[a-zA-Z0-9$_-]+)`

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.

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# DeleteResourcePolicy

Deletes a resource-based policy from a Lambda resource.

## Request Syntax

```
DELETE /2026-07-09/resource-policy/ResourceArn?RevisionId=RevisionId HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### ResourceArn

The Amazon Resource Name (ARN) of the Lambda resource you want to delete the policy from. You can use a qualified or an unqualified ARN. The value must be a complete ARN, and the operation does not accept wildcard characters.

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:(eusc-)?[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_])+)?`

Required: Yes

### RevisionId

The revision ID that the existing policy must match for the deletion to proceed. If the revision ID doesn't match, the operation fails with a `PreconditionFailedException` error. To retrieve the current revision ID, use the GetResourcePolicy operation.

Length Constraints: Fixed length of 36.

Pattern: `[0-9a-f]{8}-[0-9a-f]{4}-[0-9a-f]{4}-[0-9a-f]{4}-[0-9a-f]{12}`

## 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.

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**PreconditionFailedException**

The RevisionId provided does not match the latest RevisionId for the Lambda function or alias.

- **For AddPermission and RemovePermission API operations:** Call `GetPolicy` to retrieve the latest RevisionId for your resource.
- **For all other API operations:** Call `GetFunction` or `GetAlias` to retrieve the latest RevisionId for your resource.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 412

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2

- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# GetAccountSettings

Retrieves details about your account's limits and usage in an AWS Region.

## Request Syntax

```
GET /2016-08-19/account-settings HTTP/1.1
```

## 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
Content-type: application/json

{
   "AccountLimit": {
      "CodeSizeUnzipped": number,
      "CodeSizeZipped": number,
      "ConcurrentExecutions": number,
      "TotalCodeSize": number,
      "UnreservedConcurrentExecutions": number
   },
   "AccountUsage": {
      "FunctionCount": number,
      "TotalCodeSize": number
   }
}
```

## 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.

**AccountLimit**

Limits that are related to concurrency and code storage.

Type: AccountLimit object

**AccountUsage**

The number of functions and amount of storage in use.

Type: AccountUsage object

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2

- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# GetAlias

Returns details about a Lambda Event Function alias.

## Request Syntax

```
GET /2015-03-31/functions/FunctionName/aliases/Name HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** - `MyFunction`.
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:MyFunction`.
- **Partial ARN** - `123456789012:function:MyFunction`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

### Name

The name of the alias.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `(?!^[0-9]+$)([a-zA-Z0-9-_]+)`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "AliasArn": "string",
   "Description": "string",
   "FunctionVersion": "string",
   "Name": "string",
   "RevisionId": "string",
   "RoutingConfig": {
      "AdditionalVersionWeights": {
         "string" : number
      }
   }
}
```

## 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.

### AliasArn

The Amazon Resource Name (ARN) of the alias.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

### Description

A description of the alias.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

**FunctionVersion**

The function version that the alias invokes.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST|[0-9]+)`

**Name**

The name of the alias.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `(?!^[0-9]+$)([a-zA-Z0-9-_]+)`

**RevisionId**

A unique identifier that changes when you update the alias.

Type: String

**RoutingConfig**

The routing configuration of the alias.

Type: AliasRoutingConfiguration object

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3

- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# GetCapacityProvider

Retrieves information about a specific capacity provider, including its configuration, state, and associated resources.

## Request Syntax

```
GET /2025-11-30/capacity-providers/CapacityProviderName HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### CapacityProviderName

The name of the capacity provider to retrieve.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:aws[a-zA-Z-]*:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:capacity-provider:[a-zA-Z0-9-_]+)|[a-zA-Z0-9-_]+`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "CapacityProvider": {
      "CapacityProviderArn": "string",
      "CapacityProviderScalingConfig": {
         "MaxVCpuCount": number,
         "ScalingMode": "string",
         "ScalingPolicies": [
            {
```

```
                "PredefinedMetricType": "string",
                "TargetValue": number
            }
         ]
      },
      "InstanceRequirements": {
         "AllowedInstanceTypes": [ "string" ],
         "Architectures": [ "string" ],
         "ExcludedInstanceTypes": [ "string" ]
      },
      "KmsKeyArn": "string",
      "LastModified": "string",
      "PermissionsConfig": {
         "CapacityProviderOperatorRoleArn": "string"
      },
      "PropagateTags": {
         "ExplicitTags": {
            "string" : "string"
         },
         "Mode": "string"
      },
      "State": "string",
      "TelemetryConfig": {
         "LoggingConfig": {
            "LogGroup": "string",
            "SystemLogLevel": "string"
         }
      },
      "VpcConfig": {
         "SecurityGroupIds": [ "string" ],
         "SubnetIds": [ "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.

### CapacityProvider

Information about the capacity provider, including its configuration and current state.

Type: CapacityProvider object

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# GetCodeSigningConfig

Returns information about the specified code signing configuration.

## Request Syntax

```
GET /2020-04-22/code-signing-configs/CodeSigningConfigArn HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### CodeSigningConfigArn

The The Amazon Resource Name (ARN) of the code signing configuration.

Length Constraints: Minimum length of 0. Maximum length of 200.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}:\d{12}:code-signing-config:csc-[a-z0-9]{17}`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "CodeSigningConfig": {
      "AllowedPublishers": {
         "SigningProfileVersionArns": [ "string" ]
      },
      "CodeSigningConfigArn": "string",
      "CodeSigningConfigId": "string",
```

```
      "CodeSigningPolicies": {
         "UntrustedArtifactOnDeployment": "string"
      },
      "Description": "string",
      "LastModified": "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.

**CodeSigningConfig**

The code signing configuration

Type: CodeSigningConfig object

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# GetDurableExecution

Retrieves detailed information about a specific durable execution, including its current status, input payload, result or error information, and execution metadata such as start time and usage statistics.

## Request Syntax

```
GET /2025-12-01/durable-executions/DurableExecutionArn?
IncludeExecutionData=IncludeExecutionData HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### DurableExecutionArn

The Amazon Resource Name (ARN) of the durable execution.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `arn:([a-zA-Z0-9-]+):lambda:([a-zA-Z0-9-]+):(\d{12}):function:([a-zA-Z0-9_-]+):(\$LATEST(?:\.PUBLISHED)?|[0-9]+)/durable-execution/([a-zA-Z0-9_-]+)/([a-zA-Z0-9_-]+)`

Required: Yes

### IncludeExecutionData

Specifies whether to include execution data such as input payload, result, and error information in the response. Set to `false` for a more compact response that includes only execution metadata. The default value is set to `true`.

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
```

```
Content-type: application/json

{
   "DurableConfig": {
      "ExecutionTimeout": number,
      "KMSKeyArn": "string",
      "RetentionPeriodInDays": number
   },
   "DurableExecutionArn": "string",
   "DurableExecutionName": "string",
   "EndTimestamp": number,
   "Error": {
      "ErrorData": "string",
      "ErrorMessage": "string",
      "ErrorType": "string",
      "StackTrace": [ "string" ]
   },
   "ExecutionDataIncluded": boolean,
   "ExpectedExecutionTimeoutTimestamp": number,
   "FunctionArn": "string",
   "InputPayload": "string",
   "PauseDetails": {
      "ExecutionTimeoutPaused": boolean,
      "PauseRequestTimestamp": number,
      "Reason": "string"
   },
   "Result": "string",
   "StartTimestamp": number,
   "Status": "string",
   "TraceHeader": {
      "XAmznTraceId": "string"
   },
   "Version": "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.

### DurableConfig

Configuration settings for the durable execution, including execution timeout, retention period for execution history, and an optional ARN of the AWS Key Management Service (AWS KMS) customer managed key that is used to encrypt your durable execution's payload data, including input, output, and error payloads.

Type: DurableConfig object

### DurableExecutionArn

The Amazon Resource Name (ARN) of the durable execution.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `arn:([a-zA-Z0-9-]+):lambda:([a-zA-Z0-9-]+):(\d{12}):function:([a-zA-Z0-9_-]+):(\$LATEST(?:\.PUBLISHED)?|[0-9]+)/durable-execution/([a-zA-Z0-9_-]+)/([a-zA-Z0-9_-]+)`

### DurableExecutionName

The name of the durable execution. This is either the name you provided when invoking the function, or a system-generated unique identifier if no name was provided.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9-_]+`

### EndTimestamp

The date and time when the durable execution ended, in Unix timestamp format. This field is only present if the execution has completed (status is `SUCCEEDED`, `FAILED`, `TIMED_OUT`, or `STOPPED`).

Type: Timestamp

### Error

Error information if the durable execution failed. This field is only present when the execution status is `FAILED`, `TIMED_OUT`, or `STOPPED`. The combined size of all error fields is limited to 1 MB.

Type: ErrorObject object

**ExecutionDataIncluded**

Indicates whether execution data is included in this response. Returns `false` when `IncludeExecutionData` is set to `false` in the request.

Type: Boolean

**ExpectedExecutionTimeoutTimestamp**

The date and time when the durable execution will time out, in Unix timestamp format. This value includes any extension from time the execution spent paused. While the execution is paused with its execution timeout paused, this value is 366 days after the start time. This field isn't present for completed executions.

Type: Timestamp

**FunctionArn**

The Amazon Resource Name (ARN) of the Lambda function that was invoked to start this durable execution.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_\.]+(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

**InputPayload**

The JSON input payload that you provided when you started the durable execution. Asynchronous invocations support up to 1 MB, and synchronous invocations support up to 6 MB.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 6291456.

**PauseDetails**

The details of the pause, including when you requested it and whether it pauses the execution timeout. This field is only present when the execution status is `PAUSING` or `PAUSED`.

Type: PauseDetails object

**Result**

The JSON result returned by the durable execution if it completed successfully. This field is only present when the execution status is SUCCEEDED. Asynchronous invocations support up to 1 MB, and synchronous invocations support up to 6 MB.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 6291456.

**StartTimestamp**

The date and time when the durable execution started, in Unix timestamp format.

Type: Timestamp

**Status**

The durable execution has one of the following statuses:

- `RUNNING` – The execution is running or waiting for pending operations to complete.
- `PAUSING` – The execution is waiting for an in-progress invocation to reach its next checkpoint before it pauses.
- `PAUSED` – The execution is paused, and Lambda doesn't invoke your function.
- `SUCCEEDED` – The execution completed successfully.
- `FAILED` – The execution completed with an error.
- `TIMED_OUT` – The execution exceeded its execution timeout.
- `STOPPED` – A `StopDurableExecution` request stopped the execution.
- `DELETING` – A `DeleteDurableExecution` request is deleting the execution and its data.

Type: String

Valid Values: `RUNNING | SUCCEEDED | FAILED | TIMED_OUT | STOPPED | DELETING | PAUSING | PAUSED`

**TraceHeader**

The trace headers associated with the durable execution.

Type: TraceHeader object

**Version**

The version of the Lambda function that was invoked for this durable execution. This ensures that all replays during the execution use the same function version.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST(\.PUBLISHED)?|[0-9]+)`

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**KMSAccessDeniedException**

Lambda couldn't decrypt the environment variables because AWS KMS access was denied. Check the Lambda function's KMS permissions.

HTTP Status Code: 502

**KMSDisabledException**

Lambda couldn't decrypt the environment variables because the AWS KMS key used is disabled. Check the Lambda function's KMS key settings.

HTTP Status Code: 502

**KMSInvalidStateException**

Lambda couldn't decrypt the environment variables because the state of the AWS KMS key used is not valid for Decrypt. Check the function's KMS key settings.

HTTP Status Code: 502

**KMSNotFoundException**

Lambda couldn't decrypt the environment variables because the AWS KMS key was not found. Check the function's KMS key settings.

HTTP Status Code: 502

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++

- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# GetDurableExecutionHistory

Retrieves the execution history for a durable execution, showing all the steps, callbacks, and events that occurred during the execution. This provides a detailed audit trail of the execution's progress over time.

The history is available while the execution is running and for a retention period after it completes (1-90 days, default 30 days). You can control whether to include execution data such as step results and callback payloads.

## Request Syntax

```
GET /2025-12-01/durable-executions/DurableExecutionArn/history?
IncludeExecutionData=IncludeExecutionData&Marker=Marker&MaxItems=MaxItems&ReverseOrder=ReverseO
 HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### DurableExecutionArn

The Amazon Resource Name (ARN) of the durable execution.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `arn:([a-zA-Z0-9-]+):lambda:([a-zA-Z0-9-]+):(\d{12}):function:([a-zA-Z0-9_-]+):(\$LATEST(?:\.PUBLISHED)?|[0-9]+)/durable-execution/([a-zA-Z0-9_-]+)/([a-zA-Z0-9_-]+)`

Required: Yes

### IncludeExecutionData

Specifies whether to include execution data such as step results and callback payloads in the history events. Set to `true` to include data, or `false` to exclude it for a more compact response. The default is `true`.

### Marker

If `NextMarker` was returned from a previous request, use this value to retrieve the next page of results. Each pagination token expires after 24 hours.

**MaxItems**

The maximum number of history events to return per call. You can use `Marker` to retrieve additional pages of results. The default is 100 and the maximum allowed is 1000. A value of 0 uses the default.

Valid Range: Minimum value of 0. Maximum value of 1000.

**ReverseOrder**

When set to `true`, returns the history events in reverse chronological order (newest first). By default, events are returned in chronological order (oldest first).

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "Events": [
      {
         "CallbackFailedDetails": {
            "Error": {
               "Payload": {
                  "ErrorData": "string",
                  "ErrorMessage": "string",
                  "ErrorType": "string",
                  "StackTrace": [ "string" ]
               },
               "Truncated": boolean
            }
         },
         "CallbackStartedDetails": {
            "CallbackId": "string",
            "HeartbeatTimeout": number,
            "Timeout": number
         },
         "CallbackSucceededDetails": {
            "Result": {
```

```
            "Payload": "string",
            "Truncated": boolean
         }
      },
      "CallbackTimedOutDetails": {
         "Error": {
            "Payload": {
               "ErrorData": "string",
               "ErrorMessage": "string",
               "ErrorType": "string",
               "StackTrace": [ "string" ]
            },
            "Truncated": boolean
         }
      },
      "ChainedInvokeFailedDetails": {
         "Error": {
            "Payload": {
               "ErrorData": "string",
               "ErrorMessage": "string",
               "ErrorType": "string",
               "StackTrace": [ "string" ]
            },
            "Truncated": boolean
         }
      },
      "ChainedInvokeStartedDetails": {
         "DurableExecutionArn": "string",
         "ExecutedVersion": "string",
         "FunctionName": "string",
         "Input": {
            "Payload": "string",
            "Truncated": boolean
         },
         "TenantId": "string"
      },
      "ChainedInvokeStoppedDetails": {
         "Error": {
            "Payload": {
               "ErrorData": "string",
               "ErrorMessage": "string",
               "ErrorType": "string",
               "StackTrace": [ "string" ]
            },
```

```
            "Truncated": boolean
         }
      },
      "ChainedInvokeSucceededDetails": {
         "Result": {
            "Payload": "string",
            "Truncated": boolean
         }
      },
      "ChainedInvokeTimedOutDetails": {
         "Error": {
            "Payload": {
               "ErrorData": "string",
               "ErrorMessage": "string",
               "ErrorType": "string",
               "StackTrace": [ "string" ]
            },
            "Truncated": boolean
         }
      },
      "ContextFailedDetails": {
         "Error": {
            "Payload": {
               "ErrorData": "string",
               "ErrorMessage": "string",
               "ErrorType": "string",
               "StackTrace": [ "string" ]
            },
            "Truncated": boolean
         }
      },
      "ContextStartedDetails": {
      },
      "ContextSucceededDetails": {
         "Result": {
            "Payload": "string",
            "Truncated": boolean
         }
      },
      "EventId": number,
      "EventTimestamp": number,
      "EventType": "string",
      "ExecutionFailedDetails": {
         "Error": {
```

```
            "Payload": {
               "ErrorData": "string",
               "ErrorMessage": "string",
               "ErrorType": "string",
               "StackTrace": [ "string" ]
            },
            "Truncated": boolean
         }
      },
      "ExecutionPausedDetails": {
         "ExecutionTimeoutPaused": boolean,
         "PauseRequestTimestamp": number,
         "Reason": {
            "Payload": "string",
            "Truncated": boolean
         }
      },
      "ExecutionResumedDetails": {
         "Reason": {
            "Payload": "string",
            "Truncated": boolean
         },
         "ResumeRequestTimestamp": number
      },
      "ExecutionStartedDetails": {
         "ExecutionTimeout": number,
         "Input": {
            "Payload": "string",
            "Truncated": boolean
         }
      },
      "ExecutionStoppedDetails": {
         "Error": {
            "Payload": {
               "ErrorData": "string",
               "ErrorMessage": "string",
               "ErrorType": "string",
               "StackTrace": [ "string" ]
            },
            "Truncated": boolean
         }
      },
      "ExecutionSucceededDetails": {
         "Result": {
```

```
            "Payload": "string",
            "Truncated": boolean
         }
      },
      "ExecutionTimedOutDetails": {
         "Error": {
            "Payload": {
               "ErrorData": "string",
               "ErrorMessage": "string",
               "ErrorType": "string",
               "StackTrace": [ "string" ]
            },
            "Truncated": boolean
         }
      },
      "Id": "string",
      "InvocationCompletedDetails": {
         "EndTimestamp": number,
         "Error": {
            "Payload": {
               "ErrorData": "string",
               "ErrorMessage": "string",
               "ErrorType": "string",
               "StackTrace": [ "string" ]
            },
            "Truncated": boolean
         },
         "RequestId": "string",
         "StartTimestamp": number
      },
      "Name": "string",
      "ParentId": "string",
      "StepFailedDetails": {
         "Error": {
            "Payload": {
               "ErrorData": "string",
               "ErrorMessage": "string",
               "ErrorType": "string",
               "StackTrace": [ "string" ]
            },
            "Truncated": boolean
         },
         "RetryDetails": {
            "CurrentAttempt": number,
```

```
                "NextAttemptDelaySeconds": number
            }
         },
         "StepStartedDetails": {
         },
         "StepSucceededDetails": {
            "Result": {
               "Payload": "string",
               "Truncated": boolean
            },
            "RetryDetails": {
               "CurrentAttempt": number,
               "NextAttemptDelaySeconds": number
            }
         },
         "SubType": "string",
         "WaitCancelledDetails": {
            "Error": {
               "Payload": {
                  "ErrorData": "string",
                  "ErrorMessage": "string",
                  "ErrorType": "string",
                  "StackTrace": [ "string" ]
               },
               "Truncated": boolean
            }
         },
         "WaitStartedDetails": {
            "Duration": number,
            "ScheduledEndTimestamp": number
         },
         "WaitSucceededDetails": {
            "Duration": number
         }
      }
   ],
   "NextMarker": "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.

**Events**

An array of execution history events, ordered chronologically unless `ReverseOrder` is set to `true`. Each event represents a significant occurrence during the execution, such as step completion or callback resolution.

Type: Array of Event objects

**NextMarker**

If present, indicates that more history events are available. Use this value as the `Marker` parameter in a subsequent request to retrieve the next page of results.

Type: String

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**KMSAccessDeniedException**

Lambda couldn't decrypt the environment variables because AWS KMS access was denied. Check the Lambda function's KMS permissions.

HTTP Status Code: 502

**KMSDisabledException**

Lambda couldn't decrypt the environment variables because the AWS KMS key used is disabled. Check the Lambda function's KMS key settings.

HTTP Status Code: 502

**KMSInvalidStateException**

Lambda couldn't decrypt the environment variables because the state of the AWS KMS key used is not valid for Decrypt. Check the function's KMS key settings.

HTTP Status Code: 502

**KMSNotFoundException**

Lambda couldn't decrypt the environment variables because the AWS KMS key was not found. Check the function's KMS key settings.

HTTP Status Code: 502

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4

- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# GetDurableExecutionState

Retrieves the current execution state required for the replay process during durable function execution. This API is used by the Lambda durable functions SDK to get state information needed for replay. You typically don't need to call this API directly as the SDK handles state management automatically.

The response contains operations ordered by start sequence number in ascending order. Completed operations with children don't include child operation details since they don't need to be replayed.

## Request Syntax

```
GET /2025-12-01/durable-executions/DurableExecutionArn/state?
CheckpointToken=CheckpointToken&Marker=Marker&MaxItems=MaxItems HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

**CheckpointToken**

A checkpoint token that identifies the current state of the execution. This token is provided by the Lambda runtime and ensures that state retrieval is consistent with the current execution context.

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `[A-Za-z0-9+/]+={0,2}`

Required: Yes

**DurableExecutionArn**

The Amazon Resource Name (ARN) of the durable execution.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `arn:([a-zA-Z0-9-]+):lambda:([a-zA-Z0-9-]+):(\d{12}):function:([a-zA-Z0-9_-]+):(\$LATEST(?:\.PUBLISHED)?|[0-9]+)/durable-execution/([a-zA-Z0-9_-]+)/([a-zA-Z0-9_-]+)`

Required: Yes

**Marker**

If `NextMarker` was returned from a previous request, use this value to retrieve the next page of operations. Each pagination token expires after 24 hours.

**MaxItems**

The maximum number of operations to return per call. You can use `Marker` to retrieve additional pages of results. The default is 100 and the maximum allowed is 1000. A value of 0 uses the default.

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
Content-type: application/json

{
   "NextMarker": "string",
   "Operations": [
      {
         "CallbackDetails": {
            "CallbackId": "string",
            "Error": {
               "ErrorData": "string",
               "ErrorMessage": "string",
               "ErrorType": "string",
               "StackTrace": [ "string" ]
            },
            "Result": "string"
         },
         "ChainedInvokeDetails": {
            "Error": {
               "ErrorData": "string",
               "ErrorMessage": "string",
               "ErrorType": "string",
```

```
                "StackTrace": [ "string" ]
            },
            "Result": "string"
         },
         "ContextDetails": {
            "Error": {
               "ErrorData": "string",
               "ErrorMessage": "string",
               "ErrorType": "string",
               "StackTrace": [ "string" ]
            },
            "ReplayChildren": boolean,
            "Result": "string"
         },
         "EndTimestamp": number,
         "ExecutionDetails": {
            "InputPayload": "string"
         },
         "Id": "string",
         "Name": "string",
         "ParentId": "string",
         "StartTimestamp": number,
         "Status": "string",
         "StepDetails": {
            "Attempt": number,
            "Error": {
               "ErrorData": "string",
               "ErrorMessage": "string",
               "ErrorType": "string",
               "StackTrace": [ "string" ]
            },
            "NextAttemptTimestamp": number,
            "Result": "string"
         },
         "SubType": "string",
         "Type": "string",
         "WaitDetails": {
            "ScheduledEndTimestamp": number
         }
      }
   ]
}
```

## 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.

**NextMarker**

If present, indicates that more operations are available. Use this value as the `Marker` parameter in a subsequent request to retrieve the next page of results.

Type: String

**Operations**

An array of operations that represent the current state of the durable execution. Operations are ordered by their start sequence number in ascending order and include information needed for replay processing.

Type: Array of Operation objects

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**KMSAccessDeniedException**

Lambda couldn't decrypt the environment variables because AWS KMS access was denied. Check the Lambda function's KMS permissions.

HTTP Status Code: 502

**KMSDisabledException**

Lambda couldn't decrypt the environment variables because the AWS KMS key used is disabled. Check the Lambda function's KMS key settings.

HTTP Status Code: 502

**KMSInvalidStateException**

Lambda couldn't decrypt the environment variables because the state of the AWS KMS key used is not valid for Decrypt. Check the function's KMS key settings.

HTTP Status Code: 502

**KMSNotFoundException**

Lambda couldn't decrypt the environment variables because the AWS KMS key was not found. Check the function's KMS key settings.

HTTP Status Code: 502

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2

- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# GetEventSourceMapping

Returns details about an event source mapping. You can get the identifier of a mapping from the output of ListEventSourceMappings.

## Request Syntax

```
GET /2015-03-31/event-source-mappings/UUID HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### UUID

The identifier of the event source mapping.

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "AmazonManagedKafkaEventSourceConfig": {
      "ConsumerGroupId": "string",
      "SchemaRegistryConfig": {
         "AccessConfigs": [
            {
               "Type": "string",
               "URI": "string"
            }
         ],
         "EventRecordFormat": "string",
         "SchemaRegistryURI": "string",
         "SchemaValidationConfigs": [
```

```
            {
               "Attribute": "string"
            }
         ]
      }
   },
   "BatchSize": number,
   "BisectBatchOnFunctionError": boolean,
   "DestinationConfig": {
      "OnFailure": {
         "Destination": "string"
      },
      "OnSuccess": {
         "Destination": "string"
      }
   },
   "DocumentDBEventSourceConfig": {
      "CollectionName": "string",
      "DatabaseName": "string",
      "FullDocument": "string"
   },
   "EventSourceArn": "string",
   "EventSourceMappingArn": "string",
   "FilterCriteria": {
      "Filters": [
         {
            "Pattern": "string"
         }
      ]
   },
   "FilterCriteriaError": {
      "ErrorCode": "string",
      "Message": "string"
   },
   "FunctionArn": "string",
   "FunctionResponseTypes": [ "string" ],
   "KMSKeyArn": "string",
   "LastModified": number,
   "LastProcessingResult": "string",
   "LoggingConfig": {
      "SystemLogLevel": "string"
   },
   "MaximumBatchingWindowInSeconds": number,
   "MaximumRecordAgeInSeconds": number,
```

```
   "MaximumRetryAttempts": number,
   "MetricsConfig": {
      "Metrics": [ "string" ]
   },
   "ParallelizationFactor": number,
   "ProvisionedPollerConfig": {
      "MaximumPollers": number,
      "MinimumPollers": number,
      "PollerGroupName": "string"
   },
   "Queues": [ "string" ],
   "ScalingConfig": {
      "MaximumConcurrency": number
   },
   "SelfManagedEventSource": {
      "Endpoints": {
         "string" : [ "string" ]
      }
   },
   "SelfManagedKafkaEventSourceConfig": {
      "ConsumerGroupId": "string",
      "ConsumptionMode": "string",
      "SchemaRegistryConfig": {
         "AccessConfigs": [
            {
               "Type": "string",
               "URI": "string"
            }
         ],
         "EventRecordFormat": "string",
         "SchemaRegistryURI": "string",
         "SchemaValidationConfigs": [
            {
               "Attribute": "string"
            }
         ]
      }
   },
   "SourceAccessConfigurations": [
      {
         "Type": "string",
         "URI": "string"
      }
   ],
```

```
    "StartingPosition": "string",
    "StartingPositionTimestamp": number,
    "State": "string",
    "StateTransitionReason": "string",
    "Topics": [ "string" ],
    "TumblingWindowInSeconds": number,
    "UUID": "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.

**AmazonManagedKafkaEventSourceConfig**

Specific configuration settings for an Amazon Managed Streaming for Apache Kafka (Amazon MSK) event source.

Type: AmazonManagedKafkaEventSourceConfig object

**BatchSize**

The maximum number of records in each batch that Lambda pulls from your stream or queue and sends to your function. Lambda passes all of the records in the batch to the function in a single call, up to the payload limit for synchronous invocation (6 MB).

Default value: Varies by service. For Amazon SQS, the default is 10. For all other services, the default is 100.

Related setting: When you set `BatchSize` to a value greater than 10, you must set `MaximumBatchingWindowInSeconds` to at least 1.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10000.

**BisectBatchOnFunctionError**

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) If the function returns an error, split the batch in two and retry. The default value is false.

Type: Boolean

### DestinationConfig

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) A configuration object that specifies the destination of an event after Lambda processes it.

Type: DestinationConfig object

### DocumentDBEventSourceConfig

Specific configuration settings for a DocumentDB event source.

Type: DocumentDBEventSourceConfig object

### EventSourceArn

The Amazon Resource Name (ARN) of the event source.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

### EventSourceMappingArn

The Amazon Resource Name (ARN) of the event source mapping.

Type: String

Length Constraints: Minimum length of 85. Maximum length of 120.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:event-source-mapping:[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}`

### FilterCriteria

An object that defines the filter criteria that determine whether Lambda should process an event. For more information, see Lambda event filtering.

If filter criteria is encrypted, this field shows up as `null` in the response of ListEventSourceMapping API calls. You can view this field in plaintext in the response of GetEventSourceMapping and DeleteEventSourceMapping calls if you have `kms:Decrypt` permissions for the correct AWS KMS key.

Type: FilterCriteria object

### FilterCriteriaError

An object that contains details about an error related to filter criteria encryption.

Type: FilterCriteriaError object

### FunctionArn

The ARN of the Lambda function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

### FunctionResponseTypes

(Kinesis, DynamoDB Streams, Amazon MSK, self-managed Apache Kafka, and Amazon SQS) A list of current response type enums applied to the event source mapping.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 1 item.

Valid Values: `ReportBatchItemFailures`

### KMSKeyArn

The ARN of the AWS Key Management Service (AWS KMS) customer managed key that Lambda uses to encrypt your function's filter criteria.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

### LastModified

The date that the event source mapping was last updated or that its state changed, in Unix time seconds.

Type: Timestamp

### LastProcessingResult

The result of the event source mapping's last processing attempt.

Type: String

**LoggingConfig**

(Amazon MSK, and self-managed Apache Kafka only) The logging configuration for your event source. For more information, see Event source mapping logging.

Type: EventSourceMappingLoggingConfig object

**MaximumBatchingWindowInSeconds**

The maximum amount of time, in seconds, that Lambda spends gathering records before invoking the function. You can configure `MaximumBatchingWindowInSeconds` to any value from 0 seconds to 300 seconds in increments of seconds.

For streams and Amazon SQS event sources, the default batching window is 0 seconds. For Amazon MSK, Self-managed Apache Kafka, Amazon MQ, and DocumentDB event sources, the default batching window is 500 ms. Note that because you can only change `MaximumBatchingWindowInSeconds` in increments of seconds, you cannot revert back to the 500 ms default batching window after you have changed it. To restore the default batching window, you must create a new event source mapping.

Related setting: For streams and Amazon SQS event sources, when you set `BatchSize` to a value greater than 10, you must set `MaximumBatchingWindowInSeconds` to at least 1.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 300.

**MaximumRecordAgeInSeconds**

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) Discard records older than the specified age. The default value is -1, which sets the maximum age to infinite. When the value is set to infinite, Lambda never discards old records.

> **Note**
>
> The minimum valid value for maximum record age is 60s. Although values less than 60 and greater than -1 fall within the parameter's absolute range, they are not allowed

Type: Integer

Valid Range: Minimum value of -1. Maximum value of 604800.

**MaximumRetryAttempts**

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) Discard records after the specified number of retries. The default value is -1, which sets the maximum number of retries to infinite. When MaximumRetryAttempts is infinite, Lambda retries failed records until the record expires in the event source.

Type: Integer

Valid Range: Minimum value of -1. Maximum value of 10000.

**MetricsConfig**

The metrics configuration for your event source. For more information, see Event source mapping metrics.

Type: EventSourceMappingMetricsConfig object

**ParallelizationFactor**

(Kinesis and DynamoDB Streams only) The number of batches to process concurrently from each shard. The default value is 1.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10.

**ProvisionedPollerConfig**

(Amazon SQS, Amazon MSK, and self-managed Apache Kafka only) The provisioned mode configuration for the event source. For more information, see provisioned mode.

Type: ProvisionedPollerConfig object

**Queues**

(Amazon MQ) The name of the Amazon MQ broker destination queue to consume.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 1000.

Pattern: `[\s\S]*`

**ScalingConfig**

(Amazon SQS only) The scaling configuration for the event source. For more information, see Configuring maximum concurrency for Amazon SQS event sources.

Type: ScalingConfig object

**SelfManagedEventSource**

The self-managed Apache Kafka cluster for your event source.

Type: SelfManagedEventSource object

**SelfManagedKafkaEventSourceConfig**

Specific configuration settings for a self-managed Apache Kafka event source.

Type: SelfManagedKafkaEventSourceConfig object

**SourceAccessConfigurations**

An array of the authentication protocol, VPC components, or virtual host to secure and define your event source.

Type: Array of SourceAccessConfiguration objects

Array Members: Minimum number of 0 items. Maximum number of 22 items.

**StartingPosition**

The position in a stream from which to start reading. Required for Amazon Kinesis and Amazon DynamoDB Stream event sources. `AT_TIMESTAMP` is supported only for Amazon Kinesis streams, Amazon DocumentDB, Amazon MSK, and self-managed Apache Kafka.

Type: String

Valid Values: `TRIM_HORIZON | LATEST | AT_TIMESTAMP`

**StartingPositionTimestamp**

With `StartingPosition` set to `AT_TIMESTAMP`, the time from which to start reading, in Unix time seconds. `StartingPositionTimestamp` cannot be in the future.

Type: Timestamp

**State**

The state of the event source mapping. It can be one of the following: `Creating`, `Enabling`, `Enabled`, `Disabling`, `Disabled`, `Updating`, or `Deleting`.

Type: String

**StateTransitionReason**

Indicates whether a user or Lambda made the last change to the event source mapping.

Type: String

**Topics**

The name of the Kafka topic.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 249.

Pattern: `[^.]([a-zA-Z0-9\-_.]+)`

**TumblingWindowInSeconds**

(Kinesis and DynamoDB Streams only) The duration in seconds of a processing window for DynamoDB and Kinesis Streams event sources. A value of 0 seconds indicates no tumbling window.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 900.

**UUID**

The identifier of the event source mapping.

Type: String

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2

- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# GetFunction

Returns information about a Lambda Event Function or function version, with a link to download the deployment package that's valid for 10 minutes. If you specify a function version, only details that are specific to that version are returned.

## Request Syntax

```
GET /2015-03-31/functions/FunctionName?Qualifier=Qualifier HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function, version, or alias.

**Name formats**

- **Function name** – `my-function` (name-only), `my-function:v1` (with alias).
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

You can append a version number or alias to any of the formats. The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

Required: Yes

### Qualifier

Specify a version or alias to get details about a published version of the function.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `\$(LATEST(\.PUBLISHED)?)|[a-zA-Z0-9-_$]+`

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "Code": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "ImageUri": "string",
      "Location": "string",
      "RepositoryType": "string",
      "ResolvedImageUri": "string",
      "ResolvedS3Object": {
         "S3Bucket": "string",
         "S3Key": "string",
         "S3ObjectVersion": "string"
      },
      "SourceKMSKeyArn": "string"
   },
   "Concurrency": {
      "ReservedConcurrentExecutions": number
   },
   "Configuration": {
      "Architectures": [ "string" ],
      "CapacityProviderConfig": {
         "LambdaManagedInstancesCapacityProviderConfig": {
            "CapacityProviderArn": "string",
            "ExecutionEnvironmentMemoryGiBPerVCpu": number,
            "PerExecutionEnvironmentMaxConcurrency": number
         }
      },
      "CodeSha256": "string",
      "CodeSize": number,
```

```
   "ConfigSha256": "string",
   "DeadLetterConfig": {
      "TargetArn": "string"
   },
   "Description": "string",
   "DurableConfig": {
      "ExecutionTimeout": number,
      "KMSKeyArn": "string",
      "RetentionPeriodInDays": number
   },
   "Environment": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "Variables": {
         "string" : "string"
      }
   },
   "EphemeralStorage": {
      "Size": number
   },
   "FileSystemConfigs": [
      {
         "Arn": "string",
         "LocalMountPath": "string",
         "S3FilesConfig": {
            "DirectS3Read": "string"
         }
      }
   ],
   "FunctionArn": "string",
   "FunctionName": "string",
   "Handler": "string",
   "ImageConfigResponse": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "ImageConfig": {
         "Command": [ "string" ],
         "EntryPoint": [ "string" ],
         "WorkingDirectory": "string"
      }
```

```
      },
      "KMSKeyArn": "string",
      "LastModified": "string",
      "LastUpdateStatus": "string",
      "LastUpdateStatusReason": "string",
      "LastUpdateStatusReasonCode": "string",
      "Layers": [
         {
            "Arn": "string",
            "CodeSize": number,
            "SigningJobArn": "string",
            "SigningProfileVersionArn": "string"
         }
      ],
      "LoggingConfig": {
         "ApplicationLogLevel": "string",
         "LogFormat": "string",
         "LogGroup": "string",
         "SystemLogLevel": "string"
      },
      "MasterArn": "string",
      "MemorySize": number,
      "PackageType": "string",
      "RevisionId": "string",
      "Role": "string",
      "Runtime": "string",
      "RuntimeVersionConfig": {
         "Error": {
            "ErrorCode": "string",
            "Message": "string"
         },
         "RuntimeVersionArn": "string"
      },
      "SigningJobArn": "string",
      "SigningProfileVersionArn": "string",
      "SnapStart": {
         "ApplyOn": "string",
         "OptimizationStatus": "string"
      },
      "State": "string",
      "StateReason": "string",
      "StateReasonCode": "string",
      "TenancyConfig": {
         "TenantIsolationMode": "string"
```

```
      },
      "Timeout": number,
      "TracingConfig": {
         "Mode": "string"
      },
      "Version": "string",
      "VpcConfig": {
         "Ipv6AllowedForDualStack": boolean,
         "SecurityGroupIds": [ "string" ],
         "SubnetIds": [ "string" ],
         "VpcId": "string"
      }
   },
   "Tags": {
      "string" : "string"
   },
   "TagsError": {
      "ErrorCode": "string",
      "Message": "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.

### Code

The deployment package of the function or version.

Type: FunctionCodeLocation object

### Concurrency

The function's reserved concurrency.

Type: Concurrency object

### Configuration

The configuration of the function or version.

Type: FunctionConfiguration object

**Tags**

The function's tags. Lambda returns tag data only if you have explicit allow permissions for lambda:ListTags.

Type: String to string map

**TagsError**

An object that contains details about an error related to retrieving tags.

Type: TagsError object

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# GetFunctionCodeSigningConfig

Returns the code signing configuration for the specified function.

## Request Syntax

```
GET /2020-06-30/functions/FunctionName/code-signing-config HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** - `MyFunction`.
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:MyFunction`.
- **Partial ARN** - `123456789012:function:MyFunction`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
```

```
Content-type: application/json

{
   "CodeSigningConfigArn": "string",
   "FunctionName": "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.

### CodeSigningConfigArn

The The Amazon Resource Name (ARN) of the code signing configuration.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 200.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}:\d{12}:code-signing-config:csc-[a-z0-9]{17}`

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** - `MyFunction`.
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:MyFunction`.
- **Partial ARN** - `123456789012:function:MyFunction`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2

- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# GetFunctionConcurrency

Returns details about the reserved concurrency configuration for a function. To set a concurrency limit for a function, use PutFunctionConcurrency.

## Request Syntax

```
GET /2019-09-30/functions/FunctionName/concurrency HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "ReservedConcurrentExecutions": number
}
```

## 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.

**ReservedConcurrentExecutions**

The number of simultaneous executions that are reserved for the function.

Type: Integer

Valid Range: Minimum value of 0.

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# GetFunctionConfiguration

Returns the version-specific settings of a Lambda Event Function or version. The output includes only options that can vary between versions of a function. To modify these settings, use UpdateFunctionConfiguration.

To get all of a function's details, including function-level settings, use GetFunction.

## Request Syntax

```
GET /2015-03-31/functions/FunctionName/configuration?Qualifier=Qualifier HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function, version, or alias.

**Name formats**

- **Function name** – `my-function` (name-only), `my-function:v1` (with alias).
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

You can append a version number or alias to any of the formats. The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

Required: Yes

### Qualifier

Specify a version or alias to get details about a published version of the function.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `\$(LATEST(\.PUBLISHED)?)|[a-zA-Z0-9-_$]+`

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "Architectures": [ "string" ],
   "CapacityProviderConfig": {
      "LambdaManagedInstancesCapacityProviderConfig": {
         "CapacityProviderArn": "string",
         "ExecutionEnvironmentMemoryGiBPerVCpu": number,
         "PerExecutionEnvironmentMaxConcurrency": number
      }
   },
   "CodeSha256": "string",
   "CodeSize": number,
   "ConfigSha256": "string",
   "DeadLetterConfig": {
      "TargetArn": "string"
   },
   "Description": "string",
   "DurableConfig": {
      "ExecutionTimeout": number,
      "KMSKeyArn": "string",
      "RetentionPeriodInDays": number
   },
   "Environment": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "Variables": {
         "string" : "string"
      }
```

```
   },
   "EphemeralStorage": {
      "Size": number
   },
   "FileSystemConfigs": [
      {
         "Arn": "string",
         "LocalMountPath": "string",
         "S3FilesConfig": {
            "DirectS3Read": "string"
         }
      }
   ],
   "FunctionArn": "string",
   "FunctionName": "string",
   "Handler": "string",
   "ImageConfigResponse": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "ImageConfig": {
         "Command": [ "string" ],
         "EntryPoint": [ "string" ],
         "WorkingDirectory": "string"
      }
   },
   "KMSKeyArn": "string",
   "LastModified": "string",
   "LastUpdateStatus": "string",
   "LastUpdateStatusReason": "string",
   "LastUpdateStatusReasonCode": "string",
   "Layers": [
      {
         "Arn": "string",
         "CodeSize": number,
         "SigningJobArn": "string",
         "SigningProfileVersionArn": "string"
      }
   ],
   "LoggingConfig": {
      "ApplicationLogLevel": "string",
      "LogFormat": "string",
      "LogGroup": "string",
```

```
      "SystemLogLevel": "string"
   },
   "MasterArn": "string",
   "MemorySize": number,
   "PackageType": "string",
   "RevisionId": "string",
   "Role": "string",
   "Runtime": "string",
   "RuntimeVersionConfig": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "RuntimeVersionArn": "string"
   },
   "SigningJobArn": "string",
   "SigningProfileVersionArn": "string",
   "SnapStart": {
      "ApplyOn": "string",
      "OptimizationStatus": "string"
   },
   "State": "string",
   "StateReason": "string",
   "StateReasonCode": "string",
   "TenancyConfig": {
      "TenantIsolationMode": "string"
   },
   "Timeout": number,
   "TracingConfig": {
      "Mode": "string"
   },
   "Version": "string",
   "VpcConfig": {
      "Ipv6AllowedForDualStack": boolean,
      "SecurityGroupIds": [ "string" ],
      "SubnetIds": [ "string" ],
      "VpcId": "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.

**Architectures**

The instruction set architecture that the function supports. Architecture is a string array with one of the valid values. The default architecture value is `x86_64`.

Type: Array of strings

Array Members: Fixed number of 1 item.

Valid Values: `x86_64 | arm64`

**CapacityProviderConfig**

Configuration for the capacity provider that manages compute resources for Lambda functions.

Type: CapacityProviderConfig object

**CodeSha256**

The SHA256 hash of the function's deployment package.

Type: String

**CodeSize**

The size of the function's deployment package, in bytes.

Type: Long

**ConfigSha256**

The SHA256 hash of the function configuration.

Type: String

**DeadLetterConfig**

The function's dead letter queue.

Type: DeadLetterConfig object

**Description**

The function's description.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

**DurableConfig**

The function's durable execution configuration settings, if the function is configured for durability.

Type: DurableConfig object

**Environment**

The function's environment variables. Omitted from AWS CloudTrail logs.

Type: EnvironmentResponse object

**EphemeralStorage**

The size of the function's `/tmp` directory in MB. The default value is 512, but can be any whole number between 512 and 10,240 MB. For more information, see Configuring ephemeral storage (console).

Type: EphemeralStorage object

**FileSystemConfigs**

Connection settings for an Amazon EFS file system or an Amazon S3 file system.

Type: Array of FileSystemConfig objects

Array Members: Minimum number of 0 items. Maximum number of 1 item.

**FunctionArn**

The function's Amazon Resource Name (ARN).

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_\.]+(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

**FunctionName**

The name of the function.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

**Handler**

The function that Lambda calls to begin running your function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: `[^\s]+`

**ImageConfigResponse**

The function's image configuration values.

Type: ImageConfigResponse object

**KMSKeyArn**

The ARN of the AWS Key Management Service (AWS KMS) customer managed key that's used to encrypt the following resources:

- The function's environment variables.
- The function's Lambda SnapStart snapshots.
- When used with `SourceKMSKeyArn`, the unzipped version of the .zip deployment package that's used for function invocations. For more information, see Specifying a customer managed key for Lambda.
- The optimized version of the container image that's used for function invocations. Note that this is not the same key that's used to protect your container image in the Amazon Elastic Container Registry (Amazon ECR). For more information, see Function lifecycle.

If you don't provide a customer managed key, Lambda uses an AWS owned key or an AWS managed key.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

### LastModified

The date and time that the function was last updated, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

### LastUpdateStatus

The status of the last update that was performed on the function. This is first set to `Successful` after function creation completes.

Type: String

Valid Values: `Successful | Failed | InProgress`

### LastUpdateStatusReason

The reason for the last update that was performed on the function.

Type: String

### LastUpdateStatusReasonCode

The reason code for the last update that was performed on the function.

Type: String

Valid Values: `EniLimitExceeded | InsufficientRolePermissions | InvalidConfiguration | InternalError | SubnetOutOfIPAddresses | InvalidSubnet | InvalidSecurityGroup | ImageDeleted | ImageAccessDenied | InvalidImage | KMSKeyAccessDenied | KMSKeyNotFound | InvalidStateKMSKey | DisabledKMSKey | EFSIOError | EFSMountConnectivityError | EFSMountFailure | EFSMountTimeout | InvalidRuntime | InvalidZipFileException | FunctionError | VcpuLimitExceeded | CapacityProviderScalingLimitExceeded | InsufficientCapacity | EC2RequestLimitExceeded | FunctionError.InitTimeout | FunctionError.RuntimeInitError | FunctionError.ExtensionInitError | FunctionError.InvalidEntryPoint | FunctionError.InvalidWorkingDirectory | FunctionError.PermissionDenied | FunctionError.TooManyExtensions | FunctionError.InitResourceExhausted | DisallowedByVpcEncryptionControl | DependencyError`

### Layers

The function's layers.

Type: Array of Layer objects

### LoggingConfig

The function's Amazon CloudWatch Logs configuration settings.

Type: LoggingConfig object

### MasterArn

For Lambda@Edge functions, the ARN of the main function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

### MemorySize

The amount of memory available to the function at runtime.

Type: Integer

Valid Range: Minimum value of 128. Maximum value of 32768.

### PackageType

The type of deployment package. Set to `Image` for container image and set `Zip` for .zip file archive.

Type: String

Valid Values: `Zip | Image`

### RevisionId

The latest updated revision of the function or alias.

Type: String

### Role

The function's execution role.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:iam::\d{12}:role/?[a-zA-Z_0-9+=,.@\-_/]+`

### Runtime

The identifier of the function's runtime. Runtime is required if the deployment package is a .zip file archive. Specifying a runtime results in an error if you're deploying a function using a container image.

The following list includes deprecated runtimes. Lambda blocks creating new functions and updating existing functions shortly after each runtime is deprecated. For more information, see Runtime use after deprecation.

For a list of all currently supported runtimes, see Supported runtimes.

Type: String

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11 | python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6 | dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3 | ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21 | python3.13 | nodejs22.x | nodejs24.x | python3.14 | java25 | dotnet10 | ruby4.0`

### RuntimeVersionConfig

The ARN of the runtime and any errors that occured.

Type: RuntimeVersionConfig object

### SigningJobArn

The ARN of the signing job.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

**SigningProfileVersionArn**

The ARN of the signing profile version.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

**SnapStart**

Set `ApplyOn` to `PublishedVersions` to create a snapshot of the initialized execution environment when you publish a function version. For more information, see Improving startup performance with Lambda SnapStart.

Type: SnapStartResponse object

**State**

The current state of the function. When the state is `Inactive`, you can reactivate the function by invoking it.

Type: String

Valid Values: `Pending | Active | Inactive | Failed | Deactivating | Deactivated | ActiveNonInvocable | Deleting`

**StateReason**

The reason for the function's current state.

Type: String

**StateReasonCode**

The reason code for the function's current state. When the code is `Creating`, you can't invoke or modify the function.

Type: String

Valid Values: `Idle | Creating | Restoring | EniLimitExceeded | InsufficientRolePermissions | InvalidConfiguration | InternalError`

```
| SubnetOutOfIPAddresses | InvalidSubnet | InvalidSecurityGroup |
ImageDeleted | ImageAccessDenied | InvalidImage | KMSKeyAccessDenied
| KMSKeyNotFound | InvalidStateKMSKey | DisabledKMSKey |
EFSIOError | EFSMountConnectivityError | EFSMountFailure |
EFSMountTimeout | InvalidRuntime | InvalidZipFileException |
FunctionError | DrainingDurableExecutions | VcpuLimitExceeded
| CapacityProviderScalingLimitExceeded | InsufficientCapacity
| EC2RequestLimitExceeded | FunctionError.InitTimeout |
FunctionError.RuntimeInitError | FunctionError.ExtensionInitError |
FunctionError.InvalidEntryPoint | FunctionError.InvalidWorkingDirectory
| FunctionError.PermissionDenied | FunctionError.TooManyExtensions |
FunctionError.InitResourceExhausted | DisallowedByVpcEncryptionControl |
DependencyError
```

**TenancyConfig**

The function's tenant isolation configuration settings. Determines whether the Lambda function runs on a shared or dedicated infrastructure per unique tenant.

Type: TenancyConfig object

**Timeout**

The amount of time in seconds that Lambda allows a function to run before stopping it.

Type: Integer

Valid Range: Minimum value of 1.

**TracingConfig**

The function's AWS X-Ray tracing configuration.

Type: TracingConfigResponse object

**Version**

The version of the Lambda function.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST|[0-9]+)`

**VpcConfig**

The function's networking configuration.

Type: VpcConfigResponse object

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# GetFunctionEventInvokeConfig

Retrieves the configuration for asynchronous invocation for a function, version, or alias.

To configure options for asynchronous invocation, use PutFunctionEventInvokeConfig.

## Request Syntax

```
GET /2019-09-25/functions/FunctionName/event-invoke-config?Qualifier=Qualifier HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function, version, or alias.

**Name formats**

- **Function name** - `my-function` (name-only), `my-function:v1` (with alias).
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** - `123456789012:function:my-function`.

You can append a version number or alias to any of the formats. The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

Required: Yes

### Qualifier

A version number or alias name.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `\$(LATEST(\.PUBLISHED)?)|[a-zA-Z0-9-_$]+`

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "DestinationConfig": {
      "OnFailure": {
         "Destination": "string"
      },
      "OnSuccess": {
         "Destination": "string"
      }
   },
   "FunctionArn": "string",
   "LastModified": number,
   "MaximumEventAgeInSeconds": number,
   "MaximumRetryAttempts": number
}
```

## 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.

### DestinationConfig

A destination for events after they have been sent to a function for processing.

**Destinations**

- **Function** - The Amazon Resource Name (ARN) of a Lambda function.
- **Queue** - The ARN of a standard SQS queue.
- **Bucket** - The ARN of an Amazon S3 bucket.

- **Topic** - The ARN of a standard SNS topic.
- **Event Bus** - The ARN of an Amazon EventBridge event bus.

> **Note**
>
> S3 buckets are supported only for on-failure destinations. To retain records of successful invocations, use another destination type.

Type: DestinationConfig object

**FunctionArn**

The Amazon Resource Name (ARN) of the function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

**LastModified**

The date and time that the configuration was last updated, in Unix time seconds.

Type: Timestamp

**MaximumEventAgeInSeconds**

The maximum age of a request that Lambda sends to a function for processing.

Type: Integer

Valid Range: Minimum value of 60. Maximum value of 21600.

**MaximumRetryAttempts**

The maximum number of times to retry when the function returns an error.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 2.

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2

- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# GetFunctionRecursionConfig

Returns your function's recursive loop detection configuration.

## Request Syntax

```
GET /2024-08-31/functions/FunctionName/recursion-config HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name of the function.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "RecursiveLoop": "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.

**RecursiveLoop**

If your function's recursive loop detection configuration is `Allow`, Lambda doesn't take any action when it detects your function being invoked as part of a recursive loop.

If your function's recursive loop detection configuration is `Terminate`, Lambda stops your function being invoked and notifies you when it detects your function being invoked as part of a recursive loop.

By default, Lambda sets your function's configuration to `Terminate`. You can update this configuration using the PutFunctionRecursionConfig action.

Type: String

Valid Values: `Allow | Terminate`

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# GetFunctionScalingConfig

Retrieves the scaling configuration for a Lambda Managed Instances function.

## Request Syntax

```
GET /2025-11-30/functions/FunctionName/function-scaling-config?Qualifier=Qualifier
 HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)`

Required: Yes

### Qualifier

Specify a version or alias to get the scaling configuration for a published version of the function.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `(\$LATEST\.PUBLISHED|[0-9]+)`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
```

```
Content-type: application/json

{
   "AppliedFunctionScalingConfig": {
      "MaxExecutionEnvironments": number,
      "MinExecutionEnvironments": number
   },
   "FunctionArn": "string",
   "RequestedFunctionScalingConfig": {
      "MaxExecutionEnvironments": number,
      "MinExecutionEnvironments": number
   }
}
```

## 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.

**AppliedFunctionScalingConfig**

The scaling configuration that is currently applied to the function. This represents the actual scaling settings in effect.

Type: FunctionScalingConfig object

**FunctionArn**

The Amazon Resource Name (ARN) of the function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

**RequestedFunctionScalingConfig**

The scaling configuration that was requested for the function.

Type: FunctionScalingConfig object

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2

- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# GetFunctionUrlConfig

Returns details about a Lambda function URL.

## Request Syntax

```
GET /2021-10-31/functions/FunctionName/url?Qualifier=Qualifier HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?((eusc-)?[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]{1,64})(:((?!\d+$)[0-9a-zA-Z-_]+))?`

Required: Yes

### Qualifier

The alias name.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `((?!^\d+$)^[0-9a-zA-Z-_]+$)`

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "AuthType": "string",
   "Cors": {
      "AllowCredentials": boolean,
      "AllowHeaders": [ "string" ],
      "AllowMethods": [ "string" ],
      "AllowOrigins": [ "string" ],
      "ExposeHeaders": [ "string" ],
      "MaxAge": number
   },
   "CreationTime": "string",
   "FunctionArn": "string",
   "FunctionUrl": "string",
   "InvokeMode": "string",
   "LastModifiedTime": "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.

### AuthType

The type of authentication that your function URL uses. Set to `AWS_IAM` if you want to restrict access to authenticated users only. Set to `NONE` if you want to bypass IAM authentication to create a public endpoint. For more information, see Control access to Lambda function URLs.

Type: String

Valid Values: `NONE` | `AWS_IAM`

### Cors

The cross-origin resource sharing (CORS) settings for your function URL.

Type: Cors object

### CreationTime

When the function URL was created, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

### FunctionArn

The Amazon Resource Name (ARN) of your function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

### FunctionUrl

The HTTP URL endpoint for your function.

Type: String

Length Constraints: Minimum length of 40. Maximum length of 100.

### InvokeMode

Use one of the following options:

- `BUFFERED` – This is the default option. Lambda invokes your function using the `Invoke` API operation. Invocation results are available when the payload is complete. The maximum payload size is 6 MB.
- `RESPONSE_STREAM` – Your function streams payload results as they become available. Lambda invokes your function using the `InvokeWithResponseStream` API operation. The maximum response payload size is 200 MB.

Type: String

Valid Values: `BUFFERED | RESPONSE_STREAM`

**LastModifiedTime**

When the function URL configuration was last updated, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# GetLayerVersion

Returns information about a version of an AWS Lambda layer, with a link to download the layer archive that's valid for 10 minutes.

## Request Syntax

```
GET /2018-10-31/layers/LayerName/versions/VersionNumber HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

**LayerName**

The name or Amazon Resource Name (ARN) of the layer.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+)|[a-zA-Z0-9-_]+`

Required: Yes

**VersionNumber**

The version number.

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
```

```
   "CompatibleArchitectures": [ "string" ],
   "CompatibleRuntimes": [ "string" ],
   "Content": {
      "CodeSha256": "string",
      "CodeSize": number,
      "Location": "string",
      "ResolvedS3Object": {
         "S3Bucket": "string",
         "S3Key": "string",
         "S3ObjectVersion": "string"
      },
      "SigningJobArn": "string",
      "SigningProfileVersionArn": "string"
   },
   "CreatedDate": "string",
   "Description": "string",
   "LayerArn": "string",
   "LayerVersionArn": "string",
   "LicenseInfo": "string",
   "Version": number
}
```

## 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.

### CompatibleArchitectures

A list of compatible instruction set architectures.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 2 items.

Valid Values: `x86_64 | arm64`

### CompatibleRuntimes

The layer's compatible runtimes.

The following list includes deprecated runtimes. For more information, see Runtime use after deprecation.

For a list of all currently supported runtimes, see Supported runtimes.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 15 items.

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11 | python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6 | dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3 | ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21 | python3.13 | nodejs22.x | nodejs24.x | python3.14 | java25 | dotnet10 | ruby4.0`

**Content**

Details about the layer version.

Type: LayerVersionContentOutput object

**CreatedDate**

The date that the layer version was created, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

**Description**

The description of the version.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

**LayerArn**

The ARN of the layer.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+`

**LayerVersionArn**

The ARN of the layer version.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+:[0-9]+`

**LicenseInfo**

The layer's software license.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 512.

**Version**

The version number.

Type: Long

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# GetLayerVersionByArn

Returns information about a version of an AWS Lambda layer, with a link to download the layer archive that's valid for 10 minutes.

## Request Syntax

```
GET /2018-10-31/layers?find=LayerVersion&Arn=Arn HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### Arn

The ARN of the layer version.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+:[0-9]+`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "CompatibleArchitectures": [ "string" ],
   "CompatibleRuntimes": [ "string" ],
   "Content": {
      "CodeSha256": "string",
      "CodeSize": number,
      "Location": "string",
```

```
      "ResolvedS3Object": {
         "S3Bucket": "string",
         "S3Key": "string",
         "S3ObjectVersion": "string"
      },
      "SigningJobArn": "string",
      "SigningProfileVersionArn": "string"
   },
   "CreatedDate": "string",
   "Description": "string",
   "LayerArn": "string",
   "LayerVersionArn": "string",
   "LicenseInfo": "string",
   "Version": number
}
```

## 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.

### CompatibleArchitectures

A list of compatible instruction set architectures.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 2 items.

Valid Values: `x86_64 | arm64`

### CompatibleRuntimes

The layer's compatible runtimes.

The following list includes deprecated runtimes. For more information, see Runtime use after deprecation.

For a list of all currently supported runtimes, see Supported runtimes.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 15 items.

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11 | python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6 | dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3 | ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21 | python3.13 | nodejs22.x | nodejs24.x | python3.14 | java25 | dotnet10 | ruby4.0`

**Content**

Details about the layer version.

Type: LayerVersionContentOutput object

**CreatedDate**

The date that the layer version was created, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

**Description**

The description of the version.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

**LayerArn**

The ARN of the layer.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+`

**LayerVersionArn**

The ARN of the layer version.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+:[0-9]+`

**LicenseInfo**

The layer's software license.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 512.

**Version**

The version number.

Type: Long

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# GetLayerVersionPolicy

Returns the permission policy for a version of an AWS Lambda layer. For more information, see AddLayerVersionPermission.

## Request Syntax

```
GET /2018-10-31/layers/LayerName/versions/VersionNumber/policy HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

**LayerName**

The name or Amazon Resource Name (ARN) of the layer.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+)|[a-zA-Z0-9-_]+`

Required: Yes

**VersionNumber**

The version number.

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
```

```
    "Policy": "string",
    "RevisionId": "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.

**Policy**

The policy document.

Type: String

**RevisionId**

A unique identifier for the current revision of the policy.

Type: String

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# GetPolicy

Returns the resource-based IAM policy for a function, version, or alias.

## Request Syntax

```
GET /2015-03-31/functions/FunctionName/policy?Qualifier=Qualifier HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function, version, or alias.

**Name formats**

- **Function name** – `my-function` (name-only), `my-function:v1` (with alias).
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

You can append a version number or alias to any of the formats. The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

Required: Yes

### Qualifier

Specify a version or alias to get the policy for that resource.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `\$(LATEST(\.PUBLISHED)?)|[a-zA-Z0-9-_$]+`

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "Policy": "string",
   "RevisionId": "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.

**Policy**

The resource-based policy.

Type: String

**RevisionId**

A unique identifier for the current revision of the policy.

Type: String

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3

- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# GetProvisionedConcurrencyConfig

Retrieves the provisioned concurrency configuration for a function's alias or version.

## Request Syntax

```
GET /2019-09-30/functions/FunctionName/provisioned-concurrency?Qualifier=Qualifier
 HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

### Qualifier

The version number or alias name.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `(|[a-zA-Z0-9$_-]+)`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "AllocatedProvisionedConcurrentExecutions": number,
   "AvailableProvisionedConcurrentExecutions": number,
   "LastModified": "string",
   "RequestedProvisionedConcurrentExecutions": number,
   "Status": "string",
   "StatusReason": "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.

**AllocatedProvisionedConcurrentExecutions**

The amount of provisioned concurrency allocated. When a weighted alias is used during linear and canary deployments, this value fluctuates depending on the amount of concurrency that is provisioned for the function versions.

Type: Integer

Valid Range: Minimum value of 0.

**AvailableProvisionedConcurrentExecutions**

The amount of provisioned concurrency available.

Type: Integer

Valid Range: Minimum value of 0.

**LastModified**

The date and time that a user last updated the configuration, in ISO 8601 format.

Type: String

**RequestedProvisionedConcurrentExecutions**

The amount of provisioned concurrency requested.

Type: Integer

Valid Range: Minimum value of 1.

**Status**

The status of the allocation process.

Type: String

Valid Values: `IN_PROGRESS | READY | FAILED`

**StatusReason**

For failed allocations, the reason that provisioned concurrency could not be allocated.

Type: String

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ProvisionedConcurrencyConfigNotFoundException**

The specified configuration does not exist.

HTTP Status Code: 404

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3

- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# GetResourcePolicy

Retrieves the resource-based policy attached to a Lambda resource.

## Request Syntax

```
GET /2026-07-09/resource-policy/ResourceArn HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### ResourceArn

The Amazon Resource Name (ARN) of the Lambda resource you want to retrieve the policy for. You can use a qualified or an unqualified ARN. The value must be a complete ARN, and the operation does not accept wildcard characters.

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:(eusc-)?[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_])+)?`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "Policy": "string",
   "RevisionId": "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.

**Policy**

The resource-based policy attached to the Lambda resource you specified.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 20480.

Pattern: `[\s\S]+`

**RevisionId**

The revision ID of the policy. Pass this value as the `RevisionId` in a PutResourcePolicy or DeleteResourcePolicy request. Doing so ensures the operation acts on the expected version of the policy.

Type: String

Length Constraints: Fixed length of 36.

Pattern: `[0-9a-f]{8}-[0-9a-f]{4}-[0-9a-f]{4}-[0-9a-f]{4}-[0-9a-f]{12}`

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# GetRuntimeManagementConfig

Retrieves the runtime management configuration for a function's version. If the runtime update mode is **Manual**, this includes the ARN of the runtime version and the runtime update mode. If the runtime update mode is **Auto** or **Function update**, this includes the runtime update mode and `null` is returned for the ARN. For more information, see Runtime updates.

## Request Syntax

```
GET /2021-07-20/functions/FunctionName/runtime-management-config?Qualifier=Qualifier
 HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

Required: Yes

### Qualifier

Specify a version of the function. This can be `$LATEST` or a published version number. If no value is specified, the configuration for the `$LATEST` version is returned.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `\$(LATEST(\.PUBLISHED)?)|[a-zA-Z0-9-_$]+`

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "FunctionArn": "string",
   "RuntimeVersionArn": "string",
   "UpdateRuntimeOn": "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.

**FunctionArn**

The Amazon Resource Name (ARN) of your function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_\.]+(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

**RuntimeVersionArn**

The ARN of the runtime the function is configured to use. If the runtime update mode is **Manual**, the ARN is returned, otherwise `null` is returned.

Type: String

Length Constraints: Minimum length of 26. Maximum length of 2048.

Pattern: `arn:(aws[a-zA-Z-]*):lambda:[a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}::runtime:.+`

**UpdateRuntimeOn**

The current runtime update mode of the function.

Type: String

Valid Values: `Auto | Manual | FunctionUpdate`

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# Invoke

Invokes a Lambda Event Function. You can invoke a function synchronously (and wait for the response), or asynchronously. By default, Lambda invokes your function synchronously (i.e. the`InvocationType` is `RequestResponse`). To invoke a function asynchronously, set `InvocationType` to `Event`. Lambda passes the `ClientContext` object to your function for synchronous invocations only.

For synchronous invocations, the maximum payload size is 6 MB. For asynchronous invocations, the maximum payload size is 1 MB.

For synchronous invocation, details about the function response, including errors, are included in the response body and headers. For either invocation type, you can find more information in the execution log and trace.

When an error occurs, your function may be invoked multiple times. Retry behavior varies by error type, client, event source, and invocation type. For example, if you invoke a function asynchronously and it returns an error, Lambda executes the function up to two more times. For more information, see Error handling and automatic retries in Lambda.

For asynchronous invocation, Lambda adds events to a queue before sending them to your function. If your function does not have enough capacity to keep up with the queue, events may be lost. Occasionally, your function may receive the same event multiple times, even if no error occurs. To retain events that were not processed, configure your function with a dead-letter queue.

The status code in the API response doesn't reflect function errors. Error codes are reserved for errors that prevent your function from executing, such as permissions errors, quota errors, or issues with your function's code and configuration. For example, Lambda returns `TooManyRequestsException` if running the function would cause you to exceed a concurrency limit at either the account level (`ConcurrentInvocationLimitExceeded`) or function level (`ReservedFunctionConcurrentInvocationLimitExceeded`).

For functions with a long timeout, your client might disconnect during synchronous invocation while it waits for a response. Configure your HTTP client, SDK, firewall, proxy, or operating system to allow for long connections with timeout or keep-alive settings.

This operation requires permission for the lambda:InvokeFunction action. For details on how to set up permissions for cross-account invocations, see Granting function access to other accounts.

## Request Syntax

```
POST /2015-03-31/functions/FunctionName/invocations?Qualifier=Qualifier HTTP/1.1
X-Amz-Invocation-Type: InvocationType
X-Amz-Log-Type: LogType
X-Amz-Client-Context: ClientContext
X-Amz-Durable-Execution-Name: DurableExecutionName
X-Amz-Tenant-Id: TenantId

Payload
```

## URI Request Parameters

The request uses the following URI parameters.

### ClientContext

Up to 3,583 bytes of base64-encoded data about the invoking client to pass to the function in the context object. Lambda passes the `ClientContext` object to your function for synchronous invocations only.

### DurableExecutionName

A unique name for the durable execution. If you invoke a durable function using a name that already exists with the same payload, Lambda returns the existing execution instead of creating a duplicate. If the payload differs, Lambda returns a `DurableExecutionAlreadyStartedException` error.

If not specified, Lambda generates a unique identifier automatically. For more information, see Execution names.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9-_]+`

### FunctionName

The name or ARN of the Lambda function, version, or alias.

**Name formats**

- **Function name** – `my-function` (name-only), `my-function:v1` (with alias).

- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

You can append a version number or alias to any of the formats. The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

Required: Yes

## InvocationType

Choose from the following options.

- `RequestResponse` (default) – Invoke the function synchronously. Keep the connection open until the function returns a response or times out. The API response includes the function response and additional data.
- `Event` – Invoke the function asynchronously. Send events that fail multiple times to the function's dead-letter queue (if one is configured). The API response only includes a status code.
- `DryRun` – Validate parameter values and verify that the user or role has permission to invoke the function.

Valid Values: `Event | RequestResponse | DryRun`

## LogType

Set to `Tail` to include the execution log in the response. Applies to synchronously invoked functions only.

Valid Values: `None | Tail`

## Qualifier

Specify a version or alias to invoke a published version of the function.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `\$(LATEST(\.PUBLISHED)?)|[a-zA-Z0-9-_$]+`

**TenantId**

The identifier of the tenant in a multi-tenant Lambda function.

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `[a-zA-Z0-9\._:\/=+\-@ ]+`

## Request Body

The request accepts the following binary data.

**Payload**

The JSON that you want to provide to your Lambda function as input. The maximum payload size is 6 MB for synchronous invocations and 1 MB for asynchronous invocations.

You can enter the JSON directly. For example, `--payload '{ "key": "value" }'`. You can also specify a file path. For example, `--payload file://payload.json`.

## Response Syntax

```
HTTP/1.1 StatusCode
X-Amz-Function-Error: FunctionError
X-Amz-Log-Result: LogResult
X-Amz-Executed-Version: ExecutedVersion
X-Amz-Durable-Execution-Arn: DurableExecutionArn

Payload
```

## Response Elements

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

**StatusCode**

The HTTP status code is in the 200 range for a successful request. For the `RequestResponse` invocation type, this status code is 200. For the `Event` invocation type, this status code is 202. For the `DryRun` invocation type, the status code is 204.

The response returns the following HTTP headers.

**DurableExecutionArn**

The ARN of the durable execution that was started. This is returned when invoking a durable function and provides a unique identifier for tracking the execution.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `arn:([a-zA-Z0-9-]+):lambda:([a-zA-Z0-9-]+):(\d{12}):function:([a-zA-Z0-9_-]+):(\$LATEST(?:\.PUBLISHED)?|[0-9]+)/durable-execution/([a-zA-Z0-9_-]+)/([a-zA-Z0-9_-]+)`

**ExecutedVersion**

The version of the function that executed. When you invoke a function with an alias, this indicates which version the alias resolved to.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST|[0-9]+)`

**FunctionError**

If present, indicates that an error occurred during function execution. Details about the error are included in the response payload.

**LogResult**

The last 4 KB of the execution log, which is base64-encoded.

The response returns the following as the HTTP body.

**Payload**

The response from the function, or an error object.

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**CodeArtifactUserDeletedException**

The Lambda function couldn't be invoked because its code artifact user has been deleted. Wait for Lambda to provision a new code artifact user, or update the function's code package to recreate it.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**CodeArtifactUserFailedException**

The Lambda function couldn't be invoked because provisioning of its code artifact user failed. Update the function's code package or check the Lambda function's `State` and `StateReasonCode` for additional context.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**CodeArtifactUserPendingException**

The Lambda function couldn't be invoked because its code artifact user is still being provisioned. Wait for the function's `State` to become `Active` and try the request again.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**DurableExecutionAlreadyStartedException**

The durable execution with the specified name has already been started. Each durable execution name must be unique within the function. Use a different name or check the status of the existing execution.

**Type**

The exception type.

HTTP Status Code: 409

**EC2AccessDeniedException**

Need additional permissions to configure VPC settings.

HTTP Status Code: 502

**EC2ThrottledException**

Amazon EC2 throttled AWS Lambda during Lambda function initialization using the execution role provided for the function.

HTTP Status Code: 502

**EC2UnexpectedException**

AWS Lambda received an unexpected Amazon EC2 client exception while setting up for the Lambda function.

HTTP Status Code: 502

**EFSIOException**

An error occurred when reading from or writing to a connected file system.

HTTP Status Code: 410

**EFSMountConnectivityException**

The Lambda function couldn't make a network connection to the configured file system.

HTTP Status Code: 408

**EFSMountFailureException**

The Lambda function couldn't mount the configured file system due to a permission or configuration issue.

HTTP Status Code: 403

**EFSMountTimeoutException**

The Lambda function made a network connection to the configured file system, but the mount operation timed out.

HTTP Status Code: 408

**ENILimitReachedException**

AWS Lambda couldn't create an elastic network interface in the VPC, specified as part of Lambda function configuration, because the limit for network interfaces has been reached. For more information, see Lambda quotas.

HTTP Status Code: 502

**ENINotReadyException**

AWS Lambda couldn't invoke the Lambda function because the elastic network interface (ENI) configured for its VPC connection isn't ready yet. Wait a few moments and try the request again. For more information about VPC configuration, see Configuring a Lambda function to access resources in a VPC.

**Message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 502

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**InvalidRequestContentException**

The request body could not be parsed as JSON, or a request header is invalid. For example, the 'x-amzn-RequestId' header is not a valid UUID string.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**InvalidRuntimeException**

The runtime or runtime version specified is not supported.

HTTP Status Code: 502

**InvalidSecurityGroupIDException**

The security group ID provided in the Lambda function VPC configuration is not valid.

HTTP Status Code: 502

**InvalidSubnetIDException**

The subnet ID provided in the Lambda function VPC configuration is not valid.

HTTP Status Code: 502

**InvalidZipFileException**

AWS Lambda could not unzip the deployment package.

HTTP Status Code: 502

**KMSAccessDeniedException**

Lambda couldn't decrypt the environment variables because AWS KMS access was denied. Check the Lambda function's KMS permissions.

HTTP Status Code: 502

**KMSDisabledException**

Lambda couldn't decrypt the environment variables because the AWS KMS key used is disabled. Check the Lambda function's KMS key settings.

HTTP Status Code: 502

**KMSInvalidStateException**

Lambda couldn't decrypt the environment variables because the state of the AWS KMS key used is not valid for Decrypt. Check the function's KMS key settings.

HTTP Status Code: 502

**KMSNotFoundException**

Lambda couldn't decrypt the environment variables because the AWS KMS key was not found. Check the function's KMS key settings.

HTTP Status Code: 502

**ModeNotSupportedException**

The Lambda function doesn't support the invocation mode requested. For example, calling `Invoke` with `InvocationType=RequestResponse` on a function configured for asynchronous-only invocation, or vice versa. For more information about invocation types, see Invoking Lambda functions.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**NoPublishedVersionException**

The function has no published versions available.

**Type**

The exception type.

HTTP Status Code: 400

**RecursiveInvocationException**

Lambda has detected your function being invoked in a recursive loop with other AWS resources and stopped your function's invocation.

**Message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**RequestTooLargeException**

The request payload exceeded the `Invoke` request body JSON input quota. For more information, see Lambda quotas.

HTTP Status Code: 413

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ResourceNotReadyException**

The function is inactive and its VPC connection is no longer available. Wait for the VPC connection to reestablish and try again.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 502

**S3FilesMountConnectivityException**

The Lambda function couldn't make a network connection to the configured S3 Files access point.

**Message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 408

**S3FilesMountFailureException**

The Lambda function couldn't mount the configured S3 Files access point due to a permission or configuration issue.

**Message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 403

**S3FilesMountTimeoutException**

The Lambda function made a network connection to the configured S3 Files access point, but the mount operation timed out.

**Message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 408

**SerializedRequestEntityTooLargeException**

The request payload exceeded the maximum allowed size for serialized request entities.

**Type**

The error type.

HTTP Status Code: 413

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**ServiceQuotaExceededException**

The request would exceed a service quota. For more information about Lambda service quotas, see Lambda quotas. To request a quota increase, see Requesting a quota increase in the *Service Quotas User Guide*.

**Message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 402

**SnapStartException**

The `afterRestore()` runtime hook encountered an error. For more information, check the Amazon CloudWatch logs.

HTTP Status Code: 400

**SnapStartNotReadyException**

Lambda is initializing your function. You can invoke the function when the function state becomes `Active`.

HTTP Status Code: 409

**SnapStartRegenerationFailureException**

Lambda couldn't regenerate the SnapStart snapshot for the function. SnapStart-enabled functions periodically regenerate snapshots when their underlying runtime or dependencies

change; this regeneration failed. Wait for Lambda to retry, or update the function's configuration to trigger a new snapshot. For more information, see Lambda SnapStart.

**Message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**SnapStartTimeoutException**

Lambda couldn't restore the snapshot within the timeout limit.

HTTP Status Code: 408

**SubnetIPAddressLimitReachedException**

AWS Lambda couldn't set up VPC access for the Lambda function because one or more configured subnets has no available IP addresses.

HTTP Status Code: 502

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

**UnsupportedMediaTypeException**

The content type of the `Invoke` request body is not JSON.

HTTP Status Code: 415

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# InvokeAsync

*This action has been deprecated.*

> **Note**
>
> For asynchronous function invocation, use Invoke.

Invokes a function asynchronously.

> **Note**
>
> The payload limit is 256KB. For larger payloads, for up to 1MB, use Invoke.

> **Note**
>
> If you do use the InvokeAsync action, note that it doesn't support the use of X-Ray active tracing. Trace ID is not propagated to the function, even if X-Ray active tracing is turned on.

## Request Syntax

```
POST /2014-11-13/functions/FunctionName/invoke-async HTTP/1.1

InvokeArgs
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** – `my-function`.

- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

Required: Yes

## Request Body

The request accepts the following binary data.

**InvokeArgs**

The JSON that you want to provide to your Lambda function as input.

Required: Yes

## Response Syntax

```
HTTP/1.1 Status
```

## Response Elements

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

**Status**

The status code.

# Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidRequestContentException**

The request body could not be parsed as JSON, or a request header is invalid. For example, the 'x-amzn-RequestId' header is not a valid UUID string.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**InvalidRuntimeException**

The runtime or runtime version specified is not supported.

HTTP Status Code: 502

**ModeNotSupportedException**

The Lambda function doesn't support the invocation mode requested. For example, calling `Invoke` with `InvocationType=RequestResponse` on a function configured for asynchronous-only invocation, or vice versa. For more information about invocation types, see Invoking Lambda functions.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**ServiceQuotaExceededException**

The request would exceed a service quota. For more information about Lambda service quotas, see Lambda quotas. To request a quota increase, see Requesting a quota increase in the *Service Quotas User Guide*.

**Message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 402

**SnapStartRegenerationFailureException**

Lambda couldn't regenerate the SnapStart snapshot for the function. SnapStart-enabled functions periodically regenerate snapshots when their underlying runtime or dependencies change; this regeneration failed. Wait for Lambda to retry, or update the function's configuration to trigger a new snapshot. For more information, see Lambda SnapStart.

**Message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# InvokeWithResponseStream

Configure your Lambda Event Functions to stream response payloads back to clients. For more information, see Configuring a Lambda function to stream responses.

This operation requires permission for the lambda:InvokeFunction action. For details on how to set up permissions for cross-account invocations, see Granting function access to other accounts.

## Request Syntax

```
POST /2021-11-15/functions/FunctionName/response-streaming-invocations?
Qualifier=Qualifier HTTP/1.1
X-Amz-Invocation-Type: InvocationType
X-Amz-Log-Type: LogType
X-Amz-Client-Context: ClientContext
X-Amz-Tenant-Id: TenantId

Payload
```

## URI Request Parameters

The request uses the following URI parameters.

### ClientContext

Up to 3,583 bytes of base64-encoded data about the invoking client to pass to the function in the context object.

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

Required: Yes

**InvocationType**

Use one of the following options:

- `RequestResponse` (default) – Invoke the function synchronously. Keep the connection open until the function returns a response or times out. The API operation response includes the function response and additional data.
- `DryRun` – Validate parameter values and verify that the IAM user or role has permission to invoke the function.

Valid Values: `RequestResponse | DryRun`

**LogType**

Set to `Tail` to include the execution log in the response. Applies to synchronously invoked functions only.

Valid Values: `None | Tail`

**Qualifier**

The alias name.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `\$(LATEST(\.PUBLISHED)?)|[a-zA-Z0-9-_$]+`

**TenantId**

The identifier of the tenant in a multi-tenant Lambda function.

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `[a-zA-Z0-9\._:\/=+\-@ ]+`

## Request Body

The request accepts the following binary data.

### Payload

The JSON that you want to provide to your Lambda function as input.

You can enter the JSON directly. For example, `--payload '{ "key": "value" }'`. You can also specify a file path. For example, `--payload file://payload.json`.

## Response Syntax

```
HTTP/1.1 StatusCode
X-Amz-Executed-Version: ExecutedVersion
Content-Type: ResponseStreamContentType
Content-type: application/json

{
   "InvokeComplete": {
      "ErrorCode": "string",
      "ErrorDetails": "string",
      "LogResult": "string"
   },
   "PayloadChunk": {
      "Payload": blob
   }
}
```

## Response Elements

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

### StatusCode

For a successful request, the HTTP status code is in the 200 range. For the `RequestResponse` invocation type, this status code is 200. For the `DryRun` invocation type, this status code is 204.

The response returns the following HTTP headers.

### ExecutedVersion

The version of the function that executed. When you invoke a function with an alias, this indicates which version the alias resolved to.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST|[0-9]+)`

**ResponseStreamContentType**

The type of data the stream is returning.

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

**InvokeComplete**

An object that's returned when the stream has ended and all the payload chunks have been returned.

Type: InvokeWithResponseStreamCompleteEvent object

**PayloadChunk**

A chunk of the streamed response payload.

Type: InvokeResponseStreamUpdate object

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**EC2AccessDeniedException**

Need additional permissions to configure VPC settings.

HTTP Status Code: 502

**EC2ThrottledException**

Amazon EC2 throttled AWS Lambda during Lambda function initialization using the execution role provided for the function.

HTTP Status Code: 502

**EC2UnexpectedException**

AWS Lambda received an unexpected Amazon EC2 client exception while setting up for the Lambda function.

HTTP Status Code: 502

**EFSIOException**

An error occurred when reading from or writing to a connected file system.

HTTP Status Code: 410

**EFSMountConnectivityException**

The Lambda function couldn't make a network connection to the configured file system.

HTTP Status Code: 408

**EFSMountFailureException**

The Lambda function couldn't mount the configured file system due to a permission or configuration issue.

HTTP Status Code: 403

**EFSMountTimeoutException**

The Lambda function made a network connection to the configured file system, but the mount operation timed out.

HTTP Status Code: 408

**ENILimitReachedException**

AWS Lambda couldn't create an elastic network interface in the VPC, specified as part of Lambda function configuration, because the limit for network interfaces has been reached. For more information, see Lambda quotas.

HTTP Status Code: 502

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**InvalidRequestContentException**

The request body could not be parsed as JSON, or a request header is invalid. For example, the 'x-amzn-RequestId' header is not a valid UUID string.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**InvalidRuntimeException**

The runtime or runtime version specified is not supported.

HTTP Status Code: 502

**InvalidSecurityGroupIDException**

The security group ID provided in the Lambda function VPC configuration is not valid.

HTTP Status Code: 502

**InvalidSubnetIDException**

The subnet ID provided in the Lambda function VPC configuration is not valid.

HTTP Status Code: 502

**InvalidZipFileException**

AWS Lambda could not unzip the deployment package.

HTTP Status Code: 502

**KMSAccessDeniedException**

Lambda couldn't decrypt the environment variables because AWS KMS access was denied. Check the Lambda function's KMS permissions.

HTTP Status Code: 502

**KMSDisabledException**

Lambda couldn't decrypt the environment variables because the AWS KMS key used is disabled. Check the Lambda function's KMS key settings.

HTTP Status Code: 502

**KMSInvalidStateException**

Lambda couldn't decrypt the environment variables because the state of the AWS KMS key used is not valid for Decrypt. Check the function's KMS key settings.

HTTP Status Code: 502

**KMSNotFoundException**

Lambda couldn't decrypt the environment variables because the AWS KMS key was not found. Check the function's KMS key settings.

HTTP Status Code: 502

**NoPublishedVersionException**

The function has no published versions available.

**Type**

The exception type.

HTTP Status Code: 400

**RecursiveInvocationException**

Lambda has detected your function being invoked in a recursive loop with other AWS resources and stopped your function's invocation.

**Message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**RequestTooLargeException**

The request payload exceeded the `Invoke` request body JSON input quota. For more information, see Lambda quotas.

HTTP Status Code: 413

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ResourceNotReadyException**

The function is inactive and its VPC connection is no longer available. Wait for the VPC connection to reestablish and try again.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 502

**S3FilesMountConnectivityException**

The Lambda function couldn't make a network connection to the configured S3 Files access point.

**Message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 408

**S3FilesMountFailureException**

The Lambda function couldn't mount the configured S3 Files access point due to a permission or configuration issue.

**Message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 403

**S3FilesMountTimeoutException**

The Lambda function made a network connection to the configured S3 Files access point, but the mount operation timed out.

**Message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 408

**SerializedRequestEntityTooLargeException**

The request payload exceeded the maximum allowed size for serialized request entities.

**Type**

The error type.

HTTP Status Code: 413

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**ServiceQuotaExceededException**

The request would exceed a service quota. For more information about Lambda service quotas, see Lambda quotas. To request a quota increase, see Requesting a quota increase in the *Service Quotas User Guide*.

**Message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 402

**SnapStartException**

The `afterRestore()` runtime hook encountered an error. For more information, check the Amazon CloudWatch logs.

HTTP Status Code: 400

**SnapStartNotReadyException**

Lambda is initializing your function. You can invoke the function when the function state becomes `Active`.

HTTP Status Code: 409

**SnapStartRegenerationFailureException**

Lambda couldn't regenerate the SnapStart snapshot for the function. SnapStart-enabled functions periodically regenerate snapshots when their underlying runtime or dependencies change; this regeneration failed. Wait for Lambda to retry, or update the function's configuration to trigger a new snapshot. For more information, see Lambda SnapStart.

**Message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**SnapStartTimeoutException**

Lambda couldn't restore the snapshot within the timeout limit.

HTTP Status Code: 408

**SubnetIPAddressLimitReachedException**

AWS Lambda couldn't set up VPC access for the Lambda function because one or more configured subnets has no available IP addresses.

HTTP Status Code: 502

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

**UnsupportedMediaTypeException**

The content type of the `Invoke` request body is not JSON.

HTTP Status Code: 415

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2

- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# ListAliases

Returns a list of aliases for a Lambda Event Function.

## Request Syntax

```
GET /2015-03-31/functions/FunctionName/aliases?
FunctionVersion=FunctionVersion&Marker=Marker&MaxItems=MaxItems HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** - `MyFunction`.
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:MyFunction`.
- **Partial ARN** - `123456789012:function:MyFunction`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

### FunctionVersion

Specify a function version to only list aliases that invoke that version.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST(\.PUBLISHED)?|[0-9]+)`

**Marker**

Specify the pagination token that's returned by a previous request to retrieve the next page of results.

**MaxItems**

Limit the number of aliases returned.

Valid Range: Minimum value of 1. Maximum value of 10000.

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "Aliases": [
      {
         "AliasArn": "string",
         "Description": "string",
         "FunctionVersion": "string",
         "Name": "string",
         "RevisionId": "string",
         "RoutingConfig": {
            "AdditionalVersionWeights": {
               "string" : number
            }
         }
      }
   ],
   "NextMarker": "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.

**Aliases**

A list of aliases.

Type: Array of AliasConfiguration objects

**NextMarker**

The pagination token that's included if more results are available.

Type: String

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# ListCapacityProviders

Returns a list of capacity providers in your account.

## Request Syntax

```
GET /2025-11-30/capacity-providers?Marker=Marker&MaxItems=MaxItems&State=State HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

**Marker**

Specify the pagination token that's returned by a previous request to retrieve the next page of results.

**MaxItems**

The maximum number of capacity providers to return.

Valid Range: Minimum value of 1. Maximum value of 50.

**State**

Filter capacity providers by their current state.

Valid Values: `Pending | Active | Failed | Deleting`

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "CapacityProviders": [
      {
         "CapacityProviderArn": "string",
         "CapacityProviderScalingConfig": {
```

```
            "MaxVCpuCount": number,
            "ScalingMode": "string",
            "ScalingPolicies": [
               {
                  "PredefinedMetricType": "string",
                  "TargetValue": number
               }
            ]
         },
         "InstanceRequirements": {
            "AllowedInstanceTypes": [ "string" ],
            "Architectures": [ "string" ],
            "ExcludedInstanceTypes": [ "string" ]
         },
         "KmsKeyArn": "string",
         "LastModified": "string",
         "PermissionsConfig": {
            "CapacityProviderOperatorRoleArn": "string"
         },
         "PropagateTags": {
            "ExplicitTags": {
               "string" : "string"
            },
            "Mode": "string"
         },
         "State": "string",
         "TelemetryConfig": {
            "LoggingConfig": {
               "LogGroup": "string",
               "SystemLogLevel": "string"
            }
         },
         "VpcConfig": {
            "SecurityGroupIds": [ "string" ],
            "SubnetIds": [ "string" ]
         }
      }
   ],
   "NextMarker": "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.

**CapacityProviders**

A list of capacity providers in your account.

Type: Array of CapacityProvider objects

Array Members: Minimum number of 0 items. Maximum number of 50 items.

**NextMarker**

The pagination token that's included if more results are available.

Type: String

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# ListCodeSigningConfigs

Returns a list of code signing configurations. A request returns up to 10,000 configurations per call. You can use the `MaxItems` parameter to return fewer configurations per call.

## Request Syntax

```
GET /2020-04-22/code-signing-configs?Marker=Marker&MaxItems=MaxItems HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

**Marker**

Specify the pagination token that's returned by a previous request to retrieve the next page of results.

**MaxItems**

Maximum number of items to return.

Valid Range: Minimum value of 1. Maximum value of 10000.

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "CodeSigningConfigs": [
      {
         "AllowedPublishers": {
            "SigningProfileVersionArns": [ "string" ]
         },
         "CodeSigningConfigArn": "string",
```

```
            "CodeSigningConfigId": "string",
            "CodeSigningPolicies": {
               "UntrustedArtifactOnDeployment": "string"
            },
            "Description": "string",
            "LastModified": "string"
         }
      ],
      "NextMarker": "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.

**CodeSigningConfigs**

The code signing configurations

Type: Array of CodeSigningConfig objects

**NextMarker**

The pagination token that's included if more results are available.

Type: String

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# ListDurableExecutionsByFunction

Returns a list of durable executions for a specified Lambda function. You can filter the results by execution name, status, and start time range. This API supports pagination for large result sets.

## Request Syntax

```
GET /2025-12-01/functions/FunctionName/durable-executions?
DurableExecutionName=DurableExecutionName&Marker=Marker&MaxItems=MaxItems&Qualifier=Qualifier&R
 HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### DurableExecutionName

Filter executions by name. Only executions with names that matches this string are returned.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9-_]+`

### FunctionName

The name or ARN of the Lambda function. You can specify a function name, a partial ARN, or a full ARN.

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

Required: Yes

### Marker

Pagination token from a previous request to continue retrieving results.

### MaxItems

Maximum number of executions to return (1-1000). Default is 100.

Valid Range: Minimum value of 0. Maximum value of 1000.

### Qualifier

The function version to filter executions by. If you don't specify a qualifier, this operation returns executions across all versions of the Lambda function.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `\$(LATEST(\.PUBLISHED)?)|[a-zA-Z0-9-_$]+`

### ReverseOrder

Set to true to return results in chronological order (oldest first). Default is false.

### StartedAfter

Filter executions that started after this timestamp (ISO 8601 format).

### StartedBefore

Filter executions that started before this timestamp (ISO 8601 format).

### Statuses

Filters the executions by status. Specify one of the following values:

- `RUNNING` – The execution is running or waiting for pending operations to complete.
- `PAUSING` – The execution is waiting for an in-progress invocation to reach its next checkpoint before it pauses.
- `PAUSED` – The execution is paused, and Lambda doesn't invoke your function.
- `SUCCEEDED` – The execution completed successfully.
- `FAILED` – The execution completed with an error.
- `TIMED_OUT` – The execution exceeded its execution timeout.
- `STOPPED` – A `StopDurableExecution` request stopped the execution.
- `DELETING` – A `DeleteDurableExecution` request is deleting the execution and its data.

Array Members: Fixed number of 1 item.

Valid Values: `RUNNING | SUCCEEDED | FAILED | TIMED_OUT | STOPPED | DELETING | PAUSING | PAUSED`

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "DurableExecutions": [
      {
         "DurableExecutionArn": "string",
         "DurableExecutionName": "string",
         "EndTimestamp": number,
         "FunctionArn": "string",
         "KMSKeyArn": "string",
         "StartTimestamp": number,
         "Status": "string"
      }
   ],
   "NextMarker": "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.

**DurableExecutions**

List of durable execution summaries matching the filter criteria.

Type: Array of Execution objects

**NextMarker**

Pagination token for retrieving additional results. Present only if there are more results available.

Type: String

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2

- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# ListEventSourceMappings

Lists event source mappings. Specify an `EventSourceArn` to show only event source mappings for a single event source.

## Request Syntax

```
GET /2015-03-31/event-source-mappings?
EventSourceArn=EventSourceArn&FunctionName=FunctionName&Marker=Marker&MaxItems=MaxItems
 HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### EventSourceArn

The Amazon Resource Name (ARN) of the event source.

- **Amazon Kinesis** – The ARN of the data stream or a stream consumer.
- **Amazon DynamoDB Streams** – The ARN of the stream.
- **Amazon Simple Queue Service** – The ARN of the queue.
- **Amazon Managed Streaming for Apache Kafka** – The ARN of the cluster or the ARN of the VPC connection (for cross-account event source mappings).
- **Amazon MQ** – The ARN of the broker.
- **Amazon DocumentDB** – The ARN of the DocumentDB change stream.

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** – `MyFunction`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:MyFunction`.
- **Version or Alias ARN** – `arn:aws:lambda:us-west-2:123456789012:function:MyFunction:PROD`.

- **Partial ARN** – `123456789012:function:MyFunction`.

The length constraint applies only to the full ARN. If you specify only the function name, it's limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

**Marker**

A pagination token returned by a previous call.

**MaxItems**

The maximum number of event source mappings to return. Note that ListEventSourceMappings returns a maximum of 100 items in each response, even if you set the number higher.

Valid Range: Minimum value of 1. Maximum value of 10000.

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "EventSourceMappings": [
      {
         "AmazonManagedKafkaEventSourceConfig": {
            "ConsumerGroupId": "string",
            "SchemaRegistryConfig": {
               "AccessConfigs": [
                  {
                     "Type": "string",
                     "URI": "string"
                  }
               ],
               "EventRecordFormat": "string",
```

```
            "SchemaRegistryURI": "string",
            "SchemaValidationConfigs": [
               {
                  "Attribute": "string"
               }
            ]
         }
      },
      "BatchSize": number,
      "BisectBatchOnFunctionError": boolean,
      "DestinationConfig": {
         "OnFailure": {
            "Destination": "string"
         },
         "OnSuccess": {
            "Destination": "string"
         }
      },
      "DocumentDBEventSourceConfig": {
         "CollectionName": "string",
         "DatabaseName": "string",
         "FullDocument": "string"
      },
      "EventSourceArn": "string",
      "EventSourceMappingArn": "string",
      "FilterCriteria": {
         "Filters": [
            {
               "Pattern": "string"
            }
         ]
      },
      "FilterCriteriaError": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "FunctionArn": "string",
      "FunctionResponseTypes": [ "string" ],
      "KMSKeyArn": "string",
      "LastModified": number,
      "LastProcessingResult": "string",
      "LoggingConfig": {
         "SystemLogLevel": "string"
      },
```

```
        "MaximumBatchingWindowInSeconds": number,
        "MaximumRecordAgeInSeconds": number,
        "MaximumRetryAttempts": number,
        "MetricsConfig": {
           "Metrics": [ "string" ]
        },
        "ParallelizationFactor": number,
        "ProvisionedPollerConfig": {
           "MaximumPollers": number,
           "MinimumPollers": number,
           "PollerGroupName": "string"
        },
        "Queues": [ "string" ],
        "ScalingConfig": {
           "MaximumConcurrency": number
        },
        "SelfManagedEventSource": {
           "Endpoints": {
              "string" : [ "string" ]
           }
        },
        "SelfManagedKafkaEventSourceConfig": {
           "ConsumerGroupId": "string",
           "ConsumptionMode": "string",
           "SchemaRegistryConfig": {
              "AccessConfigs": [
                 {
                    "Type": "string",
                    "URI": "string"
                 }
              ],
              "EventRecordFormat": "string",
              "SchemaRegistryURI": "string",
              "SchemaValidationConfigs": [
                 {
                    "Attribute": "string"
                 }
              ]
           }
        },
        "SourceAccessConfigurations": [
           {
              "Type": "string",
              "URI": "string"
```

```
            }
         ],
         "StartingPosition": "string",
         "StartingPositionTimestamp": number,
         "State": "string",
         "StateTransitionReason": "string",
         "Topics": [ "string" ],
         "TumblingWindowInSeconds": number,
         "UUID": "string"
      }
   ],
   "NextMarker": "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.

**EventSourceMappings**

A list of event source mappings.

Type: Array of EventSourceMappingConfiguration objects

**NextMarker**

A pagination token that's returned when the response doesn't contain all event source mappings.

Type: String

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3

- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# ListFunctionEventInvokeConfigs

Retrieves a list of configurations for asynchronous invocation for a Lambda Event Function. To retrieve more configurations, use the `Marker` parameter.

To configure options for asynchronous invocation, use PutFunctionEventInvokeConfig.

## Request Syntax

```
GET /2019-09-25/functions/FunctionName/event-invoke-config/list?
Marker=Marker&MaxItems=MaxItems HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** - `my-function`.
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** - `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

Required: Yes

### Marker

Specify the pagination token that's returned by a previous request to retrieve the next page of results.

### MaxItems

The maximum number of configurations to return.

Valid Range: Minimum value of 1. Maximum value of 50.

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "FunctionEventInvokeConfigs": [
      {
         "DestinationConfig": {
            "OnFailure": {
               "Destination": "string"
            },
            "OnSuccess": {
               "Destination": "string"
            }
         },
         "FunctionArn": "string",
         "LastModified": number,
         "MaximumEventAgeInSeconds": number,
         "MaximumRetryAttempts": number
      }
   ],
   "NextMarker": "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.

**FunctionEventInvokeConfigs**

A list of configurations.

Type: Array of FunctionEventInvokeConfig objects

**NextMarker**

The pagination token that's included if more results are available.

Type: String

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# ListFunctions

Returns a list of Lambda Event Functions, with the version-specific configuration of each. Lambda returns up to 50 functions per call.

Set `FunctionVersion` to `ALL` to include all published versions of each function in addition to the unpublished version.

> **Note**
>
> The `ListFunctions` operation returns a subset of the FunctionConfiguration fields. To get the additional fields (State, StateReasonCode, StateReason, LastUpdateStatus, LastUpdateStatusReason, LastUpdateStatusReasonCode, RuntimeVersionConfig) for a function or version, use GetFunction.

## Request Syntax

```
GET /2015-03-31/functions?
FunctionVersion=FunctionVersion&Marker=Marker&MasterRegion=MasterRegion&MaxItems=MaxItems
 HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

**FunctionVersion**

Set to `ALL` to include entries for all published versions of each function.

Valid Values: `ALL`

**Marker**

Specify the pagination token that's returned by a previous request to retrieve the next page of results.

**MasterRegion**

For Lambda@Edge functions, the AWS Region of the master function. For example, `us-east-1` filters the list of functions to include only Lambda@Edge functions replicated from a master function in US East (N. Virginia). If specified, you must set `FunctionVersion` to `ALL`.

Pattern: `ALL|[a-z]{2}(-gov)?-[a-z]+-\d{1}`

**MaxItems**

The maximum number of functions to return in the response. Note that `ListFunctions` returns a maximum of 50 items in each response, even if you set the number higher.

Valid Range: Minimum value of 1. Maximum value of 10000.

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "Functions": [
      {
         "Architectures": [ "string" ],
         "CapacityProviderConfig": {
            "LambdaManagedInstancesCapacityProviderConfig": {
               "CapacityProviderArn": "string",
               "ExecutionEnvironmentMemoryGiBPerVCpu": number,
               "PerExecutionEnvironmentMaxConcurrency": number
            }
         },
         "CodeSha256": "string",
         "CodeSize": number,
         "ConfigSha256": "string",
         "DeadLetterConfig": {
            "TargetArn": "string"
         },
         "Description": "string",
         "DurableConfig": {
            "ExecutionTimeout": number,
            "KMSKeyArn": "string",
            "RetentionPeriodInDays": number
         },
         "Environment": {
            "Error": {
```

```
            "ErrorCode": "string",
            "Message": "string"
         },
         "Variables": {
            "string" : "string"
         }
      },
      "EphemeralStorage": {
         "Size": number
      },
      "FileSystemConfigs": [
         {
            "Arn": "string",
            "LocalMountPath": "string",
            "S3FilesConfig": {
               "DirectS3Read": "string"
            }
         }
      ],
      "FunctionArn": "string",
      "FunctionName": "string",
      "Handler": "string",
      "ImageConfigResponse": {
         "Error": {
            "ErrorCode": "string",
            "Message": "string"
         },
         "ImageConfig": {
            "Command": [ "string" ],
            "EntryPoint": [ "string" ],
            "WorkingDirectory": "string"
         }
      },
      "KMSKeyArn": "string",
      "LastModified": "string",
      "LastUpdateStatus": "string",
      "LastUpdateStatusReason": "string",
      "LastUpdateStatusReasonCode": "string",
      "Layers": [
         {
            "Arn": "string",
            "CodeSize": number,
            "SigningJobArn": "string",
            "SigningProfileVersionArn": "string"
```

```
            }
         ],
         "LoggingConfig": {
            "ApplicationLogLevel": "string",
            "LogFormat": "string",
            "LogGroup": "string",
            "SystemLogLevel": "string"
         },
         "MasterArn": "string",
         "MemorySize": number,
         "PackageType": "string",
         "RevisionId": "string",
         "Role": "string",
         "Runtime": "string",
         "RuntimeVersionConfig": {
            "Error": {
               "ErrorCode": "string",
               "Message": "string"
            },
            "RuntimeVersionArn": "string"
         },
         "SigningJobArn": "string",
         "SigningProfileVersionArn": "string",
         "SnapStart": {
            "ApplyOn": "string",
            "OptimizationStatus": "string"
         },
         "State": "string",
         "StateReason": "string",
         "StateReasonCode": "string",
         "TenancyConfig": {
            "TenantIsolationMode": "string"
         },
         "Timeout": number,
         "TracingConfig": {
            "Mode": "string"
         },
         "Version": "string",
         "VpcConfig": {
            "Ipv6AllowedForDualStack": boolean,
            "SecurityGroupIds": [ "string" ],
            "SubnetIds": [ "string" ],
            "VpcId": "string"
         }
```

```
      }
   ],
   "NextMarker": "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.

**Functions**

A list of Lambda functions.

Type: Array of FunctionConfiguration objects

**NextMarker**

The pagination token that's included if more results are available.

Type: String

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# ListFunctionsByCodeSigningConfig

List the functions that use the specified code signing configuration. You can use this method prior to deleting a code signing configuration, to verify that no functions are using it.

## Request Syntax

```
GET /2020-04-22/code-signing-configs/CodeSigningConfigArn/functions?
Marker=Marker&MaxItems=MaxItems HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

**CodeSigningConfigArn**

The The Amazon Resource Name (ARN) of the code signing configuration.

Length Constraints: Minimum length of 0. Maximum length of 200.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}:\d{12}:code-signing-config:csc-[a-z0-9]{17}`

Required: Yes

**Marker**

Specify the pagination token that's returned by a previous request to retrieve the next page of results.

**MaxItems**

Maximum number of items to return.

Valid Range: Minimum value of 1. Maximum value of 10000.

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
```

```
Content-type: application/json

{
   "FunctionArns": [ "string" ],
   "NextMarker": "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.

**FunctionArns**

The function ARNs.

Type: Array of strings

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

**NextMarker**

The pagination token that's included if more results are available.

Type: String

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# ListFunctionUrlConfigs

Returns a list of Lambda function URLs for the specified function.

## Request Syntax

```
GET /2021-10-31/functions/FunctionName/urls?Marker=Marker&MaxItems=MaxItems HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?((eusc-)?[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]{1,64})(:((?!\d+$)[0-9a-zA-Z-_]+))?`

Required: Yes

### Marker

Specify the pagination token that's returned by a previous request to retrieve the next page of results.

### MaxItems

The maximum number of function URLs to return in the response. Note that `ListFunctionUrlConfigs` returns a maximum of 50 items in each response, even if you set the number higher.

Valid Range: Minimum value of 1. Maximum value of 50.

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "FunctionUrlConfigs": [
      {
         "AuthType": "string",
         "Cors": {
            "AllowCredentials": boolean,
            "AllowHeaders": [ "string" ],
            "AllowMethods": [ "string" ],
            "AllowOrigins": [ "string" ],
            "ExposeHeaders": [ "string" ],
            "MaxAge": number
         },
         "CreationTime": "string",
         "FunctionArn": "string",
         "FunctionUrl": "string",
         "InvokeMode": "string",
         "LastModifiedTime": "string"
      }
   ],
   "NextMarker": "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.

**FunctionUrlConfigs**

A list of function URL configurations.

Type: Array of FunctionUrlConfig objects

**NextMarker**

The pagination token that's included if more results are available.

Type: String

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# ListFunctionVersionsByCapacityProvider

Returns a list of function versions that are configured to use a specific capacity provider.

## Request Syntax

```
GET /2025-11-30/capacity-providers/CapacityProviderName/function-versions?
Marker=Marker&MaxItems=MaxItems HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### CapacityProviderName

The name of the capacity provider to list function versions for.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:aws[a-zA-Z-]*:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:capacity-provider:[a-zA-Z0-9-_]+)|[a-zA-Z0-9-_]+`

Required: Yes

### Marker

Specify the pagination token that's returned by a previous request to retrieve the next page of results.

### MaxItems

The maximum number of function versions to return in the response.

Valid Range: Minimum value of 1. Maximum value of 50.

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
```

```
Content-type: application/json

{
   "CapacityProviderArn": "string",
   "FunctionVersions": [
      {
         "FunctionArn": "string",
         "State": "string"
      }
   ],
   "NextMarker": "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.

### CapacityProviderArn

The Amazon Resource Name (ARN) of the capacity provider.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `arn:aws[a-zA-Z-]*:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:capacity-provider:[a-zA-Z0-9-_]+`

### FunctionVersions

A list of function versions that use the specified capacity provider.

Type: Array of FunctionVersionsByCapacityProviderListItem objects

Array Members: Minimum number of 0 items. Maximum number of 50 items.

### NextMarker

The pagination token that's included if more results are available.

Type: String

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2

- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# ListLayers

Lists AWS Lambda layers and shows information about the latest version of each. Specify a runtime identifier to list only layers that indicate that they're compatible with that runtime. Specify a compatible architecture to include only layers that are compatible with that instruction set architecture.

## Request Syntax

```
GET /2018-10-31/layers?
CompatibleArchitecture=CompatibleArchitecture&CompatibleRuntime=CompatibleRuntime&Marker=Marker
 HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### CompatibleArchitecture

The compatible instruction set architecture.

Valid Values: `x86_64 | arm64`

### CompatibleRuntime

A runtime identifier.

The following list includes deprecated runtimes. For more information, see Runtime use after deprecation.

For a list of all currently supported runtimes, see Supported runtimes.

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11 | python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6 | dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3 | ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21 | python3.13 | nodejs22.x | nodejs24.x | python3.14 | java25 | dotnet10 | ruby4.0`

**Marker**

A pagination token returned by a previous call.

**MaxItems**

The maximum number of layers to return.

Valid Range: Minimum value of 1. Maximum value of 50.

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "Layers": [
      {
         "LatestMatchingVersion": {
            "CompatibleArchitectures": [ "string" ],
            "CompatibleRuntimes": [ "string" ],
            "CreatedDate": "string",
            "Description": "string",
            "LayerVersionArn": "string",
            "LicenseInfo": "string",
            "Version": number
         },
         "LayerArn": "string",
         "LayerName": "string"
      }
   ],
   "NextMarker": "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.

**Layers**

A list of function layers.

Type: Array of LayersListItem objects

**NextMarker**

A pagination token returned when the response doesn't contain all layers.

Type: String

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# ListLayerVersions

Lists the versions of an AWS Lambda layer. Versions that have been deleted aren't listed. Specify a runtime identifier to list only versions that indicate that they're compatible with that runtime. Specify a compatible architecture to include only layer versions that are compatible with that architecture.

## Request Syntax

```
GET /2018-10-31/layers/LayerName/versions?
CompatibleArchitecture=CompatibleArchitecture&CompatibleRuntime=CompatibleRuntime&Marker=Marker
 HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### CompatibleArchitecture

The compatible instruction set architecture.

Valid Values: `x86_64 | arm64`

### CompatibleRuntime

A runtime identifier.

The following list includes deprecated runtimes. For more information, see Runtime use after deprecation.

For a list of all currently supported runtimes, see Supported runtimes.

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11 | python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6 | dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3 | ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21 | python3.13 | nodejs22.x | nodejs24.x | python3.14 | java25 | dotnet10 | ruby4.0`

**LayerName**

The name or Amazon Resource Name (ARN) of the layer.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+)|[a-zA-Z0-9-_]+`

Required: Yes

**Marker**

A pagination token returned by a previous call.

**MaxItems**

The maximum number of versions to return.

Valid Range: Minimum value of 1. Maximum value of 50.

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "LayerVersions": [
      {
         "CompatibleArchitectures": [ "string" ],
         "CompatibleRuntimes": [ "string" ],
         "CreatedDate": "string",
         "Description": "string",
         "LayerVersionArn": "string",
         "LicenseInfo": "string",
         "Version": number
      }
   ],
   "NextMarker": "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.

**LayerVersions**

A list of versions.

Type: Array of LayerVersionsListItem objects

**NextMarker**

A pagination token returned when the response doesn't contain all versions.

Type: String

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# ListProvisionedConcurrencyConfigs

Retrieves a list of provisioned concurrency configurations for a function.

## Request Syntax

```
GET /2019-09-30/functions/FunctionName/provisioned-concurrency?
List=ALL&Marker=Marker&MaxItems=MaxItems HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

### Marker

Specify the pagination token that's returned by a previous request to retrieve the next page of results.

### MaxItems

Specify a number to limit the number of configurations returned.

Valid Range: Minimum value of 1. Maximum value of 50.

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "NextMarker": "string",
   "ProvisionedConcurrencyConfigs": [
      {
         "AllocatedProvisionedConcurrentExecutions": number,
         "AvailableProvisionedConcurrentExecutions": number,
         "FunctionArn": "string",
         "LastModified": "string",
         "RequestedProvisionedConcurrentExecutions": number,
         "Status": "string",
         "StatusReason": "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.

### NextMarker

The pagination token that's included if more results are available.

Type: String

**ProvisionedConcurrencyConfigs**

A list of provisioned concurrency configurations.

Type: Array of ProvisionedConcurrencyConfigListItem objects

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# ListTags

Returns a function, event source mapping, or code signing configuration's tags. You can also view function tags with GetFunction.

## Request Syntax

```
GET /2017-03-31/tags/Resource HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### Resource

The resource's Amazon Resource Name (ARN). Note: Lambda does not support adding tags to function aliases or versions.

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `arn:(aws[a-zA-Z-]*):lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:(function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?|code-signing-config:csc-[a-z0-9]{17}|event-source-mapping:[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}|capacity-provider:[a-zA-Z0-9-_]+)`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "Tags": {
```

```
        "string" : "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.

**Tags**

The function's tags.

Type: String to string map

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# ListVersionsByFunction

Returns a list of versions of a Lambda Event Function, with the version-specific configuration of each. Lambda returns up to 50 versions per call.

## Request Syntax

```
GET /2015-03-31/functions/FunctionName/versions?Marker=Marker&MaxItems=MaxItems
 HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** - `MyFunction`.
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:MyFunction`.
- **Partial ARN** - `123456789012:function:MyFunction`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

Required: Yes

### Marker

Specify the pagination token that's returned by a previous request to retrieve the next page of results.

### MaxItems

The maximum number of versions to return. Note that `ListVersionsByFunction` returns a maximum of 50 items in each response, even if you set the number higher.

Valid Range: Minimum value of 1. Maximum value of 10000.

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "NextMarker": "string",
   "Versions": [
      {
         "Architectures": [ "string" ],
         "CapacityProviderConfig": {
            "LambdaManagedInstancesCapacityProviderConfig": {
               "CapacityProviderArn": "string",
               "ExecutionEnvironmentMemoryGiBPerVCpu": number,
               "PerExecutionEnvironmentMaxConcurrency": number
            }
         },
         "CodeSha256": "string",
         "CodeSize": number,
         "ConfigSha256": "string",
         "DeadLetterConfig": {
            "TargetArn": "string"
         },
         "Description": "string",
         "DurableConfig": {
            "ExecutionTimeout": number,
            "KMSKeyArn": "string",
            "RetentionPeriodInDays": number
         },
         "Environment": {
            "Error": {
```

```
            "ErrorCode": "string",
            "Message": "string"
         },
         "Variables": {
            "string" : "string"
         }
      },
      "EphemeralStorage": {
         "Size": number
      },
      "FileSystemConfigs": [
         {
            "Arn": "string",
            "LocalMountPath": "string",
            "S3FilesConfig": {
               "DirectS3Read": "string"
            }
         }
      ],
      "FunctionArn": "string",
      "FunctionName": "string",
      "Handler": "string",
      "ImageConfigResponse": {
         "Error": {
            "ErrorCode": "string",
            "Message": "string"
         },
         "ImageConfig": {
            "Command": [ "string" ],
            "EntryPoint": [ "string" ],
            "WorkingDirectory": "string"
         }
      },
      "KMSKeyArn": "string",
      "LastModified": "string",
      "LastUpdateStatus": "string",
      "LastUpdateStatusReason": "string",
      "LastUpdateStatusReasonCode": "string",
      "Layers": [
         {
            "Arn": "string",
            "CodeSize": number,
            "SigningJobArn": "string",
            "SigningProfileVersionArn": "string"
```

```
            }
         ],
         "LoggingConfig": {
            "ApplicationLogLevel": "string",
            "LogFormat": "string",
            "LogGroup": "string",
            "SystemLogLevel": "string"
         },
         "MasterArn": "string",
         "MemorySize": number,
         "PackageType": "string",
         "RevisionId": "string",
         "Role": "string",
         "Runtime": "string",
         "RuntimeVersionConfig": {
            "Error": {
               "ErrorCode": "string",
               "Message": "string"
            },
            "RuntimeVersionArn": "string"
         },
         "SigningJobArn": "string",
         "SigningProfileVersionArn": "string",
         "SnapStart": {
            "ApplyOn": "string",
            "OptimizationStatus": "string"
         },
         "State": "string",
         "StateReason": "string",
         "StateReasonCode": "string",
         "TenancyConfig": {
            "TenantIsolationMode": "string"
         },
         "Timeout": number,
         "TracingConfig": {
            "Mode": "string"
         },
         "Version": "string",
         "VpcConfig": {
            "Ipv6AllowedForDualStack": boolean,
            "SecurityGroupIds": [ "string" ],
            "SubnetIds": [ "string" ],
            "VpcId": "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.

**NextMarker**

The pagination token that's included if more results are available.

Type: String

**Versions**

A list of Lambda function versions.

Type: Array of FunctionConfiguration objects

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# PauseDurableExecution

Pauses a running durable execution. While an execution is paused, Lambda doesn't invoke your function, but pending operations such as waits and callbacks continue to complete.

If an invocation is in progress, the execution status changes to PAUSING until the invocation reaches its next checkpoint, and then changes to PAUSED. This operation returns a successful response while the execution status is still RUNNING, and the status changes when Lambda processes the request. For more information about pausing executions, see Pausing and resuming durable executions.

## Request Syntax

```
POST /2025-12-01/durable-executions/DurableExecutionArn/pause HTTP/1.1
Content-type: application/json

{
   "ClientToken": "string",
   "ExecutionTimeoutPaused": boolean,
   "Reason": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### DurableExecutionArn

The Amazon Resource Name (ARN) of the durable execution.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `arn:([a-zA-Z0-9-]+):lambda:([a-zA-Z0-9-]+):(\d{12}):function:([a-zA-Z0-9_-]+):(\$LATEST(?:\.PUBLISHED)?|[0-9]+)/durable-execution/([a-zA-Z0-9_-]+)/([a-zA-Z0-9_-]+)`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### ClientToken

A unique, case-sensitive identifier that you provide so that the request completes no more than one time. If you repeat a request with the same client token and parameters within 15 minutes, Lambda doesn't pause the execution again and returns a successful response instead of an error.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[\x21-\x7E]+`

Required: No

### ExecutionTimeoutPaused

Specifies whether to pause the execution timeout while the execution is paused. If `true`, Lambda extends the execution timeout by the time the execution spends paused. An execution with a paused timeout still times out 366 days after it started. The default value is `true`.

Type: Boolean

Required: No

### Reason

A description of why you're pausing the execution. Lambda records the reason in the execution history.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1024.

Required: No

## Response Syntax

```
HTTP/1.1 202
```

## Response Elements

If the action is successful, the service sends back an HTTP 202 response with an empty HTTP body.

# Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**KMSAccessDeniedException**

Lambda couldn't decrypt the environment variables because AWS KMS access was denied. Check the Lambda function's KMS permissions.

HTTP Status Code: 502

**KMSDisabledException**

Lambda couldn't decrypt the environment variables because the AWS KMS key used is disabled. Check the Lambda function's KMS key settings.

HTTP Status Code: 502

**KMSInvalidStateException**

Lambda couldn't decrypt the environment variables because the state of the AWS KMS key used is not valid for Decrypt. Check the function's KMS key settings.

HTTP Status Code: 502

**KMSNotFoundException**

Lambda couldn't decrypt the environment variables because the AWS KMS key was not found. Check the function's KMS key settings.

HTTP Status Code: 502

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2

- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# PublishLayerVersion

Creates an AWS Lambda layer from a ZIP archive. Each time you call `PublishLayerVersion` with the same layer name, a new version is created.

Add layers to your function with CreateFunction or UpdateFunctionConfiguration.

## Request Syntax

```
POST /2018-10-31/layers/LayerName/versions HTTP/1.1
Content-type: application/json

{
   "CompatibleArchitectures": [ "string" ],
   "CompatibleRuntimes": [ "string" ],
   "Content": {
      "S3Bucket": "string",
      "S3Key": "string",
      "S3ObjectStorageMode": "string",
      "S3ObjectVersion": "string",
      "ZipFile": blob
   },
   "Description": "string",
   "LicenseInfo": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### LayerName

The name or Amazon Resource Name (ARN) of the layer.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+)|[a-zA-Z0-9-_]+`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

**CompatibleArchitectures**

A list of compatible instruction set architectures.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 2 items.

Valid Values: `x86_64 | arm64`

Required: No

**CompatibleRuntimes**

A list of compatible function runtimes. Used for filtering with ListLayers and ListLayerVersions.

The following list includes deprecated runtimes. For more information, see Runtime deprecation policy.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 15 items.

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11 | python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6 | dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3 | ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21 | python3.13 | nodejs22.x | nodejs24.x | python3.14 | java25 | dotnet10 | ruby4.0`

Required: No

**Content**

The function layer archive.

Type: LayerVersionContentInput object

Required: Yes

### Description

The description of the version.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Required: No

### LicenseInfo

The layer's software license. It can be any of the following:

- An SPDX license identifier. For example, `MIT`.
- The URL of a license hosted on the internet. For example, `https://opensource.org/licenses/MIT`.
- The full text of the license.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 512.

Required: No

## Response Syntax

```
HTTP/1.1 201
Content-type: application/json

{
   "CompatibleArchitectures": [ "string" ],
   "CompatibleRuntimes": [ "string" ],
   "Content": {
      "CodeSha256": "string",
      "CodeSize": number,
      "Location": "string",
      "ResolvedS3Object": {
         "S3Bucket": "string",
         "S3Key": "string",
         "S3ObjectVersion": "string"
```

```
      },
      "SigningJobArn": "string",
      "SigningProfileVersionArn": "string"
   },
   "CreatedDate": "string",
   "Description": "string",
   "LayerArn": "string",
   "LayerVersionArn": "string",
   "LicenseInfo": "string",
   "Version": number
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 201 response.

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

### CompatibleArchitectures

A list of compatible instruction set architectures.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 2 items.

Valid Values: `x86_64 | arm64`

### CompatibleRuntimes

The layer's compatible runtimes.

The following list includes deprecated runtimes. For more information, see Runtime use after deprecation.

For a list of all currently supported runtimes, see Supported runtimes.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 15 items.

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11`

`| python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6 | dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3 | ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21 | python3.13 | nodejs22.x | nodejs24.x | python3.14 | java25 | dotnet10 | ruby4.0`

**Content**

Details about the layer version.

Type: LayerVersionContentOutput object

**CreatedDate**

The date that the layer version was created, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

**Description**

The description of the version.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

**LayerArn**

The ARN of the layer.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+`

**LayerVersionArn**

The ARN of the layer version.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+:[0-9]+`

**LicenseInfo**

The layer's software license.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 512.

**Version**

The version number.

Type: Long

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**CodeStorageExceededException**

Your AWS account has exceeded its maximum total code size. For more information, see Lambda quotas.

**Type**

The exception type.

HTTP Status Code: 400

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# PublishVersion

Creates a version from the current code and configuration of a Lambda Event Function. Use versions to create a snapshot of your function code and configuration that doesn't change.

AWS Lambda doesn't publish a version if the function's configuration and code haven't changed since the last version. Use UpdateFunctionCode or UpdateFunctionConfiguration to update the function before publishing a version.

Clients can invoke versions directly or with an alias. To create an alias, use CreateAlias.

## Request Syntax

```
POST /2015-03-31/functions/FunctionName/versions HTTP/1.1
Content-type: application/json

{
   "CodeSha256": "string",
   "Description": "string",
   "PublishTo": "string",
   "RevisionId": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** - `MyFunction`.
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:MyFunction`.
- **Partial ARN** - `123456789012:function:MyFunction`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### CodeSha256

Only publish a version if the hash value matches the value that's specified. Use this option to avoid publishing a version if the function code has changed since you last updated it. You can get the hash for the version that you uploaded from the output of UpdateFunctionCode.

Type: String

Required: No

### Description

A description for the version to override the description in the function configuration.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Required: No

### PublishTo

Specifies where to publish the function version or configuration.

Type: String

Valid Values: `LATEST_PUBLISHED`

Required: No

### RevisionId

Only update the function if the revision ID matches the ID that's specified. Use this option to avoid publishing a version if the function configuration has changed since you last updated it.

Type: String

Required: No

## Response Syntax

```
HTTP/1.1 201
Content-type: application/json

{
   "Architectures": [ "string" ],
   "CapacityProviderConfig": {
      "LambdaManagedInstancesCapacityProviderConfig": {
         "CapacityProviderArn": "string",
         "ExecutionEnvironmentMemoryGiBPerVCpu": number,
         "PerExecutionEnvironmentMaxConcurrency": number
      }
   },
   "CodeSha256": "string",
   "CodeSize": number,
   "ConfigSha256": "string",
   "DeadLetterConfig": {
      "TargetArn": "string"
   },
   "Description": "string",
   "DurableConfig": {
      "ExecutionTimeout": number,
      "KMSKeyArn": "string",
      "RetentionPeriodInDays": number
   },
   "Environment": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "Variables": {
         "string" : "string"
      }
   },
   "EphemeralStorage": {
      "Size": number
   },
   "FileSystemConfigs": [
```

```
      {
         "Arn": "string",
         "LocalMountPath": "string",
         "S3FilesConfig": {
            "DirectS3Read": "string"
         }
      }
   ],
   "FunctionArn": "string",
   "FunctionName": "string",
   "Handler": "string",
   "ImageConfigResponse": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "ImageConfig": {
         "Command": [ "string" ],
         "EntryPoint": [ "string" ],
         "WorkingDirectory": "string"
      }
   },
   "KMSKeyArn": "string",
   "LastModified": "string",
   "LastUpdateStatus": "string",
   "LastUpdateStatusReason": "string",
   "LastUpdateStatusReasonCode": "string",
   "Layers": [
      {
         "Arn": "string",
         "CodeSize": number,
         "SigningJobArn": "string",
         "SigningProfileVersionArn": "string"
      }
   ],
   "LoggingConfig": {
      "ApplicationLogLevel": "string",
      "LogFormat": "string",
      "LogGroup": "string",
      "SystemLogLevel": "string"
   },
   "MasterArn": "string",
   "MemorySize": number,
   "PackageType": "string",
```

```
   "RevisionId": "string",
   "Role": "string",
   "Runtime": "string",
   "RuntimeVersionConfig": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "RuntimeVersionArn": "string"
   },
   "SigningJobArn": "string",
   "SigningProfileVersionArn": "string",
   "SnapStart": {
      "ApplyOn": "string",
      "OptimizationStatus": "string"
   },
   "State": "string",
   "StateReason": "string",
   "StateReasonCode": "string",
   "TenancyConfig": {
      "TenantIsolationMode": "string"
   },
   "Timeout": number,
   "TracingConfig": {
      "Mode": "string"
   },
   "Version": "string",
   "VpcConfig": {
      "Ipv6AllowedForDualStack": boolean,
      "SecurityGroupIds": [ "string" ],
      "SubnetIds": [ "string" ],
      "VpcId": "string"
   }
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 201 response.

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

### Architectures

The instruction set architecture that the function supports. Architecture is a string array with one of the valid values. The default architecture value is `x86_64`.

Type: Array of strings

Array Members: Fixed number of 1 item.

Valid Values: `x86_64 | arm64`

### CapacityProviderConfig

Configuration for the capacity provider that manages compute resources for Lambda functions.

Type: CapacityProviderConfig object

### CodeSha256

The SHA256 hash of the function's deployment package.

Type: String

### CodeSize

The size of the function's deployment package, in bytes.

Type: Long

### ConfigSha256

The SHA256 hash of the function configuration.

Type: String

### DeadLetterConfig

The function's dead letter queue.

Type: DeadLetterConfig object

### Description

The function's description.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

**DurableConfig**

The function's durable execution configuration settings, if the function is configured for durability.

Type: DurableConfig object

**Environment**

The function's environment variables. Omitted from AWS CloudTrail logs.

Type: EnvironmentResponse object

**EphemeralStorage**

The size of the function's `/tmp` directory in MB. The default value is 512, but can be any whole number between 512 and 10,240 MB. For more information, see Configuring ephemeral storage (console).

Type: EphemeralStorage object

**FileSystemConfigs**

Connection settings for an Amazon EFS file system or an Amazon S3 file system.

Type: Array of FileSystemConfig objects

Array Members: Minimum number of 0 items. Maximum number of 1 item.

**FunctionArn**

The function's Amazon Resource Name (ARN).

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_\.]+(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

**FunctionName**

The name of the function.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

**Handler**

The function that Lambda calls to begin running your function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: `[^\s]+`

**ImageConfigResponse**

The function's image configuration values.

Type: ImageConfigResponse object

**KMSKeyArn**

The ARN of the AWS Key Management Service (AWS KMS) customer managed key that's used to encrypt the following resources:

- The function's environment variables.
- The function's Lambda SnapStart snapshots.
- When used with `SourceKMSKeyArn`, the unzipped version of the .zip deployment package that's used for function invocations. For more information, see Specifying a customer managed key for Lambda.
- The optimized version of the container image that's used for function invocations. Note that this is not the same key that's used to protect your container image in the Amazon Elastic Container Registry (Amazon ECR). For more information, see Function lifecycle.

If you don't provide a customer managed key, Lambda uses an AWS owned key or an AWS managed key.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

### LastModified

The date and time that the function was last updated, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

### LastUpdateStatus

The status of the last update that was performed on the function. This is first set to `Successful` after function creation completes.

Type: String

Valid Values: `Successful | Failed | InProgress`

### LastUpdateStatusReason

The reason for the last update that was performed on the function.

Type: String

### LastUpdateStatusReasonCode

The reason code for the last update that was performed on the function.

Type: String

Valid Values: `EniLimitExceeded | InsufficientRolePermissions | InvalidConfiguration | InternalError | SubnetOutOfIPAddresses | InvalidSubnet | InvalidSecurityGroup | ImageDeleted | ImageAccessDenied | InvalidImage | KMSKeyAccessDenied | KMSKeyNotFound | InvalidStateKMSKey | DisabledKMSKey | EFSIOError | EFSMountConnectivityError | EFSMountFailure | EFSMountTimeout | InvalidRuntime | InvalidZipFileException | FunctionError | VcpuLimitExceeded | CapacityProviderScalingLimitExceeded | InsufficientCapacity | EC2RequestLimitExceeded | FunctionError.InitTimeout | FunctionError.RuntimeInitError | FunctionError.ExtensionInitError | FunctionError.InvalidEntryPoint | FunctionError.InvalidWorkingDirectory | FunctionError.PermissionDenied | FunctionError.TooManyExtensions | FunctionError.InitResourceExhausted | DisallowedByVpcEncryptionControl | DependencyError`

### Layers

The function's layers.

Type: Array of Layer objects

### LoggingConfig

The function's Amazon CloudWatch Logs configuration settings.

Type: LoggingConfig object

### MasterArn

For Lambda@Edge functions, the ARN of the main function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

### MemorySize

The amount of memory available to the function at runtime.

Type: Integer

Valid Range: Minimum value of 128. Maximum value of 32768.

### PackageType

The type of deployment package. Set to `Image` for container image and set `Zip` for .zip file archive.

Type: String

Valid Values: `Zip | Image`

### RevisionId

The latest updated revision of the function or alias.

Type: String

### Role

The function's execution role.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:iam::\d{12}:role/?[a-zA-Z_0-9+=,.@\-_/]+`

### Runtime

The identifier of the function's runtime. Runtime is required if the deployment package is a .zip file archive. Specifying a runtime results in an error if you're deploying a function using a container image.

The following list includes deprecated runtimes. Lambda blocks creating new functions and updating existing functions shortly after each runtime is deprecated. For more information, see Runtime use after deprecation.

For a list of all currently supported runtimes, see Supported runtimes.

Type: String

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11 | python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6 | dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3 | ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21 | python3.13 | nodejs22.x | nodejs24.x | python3.14 | java25 | dotnet10 | ruby4.0`

### RuntimeVersionConfig

The ARN of the runtime and any errors that occured.

Type: RuntimeVersionConfig object

### SigningJobArn

The ARN of the signing job.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

**SigningProfileVersionArn**

The ARN of the signing profile version.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

**SnapStart**

Set `ApplyOn` to `PublishedVersions` to create a snapshot of the initialized execution environment when you publish a function version. For more information, see Improving startup performance with Lambda SnapStart.

Type: SnapStartResponse object

**State**

The current state of the function. When the state is `Inactive`, you can reactivate the function by invoking it.

Type: String

Valid Values: `Pending | Active | Inactive | Failed | Deactivating | Deactivated | ActiveNonInvocable | Deleting`

**StateReason**

The reason for the function's current state.

Type: String

**StateReasonCode**

The reason code for the function's current state. When the code is `Creating`, you can't invoke or modify the function.

Type: String

Valid Values: `Idle | Creating | Restoring | EniLimitExceeded | InsufficientRolePermissions | InvalidConfiguration | InternalError`

```
| SubnetOutOfIPAddresses | InvalidSubnet | InvalidSecurityGroup |
ImageDeleted | ImageAccessDenied | InvalidImage | KMSKeyAccessDenied
| KMSKeyNotFound | InvalidStateKMSKey | DisabledKMSKey |
EFSIOError | EFSMountConnectivityError | EFSMountFailure |
EFSMountTimeout | InvalidRuntime | InvalidZipFileException |
FunctionError | DrainingDurableExecutions | VcpuLimitExceeded
| CapacityProviderScalingLimitExceeded | InsufficientCapacity
| EC2RequestLimitExceeded | FunctionError.InitTimeout |
FunctionError.RuntimeInitError | FunctionError.ExtensionInitError |
FunctionError.InvalidEntryPoint | FunctionError.InvalidWorkingDirectory
| FunctionError.PermissionDenied | FunctionError.TooManyExtensions |
FunctionError.InitResourceExhausted | DisallowedByVpcEncryptionControl |
DependencyError
```

**TenancyConfig**

The function's tenant isolation configuration settings. Determines whether the Lambda function runs on a shared or dedicated infrastructure per unique tenant.

Type: TenancyConfig object

**Timeout**

The amount of time in seconds that Lambda allows a function to run before stopping it.

Type: Integer

Valid Range: Minimum value of 1.

**TracingConfig**

The function's AWS X-Ray tracing configuration.

Type: TracingConfigResponse object

**Version**

The version of the Lambda function.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST|[0-9]+)`

**VpcConfig**

The function's networking configuration.

Type: VpcConfigResponse object

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**CodeStorageExceededException**

Your AWS account has exceeded its maximum total code size. For more information, see Lambda quotas.

**Type**

The exception type.

HTTP Status Code: 400

**FunctionVersionsPerCapacityProviderLimitExceededException**

The maximum number of function versions that can be associated with a single capacity provider has been exceeded. For more information, see Lambda quotas.

**Type**

The exception type.

HTTP Status Code: 400

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**PreconditionFailedException**

The RevisionId provided does not match the latest RevisionId for the Lambda function or alias.

- **For AddPermission and RemovePermission API operations:** Call `GetPolicy` to retrieve the latest RevisionId for your resource.
- **For all other API operations:** Call `GetFunction` or `GetAlias` to retrieve the latest RevisionId for your resource.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 412

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# PutFunctionCodeSigningConfig

Update the code signing configuration for the function. Changes to the code signing configuration take effect the next time a user tries to deploy a code package to the function.

## Request Syntax

```
PUT /2020-06-30/functions/FunctionName/code-signing-config HTTP/1.1
Content-type: application/json

{
   "CodeSigningConfigArn": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** - `MyFunction`.
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:MyFunction`.
- **Partial ARN** - `123456789012:function:MyFunction`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

**CodeSigningConfigArn**

The The Amazon Resource Name (ARN) of the code signing configuration.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 200.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}:\d{12}:code-signing-config:csc-[a-z0-9]{17}`

Required: Yes

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "CodeSigningConfigArn": "string",
   "FunctionName": "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.

**CodeSigningConfigArn**

The The Amazon Resource Name (ARN) of the code signing configuration.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 200.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}:\d{12}:code-signing-config:csc-[a-z0-9]{17}`

**FunctionName**

The name or ARN of the Lambda function.

**Name formats**

- **Function name** - `MyFunction`.
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:MyFunction`.
- **Partial ARN** - `123456789012:function:MyFunction`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**CodeSigningConfigNotFoundException**

The specified code signing configuration does not exist.

HTTP Status Code: 404

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++

- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# PutFunctionConcurrency

Sets the maximum number of simultaneous executions for a Lambda Event Function, and reserves capacity for that concurrency level.

Concurrency settings apply to the function as a whole, including all published versions and the unpublished version. Reserving concurrency both ensures that your function has capacity to process the specified number of events simultaneously, and prevents it from scaling beyond that level. Use GetFunction to see the current setting for a function.

Use GetAccountSettings to see your Regional concurrency limit. You can reserve concurrency for as many functions as you like, as long as you leave at least 100 simultaneous executions unreserved for functions that aren't configured with a per-function limit. For more information, see Lambda function scaling.

## Request Syntax

```
PUT /2017-10-31/functions/FunctionName/concurrency HTTP/1.1
Content-type: application/json

{
   "ReservedConcurrentExecutions": number
}
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

**ReservedConcurrentExecutions**

The number of simultaneous executions to reserve for the function.

Type: Integer

Valid Range: Minimum value of 0.

Required: Yes

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "ReservedConcurrentExecutions": number
}
```

## 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.

**ReservedConcurrentExecutions**

The number of concurrent executions that are reserved for this function. For more information, see Managing Lambda reserved concurrency.

Type: Integer

Valid Range: Minimum value of 0.

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# PutFunctionEventInvokeConfig

Configures options for asynchronous invocation on a function, version, or alias. If a configuration already exists for a function, version, or alias, this operation overwrites it. If you exclude any settings, they are removed. To set one option without affecting existing settings for other options, use UpdateFunctionEventInvokeConfig.

By default, Lambda retries an asynchronous invocation twice if the function returns an error. It retains events in a queue for up to six hours. When an event fails all processing attempts or stays in the asynchronous invocation queue for too long, Lambda discards it. To retain discarded events, configure a dead-letter queue with UpdateFunctionConfiguration.

To send an invocation record to a queue, topic, S3 bucket, function, or event bus, specify a destination. You can configure separate destinations for successful invocations (on-success) and events that fail all processing attempts (on-failure). You can configure destinations in addition to or instead of a dead-letter queue.

> **Note**
>
> S3 buckets are supported only for on-failure destinations. To retain records of successful invocations, use another destination type.

## Request Syntax

```
PUT /2019-09-25/functions/FunctionName/event-invoke-config?Qualifier=Qualifier HTTP/1.1
Content-type: application/json

{
   "DestinationConfig": {
      "OnFailure": {
         "Destination": "string"
      },
      "OnSuccess": {
         "Destination": "string"
      }
   },
   "MaximumEventAgeInSeconds": number,
   "MaximumRetryAttempts": number
}
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function, version, or alias.

**Name formats**

- **Function name** - `my-function` (name-only), `my-function:v1` (with alias).
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** - `123456789012:function:my-function`.

You can append a version number or alias to any of the formats. The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

Required: Yes

### Qualifier

A version number or alias name.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `\$(LATEST(\.PUBLISHED)?)|[a-zA-Z0-9-_$]+`

## Request Body

The request accepts the following data in JSON format.

### DestinationConfig

A destination for events after they have been sent to a function for processing.

**Destinations**

- **Function** - The Amazon Resource Name (ARN) of a Lambda function.
- **Queue** - The ARN of a standard SQS queue.
- **Bucket** - The ARN of an Amazon S3 bucket.
- **Topic** - The ARN of a standard SNS topic.
- **Event Bus** - The ARN of an Amazon EventBridge event bus.

> **Note**
>
> S3 buckets are supported only for on-failure destinations. To retain records of successful invocations, use another destination type.

Type: DestinationConfig object

Required: No

**MaximumEventAgeInSeconds**

The maximum age of a request that Lambda sends to a function for processing.

Type: Integer

Valid Range: Minimum value of 60. Maximum value of 21600.

Required: No

**MaximumRetryAttempts**

The maximum number of times to retry when the function returns an error.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 2.

Required: No

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json
```

```
{
   "DestinationConfig": {
      "OnFailure": {
         "Destination": "string"
      },
      "OnSuccess": {
         "Destination": "string"
      }
   },
   "FunctionArn": "string",
   "LastModified": number,
   "MaximumEventAgeInSeconds": number,
   "MaximumRetryAttempts": number
}
```

## 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.

### DestinationConfig

A destination for events after they have been sent to a function for processing.

**Destinations**

- **Function** - The Amazon Resource Name (ARN) of a Lambda function.
- **Queue** - The ARN of a standard SQS queue.
- **Bucket** - The ARN of an Amazon S3 bucket.
- **Topic** - The ARN of a standard SNS topic.
- **Event Bus** - The ARN of an Amazon EventBridge event bus.

> **Note**
>
> S3 buckets are supported only for on-failure destinations. To retain records of successful invocations, use another destination type.

Type: DestinationConfig object

**FunctionArn**

The Amazon Resource Name (ARN) of the function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

**LastModified**

The date and time that the configuration was last updated, in Unix time seconds.

Type: Timestamp

**MaximumEventAgeInSeconds**

The maximum age of a request that Lambda sends to a function for processing.

Type: Integer

Valid Range: Minimum value of 60. Maximum value of 21600.

**MaximumRetryAttempts**

The maximum number of times to retry when the function returns an error.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 2.

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# PutFunctionRecursionConfig

Sets the recursive loop detection configuration for a Lambda Event Function.

When you configure a Lambda function to output to the same service or resource that invokes the function, it's possible to create an infinite recursive loop. For example, a Lambda function might write a message to an Amazon Simple Queue Service (Amazon SQS) queue, which then invokes the same function. This invocation causes the function to write another message to the queue, which in turn invokes the function again.

Lambda can detect certain types of recursive loops shortly after they occur. When Lambda detects a recursive loop and your function's recursive loop detection configuration is set to `Terminate`, it stops your function being invoked and notifies you.

## Request Syntax

```
PUT /2024-08-31/functions/FunctionName/recursion-config HTTP/1.1
Content-type: application/json

{
   "RecursiveLoop": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

**RecursiveLoop**

If you set your function's recursive loop detection configuration to `Allow`, Lambda doesn't take any action when it detects your function being invoked as part of a recursive loop. We recommend that you only use this setting if your design intentionally uses a Lambda function to write data back to the same AWS resource that invokes it.

If you set your function's recursive loop detection configuration to `Terminate`, Lambda stops your function being invoked and notifies you when it detects your function being invoked as part of a recursive loop.

By default, Lambda sets your function's configuration to `Terminate`.

> **Important**
>
> If your design intentionally uses a Lambda function to write data back to the same AWS resource that invokes the function, then use caution and implement suitable guard rails to prevent unexpected charges being billed to your AWS account. To learn more about best practices for using recursive invocation patterns, see Recursive patterns that cause run-away Lambda functions in Serverless Land.

Type: String

Valid Values: `Allow | Terminate`

Required: Yes

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "RecursiveLoop": "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.

**RecursiveLoop**

The status of your function's recursive loop detection configuration.

When this value is set to `Allow`and Lambda detects your function being invoked as part of a recursive loop, it doesn't take any action.

When this value is set to `Terminate` and Lambda detects your function being invoked as part of a recursive loop, it stops your function being invoked and notifies you.

Type: String

Valid Values: `Allow | Terminate`

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# PutFunctionScalingConfig

Sets the scaling configuration for a Lambda Managed Instances function. The scaling configuration defines the minimum and maximum number of execution environments that can be provisioned for the function, allowing you to control scaling behavior and resource allocation.

## Request Syntax

```
PUT /2025-11-30/functions/FunctionName/function-scaling-config?Qualifier=Qualifier
 HTTP/1.1
Content-type: application/json

{
   "FunctionScalingConfig": {
      "MaxExecutionEnvironments": number,
      "MinExecutionEnvironments": number
   }
}
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)`

Required: Yes

### Qualifier

Specify a version or alias to set the scaling configuration for a published version of the function.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `(\$LATEST\.PUBLISHED|[0-9]+)`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

**FunctionScalingConfig**

The scaling configuration to apply to the function, including minimum and maximum execution environment limits.

Type: FunctionScalingConfig object

Required: No

## Response Syntax

```
HTTP/1.1 202
Content-type: application/json

{
   "FunctionState": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 202 response.

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

**FunctionState**

The current state of the function after applying the scaling configuration.

Type: String

Valid Values: `Pending | Active | Inactive | Failed | Deactivating | Deactivated | ActiveNonInvocable | Deleting`

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# PutProvisionedConcurrencyConfig

Adds a provisioned concurrency configuration to a function's alias or version.

## Request Syntax

```
PUT /2019-09-30/functions/FunctionName/provisioned-concurrency?Qualifier=Qualifier
 HTTP/1.1
Content-type: application/json

{
   "ProvisionedConcurrentExecutions": number
}
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

### Qualifier

The version number or alias name.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `(|[a-zA-Z0-9$_-]+)`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### ProvisionedConcurrentExecutions

The amount of provisioned concurrency to allocate for the version or alias.

Type: Integer

Valid Range: Minimum value of 1.

Required: Yes

## Response Syntax

```
HTTP/1.1 202
Content-type: application/json

{
   "AllocatedProvisionedConcurrentExecutions": number,
   "AvailableProvisionedConcurrentExecutions": number,
   "LastModified": "string",
   "RequestedProvisionedConcurrentExecutions": number,
   "Status": "string",
   "StatusReason": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 202 response.

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

**AllocatedProvisionedConcurrentExecutions**

The amount of provisioned concurrency allocated. When a weighted alias is used during linear and canary deployments, this value fluctuates depending on the amount of concurrency that is provisioned for the function versions.

Type: Integer

Valid Range: Minimum value of 0.

**AvailableProvisionedConcurrentExecutions**

The amount of provisioned concurrency available.

Type: Integer

Valid Range: Minimum value of 0.

**LastModified**

The date and time that a user last updated the configuration, in ISO 8601 format.

Type: String

**RequestedProvisionedConcurrentExecutions**

The amount of provisioned concurrency requested.

Type: Integer

Valid Range: Minimum value of 1.

**Status**

The status of the allocation process.

Type: String

Valid Values: `IN_PROGRESS | READY | FAILED`

**StatusReason**

For failed allocations, the reason that provisioned concurrency could not be allocated.

Type: String

# Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# PutResourcePolicy

Adds a resource-based policy to a Lambda resource. Resource-based policies grant access to other AWS accounts, organizations, or services. Resource-based policies apply to a single Lambda resource (for example, a function, function version, or function alias).

> **Important**
>
> This operation replaces any existing policy on the Lambda resource. If you previously added permissions using the AddPermission operation, the new policy overwrites those permissions.

## Request Syntax

```
PUT /2026-07-09/resource-policy/ResourceArn HTTP/1.1
Content-type: application/json

{
   "Policy": "string",
   "RevisionId": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### ResourceArn

The Amazon Resource Name (ARN) of the Lambda resource you want to add the policy to. You can use a qualified or an unqualified ARN. The value must be a complete ARN, and the operation does not accept wildcard characters.

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:(eusc-)?[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_])+)?`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

**Policy**

The policy document you want to add to your Lambda resource. This is formatted as a JSON string.

For more information, see Working with resource-based policies in Lambda in the *AWS Lambda Developer Guide*.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 20480.

Pattern: `[\s\S]+`

Required: Yes

**RevisionId**

The revision ID that the existing policy must match for the replacement to proceed. If the revision ID doesn't match, the operation fails with a `PreconditionFailedException` error. To retrieve the current revision ID, use the GetResourcePolicy operation.

Type: String

Length Constraints: Fixed length of 36.

Pattern: `[0-9a-f]{8}-[0-9a-f]{4}-[0-9a-f]{4}-[0-9a-f]{4}-[0-9a-f]{12}`

Required: No

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "Policy": "string",
   "RevisionId": "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.

**Policy**

The resource-based policy that Lambda adds to the resource.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 20480.

Pattern: `[\s\S]+`

**RevisionId**

The revision ID of the policy that Lambda adds to your Lambda resource.

Type: String

Length Constraints: Fixed length of 36.

Pattern: `[0-9a-f]{8}-[0-9a-f]{4}-[0-9a-f]{4}-[0-9a-f]{4}-[0-9a-f]{12}`

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**PolicyLengthExceededException**

The permissions policy for the resource is too large. For more information, see Lambda quotas.

HTTP Status Code: 400

**PreconditionFailedException**

The RevisionId provided does not match the latest RevisionId for the Lambda function or alias.

- **For AddPermission and RemovePermission API operations:** Call `GetPolicy` to retrieve the latest RevisionId for your resource.
- **For all other API operations:** Call `GetFunction` or `GetAlias` to retrieve the latest RevisionId for your resource.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 412

**PublicPolicyException**

The resource-based policy you tried to add to the Lambda resource would grant public access to it, which isn't allowed.

**Message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3

- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# PutRuntimeManagementConfig

Sets the runtime management configuration for a function's version. For more information, see Runtime updates.

## Request Syntax

```
PUT /2021-07-20/functions/FunctionName/runtime-management-config?Qualifier=Qualifier
 HTTP/1.1
Content-type: application/json

{
   "RuntimeVersionArn": "string",
   "UpdateRuntimeOn": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

Required: Yes

### Qualifier

Specify a version of the function. This can be `$LATEST` or a published version number. If no value is specified, the configuration for the `$LATEST` version is returned.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `\$(LATEST(\.PUBLISHED)?)|[a-zA-Z0-9-_$]+`

## Request Body

The request accepts the following data in JSON format.

### RuntimeVersionArn

The ARN of the runtime version you want the function to use.

> **Note**
>
> This is only required if you're using the **Manual** runtime update mode.

Type: String

Length Constraints: Minimum length of 26. Maximum length of 2048.

Pattern: `arn:(aws[a-zA-Z-]*):lambda:[a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}::runtime:.+`

Required: No

### UpdateRuntimeOn

Specify the runtime update mode.

- **Auto (default)** - Automatically update to the most recent and secure runtime version using a Two-phase runtime version rollout. This is the best choice for most customers to ensure they always benefit from runtime updates.
- **Function update** - Lambda updates the runtime of your function to the most recent and secure runtime version when you update your function. This approach synchronizes runtime updates with function deployments, giving you control over when runtime updates are applied and allowing you to detect and mitigate rare runtime update incompatibilities early.

When using this setting, you need to regularly update your functions to keep their runtime up-to-date.

- **Manual** - You specify a runtime version in your function configuration. The function will use this runtime version indefinitely. In the rare case where a new runtime version is incompatible with an existing function, this allows you to roll back your function to an earlier runtime version. For more information, see Roll back a runtime version.

Type: String

Valid Values: `Auto | Manual | FunctionUpdate`

Required: Yes

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "FunctionArn": "string",
   "RuntimeVersionArn": "string",
   "UpdateRuntimeOn": "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.

### FunctionArn

The ARN of the function

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

**RuntimeVersionArn**

The ARN of the runtime the function is configured to use. If the runtime update mode is **manual**, the ARN is returned, otherwise `null` is returned.

Type: String

Length Constraints: Minimum length of 26. Maximum length of 2048.

Pattern: `arn:(aws[a-zA-Z-]*):lambda:[a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}::runtime:.+`

**UpdateRuntimeOn**

The runtime update mode.

Type: String

Valid Values: `Auto | Manual | FunctionUpdate`

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3

- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# RemoveLayerVersionPermission

Removes a statement from the permissions policy for a version of an AWS Lambda layer. For more information, see AddLayerVersionPermission.

## Request Syntax

```
DELETE /2018-10-31/layers/LayerName/versions/VersionNumber/policy/StatementId?
RevisionId=RevisionId HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### LayerName

The name or Amazon Resource Name (ARN) of the layer.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+)|[a-zA-Z0-9-_]+`

Required: Yes

### RevisionId

Only update the policy if the revision ID matches the ID specified. Use this option to avoid modifying a policy that has changed since you last read it.

### StatementId

The identifier that was specified when the statement was added.

Length Constraints: Minimum length of 1. Maximum length of 100.

Pattern: `([a-zA-Z0-9-_]+)`

Required: Yes

### VersionNumber

The version number.

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.

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**PreconditionFailedException**

The RevisionId provided does not match the latest RevisionId for the Lambda function or alias.

- **For AddPermission and RemovePermission API operations:** Call `GetPolicy` to retrieve the latest RevisionId for your resource.
- **For all other API operations:** Call `GetFunction` or `GetAlias` to retrieve the latest RevisionId for your resource.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 412

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3

- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# RemovePermission

Revokes function-use permission from an AWS service or another AWS account. You can get the ID of the statement from the output of GetPolicy.

## Request Syntax

```
DELETE /2015-03-31/functions/FunctionName/policy/StatementId?
Qualifier=Qualifier&RevisionId=RevisionId HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function, version, or alias.

**Name formats**

- **Function name** – `my-function` (name-only), `my-function:v1` (with alias).
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

You can append a version number or alias to any of the formats. The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

Required: Yes

### Qualifier

Specify a version or alias to remove permissions from a published version of the function.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `\$(LATEST(\.PUBLISHED)?)|[a-zA-Z0-9-_$]+`

**RevisionId**

Update the policy only if the revision ID matches the ID that's specified. Use this option to avoid modifying a policy that has changed since you last read it.

**StatementId**

Statement ID of the permission to remove.

Length Constraints: Minimum length of 1. Maximum length of 100.

Pattern: `([a-zA-Z0-9-_.]+)`

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.

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**PreconditionFailedException**

The RevisionId provided does not match the latest RevisionId for the Lambda function or alias.

- **For AddPermission and RemovePermission API operations:** Call `GetPolicy` to retrieve the latest RevisionId for your resource.
- **For all other API operations:** Call `GetFunction` or `GetAlias` to retrieve the latest RevisionId for your resource.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 412

**PublicPolicyException**

The resource-based policy you tried to add to the Lambda resource would grant public access to it, which isn't allowed.

**Message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# ResumeDurableExecution

Resumes a paused durable execution. If the pause interrupted an invocation, or an operation completed while the execution was paused, Lambda invokes your function. Otherwise, the execution continues to wait for its pending operations.

If the execution status is PAUSING, this operation cancels the pause, and the in-progress invocation continues. This operation returns a successful response while the execution status is still PAUSED or PAUSING, and the status changes to RUNNING when Lambda processes the request. For more information about resuming executions, see Pausing and resuming durable executions.

## Request Syntax

```
POST /2025-12-01/durable-executions/DurableExecutionArn/resume HTTP/1.1
Content-type: application/json

{
   "ClientToken": "string",
   "Reason": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### DurableExecutionArn

The Amazon Resource Name (ARN) of the durable execution.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `arn:([a-zA-Z0-9-]+):lambda:([a-zA-Z0-9-]+):(\d{12}):function:([a-zA-Z0-9_-]+):(\$LATEST(?:\.PUBLISHED)?|[0-9]+)/durable-execution/([a-zA-Z0-9_-]+)/([a-zA-Z0-9_-]+)`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

**ClientToken**

A unique, case-sensitive identifier that you provide so that the request completes no more than one time. If you repeat a request with the same client token and parameters within 15 minutes, Lambda doesn't resume the execution again and returns a successful response instead of an error.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[\x21-\x7E]+`

Required: No

**Reason**

A description of why you're resuming the execution. Lambda records the reason in the execution history.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1024.

Required: No

## Response Syntax

```
HTTP/1.1 202
```

## Response Elements

If the action is successful, the service sends back an HTTP 202 response with an empty HTTP body.

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**KMSAccessDeniedException**

Lambda couldn't decrypt the environment variables because AWS KMS access was denied. Check the Lambda function's KMS permissions.

HTTP Status Code: 502

**KMSDisabledException**

Lambda couldn't decrypt the environment variables because the AWS KMS key used is disabled. Check the Lambda function's KMS key settings.

HTTP Status Code: 502

**KMSInvalidStateException**

Lambda couldn't decrypt the environment variables because the state of the AWS KMS key used is not valid for Decrypt. Check the function's KMS key settings.

HTTP Status Code: 502

**KMSNotFoundException**

Lambda couldn't decrypt the environment variables because the AWS KMS key was not found. Check the function's KMS key settings.

HTTP Status Code: 502

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# SendDurableExecutionCallbackFailure

Sends a failure response for a callback operation in a durable execution. Use this API when an external system cannot complete a callback operation successfully.

## Request Syntax

```
POST /2025-12-01/durable-execution-callbacks/CallbackId/fail HTTP/1.1
Content-type: application/json

{
   "ErrorData": "string",
   "ErrorMessage": "string",
   "ErrorType": "string",
   "StackTrace": [ "string" ]
}
```

## URI Request Parameters

The request uses the following URI parameters.

### CallbackId

The unique identifier for the callback operation.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `[A-Za-z0-9+/]+={0,2}`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### ErrorData

Machine-readable error data.

Type: String

Required: No

**ErrorMessage**

A human-readable error message.

Type: String

Required: No

**ErrorType**

The error type.

Type: String

Required: No

**StackTrace**

Stack trace information for the error.

Type: Array of strings

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.

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**CallbackTimeoutException**

The callback ID token has either expired or the callback associated with the token has already been closed.

**Type**

The exception type.

HTTP Status Code: 400

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**KMSAccessDeniedException**

Lambda couldn't decrypt the environment variables because AWS KMS access was denied. Check the Lambda function's KMS permissions.

HTTP Status Code: 502

**KMSDisabledException**

Lambda couldn't decrypt the environment variables because the AWS KMS key used is disabled. Check the Lambda function's KMS key settings.

HTTP Status Code: 502

**KMSInvalidStateException**

Lambda couldn't decrypt the environment variables because the state of the AWS KMS key used is not valid for Decrypt. Check the function's KMS key settings.

HTTP Status Code: 502

**KMSNotFoundException**

Lambda couldn't decrypt the environment variables because the AWS KMS key was not found. Check the function's KMS key settings.

HTTP Status Code: 502

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# SendDurableExecutionCallbackHeartbeat

Sends a heartbeat signal for a long-running callback operation to prevent timeout. Use this API to extend the callback timeout period while the external operation is still in progress.

## Request Syntax

```
POST /2025-12-01/durable-execution-callbacks/CallbackId/heartbeat HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### CallbackId

The unique identifier for the callback operation.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `[A-Za-z0-9+/]+={0,2}`

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

For information about the errors that are common to all actions, see Common Error Types.

**CallbackTimeoutException**

The callback ID token has either expired or the callback associated with the token has already been closed.

**Type**

The exception type.

HTTP Status Code: 400

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# SendDurableExecutionCallbackSuccess

Sends a successful completion response for a callback operation in a durable execution. Use this API when an external system has successfully completed a callback operation.

## Request Syntax

```
POST /2025-12-01/durable-execution-callbacks/CallbackId/succeed HTTP/1.1

Result
```

## URI Request Parameters

The request uses the following URI parameters.

### CallbackId

The unique identifier for the callback operation.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `[A-Za-z0-9+/]+={0,2}`

Required: Yes

## Request Body

The request accepts the following binary data.

### Result

The result data from the successful callback operation. Maximum size is 1 MB.

Length Constraints: Minimum length of 0. Maximum length of 1048576.

## 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

For information about the errors that are common to all actions, see Common Error Types.

**CallbackTimeoutException**

The callback ID token has either expired or the callback associated with the token has already been closed.

**Type**

The exception type.

HTTP Status Code: 400

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**KMSAccessDeniedException**

Lambda couldn't decrypt the environment variables because AWS KMS access was denied. Check the Lambda function's KMS permissions.

HTTP Status Code: 502

**KMSDisabledException**

Lambda couldn't decrypt the environment variables because the AWS KMS key used is disabled. Check the Lambda function's KMS key settings.

HTTP Status Code: 502

**KMSInvalidStateException**

Lambda couldn't decrypt the environment variables because the state of the AWS KMS key used is not valid for Decrypt. Check the function's KMS key settings.

HTTP Status Code: 502

**KMSNotFoundException**

Lambda couldn't decrypt the environment variables because the AWS KMS key was not found. Check the function's KMS key settings.

HTTP Status Code: 502

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++

- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# StopDurableExecution

Stops a running or paused durable execution. The execution transitions to STOPPED status and cannot be resumed. Any in-progress operations are terminated.

## Request Syntax

```
POST /2025-12-01/durable-executions/DurableExecutionArn/stop HTTP/1.1
Content-type: application/json

{
   "ErrorData": "string",
   "ErrorMessage": "string",
   "ErrorType": "string",
   "StackTrace": [ "string" ]
}
```

## URI Request Parameters

The request uses the following URI parameters.

### DurableExecutionArn

The Amazon Resource Name (ARN) of the durable execution.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `arn:([a-zA-Z0-9-]+):lambda:([a-zA-Z0-9-]+):(\d{12}):function:([a-zA-Z0-9_-]+):(\$LATEST(?:\.PUBLISHED)?|[0-9]+)/durable-execution/([a-zA-Z0-9_-]+)/([a-zA-Z0-9_-]+)`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### ErrorData

Machine-readable error data.

Type: String

Required: No

**ErrorMessage**

A human-readable error message.

Type: String

Required: No

**ErrorType**

The error type.

Type: String

Required: No

**StackTrace**

Stack trace information for the error.

Type: Array of strings

Required: No

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "StopTimestamp": number
}
```

## 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.

**StopTimestamp**

The timestamp when the execution was stopped (ISO 8601 format).

Type: Timestamp

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**KMSAccessDeniedException**

Lambda couldn't decrypt the environment variables because AWS KMS access was denied. Check the Lambda function's KMS permissions.

HTTP Status Code: 502

**KMSDisabledException**

Lambda couldn't decrypt the environment variables because the AWS KMS key used is disabled. Check the Lambda function's KMS key settings.

HTTP Status Code: 502

**KMSInvalidStateException**

Lambda couldn't decrypt the environment variables because the state of the AWS KMS key used is not valid for Decrypt. Check the function's KMS key settings.

HTTP Status Code: 502

**KMSNotFoundException**

Lambda couldn't decrypt the environment variables because the AWS KMS key was not found. Check the function's KMS key settings.

HTTP Status Code: 502

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3

- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# TagResource

Adds tags to a function, event source mapping, or code signing configuration.

## Request Syntax

```
POST /2017-03-31/tags/Resource HTTP/1.1
Content-type: application/json

{
   "Tags": {
      "string" : "string"
   }
}
```

## URI Request Parameters

The request uses the following URI parameters.

### Resource

The resource's Amazon Resource Name (ARN).

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `arn:(aws[a-zA-Z-]*):lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:(function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?|code-signing-config:csc-[a-z0-9]{17}|event-source-mapping:[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}|capacity-provider:[a-zA-Z0-9-_]+)`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### Tags

A list of tags to apply to the resource.

Type: String to string map

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.

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# UntagResource

Removes tags from a function, event source mapping, or code signing configuration.

## Request Syntax

```
DELETE /2017-03-31/tags/Resource?tagKeys=TagKeys HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

**Resource**

The resource's Amazon Resource Name (ARN).

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `arn:(aws[a-zA-Z-]*):lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:(function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?|code-signing-config:csc-[a-z0-9]{17}|event-source-mapping:[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}|capacity-provider:[a-zA-Z0-9-_]+)`

Required: Yes

**TagKeys**

A list of tag keys to remove from the resource.

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.

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# UpdateAlias

Updates the configuration of a Lambda Event Function alias.

## Request Syntax

```
PUT /2015-03-31/functions/FunctionName/aliases/Name HTTP/1.1
Content-type: application/json

{
   "Description": "string",
   "FunctionVersion": "string",
   "RevisionId": "string",
   "RoutingConfig": {
      "AdditionalVersionWeights": {
         "string" : number
      }
   }
}
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** - `MyFunction`.
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:MyFunction`.
- **Partial ARN** - `123456789012:function:MyFunction`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

**Name**

The name of the alias.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `(?!^[0-9]+$)([a-zA-Z0-9-_]+)`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

**Description**

A description of the alias.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Required: No

**FunctionVersion**

The function version that the alias invokes.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST(\.PUBLISHED)?|[0-9]+)`

Required: No

**RevisionId**

Only update the alias if the revision ID matches the ID that's specified. Use this option to avoid modifying an alias that has changed since you last read it.

Type: String

Required: No

### RoutingConfig

The routing configuration of the alias.

Type: AliasRoutingConfiguration object

Required: No

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "AliasArn": "string",
   "Description": "string",
   "FunctionVersion": "string",
   "Name": "string",
   "RevisionId": "string",
   "RoutingConfig": {
      "AdditionalVersionWeights": {
         "string" : number
      }
   }
}
```

## 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.

### AliasArn

The Amazon Resource Name (ARN) of the alias.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

### Description

A description of the alias.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

### FunctionVersion

The function version that the alias invokes.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST|[0-9]+)`

### Name

The name of the alias.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `(?!^[0-9]+$)([a-zA-Z0-9-_]+)`

### RevisionId

A unique identifier that changes when you update the alias.

Type: String

### RoutingConfig

The routing configuration of the alias.

Type: AliasRoutingConfiguration object

## Errors

For information about the errors that are common to all actions, see Common Error Types.

#### InvalidParameterValueException

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**PreconditionFailedException**

The RevisionId provided does not match the latest RevisionId for the Lambda function or alias.

- **For AddPermission and RemovePermission API operations:** Call `GetPolicy` to retrieve the latest RevisionId for your resource.
- **For all other API operations:** Call `GetFunction` or `GetAlias` to retrieve the latest RevisionId for your resource.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 412

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# UpdateCapacityProvider

Updates the configuration of an existing capacity provider.

## Request Syntax

```
PUT /2025-11-30/capacity-providers/CapacityProviderName HTTP/1.1
Content-type: application/json

{
   "CapacityProviderScalingConfig": {
      "MaxVCpuCount": number,
      "ScalingMode": "string",
      "ScalingPolicies": [
         {
            "PredefinedMetricType": "string",
            "TargetValue": number
         }
      ]
   },
   "PropagateTags": {
      "ExplicitTags": {
         "string" : "string"
      },
      "Mode": "string"
   },
   "TelemetryConfig": {
      "LoggingConfig": {
         "LogGroup": "string",
         "SystemLogLevel": "string"
      }
   }
}
```

## URI Request Parameters

The request uses the following URI parameters.

### CapacityProviderName

The name of the capacity provider to update.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:aws[a-zA-Z-]*:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:capacity-provider:[a-zA-Z0-9-_]+)|[a-zA-Z0-9-_]+`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

**CapacityProviderScalingConfig**

The updated scaling configuration for the capacity provider.

Type: CapacityProviderScalingConfig object

Required: No

**PropagateTags**

Configuration for tag propagation to managed resources launched by the capacity provider.

Type: PropagateTags object

Required: No

**TelemetryConfig**

The updated telemetry configuration for the capacity provider.

Type: CapacityProviderTelemetryConfig object

Required: No

## Response Syntax

```
HTTP/1.1 202
Content-type: application/json

{
   "CapacityProvider": {
      "CapacityProviderArn": "string",
      "CapacityProviderScalingConfig": {
         "MaxVCpuCount": number,
```

```
            "ScalingMode": "string",
            "ScalingPolicies": [
               {
                  "PredefinedMetricType": "string",
                  "TargetValue": number
               }
            ]
         },
         "InstanceRequirements": {
            "AllowedInstanceTypes": [ "string" ],
            "Architectures": [ "string" ],
            "ExcludedInstanceTypes": [ "string" ]
         },
         "KmsKeyArn": "string",
         "LastModified": "string",
         "PermissionsConfig": {
            "CapacityProviderOperatorRoleArn": "string"
         },
         "PropagateTags": {
            "ExplicitTags": {
               "string" : "string"
            },
            "Mode": "string"
         },
         "State": "string",
         "TelemetryConfig": {
            "LoggingConfig": {
               "LogGroup": "string",
               "SystemLogLevel": "string"
            }
         },
         "VpcConfig": {
            "SecurityGroupIds": [ "string" ],
            "SubnetIds": [ "string" ]
         }
      }
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 202 response.

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

**CapacityProvider**

Information about the updated capacity provider.

Type: CapacityProvider object

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# UpdateCodeSigningConfig

Update the code signing configuration. Changes to the code signing configuration take effect the next time a user tries to deploy a code package to the function.

## Request Syntax

```
PUT /2020-04-22/code-signing-configs/CodeSigningConfigArn HTTP/1.1
Content-type: application/json

{
   "AllowedPublishers": {
      "SigningProfileVersionArns": [ "string" ]
   },
   "CodeSigningPolicies": {
      "UntrustedArtifactOnDeployment": "string"
   },
   "Description": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### CodeSigningConfigArn

The The Amazon Resource Name (ARN) of the code signing configuration.

Length Constraints: Minimum length of 0. Maximum length of 200.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}:\d{12}:code-signing-config:csc-[a-z0-9]{17}`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### AllowedPublishers

Signing profiles for this code signing configuration.

Type: AllowedPublishers object

Required: No

**CodeSigningPolicies**

The code signing policy.

Type: CodeSigningPolicies object

Required: No

**Description**

Descriptive name for this code signing configuration.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Required: No

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "CodeSigningConfig": {
      "AllowedPublishers": {
         "SigningProfileVersionArns": [ "string" ]
      },
      "CodeSigningConfigArn": "string",
      "CodeSigningConfigId": "string",
      "CodeSigningPolicies": {
         "UntrustedArtifactOnDeployment": "string"
      },
      "Description": "string",
      "LastModified": "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.

**CodeSigningConfig**

The code signing configuration

Type: CodeSigningConfig object

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# UpdateEventSourceMapping

Updates an event source mapping. You can change the function that AWS Lambda invokes, or pause invocation and resume later from the same location.

For details about how to configure different event sources, see the following topics.

- Amazon DynamoDB Streams
- Amazon Kinesis
- Amazon SQS
- Amazon MQ and RabbitMQ
- Amazon MSK
- Apache Kafka
- Amazon DocumentDB

The following error handling options are available for stream sources (DynamoDB, Kinesis, Amazon MSK, and self-managed Apache Kafka):

- `BisectBatchOnFunctionError` – If the function returns an error, split the batch in two and retry.
- `MaximumRecordAgeInSeconds` – Discard records older than the specified age. The default value is infinite (-1). When set to infinite (-1), failed records are retried until the record expires
- `MaximumRetryAttempts` – Discard records after the specified number of retries. The default value is infinite (-1). When set to infinite (-1), failed records are retried until the record expires.
- `OnFailure` – Send discarded records to an Amazon SQS queue, Amazon SNS topic, Kafka topic, or Amazon S3 bucket. For more information, see Adding a destination.

The following option is available only for DynamoDB and Kinesis event sources:

- `ParallelizationFactor` – Process multiple batches from each shard concurrently.

For information about which configuration parameters apply to each event source, see the following topics.

- Amazon DynamoDB Streams

- Amazon Kinesis
- Amazon SQS
- Amazon MQ and RabbitMQ
- Amazon MSK
- Apache Kafka
- Amazon DocumentDB

## Request Syntax

```
PUT /2015-03-31/event-source-mappings/UUID HTTP/1.1
Content-type: application/json

{
   "AmazonManagedKafkaEventSourceConfig": {
      "ConsumerGroupId": "string",
      "SchemaRegistryConfig": {
         "AccessConfigs": [
            {
               "Type": "string",
               "URI": "string"
            }
         ],
         "EventRecordFormat": "string",
         "SchemaRegistryURI": "string",
         "SchemaValidationConfigs": [
            {
               "Attribute": "string"
            }
         ]
      }
   },
   "BatchSize": number,
   "BisectBatchOnFunctionError": boolean,
   "DestinationConfig": {
      "OnFailure": {
         "Destination": "string"
      },
      "OnSuccess": {
         "Destination": "string"
      }
```

```
    },
    "DocumentDBEventSourceConfig": {
       "CollectionName": "string",
       "DatabaseName": "string",
       "FullDocument": "string"
    },
    "Enabled": boolean,
    "FilterCriteria": {
       "Filters": [
          {
             "Pattern": "string"
          }
       ]
    },
    "FunctionName": "string",
    "FunctionResponseTypes": [ "string" ],
    "KMSKeyArn": "string",
    "LoggingConfig": {
       "SystemLogLevel": "string"
    },
    "MaximumBatchingWindowInSeconds": number,
    "MaximumRecordAgeInSeconds": number,
    "MaximumRetryAttempts": number,
    "MetricsConfig": {
       "Metrics": [ "string" ]
    },
    "ParallelizationFactor": number,
    "ProvisionedPollerConfig": {
       "MaximumPollers": number,
       "MinimumPollers": number,
       "PollerGroupName": "string"
    },
    "ScalingConfig": {
       "MaximumConcurrency": number
    },
    "SelfManagedKafkaEventSourceConfig": {
       "ConsumerGroupId": "string",
       "ConsumptionMode": "string",
       "SchemaRegistryConfig": {
          "AccessConfigs": [
             {
                "Type": "string",
                "URI": "string"
             }
```

```
         ],
         "EventRecordFormat": "string",
         "SchemaRegistryURI": "string",
         "SchemaValidationConfigs": [
            {
               "Attribute": "string"
            }
         ]
      }
   },
   "SourceAccessConfigurations": [
      {
         "Type": "string",
         "URI": "string"
      }
   ],
   "TumblingWindowInSeconds": number
}
```

## URI Request Parameters

The request uses the following URI parameters.

### UUID

The identifier of the event source mapping.

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### AmazonManagedKafkaEventSourceConfig

Specific configuration settings for an Amazon Managed Streaming for Apache Kafka (Amazon MSK) event source.

Type: AmazonManagedKafkaEventSourceConfig object

Required: No

### BatchSize

The maximum number of records in each batch that Lambda pulls from your stream or queue and sends to your function. Lambda passes all of the records in the batch to the function in a single call, up to the payload limit for synchronous invocation (6 MB).

- **Amazon Kinesis** – Default 100. Max 10,000.
- **Amazon DynamoDB Streams** – Default 100. Max 10,000.
- **Amazon Simple Queue Service** – Default 10. For standard queues the max is 10,000. For FIFO queues the max is 10.
- **Amazon Managed Streaming for Apache Kafka** – Default 100. Max 10,000.
- **Self-managed Apache Kafka** – Default 100. Max 10,000.
- **Amazon MQ (ActiveMQ and RabbitMQ)** – Default 100. Max 10,000.
- **DocumentDB** – Default 100. Max 10,000.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10000.

Required: No

### BisectBatchOnFunctionError

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) If the function returns an error, split the batch in two and retry.

Type: Boolean

Required: No

### DestinationConfig

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) A configuration object that specifies the destination of an event after Lambda processes it.

Type: DestinationConfig object

Required: No

### DocumentDBEventSourceConfig

Specific configuration settings for a DocumentDB event source.

Type: DocumentDBEventSourceConfig object

Required: No

### Enabled

When true, the event source mapping is active. When false, Lambda pauses polling and invocation.

Default: True

Type: Boolean

Required: No

### FilterCriteria

An object that defines the filter criteria that determine whether Lambda should process an event. For more information, see Lambda event filtering.

Type: FilterCriteria object

Required: No

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** – `MyFunction`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:MyFunction`.
- **Version or Alias ARN** – `arn:aws:lambda:us-west-2:123456789012:function:MyFunction:PROD`.
- **Partial ARN** – `123456789012:function:MyFunction`.

The length constraint applies only to the full ARN. If you specify only the function name, it's limited to 64 characters in length.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

Required: No

**FunctionResponseTypes**

(Kinesis, DynamoDB Streams, Amazon MSK, self-managed Apache Kafka, and Amazon SQS) A list of current response type enums applied to the event source mapping.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 1 item.

Valid Values: `ReportBatchItemFailures`

Required: No

**KMSKeyArn**

The ARN of the AWS Key Management Service (AWS KMS) customer managed key that Lambda uses to encrypt your function's filter criteria. By default, Lambda does not encrypt your filter criteria object. Specify this property to encrypt data using your own customer managed key.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

Required: No

**LoggingConfig**

(Amazon MSK, and self-managed Apache Kafka only) The logging configuration for your event source. Use this configuration object to define the level of logs for your event source mapping.

Type: EventSourceMappingLoggingConfig object

Required: No

**MaximumBatchingWindowInSeconds**

The maximum amount of time, in seconds, that Lambda spends gathering records before invoking the function. You can configure `MaximumBatchingWindowInSeconds` to any value from 0 seconds to 300 seconds in increments of seconds.

For Kinesis, DynamoDB, and Amazon SQS event sources, the default batching window is 0 seconds. For Amazon MSK, Self-managed Apache Kafka, Amazon MQ, and DocumentDB event sources, the default batching window is 500 ms. Note that because you can only change

`MaximumBatchingWindowInSeconds` in increments of seconds, you cannot revert back to the 500 ms default batching window after you have changed it. To restore the default batching window, you must create a new event source mapping.

Related setting: For Kinesis, DynamoDB, and Amazon SQS event sources, when you set `BatchSize` to a value greater than 10, you must set `MaximumBatchingWindowInSeconds` to at least 1.

Not supported for Kafka event source mappings when `ConsumptionMode` is `Queue`.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 300.

Required: No

**MaximumRecordAgeInSeconds**

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) Discard records older than the specified age. The default value is infinite (-1).

Type: Integer

Valid Range: Minimum value of -1. Maximum value of 604800.

Required: No

**MaximumRetryAttempts**

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) Discard records after the specified number of retries. The default value is infinite (-1). When set to infinite (-1), failed records are retried until the record expires.

For Kafka event source mappings with `ConsumptionMode` set to `Queue`, the value -1 (infinite retries) is not supported and the default is 0 (no retries). Lambda releases failed records back to the broker, which redelivers them up to the share group's `group.share.delivery.count.limit`.

Type: Integer

Valid Range: Minimum value of -1. Maximum value of 10000.

Required: No

**MetricsConfig**

The metrics configuration for your event source. For more information, see Event source mapping metrics.

Type: EventSourceMappingMetricsConfig object

Required: No

**ParallelizationFactor**

(Kinesis and DynamoDB Streams only) The number of batches to process from each shard concurrently.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10.

Required: No

**ProvisionedPollerConfig**

(Amazon SQS, Amazon MSK, and self-managed Apache Kafka only) The provisioned mode configuration for the event source. For more information, see provisioned mode.

Type: ProvisionedPollerConfig object

Required: No

**ScalingConfig**

(Amazon SQS only) The scaling configuration for the event source. For more information, see Configuring maximum concurrency for Amazon SQS event sources.

Type: ScalingConfig object

Required: No

**SelfManagedKafkaEventSourceConfig**

Specific configuration settings for a self-managed Apache Kafka event source.

Type: SelfManagedKafkaEventSourceConfig object

Required: No

**SourceAccessConfigurations**

An array of authentication protocols or VPC components required to secure your event source.

Type: Array of SourceAccessConfiguration objects

Array Members: Minimum number of 0 items. Maximum number of 22 items.

Required: No

**TumblingWindowInSeconds**

(Kinesis and DynamoDB Streams only) The duration in seconds of a processing window for DynamoDB and Kinesis Streams event sources. A value of 0 seconds indicates no tumbling window.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 900.

Required: No

## Response Syntax

```
HTTP/1.1 202
Content-type: application/json

{
   "AmazonManagedKafkaEventSourceConfig": {
      "ConsumerGroupId": "string",
      "SchemaRegistryConfig": {
         "AccessConfigs": [
            {
               "Type": "string",
               "URI": "string"
            }
         ],
         "EventRecordFormat": "string",
         "SchemaRegistryURI": "string",
         "SchemaValidationConfigs": [
            {
               "Attribute": "string"
            }
         ]
```

```
      }
   },
   "BatchSize": number,
   "BisectBatchOnFunctionError": boolean,
   "DestinationConfig": {
      "OnFailure": {
         "Destination": "string"
      },
      "OnSuccess": {
         "Destination": "string"
      }
   },
   "DocumentDBEventSourceConfig": {
      "CollectionName": "string",
      "DatabaseName": "string",
      "FullDocument": "string"
   },
   "EventSourceArn": "string",
   "EventSourceMappingArn": "string",
   "FilterCriteria": {
      "Filters": [
         {
            "Pattern": "string"
         }
      ]
   },
   "FilterCriteriaError": {
      "ErrorCode": "string",
      "Message": "string"
   },
   "FunctionArn": "string",
   "FunctionResponseTypes": [ "string" ],
   "KMSKeyArn": "string",
   "LastModified": number,
   "LastProcessingResult": "string",
   "LoggingConfig": {
      "SystemLogLevel": "string"
   },
   "MaximumBatchingWindowInSeconds": number,
   "MaximumRecordAgeInSeconds": number,
   "MaximumRetryAttempts": number,
   "MetricsConfig": {
      "Metrics": [ "string" ]
   },
```

```
   "ParallelizationFactor": number,
   "ProvisionedPollerConfig": {
      "MaximumPollers": number,
      "MinimumPollers": number,
      "PollerGroupName": "string"
   },
   "Queues": [ "string" ],
   "ScalingConfig": {
      "MaximumConcurrency": number
   },
   "SelfManagedEventSource": {
      "Endpoints": {
         "string" : [ "string" ]
      }
   },
   "SelfManagedKafkaEventSourceConfig": {
      "ConsumerGroupId": "string",
      "ConsumptionMode": "string",
      "SchemaRegistryConfig": {
         "AccessConfigs": [
            {
               "Type": "string",
               "URI": "string"
            }
         ],
         "EventRecordFormat": "string",
         "SchemaRegistryURI": "string",
         "SchemaValidationConfigs": [
            {
               "Attribute": "string"
            }
         ]
      }
   },
   "SourceAccessConfigurations": [
      {
         "Type": "string",
         "URI": "string"
      }
   ],
   "StartingPosition": "string",
   "StartingPositionTimestamp": number,
   "State": "string",
   "StateTransitionReason": "string",
```

```
    "Topics": [ "string" ],
    "TumblingWindowInSeconds": number,
    "UUID": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 202 response.

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

**AmazonManagedKafkaEventSourceConfig**

Specific configuration settings for an Amazon Managed Streaming for Apache Kafka (Amazon MSK) event source.

Type: AmazonManagedKafkaEventSourceConfig object

**BatchSize**

The maximum number of records in each batch that Lambda pulls from your stream or queue and sends to your function. Lambda passes all of the records in the batch to the function in a single call, up to the payload limit for synchronous invocation (6 MB).

Default value: Varies by service. For Amazon SQS, the default is 10. For all other services, the default is 100.

Related setting: When you set `BatchSize` to a value greater than 10, you must set `MaximumBatchingWindowInSeconds` to at least 1.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10000.

**BisectBatchOnFunctionError**

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) If the function returns an error, split the batch in two and retry. The default value is false.

Type: Boolean

**DestinationConfig**

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) A configuration object that specifies the destination of an event after Lambda processes it.

Type: DestinationConfig object

**DocumentDBEventSourceConfig**

Specific configuration settings for a DocumentDB event source.

Type: DocumentDBEventSourceConfig object

**EventSourceArn**

The Amazon Resource Name (ARN) of the event source.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

**EventSourceMappingArn**

The Amazon Resource Name (ARN) of the event source mapping.

Type: String

Length Constraints: Minimum length of 85. Maximum length of 120.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:event-source-mapping:[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}`

**FilterCriteria**

An object that defines the filter criteria that determine whether Lambda should process an event. For more information, see Lambda event filtering.

If filter criteria is encrypted, this field shows up as `null` in the response of ListEventSourceMapping API calls. You can view this field in plaintext in the response of GetEventSourceMapping and DeleteEventSourceMapping calls if you have `kms:Decrypt` permissions for the correct AWS KMS key.

Type: FilterCriteria object

**FilterCriteriaError**

An object that contains details about an error related to filter criteria encryption.

Type: FilterCriteriaError object

**FunctionArn**

The ARN of the Lambda function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

**FunctionResponseTypes**

(Kinesis, DynamoDB Streams, Amazon MSK, self-managed Apache Kafka, and Amazon SQS) A list of current response type enums applied to the event source mapping.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 1 item.

Valid Values: `ReportBatchItemFailures`

**KMSKeyArn**

The ARN of the AWS Key Management Service (AWS KMS) customer managed key that Lambda uses to encrypt your function's filter criteria.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

**LastModified**

The date that the event source mapping was last updated or that its state changed, in Unix time seconds.

Type: Timestamp

**LastProcessingResult**

The result of the event source mapping's last processing attempt.

Type: String

### LoggingConfig

(Amazon MSK, and self-managed Apache Kafka only) The logging configuration for your event source. For more information, see Event source mapping logging.

Type: EventSourceMappingLoggingConfig object

### MaximumBatchingWindowInSeconds

The maximum amount of time, in seconds, that Lambda spends gathering records before invoking the function. You can configure `MaximumBatchingWindowInSeconds` to any value from 0 seconds to 300 seconds in increments of seconds.

For streams and Amazon SQS event sources, the default batching window is 0 seconds. For Amazon MSK, Self-managed Apache Kafka, Amazon MQ, and DocumentDB event sources, the default batching window is 500 ms. Note that because you can only change `MaximumBatchingWindowInSeconds` in increments of seconds, you cannot revert back to the 500 ms default batching window after you have changed it. To restore the default batching window, you must create a new event source mapping.

Related setting: For streams and Amazon SQS event sources, when you set `BatchSize` to a value greater than 10, you must set `MaximumBatchingWindowInSeconds` to at least 1.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 300.

### MaximumRecordAgeInSeconds

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) Discard records older than the specified age. The default value is -1, which sets the maximum age to infinite. When the value is set to infinite, Lambda never discards old records.

> **Note**
>
> The minimum valid value for maximum record age is 60s. Although values less than 60 and greater than -1 fall within the parameter's absolute range, they are not allowed

Type: Integer

Valid Range: Minimum value of -1. Maximum value of 604800.

### MaximumRetryAttempts

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) Discard records after the specified number of retries. The default value is -1, which sets the maximum number of retries to infinite. When MaximumRetryAttempts is infinite, Lambda retries failed records until the record expires in the event source.

Type: Integer

Valid Range: Minimum value of -1. Maximum value of 10000.

### MetricsConfig

The metrics configuration for your event source. For more information, see Event source mapping metrics.

Type: EventSourceMappingMetricsConfig object

### ParallelizationFactor

(Kinesis and DynamoDB Streams only) The number of batches to process concurrently from each shard. The default value is 1.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10.

### ProvisionedPollerConfig

(Amazon SQS, Amazon MSK, and self-managed Apache Kafka only) The provisioned mode configuration for the event source. For more information, see provisioned mode.

Type: ProvisionedPollerConfig object

### Queues

(Amazon MQ) The name of the Amazon MQ broker destination queue to consume.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 1000.

Pattern: `[\s\S]*`

**ScalingConfig**

(Amazon SQS only) The scaling configuration for the event source. For more information, see Configuring maximum concurrency for Amazon SQS event sources.

Type: ScalingConfig object

**SelfManagedEventSource**

The self-managed Apache Kafka cluster for your event source.

Type: SelfManagedEventSource object

**SelfManagedKafkaEventSourceConfig**

Specific configuration settings for a self-managed Apache Kafka event source.

Type: SelfManagedKafkaEventSourceConfig object

**SourceAccessConfigurations**

An array of the authentication protocol, VPC components, or virtual host to secure and define your event source.

Type: Array of SourceAccessConfiguration objects

Array Members: Minimum number of 0 items. Maximum number of 22 items.

**StartingPosition**

The position in a stream from which to start reading. Required for Amazon Kinesis and Amazon DynamoDB Stream event sources. `AT_TIMESTAMP` is supported only for Amazon Kinesis streams, Amazon DocumentDB, Amazon MSK, and self-managed Apache Kafka.

Type: String

Valid Values: `TRIM_HORIZON | LATEST | AT_TIMESTAMP`

**StartingPositionTimestamp**

With `StartingPosition` set to `AT_TIMESTAMP`, the time from which to start reading, in Unix time seconds. `StartingPositionTimestamp` cannot be in the future.

Type: Timestamp

**State**

The state of the event source mapping. It can be one of the following: `Creating`, `Enabling`, `Enabled`, `Disabling`, `Disabled`, `Updating`, or `Deleting`.

Type: String

**StateTransitionReason**

Indicates whether a user or Lambda made the last change to the event source mapping.

Type: String

**Topics**

The name of the Kafka topic.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 249.

Pattern: `[^.]([a-zA-Z0-9\-_.]+)`

**TumblingWindowInSeconds**

(Kinesis and DynamoDB Streams only) The duration in seconds of a processing window for DynamoDB and Kinesis Streams event sources. A value of 0 seconds indicates no tumbling window.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 900.

**UUID**

The identifier of the event source mapping.

Type: String

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceInUseException**

The operation conflicts with the resource's availability. For example, you tried to update an event source mapping in the CREATING state, or you tried to delete an event source mapping currently UPDATING.

HTTP Status Code: 400

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# UpdateFunctionCode

Updates a Lambda Event Function's code. If code signing is enabled for the function, the code package must be signed by a trusted publisher. For more information, see Configuring code signing for Lambda.

If the function's package type is `Image`, then you must specify the code package in `ImageUri` as the URI of a container image in the Amazon ECR registry.

If the function's package type is `Zip`, then you must specify the deployment package as a .zip file archive. Enter the Amazon S3 bucket and key of the code .zip file location. You can also provide the function code inline using the `ZipFile` field.

The code in the deployment package must be compatible with the target instruction set architecture of the function (`x86-64` or `arm64`).

The function's code is locked when you publish a version. You can't modify the code of a published version, only the unpublished version.

> **Note**
>
> For a function defined as a container image, Lambda resolves the image tag to an image digest. In Amazon ECR, if you update the image tag to a new image, Lambda does not automatically update the function.

## Request Syntax

```
PUT /2015-03-31/functions/FunctionName/code HTTP/1.1
Content-type: application/json

{
   "Architectures": [ "string" ],
   "DryRun": boolean,
   "ImageUri": "string",
   "Publish": boolean,
   "PublishTo": "string",
   "RevisionId": "string",
   "S3Bucket": "string",
   "S3Key": "string",
   "S3ObjectStorageMode": "string",
```

```
    "S3ObjectVersion": "string",
    "SourceKMSKeyArn": "string",
    "ZipFile": blob
}
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### Architectures

The instruction set architecture that the function supports. Enter a string array with one of the valid values (arm64 or x86_64). The default value is x86_64.

Type: Array of strings

Array Members: Fixed number of 1 item.

Valid Values: `x86_64 | arm64`

Required: No

**DryRun**

Set to true to validate the request parameters and access permissions without modifying the function code.

Type: Boolean

Required: No

**ImageUri**

URI of a container image in the Amazon ECR registry. Do not use for a function defined with a .zip file archive.

Type: String

Required: No

**Publish**

Set to true to publish a new version of the function after updating the code. This has the same effect as calling PublishVersion separately.

Type: Boolean

Required: No

**PublishTo**

Specifies where to publish the function version or configuration.

Type: String

Valid Values: `LATEST_PUBLISHED`

Required: No

**RevisionId**

Update the function only if the revision ID matches the ID that's specified. Use this option to avoid modifying a function that has changed since you last read it.

Type: String

Required: No

**S3Bucket**

An Amazon S3 bucket in the same AWS Region as your function. The bucket can be in a different AWS account. Use only with a function defined with a .zip file archive deployment package.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 63.

Pattern: `[0-9A-Za-z\.\-_]*(?<!\.)`

Required: No

**S3Key**

The Amazon S3 key of the deployment package. Use only with a function defined with a .zip file archive deployment package.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

**S3ObjectStorageMode**

Specifies how the deployment package is stored. Valid values:

- `COPY` (default) – Uploads a copy of your deployment package to Lambda.
- `REFERENCE` – Lambda references the deployment package from the specified Amazon S3 bucket.

Type: String

Valid Values: `COPY | REFERENCE`

Required: No

**S3ObjectVersion**

For versioned objects, the version of the deployment package object to use.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

**SourceKMSKeyArn**

The ARN of the AWS Key Management Service (AWS KMS) customer managed key that's used to encrypt your function's .zip deployment package. If you don't provide a customer managed key, Lambda uses an AWS managed key.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

Required: No

**ZipFile**

The base64-encoded contents of the deployment package. AWS SDK and AWS CLI clients handle the encoding for you. Use only with a function defined with a .zip file archive deployment package.

Type: Base64-encoded binary data object

Required: No

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "Architectures": [ "string" ],
   "CapacityProviderConfig": {
      "LambdaManagedInstancesCapacityProviderConfig": {
         "CapacityProviderArn": "string",
         "ExecutionEnvironmentMemoryGiBPerVCpu": number,
         "PerExecutionEnvironmentMaxConcurrency": number
      }
   },
   "CodeSha256": "string",
   "CodeSize": number,
   "ConfigSha256": "string",
   "DeadLetterConfig": {
```

```
      "TargetArn": "string"
   },
   "Description": "string",
   "DurableConfig": {
      "ExecutionTimeout": number,
      "KMSKeyArn": "string",
      "RetentionPeriodInDays": number
   },
   "Environment": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "Variables": {
         "string" : "string"
      }
   },
   "EphemeralStorage": {
      "Size": number
   },
   "FileSystemConfigs": [
      {
         "Arn": "string",
         "LocalMountPath": "string",
         "S3FilesConfig": {
            "DirectS3Read": "string"
         }
      }
   ],
   "FunctionArn": "string",
   "FunctionName": "string",
   "Handler": "string",
   "ImageConfigResponse": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "ImageConfig": {
         "Command": [ "string" ],
         "EntryPoint": [ "string" ],
         "WorkingDirectory": "string"
      }
   },
   "KMSKeyArn": "string",
```

```
   "LastModified": "string",
   "LastUpdateStatus": "string",
   "LastUpdateStatusReason": "string",
   "LastUpdateStatusReasonCode": "string",
   "Layers": [
      {
         "Arn": "string",
         "CodeSize": number,
         "SigningJobArn": "string",
         "SigningProfileVersionArn": "string"
      }
   ],
   "LoggingConfig": {
      "ApplicationLogLevel": "string",
      "LogFormat": "string",
      "LogGroup": "string",
      "SystemLogLevel": "string"
   },
   "MasterArn": "string",
   "MemorySize": number,
   "PackageType": "string",
   "RevisionId": "string",
   "Role": "string",
   "Runtime": "string",
   "RuntimeVersionConfig": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "RuntimeVersionArn": "string"
   },
   "SigningJobArn": "string",
   "SigningProfileVersionArn": "string",
   "SnapStart": {
      "ApplyOn": "string",
      "OptimizationStatus": "string"
   },
   "State": "string",
   "StateReason": "string",
   "StateReasonCode": "string",
   "TenancyConfig": {
      "TenantIsolationMode": "string"
   },
   "Timeout": number,
```

```
    "TracingConfig": {
       "Mode": "string"
    },
    "Version": "string",
    "VpcConfig": {
       "Ipv6AllowedForDualStack": boolean,
       "SecurityGroupIds": [ "string" ],
       "SubnetIds": [ "string" ],
       "VpcId": "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.

**Architectures**

The instruction set architecture that the function supports. Architecture is a string array with one of the valid values. The default architecture value is `x86_64`.

Type: Array of strings

Array Members: Fixed number of 1 item.

Valid Values: `x86_64 | arm64`

**CapacityProviderConfig**

Configuration for the capacity provider that manages compute resources for Lambda functions.

Type: CapacityProviderConfig object

**CodeSha256**

The SHA256 hash of the function's deployment package.

Type: String

**CodeSize**

The size of the function's deployment package, in bytes.

Type: Long

**ConfigSha256**

The SHA256 hash of the function configuration.

Type: String

**DeadLetterConfig**

The function's dead letter queue.

Type: DeadLetterConfig object

**Description**

The function's description.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

**DurableConfig**

The function's durable execution configuration settings, if the function is configured for durability.

Type: DurableConfig object

**Environment**

The function's environment variables. Omitted from AWS CloudTrail logs.

Type: EnvironmentResponse object

**EphemeralStorage**

The size of the function's `/tmp` directory in MB. The default value is 512, but can be any whole number between 512 and 10,240 MB. For more information, see Configuring ephemeral storage (console).

Type: EphemeralStorage object

**FileSystemConfigs**

Connection settings for an Amazon EFS file system or an Amazon S3 file system.

Type: Array of FileSystemConfig objects

Array Members: Minimum number of 0 items. Maximum number of 1 item.

**FunctionArn**

The function's Amazon Resource Name (ARN).

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_\.]+(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

**FunctionName**

The name of the function.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

**Handler**

The function that Lambda calls to begin running your function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: `[^\s]+`

**ImageConfigResponse**

The function's image configuration values.

Type: ImageConfigResponse object

**KMSKeyArn**

The ARN of the AWS Key Management Service (AWS KMS) customer managed key that's used to encrypt the following resources:

- The function's environment variables.
- The function's Lambda SnapStart snapshots.
- When used with `SourceKMSKeyArn`, the unzipped version of the .zip deployment package that's used for function invocations. For more information, see Specifying a customer managed key for Lambda.
- The optimized version of the container image that's used for function invocations. Note that this is not the same key that's used to protect your container image in the Amazon Elastic Container Registry (Amazon ECR). For more information, see Function lifecycle.

If you don't provide a customer managed key, Lambda uses an AWS owned key or an AWS managed key.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

**LastModified**

The date and time that the function was last updated, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

**LastUpdateStatus**

The status of the last update that was performed on the function. This is first set to `Successful` after function creation completes.

Type: String

Valid Values: `Successful | Failed | InProgress`

**LastUpdateStatusReason**

The reason for the last update that was performed on the function.

Type: String

**LastUpdateStatusReasonCode**

The reason code for the last update that was performed on the function.

Type: String

Valid Values: `EniLimitExceeded | InsufficientRolePermissions | InvalidConfiguration | InternalError | SubnetOutOfIPAddresses | InvalidSubnet | InvalidSecurityGroup | ImageDeleted | ImageAccessDenied | InvalidImage | KMSKeyAccessDenied | KMSKeyNotFound | InvalidStateKMSKey | DisabledKMSKey | EFSIOError | EFSMountConnectivityError | EFSMountFailure | EFSMountTimeout | InvalidRuntime | InvalidZipFileException | FunctionError | VcpuLimitExceeded | CapacityProviderScalingLimitExceeded | InsufficientCapacity | EC2RequestLimitExceeded | FunctionError.InitTimeout | FunctionError.RuntimeInitError | FunctionError.ExtensionInitError | FunctionError.InvalidEntryPoint | FunctionError.InvalidWorkingDirectory | FunctionError.PermissionDenied | FunctionError.TooManyExtensions | FunctionError.InitResourceExhausted | DisallowedByVpcEncryptionControl | DependencyError`

### Layers

The function's layers.

Type: Array of Layer objects

### LoggingConfig

The function's Amazon CloudWatch Logs configuration settings.

Type: LoggingConfig object

### MasterArn

For Lambda@Edge functions, the ARN of the main function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

### MemorySize

The amount of memory available to the function at runtime.

Type: Integer

Valid Range: Minimum value of 128. Maximum value of 32768.

### PackageType

The type of deployment package. Set to `Image` for container image and set `Zip` for .zip file archive.

Type: String

Valid Values: `Zip | Image`

### RevisionId

The latest updated revision of the function or alias.

Type: String

### Role

The function's execution role.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:iam::\d{12}:role/?[a-zA-Z_0-9+=,.@\-_/]+`

### Runtime

The identifier of the function's runtime. Runtime is required if the deployment package is a .zip file archive. Specifying a runtime results in an error if you're deploying a function using a container image.

The following list includes deprecated runtimes. Lambda blocks creating new functions and updating existing functions shortly after each runtime is deprecated. For more information, see Runtime use after deprecation.

For a list of all currently supported runtimes, see Supported runtimes.

Type: String

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11 | python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6`

| dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3 | ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21 | python3.13 | nodejs22.x | nodejs24.x | python3.14 | java25 | dotnet10 | ruby4.0

**RuntimeVersionConfig**

The ARN of the runtime and any errors that occured.

Type: RuntimeVersionConfig object

**SigningJobArn**

The ARN of the signing job.

Type: String

Pattern: arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)

**SigningProfileVersionArn**

The ARN of the signing profile version.

Type: String

Pattern: arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)

**SnapStart**

Set ApplyOn to PublishedVersions to create a snapshot of the initialized execution environment when you publish a function version. For more information, see Improving startup performance with Lambda SnapStart.

Type: SnapStartResponse object

**State**

The current state of the function. When the state is Inactive, you can reactivate the function by invoking it.

Type: String

Valid Values: `Pending | Active | Inactive | Failed | Deactivating | Deactivated | ActiveNonInvocable | Deleting`

**StateReason**

The reason for the function's current state.

Type: String

**StateReasonCode**

The reason code for the function's current state. When the code is `Creating`, you can't invoke or modify the function.

Type: String

Valid Values: `Idle | Creating | Restoring | EniLimitExceeded | InsufficientRolePermissions | InvalidConfiguration | InternalError | SubnetOutOfIPAddresses | InvalidSubnet | InvalidSecurityGroup | ImageDeleted | ImageAccessDenied | InvalidImage | KMSKeyAccessDenied | KMSKeyNotFound | InvalidStateKMSKey | DisabledKMSKey | EFSIOError | EFSMountConnectivityError | EFSMountFailure | EFSMountTimeout | InvalidRuntime | InvalidZipFileException | FunctionError | DrainingDurableExecutions | VcpuLimitExceeded | CapacityProviderScalingLimitExceeded | InsufficientCapacity | EC2RequestLimitExceeded | FunctionError.InitTimeout | FunctionError.RuntimeInitError | FunctionError.ExtensionInitError | FunctionError.InvalidEntryPoint | FunctionError.InvalidWorkingDirectory | FunctionError.PermissionDenied | FunctionError.TooManyExtensions | FunctionError.InitResourceExhausted | DisallowedByVpcEncryptionControl | DependencyError`

**TenancyConfig**

The function's tenant isolation configuration settings. Determines whether the Lambda function runs on a shared or dedicated infrastructure per unique tenant.

Type: TenancyConfig object

**Timeout**

The amount of time in seconds that Lambda allows a function to run before stopping it.

Type: Integer

Valid Range: Minimum value of 1.

**TracingConfig**

The function's AWS X-Ray tracing configuration.

Type: TracingConfigResponse object

**Version**

The version of the Lambda function.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST|[0-9]+)`

**VpcConfig**

The function's networking configuration.

Type: VpcConfigResponse object

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**CodeSigningConfigNotFoundException**

The specified code signing configuration does not exist.

HTTP Status Code: 404

**CodeStorageExceededException**

Your AWS account has exceeded its maximum total code size. For more information, see Lambda quotas.

**Type**

The exception type.

HTTP Status Code: 400

**CodeVerificationFailedException**

The code signature failed one or more of the validation checks for signature mismatch or expiry, and the code signing policy is set to ENFORCE. Lambda blocks the deployment.

HTTP Status Code: 400

**InvalidCodeSignatureException**

The code signature failed the integrity check. If the integrity check fails, then Lambda blocks deployment, even if the code signing policy is set to WARN.

HTTP Status Code: 400

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**PreconditionFailedException**

The RevisionId provided does not match the latest RevisionId for the Lambda function or alias.

- **For AddPermission and RemovePermission API operations:** Call `GetPolicy` to retrieve the latest RevisionId for your resource.
- **For all other API operations:** Call `GetFunction` or `GetAlias` to retrieve the latest RevisionId for your resource.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 412

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2

- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# UpdateFunctionConfiguration

Modifies the version-specific settings of a Lambda Event Function.

When you update a function, Lambda provisions an instance of the function and its supporting resources. If your function connects to a VPC, this process can take a minute. During this time, you can't modify the function, but you can still invoke it. The `LastUpdateStatus`, `LastUpdateStatusReason`, and `LastUpdateStatusReasonCode` fields in the response from GetFunctionConfiguration indicate when the update is complete and the function is processing events with the new configuration. For more information, see Lambda function states.

These settings can vary between versions of a function and are locked when you publish a version. You can't modify the configuration of a published version, only the unpublished version.

To configure function concurrency, use PutFunctionConcurrency. To grant invoke permissions to an AWS account or AWS service, use AddPermission.

## Request Syntax

```
PUT /2015-03-31/functions/FunctionName/configuration HTTP/1.1
Content-type: application/json

{
   "CapacityProviderConfig": {
      "LambdaManagedInstancesCapacityProviderConfig": {
         "CapacityProviderArn": "string",
         "ExecutionEnvironmentMemoryGiBPerVCpu": number,
         "PerExecutionEnvironmentMaxConcurrency": number
      }
   },
   "DeadLetterConfig": {
      "TargetArn": "string"
   },
   "Description": "string",
   "DurableConfig": {
      "ExecutionTimeout": number,
      "KMSKeyArn": "string",
      "RetentionPeriodInDays": number
   },
   "Environment": {
      "Variables": {
         "string" : "string"
```

```
      }
   },
   "EphemeralStorage": {
      "Size": number
   },
   "FileSystemConfigs": [
      {
         "Arn": "string",
         "LocalMountPath": "string",
         "S3FilesConfig": {
            "DirectS3Read": "string"
         }
      }
   ],
   "Handler": "string",
   "ImageConfig": {
      "Command": [ "string" ],
      "EntryPoint": [ "string" ],
      "WorkingDirectory": "string"
   },
   "KMSKeyArn": "string",
   "Layers": [ "string" ],
   "LoggingConfig": {
      "ApplicationLogLevel": "string",
      "LogFormat": "string",
      "LogGroup": "string",
      "SystemLogLevel": "string"
   },
   "MemorySize": number,
   "RevisionId": "string",
   "Role": "string",
   "Runtime": "string",
   "SnapStart": {
      "ApplyOn": "string"
   },
   "Timeout": number,
   "TracingConfig": {
      "Mode": "string"
   },
   "VpcConfig": {
      "Ipv6AllowedForDualStack": boolean,
      "SecurityGroupIds": [ "string" ],
      "SubnetIds": [ "string" ]
   }
```

```
}
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]+)(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### CapacityProviderConfig

Configuration for the capacity provider that manages compute resources for Lambda functions.

Type: CapacityProviderConfig object

Required: No

### DeadLetterConfig

A dead-letter queue configuration that specifies the queue or topic where Lambda sends asynchronous events when they fail processing. For more information, see Dead-letter queues.

Type: DeadLetterConfig object

Required: No

### Description

A description of the function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Required: No

### DurableConfig

Configuration settings for durable functions, including execution timeout, retention period for execution history, and an optional ARN of the AWS Key Management Service (AWS KMS) customer managed key that is used to encrypt your durable execution's payload data, including input, output, and error payloads.

Type: DurableConfig object

Required: No

### Environment

Environment variables that are accessible from function code during execution.

Type: Environment object

Required: No

### EphemeralStorage

The size of the function's `/tmp` directory in MB. The default value is 512, but can be any whole number between 512 and 10,240 MB. For more information, see Configuring ephemeral storage (console).

Type: EphemeralStorage object

Required: No

**FileSystemConfigs**

Connection settings for an Amazon EFS file system or an Amazon S3 Files file system.

Type: Array of FileSystemConfig objects

Array Members: Minimum number of 0 items. Maximum number of 1 item.

Required: No

**Handler**

The name of the method within your code that Lambda calls to run your function. Handler is required if the deployment package is a .zip file archive. The format includes the file name. It can also include namespaces and other qualifiers, depending on the runtime. For more information, see Lambda programming model.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: `[^\s]+`

Required: No

**ImageConfig**

Container image configuration values that override the values in the container image Docker file.

Type: ImageConfig object

Required: No

**KMSKeyArn**

The ARN of the AWS Key Management Service (AWS KMS) customer managed key that's used to encrypt the following resources:

- The function's environment variables.
- The function's Lambda SnapStart snapshots.
- When used with `SourceKMSKeyArn`, the unzipped version of the .zip deployment package that's used for function invocations. For more information, see Specifying a customer managed key for Lambda.

- The optimized version of the container image that's used for function invocations. Note that this is not the same key that's used to protect your container image in the Amazon Elastic Container Registry (Amazon ECR). For more information, see Function lifecycle.

If you don't provide a customer managed key, Lambda uses an AWS owned key or an AWS managed key.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

Required: No

**Layers**

A list of function layers to add to the function's execution environment. Specify each layer by its ARN, including the version.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+:[0-9]+`

Required: No

**LoggingConfig**

The function's Amazon CloudWatch Logs configuration settings.

Type: LoggingConfig object

Required: No

**MemorySize**

The amount of memory available to the function at runtime. Increasing the function memory also increases its CPU allocation. The default value is 128 MB. The value can be any multiple of 1 MB.

Type: Integer

Valid Range: Minimum value of 128. Maximum value of 32768.

Required: No

### RevisionId

Update the function only if the revision ID matches the ID that's specified. Use this option to avoid modifying a function that has changed since you last read it.

Type: String

Required: No

### Role

The Amazon Resource Name (ARN) of the function's execution role.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:iam::\d{12}:role/?[a-zA-Z_0-9+=,.@\-_/]+`

Required: No

### Runtime

The identifier of the function's runtime. Runtime is required if the deployment package is a .zip file archive. Specifying a runtime results in an error if you're deploying a function using a container image.

The following list includes deprecated runtimes. Lambda blocks creating new functions and updating existing functions shortly after each runtime is deprecated. For more information, see Runtime use after deprecation.

For a list of all currently supported runtimes, see Supported runtimes.

Type: String

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11 | python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6 | dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3 | ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 |`

`java21 | python3.13 | nodejs22.x | nodejs24.x | python3.14 | java25 | dotnet10 | ruby4.0`

Required: No

**SnapStart**

The function's SnapStart setting.

Type: SnapStart object

Required: No

**Timeout**

The amount of time (in seconds) that Lambda allows a function to run before stopping it. The default is 3 seconds, and the maximum allowed value is 900 seconds. For functions using Lambda Managed Instances, asynchronous invocations and event source mapping invocations (except Amazon MQ and Amazon DocumentDB) support a maximum allowed value of 5,400 seconds (90 minutes). For more information, see Lambda execution environment.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

**TracingConfig**

Set `Mode` to `Active` to sample and trace a subset of incoming requests with X-Ray.

Type: TracingConfig object

Required: No

**VpcConfig**

For network connectivity to AWS resources in a VPC, specify a list of security groups and subnets in the VPC. When you connect a function to a VPC, it can access resources and the internet only through that VPC. For more information, see Configuring a Lambda function to access resources in a VPC.

Type: VpcConfig object

Required: No

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "Architectures": [ "string" ],
   "CapacityProviderConfig": {
      "LambdaManagedInstancesCapacityProviderConfig": {
         "CapacityProviderArn": "string",
         "ExecutionEnvironmentMemoryGiBPerVCpu": number,
         "PerExecutionEnvironmentMaxConcurrency": number
      }
   },
   "CodeSha256": "string",
   "CodeSize": number,
   "ConfigSha256": "string",
   "DeadLetterConfig": {
      "TargetArn": "string"
   },
   "Description": "string",
   "DurableConfig": {
      "ExecutionTimeout": number,
      "KMSKeyArn": "string",
      "RetentionPeriodInDays": number
   },
   "Environment": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "Variables": {
         "string" : "string"
      }
   },
   "EphemeralStorage": {
      "Size": number
   },
   "FileSystemConfigs": [
      {
         "Arn": "string",
         "LocalMountPath": "string",
         "S3FilesConfig": {
```

```
            "DirectS3Read": "string"
         }
      }
   ],
   "FunctionArn": "string",
   "FunctionName": "string",
   "Handler": "string",
   "ImageConfigResponse": {
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "ImageConfig": {
         "Command": [ "string" ],
         "EntryPoint": [ "string" ],
         "WorkingDirectory": "string"
      }
   },
   "KMSKeyArn": "string",
   "LastModified": "string",
   "LastUpdateStatus": "string",
   "LastUpdateStatusReason": "string",
   "LastUpdateStatusReasonCode": "string",
   "Layers": [
      {
         "Arn": "string",
         "CodeSize": number,
         "SigningJobArn": "string",
         "SigningProfileVersionArn": "string"
      }
   ],
   "LoggingConfig": {
      "ApplicationLogLevel": "string",
      "LogFormat": "string",
      "LogGroup": "string",
      "SystemLogLevel": "string"
   },
   "MasterArn": "string",
   "MemorySize": number,
   "PackageType": "string",
   "RevisionId": "string",
   "Role": "string",
   "Runtime": "string",
   "RuntimeVersionConfig": {
```

```
      "Error": {
         "ErrorCode": "string",
         "Message": "string"
      },
      "RuntimeVersionArn": "string"
   },
   "SigningJobArn": "string",
   "SigningProfileVersionArn": "string",
   "SnapStart": {
      "ApplyOn": "string",
      "OptimizationStatus": "string"
   },
   "State": "string",
   "StateReason": "string",
   "StateReasonCode": "string",
   "TenancyConfig": {
      "TenantIsolationMode": "string"
   },
   "Timeout": number,
   "TracingConfig": {
      "Mode": "string"
   },
   "Version": "string",
   "VpcConfig": {
      "Ipv6AllowedForDualStack": boolean,
      "SecurityGroupIds": [ "string" ],
      "SubnetIds": [ "string" ],
      "VpcId": "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.

### Architectures

The instruction set architecture that the function supports. Architecture is a string array with one of the valid values. The default architecture value is x86_64.

Type: Array of strings

Array Members: Fixed number of 1 item.

Valid Values: `x86_64 | arm64`

**CapacityProviderConfig**

Configuration for the capacity provider that manages compute resources for Lambda functions.

Type: CapacityProviderConfig object

**CodeSha256**

The SHA256 hash of the function's deployment package.

Type: String

**CodeSize**

The size of the function's deployment package, in bytes.

Type: Long

**ConfigSha256**

The SHA256 hash of the function configuration.

Type: String

**DeadLetterConfig**

The function's dead letter queue.

Type: DeadLetterConfig object

**Description**

The function's description.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

**DurableConfig**

The function's durable execution configuration settings, if the function is configured for durability.

Type: DurableConfig object

**Environment**

The function's environment variables. Omitted from AWS CloudTrail logs.

Type: EnvironmentResponse object

**EphemeralStorage**

The size of the function's `/tmp` directory in MB. The default value is 512, but can be any whole number between 512 and 10,240 MB. For more information, see Configuring ephemeral storage (console).

Type: EphemeralStorage object

**FileSystemConfigs**

Connection settings for an Amazon EFS file system or an Amazon S3 file system.

Type: Array of FileSystemConfig objects

Array Members: Minimum number of 0 items. Maximum number of 1 item.

**FunctionArn**

The function's Amazon Resource Name (ARN).

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_\.]+(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

**FunctionName**

The name of the function.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

### Handler

The function that Lambda calls to begin running your function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: `[^\s]+`

### ImageConfigResponse

The function's image configuration values.

Type: ImageConfigResponse object

### KMSKeyArn

The ARN of the AWS Key Management Service (AWS KMS) customer managed key that's used to encrypt the following resources:

- The function's environment variables.
- The function's Lambda SnapStart snapshots.
- When used with `SourceKMSKeyArn`, the unzipped version of the .zip deployment package that's used for function invocations. For more information, see Specifying a customer managed key for Lambda.
- The optimized version of the container image that's used for function invocations. Note that this is not the same key that's used to protect your container image in the Amazon Elastic Container Registry (Amazon ECR). For more information, see Function lifecycle.

If you don't provide a customer managed key, Lambda uses an AWS owned key or an AWS managed key.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

### LastModified

The date and time that the function was last updated, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

### LastUpdateStatus

The status of the last update that was performed on the function. This is first set to `Successful` after function creation completes.

Type: String

Valid Values: `Successful | Failed | InProgress`

### LastUpdateStatusReason

The reason for the last update that was performed on the function.

Type: String

### LastUpdateStatusReasonCode

The reason code for the last update that was performed on the function.

Type: String

Valid Values: `EniLimitExceeded | InsufficientRolePermissions | InvalidConfiguration | InternalError | SubnetOutOfIPAddresses | InvalidSubnet | InvalidSecurityGroup | ImageDeleted | ImageAccessDenied | InvalidImage | KMSKeyAccessDenied | KMSKeyNotFound | InvalidStateKMSKey | DisabledKMSKey | EFSIOError | EFSMountConnectivityError | EFSMountFailure | EFSMountTimeout | InvalidRuntime | InvalidZipFileException | FunctionError | VcpuLimitExceeded | CapacityProviderScalingLimitExceeded | InsufficientCapacity | EC2RequestLimitExceeded | FunctionError.InitTimeout | FunctionError.RuntimeInitError | FunctionError.ExtensionInitError | FunctionError.InvalidEntryPoint | FunctionError.InvalidWorkingDirectory | FunctionError.PermissionDenied | FunctionError.TooManyExtensions | FunctionError.InitResourceExhausted | DisallowedByVpcEncryptionControl | DependencyError`

### Layers

The function's layers.

Type: Array of Layer objects

### LoggingConfig

The function's Amazon CloudWatch Logs configuration settings.

Type: LoggingConfig object

### MasterArn

For Lambda@Edge functions, the ARN of the main function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

### MemorySize

The amount of memory available to the function at runtime.

Type: Integer

Valid Range: Minimum value of 128. Maximum value of 32768.

### PackageType

The type of deployment package. Set to `Image` for container image and set `Zip` for .zip file archive.

Type: String

Valid Values: `Zip | Image`

### RevisionId

The latest updated revision of the function or alias.

Type: String

### Role

The function's execution role.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:iam::\d{12}:role/?[a-zA-Z_0-9+=,.@\-_/]+`

### Runtime

The identifier of the function's runtime. Runtime is required if the deployment package is a .zip file archive. Specifying a runtime results in an error if you're deploying a function using a container image.

The following list includes deprecated runtimes. Lambda blocks creating new functions and updating existing functions shortly after each runtime is deprecated. For more information, see Runtime use after deprecation.

For a list of all currently supported runtimes, see Supported runtimes.

Type: String

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11 | python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6 | dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3 | ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21 | python3.13 | nodejs22.x | nodejs24.x | python3.14 | java25 | dotnet10 | ruby4.0`

### RuntimeVersionConfig

The ARN of the runtime and any errors that occured.

Type: RuntimeVersionConfig object

### SigningJobArn

The ARN of the signing job.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

### SigningProfileVersionArn

The ARN of the signing profile version.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

**SnapStart**

Set `ApplyOn` to `PublishedVersions` to create a snapshot of the initialized execution environment when you publish a function version. For more information, see Improving startup performance with Lambda SnapStart.

Type: SnapStartResponse object

**State**

The current state of the function. When the state is `Inactive`, you can reactivate the function by invoking it.

Type: String

Valid Values: `Pending | Active | Inactive | Failed | Deactivating | Deactivated | ActiveNonInvocable | Deleting`

**StateReason**

The reason for the function's current state.

Type: String

**StateReasonCode**

The reason code for the function's current state. When the code is `Creating`, you can't invoke or modify the function.

Type: String

Valid Values: `Idle | Creating | Restoring | EniLimitExceeded | InsufficientRolePermissions | InvalidConfiguration | InternalError | SubnetOutOfIPAddresses | InvalidSubnet | InvalidSecurityGroup | ImageDeleted | ImageAccessDenied | InvalidImage | KMSKeyAccessDenied | KMSKeyNotFound | InvalidStateKMSKey | DisabledKMSKey | EFSIOError | EFSMountConnectivityError | EFSMountFailure | EFSMountTimeout | InvalidRuntime | InvalidZipFileException | FunctionError | DrainingDurableExecutions | VcpuLimitExceeded | CapacityProviderScalingLimitExceeded | InsufficientCapacity | EC2RequestLimitExceeded | FunctionError.InitTimeout |`

`FunctionError.RuntimeInitError | FunctionError.ExtensionInitError | FunctionError.InvalidEntryPoint | FunctionError.InvalidWorkingDirectory | FunctionError.PermissionDenied | FunctionError.TooManyExtensions | FunctionError.InitResourceExhausted | DisallowedByVpcEncryptionControl | DependencyError`

**TenancyConfig**

The function's tenant isolation configuration settings. Determines whether the Lambda function runs on a shared or dedicated infrastructure per unique tenant.

Type: TenancyConfig object

**Timeout**

The amount of time in seconds that Lambda allows a function to run before stopping it.

Type: Integer

Valid Range: Minimum value of 1.

**TracingConfig**

The function's AWS X-Ray tracing configuration.

Type: TracingConfigResponse object

**Version**

The version of the Lambda function.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST|[0-9]+)`

**VpcConfig**

The function's networking configuration.

Type: VpcConfigResponse object

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**CodeSigningConfigNotFoundException**

The specified code signing configuration does not exist.

HTTP Status Code: 404

**CodeVerificationFailedException**

The code signature failed one or more of the validation checks for signature mismatch or expiry, and the code signing policy is set to ENFORCE. Lambda blocks the deployment.

HTTP Status Code: 400

**InvalidCodeSignatureException**

The code signature failed the integrity check. If the integrity check fails, then Lambda blocks deployment, even if the code signing policy is set to WARN.

HTTP Status Code: 400

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**PreconditionFailedException**

The RevisionId provided does not match the latest RevisionId for the Lambda function or alias.

- **For AddPermission and RemovePermission API operations:** Call `GetPolicy` to retrieve the latest RevisionId for your resource.
- **For all other API operations:** Call `GetFunction` or `GetAlias` to retrieve the latest RevisionId for your resource.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 412

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# UpdateFunctionEventInvokeConfig

Updates the configuration for asynchronous invocation for a function, version, or alias.

To configure options for asynchronous invocation, use PutFunctionEventInvokeConfig.

## Request Syntax

```
POST /2019-09-25/functions/FunctionName/event-invoke-config?Qualifier=Qualifier
 HTTP/1.1
Content-type: application/json

{
   "DestinationConfig": {
      "OnFailure": {
         "Destination": "string"
      },
      "OnSuccess": {
         "Destination": "string"
      }
   },
   "MaximumEventAgeInSeconds": number,
   "MaximumRetryAttempts": number
}
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function, version, or alias.

**Name formats**

- **Function name** - `my-function` (name-only), `my-function:v1` (with alias).
- **Function ARN** - `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** - `123456789012:function:my-function`.

You can append a version number or alias to any of the formats. The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

Required: Yes

**Qualifier**

A version number or alias name.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `\$(LATEST(\.PUBLISHED)?)|[a-zA-Z0-9-_$]+`

## Request Body

The request accepts the following data in JSON format.

**DestinationConfig**

A destination for events after they have been sent to a function for processing.

**Destinations**

- **Function** - The Amazon Resource Name (ARN) of a Lambda function.
- **Queue** - The ARN of a standard SQS queue.
- **Bucket** - The ARN of an Amazon S3 bucket.
- **Topic** - The ARN of a standard SNS topic.
- **Event Bus** - The ARN of an Amazon EventBridge event bus.

> **Note**
>
> S3 buckets are supported only for on-failure destinations. To retain records of successful invocations, use another destination type.

Type: DestinationConfig object

Required: No

**MaximumEventAgeInSeconds**

The maximum age of a request that Lambda sends to a function for processing.

Type: Integer

Valid Range: Minimum value of 60. Maximum value of 21600.

Required: No

**MaximumRetryAttempts**

The maximum number of times to retry when the function returns an error.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 2.

Required: No

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "DestinationConfig": {
      "OnFailure": {
         "Destination": "string"
      },
      "OnSuccess": {
         "Destination": "string"
      }
   },
   "FunctionArn": "string",
   "LastModified": number,
   "MaximumEventAgeInSeconds": number,
   "MaximumRetryAttempts": number
}
```

## 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.

### DestinationConfig

A destination for events after they have been sent to a function for processing.

**Destinations**

- **Function** - The Amazon Resource Name (ARN) of a Lambda function.
- **Queue** - The ARN of a standard SQS queue.
- **Bucket** - The ARN of an Amazon S3 bucket.
- **Topic** - The ARN of a standard SNS topic.
- **Event Bus** - The ARN of an Amazon EventBridge event bus.

> **Note**
>
> S3 buckets are supported only for on-failure destinations. To retain records of successful invocations, use another destination type.

Type: DestinationConfig object

### FunctionArn

The Amazon Resource Name (ARN) of the function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

### LastModified

The date and time that the configuration was last updated, in Unix time seconds.

Type: Timestamp

### MaximumEventAgeInSeconds

The maximum age of a request that Lambda sends to a function for processing.

Type: Integer

Valid Range: Minimum value of 60. Maximum value of 21600.

**MaximumRetryAttempts**

The maximum number of times to retry when the function returns an error.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 2.

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# UpdateFunctionUrlConfig

Updates the configuration for a function URL of a Lambda Event Function.

## Request Syntax

```
PUT /2021-10-31/functions/FunctionName/url?Qualifier=Qualifier HTTP/1.1
Content-type: application/json

{
   "AuthType": "string",
   "Cors": {
      "AllowCredentials": boolean,
      "AllowHeaders": [ "string" ],
      "AllowMethods": [ "string" ],
      "AllowOrigins": [ "string" ],
      "ExposeHeaders": [ "string" ],
      "MaxAge": number
   },
   "InvokeMode": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### FunctionName

The name or ARN of the Lambda function.

**Name formats**

- **Function name** – `my-function`.
- **Function ARN** – `arn:aws:lambda:us-west-2:123456789012:function:my-function`.
- **Partial ARN** – `123456789012:function:my-function`.

The length constraint applies only to the full ARN. If you specify only the function name, it is limited to 64 characters in length.

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?((eusc-)?[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_]{1,64})(:((?!\d+$)[0-9a-zA-Z-_]+))?`

Required: Yes

**Qualifier**

The alias name.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `((?!^\d+$)^[0-9a-zA-Z-_]+$)`

## Request Body

The request accepts the following data in JSON format.

**AuthType**

The type of authentication that your function URL uses. Set to `AWS_IAM` if you want to restrict access to authenticated users only. Set to `NONE` if you want to bypass IAM authentication to create a public endpoint. For more information, see Control access to Lambda function URLs.

Type: String

Valid Values: `NONE | AWS_IAM`

Required: No

**Cors**

The cross-origin resource sharing (CORS) settings for your function URL.

Type: Cors object

Required: No

**InvokeMode**

Use one of the following options:

- `BUFFERED` – This is the default option. Lambda invokes your function using the `Invoke` API operation. Invocation results are available when the payload is complete. The maximum payload size is 6 MB.

- `RESPONSE_STREAM` – Your function streams payload results as they become available. Lambda invokes your function using the `InvokeWithResponseStream` API operation. The maximum response payload size is 200 MB.

Type: String

Valid Values: `BUFFERED | RESPONSE_STREAM`

Required: No

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
   "AuthType": "string",
   "Cors": {
      "AllowCredentials": boolean,
      "AllowHeaders": [ "string" ],
      "AllowMethods": [ "string" ],
      "AllowOrigins": [ "string" ],
      "ExposeHeaders": [ "string" ],
      "MaxAge": number
   },
   "CreationTime": "string",
   "FunctionArn": "string",
   "FunctionUrl": "string",
   "InvokeMode": "string",
   "LastModifiedTime": "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.

### AuthType

The type of authentication that your function URL uses. Set to `AWS_IAM` if you want to restrict access to authenticated users only. Set to `NONE` if you want to bypass IAM authentication to create a public endpoint. For more information, see Control access to Lambda function URLs.

Type: String

Valid Values: `NONE` | `AWS_IAM`

### Cors

The cross-origin resource sharing (CORS) settings for your function URL.

Type: Cors object

### CreationTime

When the function URL was created, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

### FunctionArn

The Amazon Resource Name (ARN) of your function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

### FunctionUrl

The HTTP URL endpoint for your function.

Type: String

Length Constraints: Minimum length of 40. Maximum length of 100.

### InvokeMode

Use one of the following options:

- `BUFFERED` – This is the default option. Lambda invokes your function using the `Invoke` API operation. Invocation results are available when the payload is complete. The maximum payload size is 6 MB.

- `RESPONSE_STREAM` – Your function streams payload results as they become available. Lambda invokes your function using the `InvokeWithResponseStream` API operation. The maximum response payload size is 200 MB.

Type: String

Valid Values: `BUFFERED` | `RESPONSE_STREAM`

**LastModifiedTime**

When the function URL configuration was last updated, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

## Errors

For information about the errors that are common to all actions, see Common Error Types.

**InvalidParameterValueException**

One of the parameters in the request is not valid.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 400

**ResourceConflictException**

The resource already exists, or another operation is in progress.

**message**

The exception message.

**Type**

The exception type.

HTTP Status Code: 409

**ResourceNotFoundException**

The resource specified in the request does not exist.

HTTP Status Code: 404

**ServiceException**

The AWS Lambda service encountered an internal error.

HTTP Status Code: 500

**TooManyRequestsException**

The request throughput limit was exceeded. For more information, see Lambda quotas.

**retryAfterSeconds**

The number of seconds the caller should wait before retrying.

HTTP Status Code: 429

## See Also

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

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

# Data Types

The AWS Lambda API contains several data types that various actions use. This section describes each data type in detail.

> **Note**
>
> The order of each element in a data type structure is not guaranteed. Applications should not assume a particular order.

The following data types are supported:

- AccountLimit
- AccountUsage
- AliasConfiguration
- AliasRoutingConfiguration
- AllowedPublishers
- AmazonManagedKafkaEventSourceConfig
- CallbackDetails
- CallbackFailedDetails
- CallbackOptions
- CallbackStartedDetails
- CallbackSucceededDetails
- CallbackTimedOutDetails
- CapacityProvider
- CapacityProviderConfig
- CapacityProviderLoggingConfig
- CapacityProviderPermissionsConfig
- CapacityProviderScalingConfig
- CapacityProviderTelemetryConfig
- CapacityProviderVpcConfig
- ChainedInvokeDetails

- ChainedInvokeFailedDetails
- ChainedInvokeOptions
- ChainedInvokeStartedDetails
- ChainedInvokeStoppedDetails
- ChainedInvokeSucceededDetails
- ChainedInvokeTimedOutDetails
- CheckpointUpdatedExecutionState
- CodeSigningConfig
- CodeSigningPolicies
- Concurrency
- ContextDetails
- ContextFailedDetails
- ContextOptions
- ContextStartedDetails
- ContextSucceededDetails
- Cors
- DeadLetterConfig
- DestinationConfig
- DocumentDBEventSourceConfig
- DurableConfig
- Environment
- EnvironmentError
- EnvironmentResponse
- EphemeralStorage
- ErrorObject
- Event
- EventError
- EventInput
- EventPauseReason
- EventResult

- EventResumeReason
- EventSourceMappingConfiguration
- EventSourceMappingLoggingConfig
- EventSourceMappingMetricsConfig
- Execution
- ExecutionDetails
- ExecutionFailedDetails
- ExecutionPausedDetails
- ExecutionResumedDetails
- ExecutionStartedDetails
- ExecutionStoppedDetails
- ExecutionSucceededDetails
- ExecutionTimedOutDetails
- FileSystemConfig
- Filter
- FilterCriteria
- FilterCriteriaError
- FunctionCode
- FunctionCodeLocation
- FunctionCodeLocationError
- FunctionConfiguration
- FunctionEventInvokeConfig
- FunctionScalingConfig
- FunctionUrlConfig
- FunctionVersionsByCapacityProviderListItem
- ImageConfig
- ImageConfigError
- ImageConfigResponse
- InstanceRequirements
- InvocationCompletedDetails

- InvokeResponseStreamUpdate
- InvokeWithResponseStreamCompleteEvent
- InvokeWithResponseStreamResponseEvent
- KafkaSchemaRegistryAccessConfig
- KafkaSchemaRegistryConfig
- KafkaSchemaValidationConfig
- LambdaManagedInstancesCapacityProviderConfig
- Layer
- LayersListItem
- LayerVersionContentInput
- LayerVersionContentOutput
- LayerVersionsListItem
- LoggingConfig
- OnFailure
- OnSuccess
- Operation
- OperationUpdate
- PauseDetails
- PropagateTags
- ProvisionedConcurrencyConfigListItem
- ProvisionedPollerConfig
- ResolvedS3Object
- RetryDetails
- RuntimeVersionConfig
- RuntimeVersionError
- S3FilesConfig
- ScalingConfig
- SelfManagedEventSource
- SelfManagedKafkaEventSourceConfig
- SnapStart

- SnapStartResponse
- SourceAccessConfiguration
- StepDetails
- StepFailedDetails
- StepOptions
- StepStartedDetails
- StepSucceededDetails
- TagsError
- TargetTrackingScalingPolicy
- TenancyConfig
- TraceHeader
- TracingConfig
- TracingConfigResponse
- VpcConfig
- VpcConfigResponse
- WaitCancelledDetails
- WaitDetails
- WaitOptions
- WaitStartedDetails
- WaitSucceededDetails

# AccountLimit

Limits that are related to concurrency and storage. All file and storage sizes are in bytes.

## Contents

**CodeSizeUnzipped**

The maximum size of a function's deployment package and layers when they're extracted.

Type: Long

Required: No

**CodeSizeZipped**

The maximum size of a deployment package when it's uploaded directly to Lambda. Use Amazon S3 for larger files.

Type: Long

Required: No

**ConcurrentExecutions**

The maximum number of simultaneous function executions.

Type: Integer

Required: No

**TotalCodeSize**

The amount of storage space that you can use for all deployment packages and layer archives.

Type: Long

Required: No

**UnreservedConcurrentExecutions**

The maximum number of simultaneous function executions, minus the capacity that's reserved for individual functions with PutFunctionConcurrency.

Type: Integer

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

# AccountUsage

The number of functions and amount of storage in use.

## Contents

**FunctionCount**

The number of Lambda functions.

Type: Long

Required: No

**TotalCodeSize**

The amount of storage space, in bytes, that's being used by deployment packages and layer archives.

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

# AliasConfiguration

Provides configuration information about a Lambda function alias.

## Contents

**AliasArn**

The Amazon Resource Name (ARN) of the alias.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: No

**Description**

A description of the alias.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Required: No

**FunctionVersion**

The function version that the alias invokes.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST|[0-9]+)`

Required: No

**Name**

The name of the alias.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `(?!^[0-9]+$)([a-zA-Z0-9-_]+)`

Required: No

**RevisionId**

A unique identifier that changes when you update the alias.

Type: String

Required: No

**RoutingConfig**

The routing configuration of the alias.

Type: AliasRoutingConfiguration 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

# AliasRoutingConfiguration

The traffic-shifting configuration of a Lambda function alias.

## Contents

**AdditionalVersionWeights**

The second version, and the percentage of traffic that's routed to it.

Type: String to double map

Key Length Constraints: Minimum length of 1. Maximum length of 1024.

Key Pattern: `[0-9]+`

Valid Range: Minimum value of 0.0. Maximum value of 1.0.

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

# AllowedPublishers

List of signing profiles that can sign a code package.

## Contents

**SigningProfileVersionArns**

The Amazon Resource Name (ARN) for each of the signing profiles. A signing profile defines a trusted user who can sign a code package.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 20 items.

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

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

# AmazonManagedKafkaEventSourceConfig

Specific configuration settings for an Amazon Managed Streaming for Apache Kafka (Amazon MSK) event source.

## Contents

**ConsumerGroupId**

The identifier for the Kafka consumer group to join. The consumer group ID must be unique among all your Kafka event sources. After creating a Kafka event source mapping with the consumer group ID specified, you cannot update this value. For more information, see Customizable consumer group ID.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 200.

Pattern: `[a-zA-Z0-9-\/*:_+=.@-]*`

Required: No

**SchemaRegistryConfig**

Specific configuration settings for a Kafka schema registry.

Type: KafkaSchemaRegistryConfig 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

# CallbackDetails

Contains details about a callback operation in a durable execution, including the callback token and timeout configuration.

## Contents

**CallbackId**

The callback ID. Callback IDs are generated by the `DurableContext` when a durable function calls `ctx.waitForCallback`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `[A-Za-z0-9+/]+={0,2}`

Required: No

**Error**

An error object that contains details about the failure.

Type: ErrorObject object

Required: No

**Result**

The response payload from the callback operation as a string.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 6291456.

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

# CallbackFailedDetails

Contains details about a failed callback operation, including error information and the reason for failure.

## Contents

**Error**

An error object that contains details about the failure.

Type: EventError object

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

# CallbackOptions

Configuration options for callback operations in durable executions, including timeout settings and retry behavior.

## Contents

**HeartbeatTimeoutSeconds**

The heartbeat timeout for the callback operation, in seconds. If not specified or set to 0, heartbeat timeout is disabled.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 99999999.

Required: No

**TimeoutSeconds**

The timeout for the callback operation in seconds. If not specified or set to 0, the callback has no timeout.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 99999999.

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

# CallbackStartedDetails

Contains details about a callback operation that has started, including timing information and callback metadata.

## Contents

**CallbackId**

The callback ID. Callback IDs are generated by the `DurableContext` when a durable function calls `ctx.waitForCallback`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `[A-Za-z0-9+/]+={0,2}`

Required: Yes

**HeartbeatTimeout**

The heartbeat timeout value, in seconds.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

**Timeout**

The timeout value, in seconds.

Type: Integer

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

# CallbackSucceededDetails

Contains details about a successfully completed callback operation, including the result data and completion timestamp.

## Contents

**Result**

The response payload from the successful operation.

Type: EventResult object

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

# CallbackTimedOutDetails

Contains details about a callback operation that timed out, including timeout duration and any partial results.

## Contents

**Error**

Details about the callback timeout.

Type: EventError object

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

# CapacityProvider

A capacity provider manages compute resources for Lambda functions.

## Contents

**CapacityProviderArn**

The Amazon Resource Name (ARN) of the capacity provider.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `arn:aws[a-zA-Z-]*:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:capacity-provider:[a-zA-Z0-9-_]+`

Required: Yes

**PermissionsConfig**

The permissions configuration for the capacity provider.

Type: CapacityProviderPermissionsConfig object

Required: Yes

**State**

The current state of the capacity provider.

Type: String

Valid Values: `Pending | Active | Failed | Deleting`

Required: Yes

**VpcConfig**

The VPC configuration for the capacity provider.

Type: CapacityProviderVpcConfig object

Required: Yes

**CapacityProviderScalingConfig**

The scaling configuration for the capacity provider.

Type: CapacityProviderScalingConfig object

Required: No

**InstanceRequirements**

The instance requirements for compute resources managed by the capacity provider.

Type: InstanceRequirements object

Required: No

**KmsKeyArn**

The ARN of the KMS key used to encrypt the capacity provider's resources.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

Required: No

**LastModified**

The date and time when the capacity provider was last modified.

Type: String

Required: No

**PropagateTags**

Configuration for tag propagation to managed resources launched by the capacity provider.

Type: PropagateTags object

Required: No

**TelemetryConfig**

The telemetry configuration for the capacity provider, including logging settings.

Type: CapacityProviderTelemetryConfig 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

# CapacityProviderConfig

Configuration for the capacity provider that manages compute resources for Lambda functions.

## Contents

**LambdaManagedInstancesCapacityProviderConfig**

Configuration for Lambda-managed instances used by the capacity provider.

Type: LambdaManagedInstancesCapacityProviderConfig object

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

# CapacityProviderLoggingConfig

The capacity provider's Amazon CloudWatch Logs configuration settings.

## Contents

**LogGroup**

The name of the Amazon CloudWatch log group the capacity provider sends logs to. By default, Lambda capacity providers send logs to a default log group named `/aws/lambda/capacity-provider/<capacity provider name>`. To use a different log group, enter an existing log group or enter a new log group name.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 512.

Pattern: `[\.\-_/#A-Za-z0-9]+`

Required: No

**SystemLogLevel**

Set this property to filter the system logs for your capacity provider that Lambda sends to CloudWatch. Lambda only sends system logs at the selected level of detail and lower, where `DEBUG` is the highest level and `WARN` is the lowest.

Type: String

Valid Values: `DEBUG | INFO | WARN`

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

# CapacityProviderPermissionsConfig

Configuration that specifies the permissions required for the capacity provider to manage compute resources.

## Contents

**CapacityProviderOperatorRoleArn**

The ARN of the IAM role that the capacity provider uses to manage compute instances and other AWS resources.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:iam::\d{12}:role/?[a-zA-Z_0-9+=,.@\-_/]+`

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

# CapacityProviderScalingConfig

Configuration that defines how the capacity provider scales compute instances based on demand and policies.

## Contents

**MaxVCpuCount**

The maximum number of vCPUs that the capacity provider can provision across all compute instances.

Type: Integer

Valid Range: Minimum value of 2. Maximum value of 15000.

Required: No

**ScalingMode**

The scaling mode that determines how the capacity provider responds to changes in demand.

Type: String

Valid Values: `Auto | Manual`

Required: No

**ScalingPolicies**

A list of scaling policies that define how the capacity provider scales compute instances based on metrics and thresholds.

Type: Array of TargetTrackingScalingPolicy objects

Array Members: Minimum number of 1 item. Maximum number of 10 items.

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

# CapacityProviderTelemetryConfig

Configuration that specifies the telemetry collection for the capacity provider.

## Contents

### LoggingConfig

The capacity provider's Amazon CloudWatch Logs configuration settings.

Type: CapacityProviderLoggingConfig 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

# CapacityProviderVpcConfig

VPC configuration that specifies the network settings for compute instances managed by the capacity provider.

## Contents

**SecurityGroupIds**

A list of security group IDs that control network access for compute instances managed by the capacity provider.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 5 items.

Required: Yes

**SubnetIds**

A list of subnet IDs where the capacity provider launches compute instances.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 16 items.

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

# ChainedInvokeDetails

Contains details about a chained function invocation in a durable execution, including the target function and invocation parameters.

## Contents

**Error**

Details about the chained invocation failure.

Type: ErrorObject object

Required: No

**Result**

The response payload from the chained invocation.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 6291456.

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

# ChainedInvokeFailedDetails

Contains details about a failed chained function invocation, including error information and failure reason.

## Contents

**Error**

Details about the chained invocation failure.

Type: EventError object

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

# ChainedInvokeOptions

Configuration options for chained function invocations in durable executions, including retry settings and timeout configuration.

## Contents

**FunctionName**

The name or ARN of the Lambda function to invoke.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

Required: Yes

**TenantId**

The tenant identifier for the chained invocation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `[a-zA-Z0-9\._:\/=+\-@ ]+`

Required: No

**XAmznTraceId**

The AWS X-Ray trace header to use when starting the chained invocation. This parameter is optional. If you omit this value, the child invocation inherits the parent durable execution's trace header.

Specify this value on the `START` update for the chained invocation operation. For more information about the header format, see Tracing header in the *AWS X-Ray Developer Guide*.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 8192.

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

# ChainedInvokeStartedDetails

Contains details about a chained function invocation that has started execution, including start time and execution context.

## Contents

**FunctionName**

The name or ARN of the Lambda function being invoked.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

Required: Yes

**DurableExecutionArn**

The Amazon Resource Name (ARN) that identifies the durable execution.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `arn:([a-zA-Z0-9-]+):lambda:([a-zA-Z0-9-]+):(\d{12}):function:([a-zA-Z0-9_-]+):(\$LATEST(?:\.PUBLISHED)?|[0-9]+)/durable-execution/([a-zA-Z0-9_-]+)/([a-zA-Z0-9_-]+)`

Required: No

**ExecutedVersion**

The version of the function that was executed.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST(\.PUBLISHED)?|[0-9]+)`

Required: No

**Input**

The JSON input payload provided to the chained invocation.

Type: EventInput object

Required: No

**TenantId**

The tenant identifier for the chained invocation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `[a-zA-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

# ChainedInvokeStoppedDetails

Details about a chained invocation that was stopped.

## Contents

**Error**

Details about why the chained invocation stopped.

Type: EventError object

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

# ChainedInvokeSucceededDetails

Details about a chained invocation that succeeded.

## Contents

**Result**

The response payload from the successful operation.

Type: EventResult object

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

# ChainedInvokeTimedOutDetails

Details about a chained invocation that timed out.

## Contents

**Error**

Details about the chained invocation timeout.

Type: EventError object

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

# CheckpointUpdatedExecutionState

Contains operations that have been updated since the last checkpoint, such as completed asynchronous work like timers or callbacks.

## Contents

**NextMarker**

Indicates that more results are available. Use this value in a subsequent call to retrieve the next page of results.

Type: String

Required: No

**Operations**

A list of operations that have been updated since the last checkpoint.

Type: Array of Operation objects

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

# CodeSigningConfig

Details about a Code signing configuration.

## Contents

**AllowedPublishers**

List of allowed publishers.

Type: AllowedPublishers object

Required: Yes

**CodeSigningConfigArn**

The Amazon Resource Name (ARN) of the Code signing configuration.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 200.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}:\d{12}:code-signing-config:csc-[a-z0-9]{17}`

Required: Yes

**CodeSigningConfigId**

Unique identifer for the Code signing configuration.

Type: String

Pattern: `csc-[a-zA-Z0-9-_\.]{17}`

Required: Yes

**CodeSigningPolicies**

The code signing policy controls the validation failure action for signature mismatch or expiry.

Type: CodeSigningPolicies object

Required: Yes

**LastModified**

The date and time that the Code signing configuration was last modified, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

Required: Yes

**Description**

Code signing configuration description.

Type: String

Length Constraints: Minimum length of 0. 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

# CodeSigningPolicies

Code signing configuration policies specify the validation failure action for signature mismatch or expiry.

## Contents

**UntrustedArtifactOnDeployment**

Code signing configuration policy for deployment validation failure. If you set the policy to `Enforce`, Lambda blocks the deployment request if signature validation checks fail. If you set the policy to `Warn`, Lambda allows the deployment and issues a new Amazon CloudWatch metric (`SignatureValidationErrors`) and also stores the warning in the CloudTrail log.

Default value: `Warn`

Type: String

Valid Values: `Warn | Enforce`

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

# Concurrency

## Contents

**ReservedConcurrentExecutions**

The number of concurrent executions that are reserved for this function. For more information, see Managing Lambda reserved concurrency.

Type: Integer

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

# ContextDetails

Details about a durable execution context.

## Contents

**Error**

Details about the context failure.

Type: ErrorObject object

Required: No

**ReplayChildren**

Whether the state data of child operations of this completed context should be included in the invoke payload and `GetDurableExecutionState` response.

Type: Boolean

Required: No

**Result**

The response payload from the context.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 6291456.

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

# ContextFailedDetails

Details about a context that failed.

## Contents

**Error**

Details about the context failure.

Type: EventError object

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

# ContextOptions

Configuration options for a durable execution context.

## Contents

### ReplayChildren

Whether the state data of children of the completed context should be included in the invoke payload and `GetDurableExecutionState` response.

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

# ContextStartedDetails

Details about a context that has started.

## 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

# ContextSucceededDetails

Details about a context that succeeded.

## Contents

**Result**

The JSON response payload from the successful context.

Type: EventResult object

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

# Cors

The cross-origin resource sharing (CORS) settings for your Lambda function URL. Use CORS to grant access to your function URL from any origin. You can also use CORS to control access for specific HTTP headers and methods in requests to your function URL.

## Contents

**AllowCredentials**

Whether to allow cookies or other credentials in requests to your function URL. The default is `false`.

Type: Boolean

Required: No

**AllowHeaders**

The HTTP headers that origins can include in requests to your function URL. For example: `Date`, `Keep-Alive`, `X-Custom-Header`.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 100 items.

Length Constraints: Minimum length of 0. Maximum length of 1024.

Pattern: `.*`

Required: No

**AllowMethods**

The HTTP methods that are allowed when calling your function URL. For example: `GET`, `POST`, `DELETE`, or the wildcard character (`*`).

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 6 items.

Length Constraints: Minimum length of 0. Maximum length of 6.

Pattern: `.*`

Required: No

**AllowOrigins**

The origins that can access your function URL. You can list any number of specific origins, separated by a comma. For example: `https://www.example.com`, `http://localhost:60905`.

Alternatively, you can grant access to all origins using the wildcard character (`*`).

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 100 items.

Length Constraints: Minimum length of 1. Maximum length of 253.

Pattern: `.*`

Required: No

**ExposeHeaders**

The HTTP headers in your function response that you want to expose to origins that call your function URL. For example: `Date`, `Keep-Alive`, `X-Custom-Header`.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 100 items.

Length Constraints: Minimum length of 0. Maximum length of 1024.

Pattern: `.*`

Required: No

**MaxAge**

The maximum amount of time, in seconds, that web browsers can cache results of a preflight request. By default, this is set to `0`, which means that the browser doesn't cache results.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 86400.

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

# DeadLetterConfig

The dead-letter queue for failed asynchronous invocations.

## Contents

**TargetArn**

The Amazon Resource Name (ARN) of an Amazon SQS queue or Amazon SNS topic.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[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

# DestinationConfig

A configuration object that specifies the destination of an event after Lambda processes it. For more information, see Adding a destination.

## Contents

**OnFailure**

The destination configuration for failed invocations.

Type: OnFailure object

Required: No

**OnSuccess**

The destination configuration for successful invocations. Not supported in `CreateEventSourceMapping` or `UpdateEventSourceMapping`.

Type: OnSuccess 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

# DocumentDBEventSourceConfig

Specific configuration settings for a DocumentDB event source.

## Contents

**CollectionName**

The name of the collection to consume within the database. If you do not specify a collection, Lambda consumes all collections.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 57.

Pattern: `(^(?!(system\x2e)))(^[_a-zA-Z0-9])([^$]*)`

Required: No

**DatabaseName**

The name of the database to consume within the DocumentDB cluster.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 63.

Pattern: `[^ /\.$\x22]*`

Required: No

**FullDocument**

Determines what DocumentDB sends to your event stream during document update operations. If set to UpdateLookup, DocumentDB sends a delta describing the changes, along with a copy of the entire document. Otherwise, DocumentDB sends only a partial document that contains the changes.

Type: String

Valid Values: `UpdateLookup | Default`

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

# DurableConfig

Configuration settings for durable functions, including execution timeout, retention period for execution history, and an optional ARN of the AWS Key Management Service (AWS KMS) customer managed key that is used to encrypt your durable execution's payload data, including input, output, and error payloads.

## Contents

**ExecutionTimeout**

The maximum time (in seconds) that a durable execution can run before timing out. This timeout applies to the entire durable execution, not individual function invocations.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 31622400.

Required: No

**KMSKeyArn**

The ARN of the AWS Key Management Service (AWS KMS) customer managed key that is used to encrypt your durable execution's payload data, including input, output, and error payloads.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

Required: No

**RetentionPeriodInDays**

The number of days to retain execution history after a durable execution completes. After this period, execution history is no longer available through the GetDurableExecutionHistory API.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 90.

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

# Environment

A function's environment variable settings. You can use environment variables to adjust your function's behavior without updating code. An environment variable is a pair of strings that are stored in a function's version-specific configuration.

## Contents

### Variables

Environment variable key-value pairs. For more information, see Using Lambda environment variables.

Type: String to string map

Key Pattern: `[a-zA-Z]([a-zA-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

# EnvironmentError

Error messages for environment variables that couldn't be applied.

## Contents

**ErrorCode**

The error code.

Type: String

Required: No

**Message**

The error message.

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

# EnvironmentResponse

The results of an operation to update or read environment variables. If the operation succeeds, the response contains the environment variables. If it fails, the response contains details about the error.

## Contents

**Error**

Error messages for environment variables that couldn't be applied.

Type: EnvironmentError object

Required: No

**Variables**

Environment variable key-value pairs. Omitted from AWS CloudTrail logs.

Type: String to string map

Key Pattern: `[a-zA-Z]([a-zA-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

# EphemeralStorage

The size of the function's `/tmp` directory in MB. The default value is 512, but can be any whole number between 512 and 10,240 MB. For more information, see Configuring ephemeral storage (console).

## Contents

**Size**

The size of the function's `/tmp` directory.

Type: Integer

Valid Range: Minimum value of 512. Maximum value of 10240.

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

# ErrorObject

An object that contains error information.

## Contents

**ErrorData**

Machine-readable error data.

Type: String

Required: No

**ErrorMessage**

A human-readable error message.

Type: String

Required: No

**ErrorType**

The error type.

Type: String

Required: No

**StackTrace**

Stack trace information for the error.

Type: Array of strings

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

# Event

An event that occurred during the execution of a durable function.

## Contents

**CallbackFailedDetails**

Contains details about a failed callback operation, including error information and the reason for failure.

Type: CallbackFailedDetails object

Required: No

**CallbackStartedDetails**

Contains details about a callback operation that has started, including timing information and callback metadata.

Type: CallbackStartedDetails object

Required: No

**CallbackSucceededDetails**

Contains details about a successfully completed callback operation, including the result data and completion timestamp.

Type: CallbackSucceededDetails object

Required: No

**CallbackTimedOutDetails**

Contains details about a callback operation that timed out, including timeout duration and any partial results.

Type: CallbackTimedOutDetails object

Required: No

**ChainedInvokeFailedDetails**

Contains details about a failed chained function invocation, including error information and failure reason.

Type: ChainedInvokeFailedDetails object

Required: No

**ChainedInvokeStartedDetails**

Contains details about a chained function invocation that has started execution, including start time and execution context.

Type: ChainedInvokeStartedDetails object

Required: No

**ChainedInvokeStoppedDetails**

Details about a chained invocation that was stopped.

Type: ChainedInvokeStoppedDetails object

Required: No

**ChainedInvokeSucceededDetails**

Details about a chained invocation that succeeded.

Type: ChainedInvokeSucceededDetails object

Required: No

**ChainedInvokeTimedOutDetails**

Details about a chained invocation that timed out.

Type: ChainedInvokeTimedOutDetails object

Required: No

**ContextFailedDetails**

Details about a context that failed.

Type: ContextFailedDetails object

Required: No

**ContextStartedDetails**

Details about a context that started.

Type: ContextStartedDetails object

Required: No

**ContextSucceededDetails**

Details about a context that succeeded.

Type: ContextSucceededDetails object

Required: No

**EventId**

The unique identifier for this event. Event IDs increment sequentially.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

**EventTimestamp**

The date and time when this event occurred, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: Timestamp

Required: No

**EventType**

The type of event that occurred.

Type: String

Valid Values: `ExecutionStarted | ExecutionSucceeded | ExecutionFailed | ExecutionTimedOut | ExecutionStopped | ContextStarted | ContextSucceeded | ContextFailed | WaitStarted | WaitSucceeded | WaitCancelled | StepStarted | StepSucceeded | StepFailed | ChainedInvokeStarted | ChainedInvokeSucceeded | ChainedInvokeFailed | ChainedInvokeTimedOut | ChainedInvokeStopped | CallbackStarted | CallbackSucceeded | CallbackFailed | CallbackTimedOut | InvocationCompleted | ExecutionPaused | ExecutionResumed`

Required: No

**ExecutionFailedDetails**

Details about an execution that failed.

Type: ExecutionFailedDetails object

Required: No

**ExecutionPausedDetails**

The details of an `ExecutionPaused` event.

Type: ExecutionPausedDetails object

Required: No

**ExecutionResumedDetails**

The details of an `ExecutionResumed` event.

Type: ExecutionResumedDetails object

Required: No

**ExecutionStartedDetails**

Details about an execution that started.

Type: ExecutionStartedDetails object

Required: No

**ExecutionStoppedDetails**

Details about an execution that was stopped.

Type: ExecutionStoppedDetails object

Required: No

**ExecutionSucceededDetails**

Details about an execution that succeeded.

Type: ExecutionSucceededDetails object

Required: No

**ExecutionTimedOutDetails**

Details about an execution that timed out.

Type: ExecutionTimedOutDetails object

Required: No

**Id**

The unique identifier for this operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9-_]+`

Required: No

**InvocationCompletedDetails**

Details about a function invocation that completed.

Type: InvocationCompletedDetails object

Required: No

**Name**

The customer-provided name for this operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `[\x20-\x7E]+`

Required: No

**ParentId**

The unique identifier of the parent operation, if this operation is running within a child context.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9-_]+`

Required: No

**StepFailedDetails**

Details about a step that failed.

Type: StepFailedDetails object

Required: No

**StepStartedDetails**

Details about a step that started.

Type: StepStartedDetails object

Required: No

**StepSucceededDetails**

Details about a step that succeeded.

Type: StepSucceededDetails object

Required: No

**SubType**

The subtype of the event, providing additional categorization.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `[a-zA-Z0-9-_]+`

Required: No

**WaitCancelledDetails**

Details about a wait operation that was cancelled.

Type: WaitCancelledDetails object

Required: No

**WaitStartedDetails**

Details about a wait operation that started.

Type: WaitStartedDetails object

Required: No

**WaitSucceededDetails**

Details about a wait operation that succeeded.

Type: WaitSucceededDetails 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

# EventError

Error information for an event.

## Contents

**Payload**

The error payload.

Type: ErrorObject object

Required: No

**Truncated**

Indicates if the error payload was truncated due to size limits.

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

# EventInput

Input information for an event.

## Contents

**Payload**

The input payload.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 6291456.

Required: No

**Truncated**

Indicates if the error payload was truncated due to size limits.

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

# EventPauseReason

The reason for pausing a durable execution, as recorded in the execution history.

## Contents

**Payload**

The reason that you provided when you paused the execution. This field is only present if you set `IncludeExecutionData` to `true` in the request.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1024.

Required: No

**Truncated**

Specifies whether Lambda omitted the reason from the response because `IncludeExecutionData` is `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

# EventResult

Result information for an event.

## Contents

**Payload**

The result payload.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 6291456.

Required: No

**Truncated**

Indicates if the error payload was truncated due to size limits.

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

# EventResumeReason

The reason for resuming a durable execution, as recorded in the execution history.

## Contents

**Payload**

The reason that you provided when you resumed the execution. This field is only present if you set `IncludeExecutionData` to `true` in the request.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1024.

Required: No

**Truncated**

Specifies whether Lambda omitted the reason from the response because `IncludeExecutionData` is `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

# EventSourceMappingConfiguration

A mapping between an AWS resource and a Lambda function. For details, see CreateEventSourceMapping.

## Contents

**AmazonManagedKafkaEventSourceConfig**

Specific configuration settings for an Amazon Managed Streaming for Apache Kafka (Amazon MSK) event source.

Type: AmazonManagedKafkaEventSourceConfig object

Required: No

**BatchSize**

The maximum number of records in each batch that Lambda pulls from your stream or queue and sends to your function. Lambda passes all of the records in the batch to the function in a single call, up to the payload limit for synchronous invocation (6 MB).

Default value: Varies by service. For Amazon SQS, the default is 10. For all other services, the default is 100.

Related setting: When you set `BatchSize` to a value greater than 10, you must set `MaximumBatchingWindowInSeconds` to at least 1.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10000.

Required: No

**BisectBatchOnFunctionError**

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) If the function returns an error, split the batch in two and retry. The default value is false.

Type: Boolean

Required: No

**DestinationConfig**

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) A configuration object that specifies the destination of an event after Lambda processes it.

Type: DestinationConfig object

Required: No

**DocumentDBEventSourceConfig**

Specific configuration settings for a DocumentDB event source.

Type: DocumentDBEventSourceConfig object

Required: No

**EventSourceArn**

The Amazon Resource Name (ARN) of the event source.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

Required: No

**EventSourceMappingArn**

The Amazon Resource Name (ARN) of the event source mapping.

Type: String

Length Constraints: Minimum length of 85. Maximum length of 120.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:event-source-mapping:[0-9a-fA-F]{8}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{4}-[0-9a-fA-F]{12}`

Required: No

**FilterCriteria**

An object that defines the filter criteria that determine whether Lambda should process an event. For more information, see Lambda event filtering.

If filter criteria is encrypted, this field shows up as `null` in the response of ListEventSourceMapping API calls. You can view this field in plaintext in the response of GetEventSourceMapping and DeleteEventSourceMapping calls if you have `kms:Decrypt` permissions for the correct AWS KMS key.

Type: FilterCriteria object

Required: No

**FilterCriteriaError**

An object that contains details about an error related to filter criteria encryption.

Type: FilterCriteriaError object

Required: No

**FunctionArn**

The ARN of the Lambda function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: No

**FunctionResponseTypes**

(Kinesis, DynamoDB Streams, Amazon MSK, self-managed Apache Kafka, and Amazon SQS) A list of current response type enums applied to the event source mapping.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 1 item.

Valid Values: `ReportBatchItemFailures`

Required: No

**KMSKeyArn**

The ARN of the AWS Key Management Service (AWS KMS) customer managed key that Lambda uses to encrypt your function's filter criteria.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

Required: No

**LastModified**

The date that the event source mapping was last updated or that its state changed, in Unix time seconds.

Type: Timestamp

Required: No

**LastProcessingResult**

The result of the event source mapping's last processing attempt.

Type: String

Required: No

**LoggingConfig**

(Amazon MSK, and self-managed Apache Kafka only) The logging configuration for your event source. For more information, see Event source mapping logging.

Type: EventSourceMappingLoggingConfig object

Required: No

**MaximumBatchingWindowInSeconds**

The maximum amount of time, in seconds, that Lambda spends gathering records before invoking the function. You can configure `MaximumBatchingWindowInSeconds` to any value from 0 seconds to 300 seconds in increments of seconds.

For streams and Amazon SQS event sources, the default batching window is 0 seconds. For Amazon MSK, Self-managed Apache Kafka, Amazon MQ, and DocumentDB event sources, the default batching window is 500 ms. Note that because you can only change `MaximumBatchingWindowInSeconds` in increments of seconds, you cannot revert back to the 500 ms default batching window after you have changed it. To restore the default batching window, you must create a new event source mapping.

Related setting: For streams and Amazon SQS event sources, when you set `BatchSize` to a value greater than 10, you must set `MaximumBatchingWindowInSeconds` to at least 1.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 300.

Required: No

**MaximumRecordAgeInSeconds**

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) Discard records older than the specified age. The default value is -1, which sets the maximum age to infinite. When the value is set to infinite, Lambda never discards old records.

> **Note**
>
> The minimum valid value for maximum record age is 60s. Although values less than 60 and greater than -1 fall within the parameter's absolute range, they are not allowed

Type: Integer

Valid Range: Minimum value of -1. Maximum value of 604800.

Required: No

**MaximumRetryAttempts**

(Kinesis, DynamoDB Streams, Amazon MSK, and self-managed Apache Kafka) Discard records after the specified number of retries. The default value is -1, which sets the maximum number of retries to infinite. When MaximumRetryAttempts is infinite, Lambda retries failed records until the record expires in the event source.

Type: Integer

Valid Range: Minimum value of -1. Maximum value of 10000.

Required: No

**MetricsConfig**

The metrics configuration for your event source. For more information, see Event source mapping metrics.

Type: EventSourceMappingMetricsConfig object

Required: No

**ParallelizationFactor**

(Kinesis and DynamoDB Streams only) The number of batches to process concurrently from each shard. The default value is 1.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10.

Required: No

**ProvisionedPollerConfig**

(Amazon SQS, Amazon MSK, and self-managed Apache Kafka only) The provisioned mode configuration for the event source. For more information, see provisioned mode.

Type: ProvisionedPollerConfig object

Required: No

**Queues**

(Amazon MQ) The name of the Amazon MQ broker destination queue to consume.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 1000.

Pattern: `[\s\S]*`

Required: No

**ScalingConfig**

(Amazon SQS only) The scaling configuration for the event source. For more information, see Configuring maximum concurrency for Amazon SQS event sources.

Type: ScalingConfig object

Required: No

**SelfManagedEventSource**

The self-managed Apache Kafka cluster for your event source.

Type: SelfManagedEventSource object

Required: No

**SelfManagedKafkaEventSourceConfig**

Specific configuration settings for a self-managed Apache Kafka event source.

Type: SelfManagedKafkaEventSourceConfig object

Required: No

**SourceAccessConfigurations**

An array of the authentication protocol, VPC components, or virtual host to secure and define your event source.

Type: Array of SourceAccessConfiguration objects

Array Members: Minimum number of 0 items. Maximum number of 22 items.

Required: No

**StartingPosition**

The position in a stream from which to start reading. Required for Amazon Kinesis and Amazon DynamoDB Stream event sources. `AT_TIMESTAMP` is supported only for Amazon Kinesis streams, Amazon DocumentDB, Amazon MSK, and self-managed Apache Kafka.

Type: String

Valid Values: `TRIM_HORIZON | LATEST | AT_TIMESTAMP`

Required: No

**StartingPositionTimestamp**

With `StartingPosition` set to `AT_TIMESTAMP`, the time from which to start reading, in Unix time seconds. `StartingPositionTimestamp` cannot be in the future.

Type: Timestamp

Required: No

**State**

The state of the event source mapping. It can be one of the following: `Creating`, `Enabling`, `Enabled`, `Disabling`, `Disabled`, `Updating`, or `Deleting`.

Type: String

Required: No

**StateTransitionReason**

Indicates whether a user or Lambda made the last change to the event source mapping.

Type: String

Required: No

**Topics**

The name of the Kafka topic.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Minimum length of 1. Maximum length of 249.

Pattern: `[^.]([a-zA-Z0-9\-_.]+)`

Required: No

**TumblingWindowInSeconds**

(Kinesis and DynamoDB Streams only) The duration in seconds of a processing window for DynamoDB and Kinesis Streams event sources. A value of 0 seconds indicates no tumbling window.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 900.

Required: No

**UUID**

The identifier of the event source mapping.

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

# EventSourceMappingLoggingConfig

(Amazon MSK, and self-managed Apache Kafka only) The logging configuration for your event source. Use this configuration object to define the level of logs for your event source mapping.

## Contents

**SystemLogLevel**

The log level you want your event source mapping to use. Lambda event poller only sends system logs at the selected level of detail and lower, where `DEBUG` is the highest level and `WARN` is the lowest. For more information about these metrics, see Event source mapping logging.

Type: String

Valid Values: `DEBUG | INFO | WARN`

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

# EventSourceMappingMetricsConfig

The metrics configuration for your event source. Use this configuration object to define which metrics you want your event source mapping to produce.

## Contents

### Metrics

The metrics you want your event source mapping to produce, including `EventCount`, `ErrorCount`, `KafkaMetrics`.

- `EventCount` to receive metrics related to the number of events processed by your event source mapping.
- `ErrorCount` (Amazon MSK and self-managed Apache Kafka) to receive metrics related to the number of errors in your event source mapping processing.
- `KafkaMetrics` (Amazon MSK and self-managed Apache Kafka) to receive metrics related to the Kafka consumers from your event source mapping.

For more information about these metrics, see Event source mapping metrics.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 3 items.

Valid Values: `EventCount | ErrorCount | KafkaMetrics`

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

# Execution

Information about a durable execution.

## Contents

**DurableExecutionArn**

The Amazon Resource Name (ARN) of the durable execution, if this execution is a durable execution.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `arn:([a-zA-Z0-9-]+):lambda:([a-zA-Z0-9-]+):(\d{12}):function:([a-zA-Z0-9_-]+):(\$LATEST(?:\.PUBLISHED)?|[0-9]+)/durable-execution/([a-zA-Z0-9_-]+)/([a-zA-Z0-9_-]+)`

Required: Yes

**DurableExecutionName**

The unique name of the durable execution, if one was provided when the execution was started.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9-_]+`

Required: Yes

**FunctionArn**

The Amazon Resource Name (ARN) of the Lambda function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_\.]+(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

Required: Yes

**StartTimestamp**

The date and time when the durable execution started, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: Timestamp

Required: Yes

**Status**

The current status of the durable execution.

Type: String

Valid Values: `RUNNING | SUCCEEDED | FAILED | TIMED_OUT | STOPPED | DELETING | PAUSING | PAUSED`

Required: Yes

**EndTimestamp**

The date and time when the durable execution ended, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: Timestamp

Required: No

**KMSKeyArn**

The ARN of the AWS Key Management Service (AWS KMS) customer managed key that is used to encrypt your durable execution's payload data, including input, output, and error payloads.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[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

# ExecutionDetails

Details about a durable execution.

## Contents

### InputPayload

The original input payload provided for the durable execution.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 6291456.

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

# ExecutionFailedDetails

Details about a failed durable execution.

## Contents

**Error**

Details about the execution failure.

Type: EventError object

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

# ExecutionPausedDetails

Details about a durable execution that paused. The event timestamp is when the execution paused.

## Contents

**ExecutionTimeoutPaused**

Specifies whether the pause also paused the execution timeout.

Type: Boolean

Required: Yes

**PauseRequestTimestamp**

The date and time when you requested the pause, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: Timestamp

Required: Yes

**Reason**

The reason that you provided when you paused the execution.

Type: EventPauseReason 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

# ExecutionResumedDetails

Details about a durable execution that resumed. The event timestamp is when the execution resumed.

## Contents

**ResumeRequestTimestamp**

The date and time when you requested the resume, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: Timestamp

Required: Yes

**Reason**

The reason that you provided when you resumed the execution.

Type: EventResumeReason 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

# ExecutionStartedDetails

Details about a durable execution that started.

## Contents

**ExecutionTimeout**

The maximum amount of time that the durable execution is allowed to run, in seconds.

Type: Integer

Valid Range: Minimum value of 0.

Required: Yes

**Input**

The input payload provided for the durable execution.

Type: EventInput object

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

# ExecutionStoppedDetails

Details about a durable execution that stopped.

## Contents

**Error**

Details about why the execution stopped.

Type: EventError object

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

# ExecutionSucceededDetails

Details about a durable execution that succeeded.

## Contents

**Result**

The response payload from the successful operation.

Type: EventResult object

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

# ExecutionTimedOutDetails

Details about a durable execution that timed out.

## Contents

**Error**

Details about the execution timeout.

Type: EventError 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

# FileSystemConfig

Details about the connection between a Lambda function and an Amazon EFS file system or an Amazon S3 file system.

## Contents

**Arn**

The Amazon Resource Name (ARN) of the Amazon EFS or Amazon S3 Files access point that provides access to the file system.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Pattern: `arn:aws[a-zA-Z-]*:elasticfilesystem:[a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}:\d{12}:access-point/fsap-[a-f0-9]{17}$|^arn:aws[-a-z]*:s3files:[0-9a-z-:]+:file-system/fs-[0-9a-f]{17,40}/access-point/fsap-[0-9a-f]{17,40}`

Required: Yes

**LocalMountPath**

The path where the function can access the file system, starting with `/mnt/`.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 160.

Pattern: `/mnt/[a-zA-Z0-9-_.]+`

Required: Yes

**S3FilesConfig**

The configuration for how your function accesses data on an Amazon S3 file system. Valid only when the file system access point ARN is an Amazon S3 Files access point. If you specify a different access point type (for example, Amazon Elastic File System), the operation returns an `InvalidParameterException`.

Type: S3FilesConfig 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

# Filter

A structure within a `FilterCriteria` object that defines an event filtering pattern.

## Contents

### Pattern

A filter pattern. For more information on the syntax of a filter pattern, see Filter rule syntax.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 4096.

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

# FilterCriteria

An object that contains the filters for an event source.

## Contents

### Filters

A list of filters.

Type: Array of Filter objects

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

# FilterCriteriaError

An object that contains details about an error related to filter criteria encryption.

## Contents

**ErrorCode**

The AWS KMS exception that resulted from filter criteria encryption or decryption.

Type: String

Length Constraints: Minimum length of 10. Maximum length of 50.

Pattern: `[A-Za-z]+Exception`

Required: No

**Message**

The error message.

Type: String

Length Constraints: Minimum length of 10. Maximum length of 2048.

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

# FunctionCode

The code for the Lambda function. You can either specify an object in Amazon S3, upload a .zip file archive deployment package directly, or specify the URI of a container image.

## Contents

**ImageUri**

URI of a container image in the Amazon ECR registry.

Type: String

Required: No

**S3Bucket**

An Amazon S3 bucket in the same AWS Region as your function. The bucket can be in a different AWS account.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 63.

Pattern: `[0-9A-Za-z\.\-_]*(?<!\.)`

Required: No

**S3Key**

The Amazon S3 key of the deployment package.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

**S3ObjectStorageMode**

Specifies how the deployment package is stored. Valid values:

- `COPY` (default) – Uploads a copy of your deployment package to Lambda.
- `REFERENCE` – Lambda references the deployment package from the specified Amazon S3 bucket.

Type: String

Valid Values: `COPY | REFERENCE`

Required: No

**S3ObjectVersion**

For versioned objects, the version of the deployment package object to use.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

**SourceKMSKeyArn**

The ARN of the AWS Key Management Service (AWS KMS) customer managed key that's used to encrypt your function's .zip deployment package. If you don't provide a customer managed key, Lambda uses an AWS owned key.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

Required: No

**ZipFile**

The base64-encoded contents of the deployment package. AWS SDK and AWS CLI clients handle the encoding for you.

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

# FunctionCodeLocation

Details about a function's deployment package.

## Contents

**Error**

An object that contains details about an error related to function deployment package retrieval.

Type: FunctionCodeLocationError object

Required: No

**ImageUri**

URI of a container image in the Amazon ECR registry.

Type: String

Required: No

**Location**

A presigned URL that you can use to download the deployment package.

Type: String

Required: No

**RepositoryType**

The service that's hosting the file.

Type: String

Required: No

**ResolvedImageUri**

The resolved URI for the image.

Type: String

Required: No

**ResolvedS3Object**

The resolved Amazon S3 object that contains the deployment package.

Type: ResolvedS3Object object

Required: No

**SourceKMSKeyArn**

The ARN of the AWS Key Management Service (AWS KMS) customer managed key that's used to encrypt your function's .zip deployment package. If you don't provide a customer managed key, Lambda uses an AWS owned key.

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

# FunctionCodeLocationError

Contains details about an error that occurred when Lambda attempted to retrieve a function's deployment package.

## Contents

**ErrorCode**

The error code that identifies why Lambda failed to retrieve the deployment package.

Type: String

Required: No

**Message**

The human-readable message that describes why Lambda failed to retrieve the deployment package.

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

# FunctionConfiguration

Details about a function's configuration.

## Contents

**Architectures**

The instruction set architecture that the function supports. Architecture is a string array with one of the valid values. The default architecture value is `x86_64`.

Type: Array of strings

Array Members: Fixed number of 1 item.

Valid Values: `x86_64 | arm64`

Required: No

**CapacityProviderConfig**

Configuration for the capacity provider that manages compute resources for Lambda functions.

Type: CapacityProviderConfig object

Required: No

**CodeSha256**

The SHA256 hash of the function's deployment package.

Type: String

Required: No

**CodeSize**

The size of the function's deployment package, in bytes.

Type: Long

Required: No

**ConfigSha256**

The SHA256 hash of the function configuration.

Type: String

Required: No

**DeadLetterConfig**

The function's dead letter queue.

Type: DeadLetterConfig object

Required: No

**Description**

The function's description.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Required: No

**DurableConfig**

The function's durable execution configuration settings, if the function is configured for durability.

Type: DurableConfig object

Required: No

**Environment**

The function's environment variables. Omitted from AWS CloudTrail logs.

Type: EnvironmentResponse object

Required: No

**EphemeralStorage**

The size of the function's `/tmp` directory in MB. The default value is 512, but can be any whole number between 512 and 10,240 MB. For more information, see Configuring ephemeral storage (console).

Type: EphemeralStorage object

Required: No

**FileSystemConfigs**

Connection settings for an Amazon EFS file system or an Amazon S3 file system.

Type: Array of FileSystemConfig objects

Array Members: Minimum number of 0 items. Maximum number of 1 item.

Required: No

**FunctionArn**

The function's Amazon Resource Name (ARN).

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_\.]+(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

Required: No

**FunctionName**

The name of the function.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `(arn:(aws[a-zA-Z-]*)?:lambda:)?([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:)?(\d{12}:)?(function:)?([a-zA-Z0-9-_\.]+)(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

Required: No

**Handler**

The function that Lambda calls to begin running your function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: `[^\s]+`

Required: No

**ImageConfigResponse**

The function's image configuration values.

Type: ImageConfigResponse object

Required: No

**KMSKeyArn**

The ARN of the AWS Key Management Service (AWS KMS) customer managed key that's used to encrypt the following resources:

- The function's environment variables.
- The function's Lambda SnapStart snapshots.
- When used with `SourceKMSKeyArn`, the unzipped version of the .zip deployment package that's used for function invocations. For more information, see Specifying a customer managed key for Lambda.
- The optimized version of the container image that's used for function invocations. Note that this is not the same key that's used to protect your container image in the Amazon Elastic Container Registry (Amazon ECR). For more information, see Function lifecycle.

If you don't provide a customer managed key, Lambda uses an AWS owned key or an AWS managed key.

Type: String

Pattern: `(arn:(aws[a-zA-Z-]*)?:[a-z0-9-.]+:.*)|()`

Required: No

**LastModified**

The date and time that the function was last updated, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

Required: No

**LastUpdateStatus**

The status of the last update that was performed on the function. This is first set to `Successful` after function creation completes.

Type: String

Valid Values: `Successful | Failed | InProgress`

Required: No

**LastUpdateStatusReason**

The reason for the last update that was performed on the function.

Type: String

Required: No

**LastUpdateStatusReasonCode**

The reason code for the last update that was performed on the function.

Type: String

Valid Values: `EniLimitExceeded | InsufficientRolePermissions | InvalidConfiguration | InternalError | SubnetOutOfIPAddresses | InvalidSubnet | InvalidSecurityGroup | ImageDeleted | ImageAccessDenied | InvalidImage | KMSKeyAccessDenied | KMSKeyNotFound | InvalidStateKMSKey | DisabledKMSKey | EFSIOError | EFSMountConnectivityError | EFSMountFailure | EFSMountTimeout | InvalidRuntime | InvalidZipFileException | FunctionError | VcpuLimitExceeded | CapacityProviderScalingLimitExceeded | InsufficientCapacity | EC2RequestLimitExceeded | FunctionError.InitTimeout | FunctionError.RuntimeInitError | FunctionError.ExtensionInitError | FunctionError.InvalidEntryPoint | FunctionError.InvalidWorkingDirectory | FunctionError.PermissionDenied | FunctionError.TooManyExtensions | FunctionError.InitResourceExhausted | DisallowedByVpcEncryptionControl | DependencyError`

Required: No

**Layers**

The function's layers.

Type: Array of Layer objects

Required: No

**LoggingConfig**

The function's Amazon CloudWatch Logs configuration settings.

Type: LoggingConfig object

Required: No

**MasterArn**

For Lambda@Edge functions, the ARN of the main function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: No

**MemorySize**

The amount of memory available to the function at runtime.

Type: Integer

Valid Range: Minimum value of 128. Maximum value of 32768.

Required: No

**PackageType**

The type of deployment package. Set to `Image` for container image and set `Zip` for .zip file archive.

Type: String

Valid Values: `Zip | Image`

Required: No

**RevisionId**

The latest updated revision of the function or alias.

Type: String

Required: No

**Role**

The function's execution role.

Type: String

Pattern: `arn:(aws[a-zA-Z-]*)?:iam::\d{12}:role/?[a-zA-Z_0-9+=,.@\-_/]+`

Required: No

**Runtime**

The identifier of the function's runtime. Runtime is required if the deployment package is a .zip file archive. Specifying a runtime results in an error if you're deploying a function using a container image.

The following list includes deprecated runtimes. Lambda blocks creating new functions and updating existing functions shortly after each runtime is deprecated. For more information, see Runtime use after deprecation.

For a list of all currently supported runtimes, see Supported runtimes.

Type: String

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11 | python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6 | dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3 | ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 |`

`java21 | python3.13 | nodejs22.x | nodejs24.x | python3.14 | java25 | dotnet10 | ruby4.0`

Required: No

**RuntimeVersionConfig**

The ARN of the runtime and any errors that occured.

Type: RuntimeVersionConfig object

Required: No

**SigningJobArn**

The ARN of the signing job.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

Required: No

**SigningProfileVersionArn**

The ARN of the signing profile version.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

Required: No

**SnapStart**

Set `ApplyOn` to `PublishedVersions` to create a snapshot of the initialized execution environment when you publish a function version. For more information, see Improving startup performance with Lambda SnapStart.

Type: SnapStartResponse object

Required: No

**State**

The current state of the function. When the state is `Inactive`, you can reactivate the function by invoking it.

Type: String

Valid Values: `Pending | Active | Inactive | Failed | Deactivating | Deactivated | ActiveNonInvocable | Deleting`

Required: No

**StateReason**

The reason for the function's current state.

Type: String

Required: No

**StateReasonCode**

The reason code for the function's current state. When the code is `Creating`, you can't invoke or modify the function.

Type: String

Valid Values: `Idle | Creating | Restoring | EniLimitExceeded | InsufficientRolePermissions | InvalidConfiguration | InternalError | SubnetOutOfIPAddresses | InvalidSubnet | InvalidSecurityGroup | ImageDeleted | ImageAccessDenied | InvalidImage | KMSKeyAccessDenied | KMSKeyNotFound | InvalidStateKMSKey | DisabledKMSKey | EFSIOError | EFSMountConnectivityError | EFSMountFailure | EFSMountTimeout | InvalidRuntime | InvalidZipFileException | FunctionError | DrainingDurableExecutions | VcpuLimitExceeded | CapacityProviderScalingLimitExceeded | InsufficientCapacity | EC2RequestLimitExceeded | FunctionError.InitTimeout | FunctionError.RuntimeInitError | FunctionError.ExtensionInitError | FunctionError.InvalidEntryPoint | FunctionError.InvalidWorkingDirectory | FunctionError.PermissionDenied | FunctionError.TooManyExtensions | FunctionError.InitResourceExhausted | DisallowedByVpcEncryptionControl | DependencyError`

Required: No

**TenancyConfig**

The function's tenant isolation configuration settings. Determines whether the Lambda function runs on a shared or dedicated infrastructure per unique tenant.

Type: TenancyConfig object

Required: No

**Timeout**

The amount of time in seconds that Lambda allows a function to run before stopping it.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

**TracingConfig**

The function's AWS X-Ray tracing configuration.

Type: TracingConfigResponse object

Required: No

**Version**

The version of the Lambda function.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `(\$LATEST|[0-9]+)`

Required: No

**VpcConfig**

The function's networking configuration.

Type: VpcConfigResponse 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

# FunctionEventInvokeConfig

## Contents

**DestinationConfig**

A destination for events after they have been sent to a function for processing.

**Destinations**

- **Function** - The Amazon Resource Name (ARN) of a Lambda function.
- **Queue** - The ARN of a standard SQS queue.
- **Bucket** - The ARN of an Amazon S3 bucket.
- **Topic** - The ARN of a standard SNS topic.
- **Event Bus** - The ARN of an Amazon EventBridge event bus.

> **Note**
>
> S3 buckets are supported only for on-failure destinations. To retain records of successful invocations, use another destination type.

Type: DestinationConfig object

Required: No

**FunctionArn**

The Amazon Resource Name (ARN) of the function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: No

**LastModified**

The date and time that the configuration was last updated, in Unix time seconds.

Type: Timestamp

Required: No

**MaximumEventAgeInSeconds**

The maximum age of a request that Lambda sends to a function for processing.

Type: Integer

Valid Range: Minimum value of 60. Maximum value of 21600.

Required: No

**MaximumRetryAttempts**

The maximum number of times to retry when the function returns an error.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 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

# FunctionScalingConfig

Configuration that defines the scaling behavior for a Lambda Managed Instances function, including the minimum and maximum number of execution environments that can be provisioned.

## Contents

**MaxExecutionEnvironments**

The maximum number of execution environments that can be provisioned for the function.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 15000.

Required: No

**MinExecutionEnvironments**

The minimum number of execution environments to maintain for the function.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 15000.

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

# FunctionUrlConfig

Details about a Lambda function URL.

## Contents

**AuthType**

The type of authentication that your function URL uses. Set to `AWS_IAM` if you want to restrict access to authenticated users only. Set to `NONE` if you want to bypass IAM authentication to create a public endpoint. For more information, see Security and auth model for Lambda function URLs.

Type: String

Valid Values: `NONE | AWS_IAM`

Required: Yes

**CreationTime**

When the function URL was created, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

Required: Yes

**FunctionArn**

The Amazon Resource Name (ARN) of your function.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: Yes

**FunctionUrl**

The HTTP URL endpoint for your function.

Type: String

Length Constraints: Minimum length of 40. Maximum length of 100.

Required: Yes

**LastModifiedTime**

When the function URL configuration was last updated, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: String

Required: Yes

**Cors**

The cross-origin resource sharing (CORS) settings for your function URL.

Type: Cors object

Required: No

**InvokeMode**

Use one of the following options:

- `BUFFERED` – This is the default option. Lambda invokes your function using the `Invoke` API operation. Invocation results are available when the payload is complete. The maximum payload size is 6 MB.
- `RESPONSE_STREAM` – Your function streams payload results as they become available. Lambda invokes your function using the `InvokeWithResponseStream` API operation. The maximum response payload size is 200 MB.

Type: String

Valid Values: `BUFFERED | RESPONSE_STREAM`

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

# FunctionVersionsByCapacityProviderListItem

Information about a function version that uses a specific capacity provider, including its ARN and current state.

## Contents

**FunctionArn**

The Amazon Resource Name (ARN) of the function version.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_\.]+(:(\$LATEST(\.PUBLISHED)?|[a-zA-Z0-9-_]+))?`

Required: Yes

**State**

The current state of the function version.

Type: String

Valid Values: `Pending | Active | Inactive | Failed | Deactivating | Deactivated | ActiveNonInvocable | Deleting`

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

# ImageConfig

Configuration values that override the container image Dockerfile settings. For more information, see Container image settings.

## Contents

**Command**

Specifies parameters that you want to pass in with ENTRYPOINT.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 1500 items.

Required: No

**EntryPoint**

Specifies the entry point to their application, which is typically the location of the runtime executable.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 1500 items.

Required: No

**WorkingDirectory**

Specifies the working directory.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1000.

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

# ImageConfigError

Error response to `GetFunctionConfiguration`.

## Contents

**ErrorCode**

Error code.

Type: String

Required: No

**Message**

Error message.

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

# ImageConfigResponse

Response to a `GetFunctionConfiguration` request.

## Contents

**Error**

Error response to `GetFunctionConfiguration`.

Type: ImageConfigError object

Required: No

**ImageConfig**

Configuration values that override the container image Dockerfile.

Type: ImageConfig 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

# InstanceRequirements

Specifications that define the characteristics and constraints for compute instances used by the capacity provider.

## Contents

**AllowedInstanceTypes**

A list of EC2 instance types that the capacity provider is allowed to use. If not specified, all compatible instance types are allowed.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 400 items.

Length Constraints: Minimum length of 1. Maximum length of 30.

Pattern: `[a-zA-Z0-9\.\-]+`

Required: No

**Architectures**

A list of supported CPU architectures for compute instances. Valid values include `x86_64` and `arm64`.

Type: Array of strings

Array Members: Fixed number of 1 item.

Valid Values: `x86_64 | arm64`

Required: No

**ExcludedInstanceTypes**

A list of EC2 instance types that the capacity provider should not use, even if they meet other requirements.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 400 items.

Length Constraints: Minimum length of 1. Maximum length of 30.

Pattern: `[a-zA-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

# InvocationCompletedDetails

Details about a function invocation that completed.

## Contents

**EndTimestamp**

The date and time when the invocation ended, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: Timestamp

Required: Yes

**RequestId**

The request ID for the invocation.

Type: String

Required: Yes

**StartTimestamp**

The date and time when the invocation started, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: Timestamp

Required: Yes

**Error**

Details about the invocation failure.

Type: EventError 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

# InvokeResponseStreamUpdate

A chunk of the streamed response payload.

## Contents

### Payload

Data returned by your Lambda function.

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

# InvokeWithResponseStreamCompleteEvent

A response confirming that the event stream is complete.

## Contents

**ErrorCode**

An error code.

Type: String

Required: No

**ErrorDetails**

The details of any returned error.

Type: String

Required: No

**LogResult**

The last 4 KB of the execution log, which is base64-encoded.

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

# InvokeWithResponseStreamResponseEvent

An object that includes a chunk of the response payload. When the stream has ended, Lambda includes a `InvokeComplete` object.

## Contents

**InvokeComplete**

An object that's returned when the stream has ended and all the payload chunks have been returned.

Type: InvokeWithResponseStreamCompleteEvent object

Required: No

**PayloadChunk**

A chunk of the streamed response payload.

Type: InvokeResponseStreamUpdate 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

# KafkaSchemaRegistryAccessConfig

Specific access configuration settings that tell Lambda how to authenticate with your schema registry.

If you're working with an AWS Glue schema registry, don't provide authentication details in this object. Instead, ensure that your execution role has the required permissions for Lambda to access your cluster.

If you're working with a Confluent schema registry, choose the authentication method in the `Type` field, and provide the AWS Secrets Manager secret ARN in the `URI` field.

## Contents

**Type**

The type of authentication Lambda uses to access your schema registry.

- `BASIC_AUTH` – The Secrets Manager ARN of your secret key used for basic authentication with your Confluent schema registry.
- `CLIENT_CERTIFICATE_TLS_AUTH` – The Secrets Manager ARN of your secret key containing the certificate chain (X.509 PEM), private key (PKCS#8 PEM), and private key password (optional) used for mutual TLS authentication with your Confluent schema registry.
- `SERVER_ROOT_CA_CERTIFICATE` – The Secrets Manager ARN of your secret key containing the root CA certificate (X.509 PEM) used for TLS encryption with your Confluent schema registry.
- `OAUTHBEARER_AUTH` – The Secrets Manager ARN of your secret key containing the OAuth 2.0 credentials that Lambda uses to acquire an access token for your Confluent schema registry. For the contents of the secret, see Configuring the OAuth secret.

Type: String

Valid Values: `BASIC_AUTH | CLIENT_CERTIFICATE_TLS_AUTH | SERVER_ROOT_CA_CERTIFICATE`

Required: No

**URI**

The URI of the secret (Secrets Manager secret ARN) to authenticate with your schema registry.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\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

# KafkaSchemaRegistryConfig

Specific configuration settings for a Kafka schema registry.

## Contents

**AccessConfigs**

An array of access configuration objects that tell Lambda how to authenticate with your schema registry.

Type: Array of KafkaSchemaRegistryAccessConfig objects

Required: No

**EventRecordFormat**

The record format that Lambda delivers to your function after schema validation.

- Choose `JSON` to have Lambda deliver the record to your function as a standard JSON object.
- Choose `SOURCE` to have Lambda deliver the record to your function in its original source format. Lambda removes all schema metadata, such as the schema ID, before sending the record to your function.

Type: String

Valid Values: `JSON | SOURCE`

Required: No

**SchemaRegistryURI**

The URI for your schema registry. The correct URI format depends on the type of schema registry you're using.

- For AWS Glue schema registries, use the ARN of the registry.
- For Confluent schema registries, use the URL of the registry.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 10000.

Pattern: `[a-zA-Z0-9-\/*:_+=.@-]*`

Required: No

**SchemaValidationConfigs**

An array of schema validation configuration objects, which tell Lambda the message attributes you want to validate and filter using your schema registry.

Type: Array of KafkaSchemaValidationConfig objects

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

# KafkaSchemaValidationConfig

Specific schema validation configuration settings that tell Lambda the message attributes you want to validate and filter using your schema registry.

## Contents

**Attribute**

The attributes you want your schema registry to validate and filter for. If you selected `JSON` as the `EventRecordFormat`, Lambda also deserializes the selected message attributes.

Type: String

Valid Values: `KEY` | `VALUE`

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

# LambdaManagedInstancesCapacityProviderConfig

Configuration for Lambda-managed instances used by the capacity provider.

## Contents

**CapacityProviderArn**

The Amazon Resource Name (ARN) of the capacity provider.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `arn:aws[a-zA-Z-]*:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:capacity-provider:[a-zA-Z0-9-_]+`

Required: Yes

**ExecutionEnvironmentMemoryGiBPerVCpu**

The amount of memory in GiB allocated per vCPU for execution environments.

Type: Double

Valid Range: Minimum value of 2.0. Maximum value of 8.0.

Required: No

**PerExecutionEnvironmentMaxConcurrency**

The maximum number of concurrent execution environments that can run on each compute instance.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 1600.

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

# Layer

An AWS Lambda layer.

## Contents

**Arn**

The Amazon Resource Name (ARN) of the function layer.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+:[0-9]+`

Required: No

**CodeSize**

The size of the layer archive in bytes.

Type: Long

Required: No

**SigningJobArn**

The Amazon Resource Name (ARN) of a signing job.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\d{12})?:(.*)`

Required: No

**SigningProfileVersionArn**

The Amazon Resource Name (ARN) for a signing profile version.

Type: String

Pattern: `arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}(-gov)?-[a-z]+-\d{1})?:(\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

# LayersListItem

Details about an AWS Lambda layer.

## Contents

**LatestMatchingVersion**

The newest version of the layer.

Type: LayerVersionsListItem object

Required: No

**LayerArn**

The Amazon Resource Name (ARN) of the function layer.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+`

Required: No

**LayerName**

The name of the layer.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `(arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+)|[a-zA-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

# LayerVersionContentInput

A ZIP archive that contains the contents of an AWS Lambda layer. You can specify either an Amazon S3 location, or upload a layer archive directly.

## Contents

**S3Bucket**

The Amazon S3 bucket of the layer archive.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 63.

Pattern: `[0-9A-Za-z\.\-_]*(?<!\.)`

Required: No

**S3Key**

The Amazon S3 key of the layer archive.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

**S3ObjectStorageMode**

Specifies how the layer archive is stored. Valid values:

- `COPY` (default) – Uploads a copy of your layer archive to Lambda.
- `REFERENCE` – Lambda references the layer archive from the specified Amazon S3 bucket.

Type: String

Valid Values: `COPY | REFERENCE`

Required: No

**S3ObjectVersion**

For versioned objects, the version of the layer archive object to use.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

**ZipFile**

The base64-encoded contents of the layer archive. AWS SDK and AWS CLI clients handle the encoding for you.

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

# LayerVersionContentOutput

Details about a version of an AWS Lambda layer.

## Contents

**CodeSha256**

The SHA-256 hash of the layer archive.

Type: String

Required: No

**CodeSize**

The size of the layer archive in bytes.

Type: Long

Required: No

**Location**

A link to the layer archive in Amazon S3 that is valid for 10 minutes.

Type: String

Required: No

**ResolvedS3Object**

The resolved Amazon S3 object that contains the layer archive.

Type: ResolvedS3Object object

Required: No

**SigningJobArn**

The Amazon Resource Name (ARN) of a signing job.

Type: String

Required: No

**SigningProfileVersionArn**

The Amazon Resource Name (ARN) for a signing profile version.

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

# LayerVersionsListItem

Details about a version of an AWS Lambda layer.

## Contents

### CompatibleArchitectures

A list of compatible instruction set architectures.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 2 items.

Valid Values: `x86_64 | arm64`

Required: No

### CompatibleRuntimes

The layer's compatible runtimes.

The following list includes deprecated runtimes. For more information, see Runtime use after deprecation.

For a list of all currently supported runtimes, see Supported runtimes.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 15 items.

Valid Values: `nodejs | nodejs4.3 | nodejs6.10 | nodejs8.10 | nodejs10.x | nodejs12.x | nodejs14.x | nodejs16.x | java8 | java8.al2 | java11 | python2.7 | python3.6 | python3.7 | python3.8 | python3.9 | dotnetcore1.0 | dotnetcore2.0 | dotnetcore2.1 | dotnetcore3.1 | dotnet6 | dotnet8 | nodejs4.3-edge | go1.x | ruby2.5 | ruby2.7 | provided | provided.al2 | nodejs18.x | python3.10 | java17 | ruby3.2 | ruby3.3 | ruby3.4 | python3.11 | nodejs20.x | provided.al2023 | python3.12 | java21 | python3.13 | nodejs22.x | nodejs24.x | python3.14 | java25 | dotnet10 | ruby4.0`

Required: No

**CreatedDate**

The date that the version was created, in ISO 8601 format. For example, `2018-11-27T15:10:45.123+0000`.

Type: String

Required: No

**Description**

The description of the version.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 256.

Required: No

**LayerVersionArn**

The ARN of the layer version.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 140.

Pattern: `arn:[a-zA-Z0-9-]+:lambda:[a-zA-Z0-9-]+:\d{12}:layer:[a-zA-Z0-9-_]+:[0-9]+`

Required: No

**LicenseInfo**

The layer's open-source license.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 512.

Required: No

**Version**

The version number.

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

# LoggingConfig

The function's Amazon CloudWatch Logs configuration settings.

## Contents

**ApplicationLogLevel**

Set this property to filter the application logs for your function that Lambda sends to CloudWatch. Lambda only sends application logs at the selected level of detail and lower, where `TRACE` is the highest level and `FATAL` is the lowest.

Type: String

Valid Values: `TRACE | DEBUG | INFO | WARN | ERROR | FATAL`

Required: No

**LogFormat**

The format in which Lambda sends your function's application and system logs to CloudWatch. Select between plain text and structured JSON.

Type: String

Valid Values: `JSON | Text`

Required: No

**LogGroup**

The name of the Amazon CloudWatch log group the function sends logs to. By default, Lambda functions send logs to a default log group named `/aws/lambda/<function name>`. To use a different log group, enter an existing log group or enter a new log group name.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 512.

Pattern: `[\.\-_/#A-Za-z0-9]+`

Required: No

**SystemLogLevel**

Set this property to filter the system logs for your function that Lambda sends to CloudWatch. Lambda only sends system logs at the selected level of detail and lower, where `DEBUG` is the highest level and `WARN` is the lowest.

Type: String

Valid Values: `DEBUG | INFO | WARN`

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

# OnFailure

A destination for events that failed processing. For more information, see Adding a destination.

## Contents

### Destination

The Amazon Resource Name (ARN) of the destination resource.

To retain records of failed invocations from Kinesis, DynamoDB, self-managed Apache Kafka, or Amazon MSK, you can configure an Amazon SNS topic, Amazon SQS queue, Amazon S3 bucket, or Kafka topic as the destination.

> **Note**
>
> Amazon SNS destinations have a message size limit of 256 KB. If the combined size of the function request and response payload exceeds the limit, Lambda will drop the payload when sending `OnFailure` event to the destination. For details on this behavior, refer to Retaining records of asynchronous invocations.

To retain records of failed invocations from Kinesis, DynamoDB, self-managed Kafka or Amazon MSK, you can configure an Amazon SNS topic, Amazon SQS queue, or Amazon S3 bucket as the destination.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 350.

Pattern: `$|kafka://([^.]([a-zA-Z0-9\-_.]{0,248}))|arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1})?:(\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

# OnSuccess

A destination for events that were processed successfully.

To retain records of successful asynchronous invocations, you can configure an Amazon SNS topic, Amazon SQS queue, Lambda function, or Amazon EventBridge event bus as the destination.

> **Note**
>
> `OnSuccess` is not supported in `CreateEventSourceMapping` or `UpdateEventSourceMapping` requests.

## Contents

### Destination

The Amazon Resource Name (ARN) of the destination resource.

> **Note**
>
> Amazon SNS destinations have a message size limit of 256 KB. If the combined size of the function request and response payload exceeds the limit, Lambda will drop the payload when sending `OnFailure` event to the destination. For details on this behavior, refer to Retaining records of asynchronous invocations.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 350.

Pattern: `$|kafka://([^.]([a-zA-Z0-9\-_.]{0,248}))|arn:(aws[a-zA-Z0-9-]*):([a-zA-Z0-9\-])+:([a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1})?:(\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

# Operation

Information about an operation within a durable execution.

## Contents

**Id**

The unique identifier for this operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9-_]+`

Required: Yes

**StartTimestamp**

The date and time when the operation started, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: Timestamp

Required: Yes

**Status**

The current status of the operation.

Type: String

Valid Values: `STARTED | PENDING | READY | SUCCEEDED | FAILED | CANCELLED | TIMED_OUT | STOPPED`

Required: Yes

**Type**

The type of operation.

Type: String

Valid Values: `EXECUTION | CONTEXT | STEP | WAIT | CALLBACK | CHAINED_INVOKE`

Required: Yes

**CallbackDetails**

Contains details about a callback operation in a durable execution, including the callback token and timeout configuration.

Type: CallbackDetails object

Required: No

**ChainedInvokeDetails**

Contains details about a chained function invocation in a durable execution, including the target function and invocation parameters.

Type: ChainedInvokeDetails object

Required: No

**ContextDetails**

Details about the context, if this operation represents a context.

Type: ContextDetails object

Required: No

**EndTimestamp**

The date and time when the operation ended, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: Timestamp

Required: No

**ExecutionDetails**

Details about the execution, if this operation represents an execution.

Type: ExecutionDetails object

Required: No

**Name**

The customer-provided name for this operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `[\x20-\x7E]+`

Required: No

**ParentId**

The unique identifier of the parent operation, if this operation is running within a child context.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9-_]+`

Required: No

**StepDetails**

Details about the step, if this operation represents a step.

Type: StepDetails object

Required: No

**SubType**

The subtype of the operation, providing additional categorization.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `[a-zA-Z0-9-_]+`

Required: No

**WaitDetails**

Details about the wait operation, if this operation represents a wait.

Type: WaitDetails 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

# OperationUpdate

An update to be applied to an operation during checkpointing.

## Contents

**Action**

The action to take on the operation.

Type: String

Valid Values: `START | SUCCEED | FAIL | RETRY | CANCEL`

Required: Yes

**Id**

The unique identifier for this operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9-_]+`

Required: Yes

**Type**

The type of operation to update.

Type: String

Valid Values: `EXECUTION | CONTEXT | STEP | WAIT | CALLBACK | CHAINED_INVOKE`

Required: Yes

**CallbackOptions**

Configuration options for callback operations in durable executions, including timeout settings and retry behavior.

Type: CallbackOptions object

Required: No

**ChainedInvokeOptions**

Configuration options for chained function invocations in durable executions, including retry settings and timeout configuration.

Type: ChainedInvokeOptions object

Required: No

**ContextOptions**

Options for context operations.

Type: ContextOptions object

Required: No

**Error**

The error information for failed operations. The combined size of all error fields is limited to 1 MB.

Type: ErrorObject object

Required: No

**Name**

The customer-provided name for this operation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `[\x20-\x7E]+`

Required: No

**ParentId**

The unique identifier of the parent operation, if this operation is running within a child context.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[a-zA-Z0-9-_]+`

Required: No

**Payload**

The payload for successful operations. The maximum payload size is 6 MB for synchronous `EXECUTION` operations (RequestResponse invocationType), and 1 MB for asynchronous `EXECUTION` (Event invocationType), `CHAINED_INVOKE`, `CONTEXT`, `STEP`, `WAIT`, and `CALLBACK` operations.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 6291456.

Required: No

**StepOptions**

Options for step operations.

Type: StepOptions object

Required: No

**SubType**

The subtype of the operation, providing additional categorization.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `[a-zA-Z0-9-_]+`

Required: No

**WaitOptions**

Options for wait operations.

Type: WaitOptions 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

# PauseDetails

Details about a durable execution that is pausing or paused.

## Contents

**ExecutionTimeoutPaused**

Specifies whether the pause also pauses the execution timeout.

Type: Boolean

Required: Yes

**PauseRequestTimestamp**

The date and time when you requested the pause, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: Timestamp

Required: Yes

**Reason**

The reason that you provided when you paused the execution. This field is only present if you set `IncludeExecutionData` to `true` in the request.

Type: String

Length Constraints: Minimum length of 0. 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

# PropagateTags

Configuration for tag propagation to managed resources launched by the capacity provider.

## Contents

**ExplicitTags**

A list of tags to apply to managed resources when `Mode` is set to `Explicit`. You can specify up to 40 tags.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 40 items.

Required: No

**Mode**

The tag propagation mode. Set to `Explicit` to propagate the tags specified in `ExplicitTags` to managed resources. Set to `None` to disable tag propagation.

Type: String

Valid Values: `None | Explicit`

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

# ProvisionedConcurrencyConfigListItem

Details about the provisioned concurrency configuration for a function alias or version.

## Contents

**AllocatedProvisionedConcurrentExecutions**

The amount of provisioned concurrency allocated. When a weighted alias is used during linear and canary deployments, this value fluctuates depending on the amount of concurrency that is provisioned for the function versions.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

**AvailableProvisionedConcurrentExecutions**

The amount of provisioned concurrency available.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

**FunctionArn**

The Amazon Resource Name (ARN) of the alias or version.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: `arn:(aws[a-zA-Z-]*)?:lambda:[a-z]{2}((-gov)|(-iso([a-z]?)))?-[a-z]+-\d{1}:\d{12}:function:[a-zA-Z0-9-_]+(:(\$LATEST|[a-zA-Z0-9-_]+))?`

Required: No

**LastModified**

The date and time that a user last updated the configuration, in ISO 8601 format.

Type: String

Required: No

**RequestedProvisionedConcurrentExecutions**

The amount of provisioned concurrency requested.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

**Status**

The status of the allocation process.

Type: String

Valid Values: `IN_PROGRESS | READY | FAILED`

Required: No

**StatusReason**

For failed allocations, the reason that provisioned concurrency could not be allocated.

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

# ProvisionedPollerConfig

The provisioned mode configuration for the event source. Use Provisioned Mode to customize the minimum and maximum number of event pollers for your event source.

## Contents

**MaximumPollers**

The maximum number of event pollers this event source can scale up to. For Amazon SQS event source mappings, the accepted range is between 2 and 10,000, with a default of 200. For Amazon MSK and self-managed Apache Kafka event source mappings, the accepted range is between 1 and 2,000, with a default of 200.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 10000.

Required: No

**MinimumPollers**

The minimum number of event pollers this event source can scale down to. For Amazon SQS events source mappings, default is 2, and minimum 2 required. For Amazon MSK and self-managed Apache Kafka event source mappings, default is 1.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 200.

Required: No

**PollerGroupName**

(Amazon MSK and self-managed Apache Kafka) The name of the provisioned poller group. Use this option to group multiple ESMs within the event source's VPC to share Event Poller Unit (EPU) capacity. You can use this option to optimize Provisioned mode costs for your ESMs. You can group up to 100 ESMs per poller group and aggregate maximum pollers across all ESMs in a group cannot exceed 2000.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 128.

Pattern: `[a-zA-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

# ResolvedS3Object

Details about the resolved Amazon S3 object that contains a function's deployment package.

## Contents

**S3Bucket**

The Amazon S3 bucket that contains the deployment package.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 63.

Pattern: `[0-9A-Za-z\.\-_]*(?<!\.)`

Required: No

**S3Key**

The Amazon S3 key of the deployment package.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Required: No

**S3ObjectVersion**

The version of the deployment package object.

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

# RetryDetails

Information about retry attempts for an operation.

## Contents

**CurrentAttempt**

The current attempt number for this operation.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

**NextAttemptDelaySeconds**

The delay before the next retry attempt, in seconds.

Type: Integer

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

# RuntimeVersionConfig

The ARN of the runtime and any errors that occured.

## Contents

**Error**

Error response when Lambda is unable to retrieve the runtime version for a function.

Type: RuntimeVersionError object

Required: No

**RuntimeVersionArn**

The ARN of the runtime version you want the function to use.

Type: String

Length Constraints: Minimum length of 26. Maximum length of 2048.

Pattern: `arn:(aws[a-zA-Z-]*):lambda:[a-z]{2}((-gov)|(-iso(b?)))?-[a-z]+-\d{1}::runtime:.+`

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

# RuntimeVersionError

Any error returned when the runtime version information for the function could not be retrieved.

## Contents

**ErrorCode**

The error code.

Type: String

Required: No

**Message**

The error message.

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

# S3FilesConfig

Setting controls how your function accesses data from an Amazon S3 file system.

## Contents

**DirectS3Read**

Specifies if a function reads from the file system for the lowest latency, or through Amazon S3 Files feature "direct Amazon S3 bucket reads" for the highest throughput. Valid values:

- AUTO (default) – Direct reads are active for functions you configure with 512 MB or more of memory.
- ENABLED – Enforces all reads are directly from the Amazon S3 bucket, regardless of available memory (less than 512 MB).
- DISABLED – Routes all reads through the file system, regardless of memory configuration.

To use direct reads, you must grant the execution role the `s3:GetObject` and `s3:GetObjectVersion` permissions. If a direct read fails, Lambda automatically falls back to reading through the file system.

Type: String

Valid Values: `ENABLED | DISABLED | AUTO`

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

# ScalingConfig

(Amazon SQS only) The scaling configuration for the event source. To remove the configuration, pass an empty value.

## Contents

**MaximumConcurrency**

Limits the number of concurrent instances that the Amazon SQS event source can invoke.

Type: Integer

Valid Range: Minimum value of 2. Maximum value of 1000.

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

# SelfManagedEventSource

The self-managed Apache Kafka cluster for your event source.

## Contents

**Endpoints**

The list of bootstrap servers for your Kafka brokers in the following format: `"KAFKA_BOOTSTRAP_SERVERS": ["abc.xyz.com:xxxx","abc2.xyz.com:xxxx"]`.

Type: String to array of strings map

Map Entries: Maximum number of 2 items.

Valid Keys: `KAFKA_BOOTSTRAP_SERVERS`

Array Members: Minimum number of 1 item. Maximum number of 10 items.

Length Constraints: Minimum length of 1. Maximum length of 300.

Pattern: `(([a-zA-Z0-9]|[a-zA-Z0-9][a-zA-Z0-9\-]*[a-zA-Z0-9])\.)*([A-Za-z0-9]|[A-Za-z0-9][A-Za-z0-9\-]*[A-Za-z0-9]):[0-9]{1,5}`

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

# SelfManagedKafkaEventSourceConfig

Specific configuration settings for a self-managed Apache Kafka event source.

## Contents

**ConsumerGroupId**

The identifier for the Kafka consumer group to join. The consumer group ID must be unique among all your Kafka event sources. After creating a Kafka event source mapping with the consumer group ID specified, you cannot update this value. For more information, see Customizable consumer group ID.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 200.

Pattern: `[a-zA-Z0-9-\/*:_+=.@-]*`

Required: No

**ConsumptionMode**

The mode that Lambda uses to consume records from your self-managed Apache Kafka topic. Valid values are the following:

- `Stream` (default) – Lambda consumes records using a Kafka consumer group and preserves the order of records within each partition.
- `Queue` – Lambda consumes records using a Kafka share group. Multiple consumers can process records from the same partition concurrently, so Lambda doesn't preserve per-partition order. To use Queue mode, your cluster must run Apache Kafka version 4.2 or later with share groups enabled.

If you omit this parameter, Lambda uses `Stream`.

You cannot change `ConsumptionMode` after you create the event source mapping. To use a different consumption mode, create a new event source mapping.

When `ConsumptionMode` is `Queue`, the `StartingPosition`, `StartingPositionTimestamp`, and `MaximumBatchingWindowInSeconds` parameters are not supported.

Type: String

Valid Values: `Stream | Queue`

Required: No

**SchemaRegistryConfig**

Specific configuration settings for a Kafka schema registry.

Type: KafkaSchemaRegistryConfig 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

# SnapStart

The function's Lambda SnapStart setting. Set `ApplyOn` to `PublishedVersions` to create a snapshot of the initialized execution environment when you publish a function version.

## Contents

### ApplyOn

Set to `PublishedVersions` to create a snapshot of the initialized execution environment when you publish a function version.

Type: String

Valid Values: `PublishedVersions | None`

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

# SnapStartResponse

The function's SnapStart setting.

## Contents

**ApplyOn**

When set to `PublishedVersions`, Lambda creates a snapshot of the execution environment when you publish a function version.

Type: String

Valid Values: `PublishedVersions | None`

Required: No

**OptimizationStatus**

When you provide a qualified Amazon Resource Name (ARN), this response element indicates whether SnapStart is activated for the specified function version.

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

# SourceAccessConfiguration

To secure and define access to your event source, you can specify the authentication protocol, VPC components, or virtual host.

## Contents

### Type

The type of authentication protocol, VPC components, or virtual host for your event source. For example: `"Type":"SASL_SCRAM_512_AUTH"`.

- `BASIC_AUTH` – (Amazon MQ) The AWS Secrets Manager secret that stores your broker credentials.
- `BASIC_AUTH` – (Self-managed Apache Kafka) The Secrets Manager ARN of your secret key used for SASL/PLAIN authentication of your Apache Kafka brokers.
- `VPC_SUBNET` – (Self-managed Apache Kafka) The subnets associated with your VPC. Lambda connects to these subnets to fetch data from your self-managed Apache Kafka cluster.
- `VPC_SECURITY_GROUP` – (Self-managed Apache Kafka) The VPC security group used to manage access to your self-managed Apache Kafka brokers.
- `SASL_SCRAM_256_AUTH` – (Self-managed Apache Kafka) The Secrets Manager ARN of your secret key used for SASL SCRAM-256 authentication of your self-managed Apache Kafka brokers.
- `SASL_SCRAM_512_AUTH` – (Amazon MSK, Self-managed Apache Kafka) The Secrets Manager ARN of your secret key used for SASL SCRAM-512 authentication of your self-managed Apache Kafka brokers.
- `VIRTUAL_HOST` –- (RabbitMQ) The name of the virtual host in your RabbitMQ broker. Lambda uses this RabbitMQ host as the event source. This property cannot be specified in an UpdateEventSourceMapping API call.
- `CLIENT_CERTIFICATE_TLS_AUTH` – (Amazon MSK, self-managed Apache Kafka) The Secrets Manager ARN of your secret key containing the certificate chain (X.509 PEM), private key (PKCS#8 PEM), and private key password (optional) used for mutual TLS authentication of your MSK/Apache Kafka brokers.
- `SERVER_ROOT_CA_CERTIFICATE` – (Self-managed Apache Kafka) The Secrets Manager ARN of your secret key containing the root CA certificate (X.509 PEM) used for TLS encryption of your Apache Kafka brokers.

- OAUTHBEARER_AUTH – (Self-managed Apache Kafka) The Secrets Manager ARN of your secret key containing the OAuth 2.0 credentials that Lambda uses for SASL/OAUTHBEARER authentication with your Apache Kafka brokers. For the contents of the secret, see Configuring the OAuth secret.
- OAUTHBEARER_SCOPE – (Self-managed Apache Kafka) The OAuth 2.0 scope that Lambda requests when it acquires an access token. The URI field holds the scope value, not a secret ARN. This type requires OAUTHBEARER_AUTH.
- OAUTHBEARER_AUDIENCE – (Self-managed Apache Kafka) The OAuth 2.0 audience that Lambda requests when it acquires an access token. The URI field holds the audience value, not a secret ARN. This type requires either OAUTHBEARER_AUTH or IAM_OAUTHBEARER_AUTH.
- OAUTHBEARER_LOGICAL_CLUSTER – (Self-managed Apache Kafka) The logical cluster identifier that Lambda sends to a Confluent Cloud broker. The URI field holds the identifier, not a secret ARN. This type requires OAUTHBEARER_AUTH.
- OAUTHBEARER_IDENTITY_POOL – (Self-managed Apache Kafka) The identity pool identifier that Lambda sends to a Confluent Cloud broker. The URI field holds the identifier, not a secret ARN. This type requires OAUTHBEARER_AUTH.
- IAM_AUTH – (Self-managed Apache Kafka) Authenticate with AWS Identity and Access Management (IAM). Your function's execution role signs each connection, so there is no secret to provide. Omit the URI field for this type.
- IAM_OAUTHBEARER_AUTH – (Self-managed Apache Kafka) Authenticate with an AWS web identity token over SASL/OAUTHBEARER. Lambda requests the token for your function's execution role, so there is no secret to provide. Omit the URI field for this type. This type requires OAUTHBEARER_AUDIENCE and does not support the other OAUTHBEARER types.

Type: String

Valid Values: BASIC_AUTH | VPC_SUBNET | VPC_SECURITY_GROUP | SASL_SCRAM_512_AUTH | SASL_SCRAM_256_AUTH | VIRTUAL_HOST | CLIENT_CERTIFICATE_TLS_AUTH | SERVER_ROOT_CA_CERTIFICATE

Required: No

**URI**

The value for your chosen configuration in Type. For example: "URI": "arn:aws:secretsmanager:us-east-1:01234567890:secret:MyBrokerSecretName".

Type: String

Length Constraints: Minimum length of 1. Maximum length of 200.

Pattern: `[a-zA-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

# StepDetails

Details about a step operation.

## Contents

**Attempt**

The current attempt number for this step.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

**Error**

Details about the step failure.

Type: ErrorObject object

Required: No

**NextAttemptTimestamp**

The date and time when the next attempt is scheduled, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD). Only populated when the step is in a pending state.

Type: Timestamp

Required: No

**Result**

The JSON response payload from the step operation.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 6291456.

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

# StepFailedDetails

Details about a step that failed.

## Contents

**Error**

Details about the step failure.

Type: EventError object

Required: Yes

**RetryDetails**

Information about retry attempts for this step operation.

Type: RetryDetails object

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

# StepOptions

Configuration options for a step operation.

## Contents

**NextAttemptDelaySeconds**

The delay in seconds before the next retry attempt.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 31622400.

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

# StepStartedDetails

Details about a step that has started.

## 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

# StepSucceededDetails

Details about a step that succeeded.

## Contents

**Result**

The response payload from the successful operation.

Type: EventResult object

Required: Yes

**RetryDetails**

Information about retry attempts for this step operation.

Type: RetryDetails object

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

# TagsError

An object that contains details about an error related to retrieving tags.

## Contents

**ErrorCode**

The error code.

Type: String

Length Constraints: Minimum length of 10. Maximum length of 21.

Pattern: `[A-Za-z]+Exception`

Required: Yes

**Message**

The error message.

Type: String

Length Constraints: Minimum length of 84. Maximum length of 1000.

Pattern: `.*`

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

# TargetTrackingScalingPolicy

A scaling policy for the capacity provider that automatically adjusts capacity to maintain a target value for a specific metric.

## Contents

**PredefinedMetricType**

The predefined metric type to track for scaling decisions.

Type: String

Valid Values: `LambdaCapacityProviderAverageCPUUtilization`

Required: Yes

**TargetValue**

The target value for the metric that the scaling policy attempts to maintain through scaling actions.

Type: Double

Valid Range: Minimum value of 0.0. Maximum value of 100.0.

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

# TenancyConfig

Specifies the tenant isolation mode configuration for a Lambda function. This allows you to configure specific tenant isolation strategies for your function invocations. Tenant isolation configuration cannot be modified after function creation.

## Contents

**TenantIsolationMode**

Tenant isolation mode allows for invocation to be sent to a corresponding execution environment dedicated to a specific tenant ID.

Type: String

Valid Values: `PER_TENANT`

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

# TraceHeader

Contains trace headers for the Lambda durable execution.

## Contents

### XAmznTraceId

The AWS X-Ray trace header associated with the durable execution.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 8192.

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

# TracingConfig

The function's AWS X-Ray tracing configuration. To sample and record incoming requests, set `Mode` to `Active`.

## Contents

### Mode

The tracing mode.

Type: String

Valid Values: `Active | PassThrough`

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

# TracingConfigResponse

The function's AWS X-Ray tracing configuration.

## Contents

### Mode

The tracing mode.

Type: String

Valid Values: `Active | PassThrough`

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

# VpcConfig

The VPC security groups and subnets that are attached to a Lambda function. For more information, see Configuring a Lambda function to access resources in a VPC.

## Contents

**Ipv6AllowedForDualStack**

Allows outbound IPv6 traffic on VPC functions that are connected to dual-stack subnets.

Type: Boolean

Required: No

**SecurityGroupIds**

A list of VPC security group IDs.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 5 items.

Required: No

**SubnetIds**

A list of VPC subnet IDs.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 16 items.

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

# VpcConfigResponse

The VPC security groups and subnets that are attached to a Lambda function.

## Contents

**Ipv6AllowedForDualStack**

Allows outbound IPv6 traffic on VPC functions that are connected to dual-stack subnets.

Type: Boolean

Required: No

**SecurityGroupIds**

A list of VPC security group IDs.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 5 items.

Required: No

**SubnetIds**

A list of VPC subnet IDs.

Type: Array of strings

Array Members: Minimum number of 0 items. Maximum number of 16 items.

Required: No

**VpcId**

The ID of the VPC.

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

# WaitCancelledDetails

Details about a wait operation that was cancelled.

## Contents

**Error**

Details about why the wait operation was cancelled.

Type: EventError 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

# WaitDetails

Details about a wait operation.

## Contents

### ScheduledEndTimestamp

The date and time when the wait operation is scheduled to complete, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

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

# WaitOptions

Specifies how long the durable execution waits.

## Contents

### WaitSeconds

The duration to wait, in seconds.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 31622400.

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

# WaitStartedDetails

Details about a wait operation that has started.

## Contents

**Duration**

The duration to wait, in seconds.

Type: Integer

Valid Range: Minimum value of 0.

Required: Yes

**ScheduledEndTimestamp**

The date and time when the wait operation is scheduled to complete, in ISO-8601 format (YYYY-MM-DDThh:mm:ss.sTZD).

Type: Timestamp

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

# WaitSucceededDetails

Details about a wait operation that succeeded.

## Contents

### Duration

The wait duration, in seconds.

Type: Integer

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

# Common Parameters

The following list contains the parameters that all actions use for signing Signature Version 4 requests with a query string. Any action-specific parameters are listed in the topic for that action. For more information about Signature Version 4, see Signing AWS API requests in the *IAM User Guide*.

**X-Amz-Algorithm**

The hash algorithm that you used to create the request signature.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Valid Values: `AWS4-HMAC-SHA256`

Required: Conditional

**X-Amz-Credential**

The credential scope value, which is a string that includes your access key, the date, the region you are targeting, the service you are requesting, and a termination string ("aws4_request"). The value is expressed in the following format: *access_key*/*YYYYMMDD*/*region*/*service*/aws4_request.

For more information, see Create a signed AWS API request in the *IAM User Guide*.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

**X-Amz-Date**

The date that is used to create the signature. The format must be ISO 8601 basic format (YYYYMMDD'T'HHMMSS'Z'). For example, the following date time is a valid X-Amz-Date value: `20120325T120000Z`.

Condition: 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, X-Amz-Date is not required. When X-Amz-Date is used, it always overrides the value of the Date header. For more information, see Elements of an AWS API request signature in the *IAM User Guide*.

Type: string

Required: Conditional

**X-Amz-Security-Token**

The temporary security token that was obtained through a call to AWS Security Token Service (AWS STS). For a list of services that support temporary security credentials from AWS STS, see AWS services that work with IAM in the *IAM User Guide*.

Condition: If you're using temporary security credentials from AWS STS, you must include the security token.

Type: string

Required: Conditional

**X-Amz-Signature**

Specifies the hex-encoded signature that was calculated from the string to sign and the derived signing key.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

**X-Amz-SignedHeaders**

Specifies all the HTTP headers that were included as part of the canonical request. For more information about specifying signed headers, see Create a signed AWS API request in the *IAM User Guide*.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

# Common Error Types

This section lists common error types that this AWS service may return. Not all services return all error types listed here. For errors specific to an API action for this service, see the topic for that API action.

**AccessDeniedException**

You don't have permission to perform this action. Verify that your IAM policy includes the required permissions.

HTTP Status Code: 403

**ExpiredTokenException**

The security token included in the request has expired. Request a new security token and try again.

HTTP Status Code: 403

**IncompleteSignature**

The request signature doesn't conform to AWS standards. Verify that you're using valid AWS credentials and that your request is properly formatted. If you're using an SDK, ensure it's up to date.

HTTP Status Code: 403

**InternalFailure**

The request can't be processed right now because of an internal server issue. Try again later. If the problem persists, contact AWS Support.

HTTP Status Code: 500

**MalformedHttpRequestException**

The request body can't be processed. This typically happens when the request body can't be decompressed using the specified content encoding algorithm. Verify that the content encoding header matches the compression format used.

HTTP Status Code: 400

**NotAuthorized**

You don't have permissions to perform this action. Verify that your IAM policy includes the required permissions.

HTTP Status Code: 401

**OptInRequired**

Your AWS account needs a subscription for this service. Verify that you've enabled the service in your account.

HTTP Status Code: 403

**RequestAbortedException**

The request was aborted before a response could be returned. This typically happens when the client closes the connection.

HTTP Status Code: 400

**RequestEntityTooLargeException**

The request entity is too large. Reduce the size of the request body and try again.

HTTP Status Code: 413

**RequestTimeoutException**

The request timed out. The server didn't receive the complete request within the expected time frame. Try again.

HTTP Status Code: 408

**ServiceUnavailable**

The service is temporarily unavailable. Try again later.

HTTP Status Code: 503

**ThrottlingException**

Your request rate is too high. The AWS SDKs automatically retry requests that receive this exception. Reduce the frequency of requests.

HTTP Status Code: 400

**UnknownOperationException**

The action or operation isn't recognized. Verify that the action name is spelled correctly and that it's supported by the API version you're using.

HTTP Status Code: 404

**UnrecognizedClientException**

The X.509 certificate or AWS access key ID you provided doesn't exist in our records. Verify that you're using valid credentials and that they haven't expired.

HTTP Status Code: 403

**ValidationError**

The input doesn't meet the required format or constraints. Check that all required parameters are included and that values are valid.

HTTP Status Code: 400