API Reference

Amazon Redshift

API Version 2012-12-01

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Amazon Redshift: API Reference

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Welcome

Overview

This is an interface reference for Amazon Redshift. It contains documentation for one of the programming or command line interfaces you can use to manage Amazon Redshift clusters. Note that Amazon Redshift is asynchronous, which means that some interfaces may require techniques, such as polling or asynchronous callback handlers, to determine when a command has been applied. In this reference, the parameter descriptions indicate whether a change is applied immediately, on the next instance reboot, or during the next maintenance window. For a summary of the Amazon Redshift cluster management interfaces, go to Using the Amazon Redshift Management Interfaces.

Amazon Redshift manages all the work of setting up, operating, and scaling a data warehouse: provisioning capacity, monitoring and backing up the cluster, and applying patches and upgrades to the Amazon Redshift engine. You can focus on using your data to acquire new insights for your business and customers.

If you are a first-time user of Amazon Redshift, we recommend that you begin by reading the Amazon Redshift Getting Started Guide.

If you are a database developer, the Amazon Redshift Database Developer Guide explains how to design, build, query, and maintain the databases that make up your data warehouse.

This document was last published on September 2, 2025.

Actions

The following actions are supported:

- AcceptReservedNodeExchange
- AddPartner
- AssociateDataShareConsumer
- AuthorizeClusterSecurityGroupIngress
- AuthorizeDataShare
- AuthorizeEndpointAccess
- AuthorizeSnapshotAccess
- BatchDeleteClusterSnapshots
- BatchModifyClusterSnapshots
- CancelResize
- CopyClusterSnapshot
- CreateAuthenticationProfile
- CreateCluster
- CreateClusterParameterGroup
- CreateClusterSecurityGroup
- CreateClusterSnapshot
- CreateClusterSubnetGroup
- CreateCustomDomainAssociation
- CreateEndpointAccess
- CreateEventSubscription
- CreateHsmClientCertificate
- CreateHsmConfiguration
- CreateIntegration
- CreateRedshiftIdcApplication
- CreateScheduledAction
- CreateSnapshotCopyGrant
- CreateSnapshotSchedule

- CreateTags
- CreateUsageLimit
- DeauthorizeDataShare
- DeleteAuthenticationProfile
- DeleteCluster
- DeleteClusterParameterGroup
- DeleteClusterSecurityGroup
- DeleteClusterSnapshot
- DeleteClusterSubnetGroup
- DeleteCustomDomainAssociation
- DeleteEndpointAccess
- DeleteEventSubscription
- DeleteHsmClientCertificate
- DeleteHsmConfiguration
- DeleteIntegration
- DeletePartner
- DeleteRedshiftIdcApplication
- DeleteResourcePolicy
- DeleteScheduledAction
- DeleteSnapshotCopyGrant
- DeleteSnapshotSchedule
- DeleteTags
- DeleteUsageLimit
- DeregisterNamespace
- DescribeAccountAttributes
- DescribeAuthenticationProfiles
- DescribeClusterDbRevisions
- DescribeClusterParameterGroups
- DescribeClusterParameters
- DescribeClusters

- DescribeClusterSecurityGroups
- DescribeClusterSnapshots
- DescribeClusterSubnetGroups
- DescribeClusterTracks
- DescribeClusterVersions
- DescribeCustomDomainAssociations
- DescribeDataShares
- DescribeDataSharesForConsumer
- DescribeDataSharesForProducer
- DescribeDefaultClusterParameters
- DescribeEndpointAccess
- DescribeEndpointAuthorization
- DescribeEventCategories
- DescribeEvents
- DescribeEventSubscriptions
- DescribeHsmClientCertificates
- DescribeHsmConfigurations
- DescribeInboundIntegrations
- DescribeIntegrations
- DescribeLoggingStatus
- DescribeNodeConfigurationOptions
- DescribeOrderableClusterOptions
- DescribePartners
- DescribeRedshiftIdcApplications
- DescribeReservedNodeExchangeStatus
- DescribeReservedNodeOfferings
- DescribeReservedNodes
- DescribeResize
- DescribeScheduledActions
- DescribeSnapshotCopyGrants

- DescribeSnapshotSchedules
- DescribeStorage
- DescribeTableRestoreStatus
- DescribeTags
- DescribeUsageLimits
- DisableLogging
- DisableSnapshotCopy
- DisassociateDataShareConsumer
- EnableLogging
- EnableSnapshotCopy
- FailoverPrimaryCompute
- GetClusterCredentials
- GetClusterCredentialsWithIAM
- GetReservedNodeExchangeConfigurationOptions
- GetReservedNodeExchangeOfferings
- GetResourcePolicy
- ListRecommendations
- ModifyAquaConfiguration
- ModifyAuthenticationProfile
- ModifyCluster
- ModifyClusterDbRevision
- ModifyClusterIamRoles
- ModifyClusterMaintenance
- ModifyClusterParameterGroup
- ModifyClusterSnapshot
- ModifyClusterSnapshotSchedule
- ModifyClusterSubnetGroup
- ModifyCustomDomainAssociation
- ModifyEndpointAccess
- ModifyEventSubscription

- ModifyIntegration
- ModifyRedshiftIdcApplication
- ModifyScheduledAction
- ModifySnapshotCopyRetentionPeriod
- ModifySnapshotSchedule
- ModifyUsageLimit
- PauseCluster
- PurchaseReservedNodeOffering
- PutResourcePolicy
- RebootCluster
- RegisterNamespace
- RejectDataShare
- ResetClusterParameterGroup
- ResizeCluster
- RestoreFromClusterSnapshot
- RestoreTableFromClusterSnapshot
- ResumeCluster
- RevokeClusterSecurityGroupIngress
- RevokeEndpointAccess
- RevokeSnapshotAccess
- RotateEncryptionKey
- UpdatePartnerStatus

AcceptReservedNodeExchange

Exchanges a DC1 Reserved Node for a DC2 Reserved Node with no changes to the configuration (term, payment type, or number of nodes) and no additional costs.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ReservedNodeId

A string representing the node identifier of the DC1 Reserved Node to be exchanged.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

TargetReservedNodeOfferingId

The unique identifier of the DC2 Reserved Node offering to be used for the exchange. You can obtain the value for the parameter by calling GetReservedNodeExchangeOfferings

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Response Elements

The following element is returned by the service.

ExchangedReservedNode

Type: ReservedNode object

Errors

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

DependentServiceUnavailableFault

Your request cannot be completed because a dependent internal service is temporarily unavailable. Wait 30 to 60 seconds and try again.

HTTP Status Code: 400

InvalidReservedNodeState

Indicates that the Reserved Node being exchanged is not in an active state.

HTTP Status Code: 400

ReservedNodeAlreadyExists

User already has a reservation with the given identifier.

HTTP Status Code: 404

ReservedNodeAlreadyMigrated

Indicates that the reserved node has already been exchanged.

HTTP Status Code: 400

ReservedNodeNotFound

The specified reserved compute node not found.

HTTP Status Code: 404

ReservedNodeOfferingNotFound

Specified offering does not exist.

HTTP Status Code: 404

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of AcceptReservedNodeExchange.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
    ?Action=AcceptReservedNodeExchange
&ReservedNodeId=12345678-12ab-12a1-1a2a-12ab-12a12aEXAMPLE
&TargetReservedNodeOfferingId=12345678-12ab-12a1-1a2a-12ab-12a12bEXAMPLE
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<AcceptReservedNodeExchangeResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <AcceptReservedNodeExchangeResult>
    <ExchangedReservedNode>
      <ReservedNodeId>12345678-12ab-12a1-1a2a-12ab-12a12aEXAMPLE</ReservedNodeId>
      <OfferingType>All Upfront</OfferingType>
      <ReservedNodeOfferingType>Regular</ReservedNodeOfferingType>
      <RecurringCharges>
        <RecurringCharge>
          <RecurringChargeAmount>0.0</RecurringChargeAmount>
          <RecurringChargeFrequency>Hourly</RecurringChargeFrequency>
        </RecurringCharge>
      </RecurringCharges>
      <NodeType>dc2.large</NodeType>
      <FixedPrice>0.0</FixedPrice>
      <Duration>31536000</Duration>
      <UsagePrice>0.0</UsagePrice>
      <ReservedNodeOfferingId>12345678-12ab-12a1-1a2a-12ab-12a12bEXAMPLE</
ReservedNodeOfferingId>
      <StartTime>2019-12-26T22:27:56Z</StartTime>
      <NodeCount>1</NodeCount>
      <State>exchanging</State>
      <CurrencyCode>USD</CurrencyCode>
    </ExchangedReservedNode>
  </AcceptReservedNodeExchangeResult>
  <ResponseMetadata>
    <RequestId>0b899aa4-2830-11ea-8a28-2fd1719d0e86</RequestId>
```

```
  </ResponseMetadata>
</AcceptReservedNodeExchangeResponse>
```

See Also

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

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

AddPartner

Adds a partner integration to a cluster. This operation authorizes a partner to push status updates for the specified database. To complete the integration, you also set up the integration on the partner website.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

AccountId

The AWS account ID that owns the cluster.

Type: String

Length Constraints: Fixed length of 12.

Pattern: `^[0-9]+$`

Required: Yes

ClusterIdentifier

The cluster identifier of the cluster that receives data from the partner.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[a-zA-Z0-9\-]+$`

Required: Yes

DatabaseName

The name of the database that receives data from the partner.

Type: String

Length Constraints: Maximum length of 127.

Pattern: `^[\p{L}_][\p{L}\p{N}@$#_]+$`

Required: Yes

PartnerName

The name of the partner that is authorized to send data.

Type: String

Length Constraints: Maximum length of 255.

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

Required: Yes

Response Elements

The following elements are returned by the service.

DatabaseName

The name of the database that receives data from the partner.

Type: String

Length Constraints: Maximum length of 127.

Pattern: `^[\p{L}_][\p{L}\p{N}@$#_]+$`

PartnerName

The name of the partner that is authorized to send data.

Type: String

Length Constraints: Maximum length of 255.

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

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

PartnerNotFound

The name of the partner was not found.

HTTP Status Code: 404

UnauthorizedPartnerIntegration

The partner integration is not authorized.

HTTP Status Code: 401

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

AssociateDataShareConsumer

From a datashare consumer account, associates a datashare with the account (AssociateEntireAccount) or the specified namespace (ConsumerArn). If you make this association, the consumer can consume the datashare.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

DataShareArn

The Amazon Resource Name (ARN) of the datashare that the consumer is to use.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

AllowWrites

If set to true, allows write operations for a datashare.

Type: Boolean

Required: No

AssociateEntireAccount

A value that specifies whether the datashare is associated with the entire account.

Type: Boolean

Required: No

ConsumerArn

The Amazon Resource Name (ARN) of the consumer namespace associated with the datashare.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ConsumerRegion

From a datashare consumer account, associates a datashare with all existing and future namespaces in the specified AWS Region.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following elements are returned by the service.

AllowPubliclyAccessibleConsumers

A value that specifies whether the datashare can be shared to a publicly accessible cluster.

Type: Boolean

DataShareArn

The Amazon Resource Name (ARN) of the datashare that the consumer is to use.

Type: String

Length Constraints: Maximum length of 2147483647.

DataShareAssociations.member.N

A value that specifies when the datashare has an association between producer and data consumers.

Type: Array of DataShareAssociation objects

DataShareType

The type of the datashare created by RegisterNamespace.

Type: String

Valid Values: `INTERNAL`

ManagedBy

The identifier of a datashare to show its managing entity.

Type: String

Length Constraints: Maximum length of 2147483647.

ProducerArn

The Amazon Resource Name (ARN) of the producer namespace.

Type: String

Length Constraints: Maximum length of 2147483647.

Errors

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

InvalidDataShareFault

There is an error with the datashare.

HTTP Status Code: 400

InvalidNamespaceFault

The namespace isn't valid because the namespace doesn't exist. Provide a valid namespace.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of AssociateDataShareConsumer.

Sample Request

```
AssociateDataShareConsumer&AssociateEntireAccount=true&DataShareArn=arn%3Aaws
%3Aredshift%3Aus-east-1%3A827630067164%3Adatashare%3Aa1c54ed4-8323-4d14-
b5dd-927cb596dc0e%2Ftestshare&Version=2012-12-01
```

Sample Response

```
<AssociateDataShareConsumerResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <AssociateDataShareConsumerResult>
    <ProducerNamespaceArn>arn:aws:redshift:us-
east-1:827630067164:namespace:a1c54ed4-8323-4d14-b5dd-927cb596dc0e</
ProducerNamespaceArn>
    <AllowPubliclyAccessibleConsumers>false</AllowPubliclyAccessibleConsumers>
    <DataShareArn>arn:aws:redshift:us-east-1:827630067164:datashare:a1c54ed4-8323-4d14-
b5dd-927cb596dc0e/testshare</DataShareArn>
    <DataShareAssociations>
      <member>
        <StatusChangeDate>2021-01-11T23:39:25.485605</StatusChangeDate>
        <ConsumerIdentifier>827630067164</ConsumerIdentifier>
        <CreatedDate>2021-01-11T22:12:23.038612</CreatedDate>
        <Status>ACTIVE</Status>
      </member>
    </DataShareAssociations>
  </AssociateDataShareConsumerResult>
  <ResponseMetadata>
    <RequestId>c125d0e3-72de-4938-a919-e6a0c3f8489d</RequestId>
  </ResponseMetadata>
</AssociateDataShareConsumerResponse>
```

See Also

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

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

- AWS SDK for Ruby V3

AuthorizeClusterSecurityGroupIngress

Adds an inbound (ingress) rule to an Amazon Redshift security group. Depending on whether the application accessing your cluster is running on the Internet or an Amazon EC2 instance, you can authorize inbound access to either a Classless Interdomain Routing (CIDR)/Internet Protocol (IP) range or to an Amazon EC2 security group. You can add as many as 20 ingress rules to an Amazon Redshift security group.

If you authorize access to an Amazon EC2 security group, specify *EC2SecurityGroupName* and *EC2SecurityGroupOwnerId*. The Amazon EC2 security group and Amazon Redshift cluster must be in the same AWS Region.

If you authorize access to a CIDR/IP address range, specify *CIDRIP*. For an overview of CIDR blocks, see the Wikipedia article on Classless Inter-Domain Routing.

You must also associate the security group with a cluster so that clients running on these IP addresses or the EC2 instance are authorized to connect to the cluster. For information about managing security groups, go to Working with Security Groups in the *Amazon Redshift Cluster Management Guide*.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterSecurityGroupName

The name of the security group to which the ingress rule is added.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

CIDRIP

The IP range to be added the Amazon Redshift security group.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

EC2SecurityGroupName

The EC2 security group to be added the Amazon Redshift security group.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

EC2SecurityGroupOwnerId

The AWS account number of the owner of the security group specified by the *EC2SecurityGroupName* parameter. The AWS Access Key ID is not an acceptable value.

Example: 111122223333

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following element is returned by the service.

ClusterSecurityGroup

Describes a security group.

Type: ClusterSecurityGroup object

Errors

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

AuthorizationAlreadyExists

The specified CIDR block or EC2 security group is already authorized for the specified cluster security group.

HTTP Status Code: 400

AuthorizationQuotaExceeded

The authorization quota for the cluster security group has been reached.

HTTP Status Code: 400

ClusterSecurityGroupNotFound

The cluster security group name does not refer to an existing cluster security group.

HTTP Status Code: 404

InvalidClusterSecurityGroupState

The state of the cluster security group is not `available`.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of AuthorizeClusterSecurityGroupIngress.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
    ?Action=AuthorizeClusterSecurityGroupIngress
    &CIDRIP=10.24.34.0/24
    &ClusterSecurityGroupName=example-security-group
    &SignatureMethod=HmacSHA256&SignatureVersion=4
    &Version=2012-12-01
    &X-Amz-Algorithm=AWS4-HMAC-SHA256
    &X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20150817/us-east-2/redshift/aws4_request
    &X-Amz-Date=20150825T160000Z
    &X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
    &X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<AuthorizeClusterSecurityGroupIngressResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
```

```
  <AuthorizeClusterSecurityGroupIngressResult>
    <ClusterSecurityGroup>
      <Tags/>
      <EC2SecurityGroups/>
      <IPRanges>
        <IPRange>
          <CIDRIP>10.24.34.0/24</CIDRIP>
          <Status>authorized</Status>
        </IPRange>
      </IPRanges>
      <Description>Example security group</Description>
      <ClusterSecurityGroupName>example-security-group</ClusterSecurityGroupName>
    </ClusterSecurityGroup>
  </AuthorizeClusterSecurityGroupIngressResult>
  <ResponseMetadata>
    <RequestId>534d1bce-46ac-11e5-b673-31d855cc98c6</RequestId>
  </ResponseMetadata>
</AuthorizeClusterSecurityGroupIngressResponse>
```

See Also

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

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

AuthorizeDataShare

From a data producer account, authorizes the sharing of a datashare with one or more consumer accounts or managing entities. To authorize a datashare for a data consumer, the producer account must have the correct access permissions.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ConsumerIdentifier

The identifier of the data consumer that is authorized to access the datashare. This identifier is an AWS account ID or a keyword, such as ADX.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

DataShareArn

The Amazon Resource Name (ARN) of the datashare namespace that producers are to authorize sharing for.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

AllowWrites

If set to true, allows write operations for a datashare.

Type: Boolean

Required: No

Response Elements

The following elements are returned by the service.

AllowPubliclyAccessibleConsumers

A value that specifies whether the datashare can be shared to a publicly accessible cluster.

Type: Boolean

DataShareArn

The Amazon Resource Name (ARN) of the datashare that the consumer is to use.

Type: String

Length Constraints: Maximum length of 2147483647.

DataShareAssociations.member.N

A value that specifies when the datashare has an association between producer and data consumers.

Type: Array of DataShareAssociation objects

DataShareType

The type of the datashare created by RegisterNamespace.

Type: String

Valid Values: `INTERNAL`

ManagedBy

The identifier of a datashare to show its managing entity.

Type: String

Length Constraints: Maximum length of 2147483647.

ProducerArn

The Amazon Resource Name (ARN) of the producer namespace.

Type: String

Length Constraints: Maximum length of 2147483647.

Errors

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

InvalidDataShareFault

There is an error with the datashare.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of AuthorizeDataShare.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
        ?Action=AuthorizeDataShare
        &ConsumerIdentifier=275247490162
        &DataShareArn=arn%3Aaws%3Aredshift%3Aus-east-1%3A827630067164%3Adatashare
%3Aaf06285e-8a45-4ee9-b598-648c218c8ff1%2Ftestshare2
        &SignatureMethod=HmacSHA256&SignatureVersion=4
        &Version=2012-12-01
        &X-Amz-Algorithm=AWS4-HMAC-SHA256
        &X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
        &X-Amz-Date=20190825T160000Z
        &X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-
date
        &X-Amz-
Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<AuthorizeDataShareResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
            <AuthorizeDataShareResult>
                <AllowPubliclyAccessibleConsumers>false</
AllowPubliclyAccessibleConsumers>
                <ProducerNamespaceArn>arn:aws:redshift:us-
east-1:827630067164:namespace:af06285e-8a45-4ee9-b598-648c218c8ff1</
ProducerNamespaceArn>
```

```
                <DataShareArn>arn:aws:redshift:us-
east-1:827630067164:datashare:af06285e-8a45-4ee9-b598-648c218c8ff1/testshare2</
DataShareArn>
                <DataShareAssociations>
                    <member>
                        <ConsumerIdentifier>275247490162</ConsumerIdentifier>
                        <StatusChangeDate>2020-10-30T17:39:04.021910</StatusChangeDate>
                        <CreatedDate>2020-10-29T22:31:53.495665</CreatedDate>
                        <Status>PENDING_ACCEPTANCE</Status>
                    </member>
                </DataShareAssociations>
            </AuthorizeDataShareResult>
            <ResponseMetadata>
                <RequestId>7c915a04-fe35-4be1-b71d-363efaa95a08</RequestId>
            </ResponseMetadata>
        </AuthorizeDataShareResponse>
```

See Also

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

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

AuthorizeEndpointAccess

Grants access to a cluster.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

Account

The AWS account ID to grant access to.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

ClusterIdentifier

The cluster identifier of the cluster to grant access to.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

VpcIds.VpcIdentifier.N

The virtual private cloud (VPC) identifiers to grant access to.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following elements are returned by the service.

AllowedAllVPCs

Indicates whether all VPCs in the grantee account are allowed access to the cluster.

Type: Boolean

AllowedVPCs.VpcIdentifier.N

The VPCs allowed access to the cluster.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

AuthorizeTime

The time (UTC) when the authorization was created.

Type: Timestamp

ClusterIdentifier

The cluster identifier.

Type: String

Length Constraints: Maximum length of 2147483647.

ClusterStatus

The status of the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

EndpointCount

The number of Redshift-managed VPC endpoints created for the authorization.

Type: Integer

Grantee

The AWS account ID of the grantee of the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Grantor

The AWS account ID of the cluster owner.

Type: String

Length Constraints: Maximum length of 2147483647.

Status

The status of the authorization action.

Type: String

Valid Values: `Authorized | Revoking`

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

EndpointAuthorizationAlreadyExists

The authorization already exists for this endpoint.

HTTP Status Code: 400

EndpointAuthorizationsPerClusterLimitExceeded

The number of endpoint authorizations per cluster has exceeded its limit.

HTTP Status Code: 400

InvalidAuthorizationState

The status of the authorization is not valid.

HTTP Status Code: 400

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

AuthorizeSnapshotAccess

Authorizes the specified AWS account to restore the specified snapshot.

For more information about working with snapshots, go to Amazon Redshift Snapshots in the *Amazon Redshift Cluster Management Guide*.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

AccountWithRestoreAccess

The identifier of the AWS account authorized to restore the specified snapshot.

To share a snapshot with Support, specify amazon-redshift-support.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

SnapshotArn

The Amazon Resource Name (ARN) of the snapshot to authorize access to.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SnapshotClusterIdentifier

The identifier of the cluster the snapshot was created from.

- *If the snapshot to access doesn't exist and the associated IAM policy doesn't allow access to all (*) snapshots* - This parameter is required. Otherwise, permissions aren't available to check if the snapshot exists.
- *If the snapshot to access exists* - This parameter isn't required. Redshift can retrieve the cluster identifier and use it to validate snapshot authorization.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SnapshotIdentifier

The identifier of the snapshot the account is authorized to restore.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following element is returned by the service.

Snapshot

Describes a snapshot.

Type: Snapshot object

Errors

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

AuthorizationAlreadyExists

The specified CIDR block or EC2 security group is already authorized for the specified cluster security group.

HTTP Status Code: 400

AuthorizationQuotaExceeded

The authorization quota for the cluster security group has been reached.

HTTP Status Code: 400

ClusterSnapshotNotFound

The snapshot identifier does not refer to an existing cluster snapshot.

HTTP Status Code: 404

DependentServiceRequestThrottlingFault

The request cannot be completed because a dependent service is throttling requests made by Amazon Redshift on your behalf. Wait and retry the request.

HTTP Status Code: 400

InvalidClusterSnapshotState

The specified cluster snapshot is not in the `available` state, or other accounts are authorized to access the snapshot.

HTTP Status Code: 400

LimitExceededFault

The encryption key has exceeded its grant limit in AWS KMS.

HTTP Status Code: 400

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

- AWS SDK for Python
- AWS SDK for Ruby V3

BatchDeleteClusterSnapshots

Deletes a set of cluster snapshots.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

Identifiers.DeleteClusterSnapshotMessage.N

A list of identifiers for the snapshots that you want to delete.

Type: Array of DeleteClusterSnapshotMessage objects

Required: Yes

Response Elements

The following elements are returned by the service.

Errors.SnapshotErrorMessage.N

A list of any errors returned.

Type: Array of SnapshotErrorMessage objects

Resources.String.N

A list of the snapshot identifiers that were deleted.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Errors

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

BatchDeleteRequestSizeExceeded

The maximum number for a batch delete of snapshots has been reached. The limit is 100.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of BatchDeleteClusterSnapshots.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=BatchDeleteClusterSnapshots
    &Identifiers.DeleteClusterSnapshotMessage.1.SnapshotIdentifier=mysnapshotid1
    &Identifiers.DeleteClusterSnapshotMessage.2.SnapshotIdentifier=mysnapshotid2
    &SignatureMethod=HmacSHA256&SignatureVersion=4
    &Version=2012-12-01
    &X-Amz-Algorithm=AWS4-HMAC-SHA256
    &X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
    &X-Amz-Date=20190825T160000Z
    &X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
    &X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<BatchDeleteClusterSnapshotsResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <BatchDeleteClusterSnapshotsResult>
    <Resources>
      <String>mysnapshotid1</String>
      <String>mysnapshotid2</String>
    </Resources>
  </BatchDeleteClusterSnapshotsResult>
  <ResponseMetadata>
    <RequestId>5b43fc38-282e-11ea-8cc9-43f1872b4b75</RequestId>
  </ResponseMetadata>
</BatchDeleteClusterSnapshotsResponse>
```

See Also

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

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

BatchModifyClusterSnapshots

Modifies the settings for a set of cluster snapshots.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

SnapshotIdentifierList.String.N

A list of snapshot identifiers you want to modify.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: Yes

Force

A boolean value indicating whether to override an exception if the retention period has passed.

Type: Boolean

Required: No

ManualSnapshotRetentionPeriod

The number of days that a manual snapshot is retained. If you specify the value -1, the manual snapshot is retained indefinitely.

The number must be either -1 or an integer between 1 and 3,653.

If you decrease the manual snapshot retention period from its current value, existing manual snapshots that fall outside of the new retention period will return an error. If you want to suppress the errors and delete the snapshots, use the force option.

Type: Integer

Required: No

Response Elements

The following elements are returned by the service.

Errors.SnapshotErrorMessage.N

A list of any errors returned.

Type: Array of SnapshotErrorMessage objects

Resources.String.N

A list of the snapshots that were modified.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Errors

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

BatchModifyClusterSnapshotsLimitExceededFault

The maximum number for snapshot identifiers has been reached. The limit is 100.

HTTP Status Code: 400

InvalidRetentionPeriodFault

The retention period specified is either in the past or is not a valid value.

The value must be either -1 or an integer between 1 and 3,653.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of BatchModifyClusterSnapshots.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=BatchModifyClusterSnapshots
&SnapshotIdentifierList.String.1=mysnapshotid1
```

```
&SnapshotIdentifierList.String.2=mysnapshotid2
&ManualSnapshotRetentionPeriod=30
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<BatchModifyClusterSnapshotsResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <BatchModifyClusterSnapshotsResult>
    <Resources>
      <String>mysnapshotid1</String>
      <String>mysnapshotid2</String>
    </Resources>
    <Errors/>
  </BatchModifyClusterSnapshotsResult>
  <ResponseMetadata>
    <RequestId>c10326d1-282d-11ea-8314-974e2ba81189</RequestId>
  </ResponseMetadata>
</BatchModifyClusterSnapshotsResponse>
```

See Also

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

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

- AWS SDK for Python
- AWS SDK for Ruby V3

CancelResize

Cancels a resize operation for a cluster.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The unique identifier for the cluster that you want to cancel a resize operation for.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Response Elements

The following elements are returned by the service.

AvgResizeRateInMegaBytesPerSecond

The average rate of the resize operation over the last few minutes, measured in megabytes per second. After the resize operation completes, this value shows the average rate of the entire resize operation.

Type: Double

DataTransferProgressPercent

The percent of data transferred from source cluster to target cluster.

Type: Double

ElapsedTimeInSeconds

The amount of seconds that have elapsed since the resize operation began. After the resize operation completes, this value shows the total actual time, in seconds, for the resize operation.

Type: Long

EstimatedTimeToCompletionInSeconds

The estimated time remaining, in seconds, until the resize operation is complete. This value is calculated based on the average resize rate and the estimated amount of data remaining to be processed. Once the resize operation is complete, this value will be 0.

Type: Long

ImportTablesCompleted.member.N

The names of tables that have been completely imported .

Valid Values: List of table names.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

ImportTablesInProgress.member.N

The names of tables that are being currently imported.

Valid Values: List of table names.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

ImportTablesNotStarted.member.N

The names of tables that have not been yet imported.

Valid Values: List of table names

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Message

An optional string to provide additional details about the resize action.

Type: String

Length Constraints: Maximum length of 2147483647.

ProgressInMegaBytes

While the resize operation is in progress, this value shows the current amount of data, in megabytes, that has been processed so far. When the resize operation is complete, this value shows the total amount of data, in megabytes, on the cluster, which may be more or less than TotalResizeDataInMegaBytes (the estimated total amount of data before resize).

Type: Long

ResizeType

An enum with possible values of `ClassicResize` and `ElasticResize`. These values describe the type of resize operation being performed.

Type: String

Length Constraints: Maximum length of 2147483647.

Status

The status of the resize operation.

Valid Values: `NONE` | `IN_PROGRESS` | `FAILED` | `SUCCEEDED` | `CANCELLING`

Type: String

Length Constraints: Maximum length of 2147483647.

TargetClusterType

The cluster type after the resize operation is complete.

Valid Values: `multi-node` | `single-node`

Type: String

Length Constraints: Maximum length of 2147483647.

TargetEncryptionType

The type of encryption for the cluster after the resize is complete.

Possible values are `KMS` and `None`.

Type: String

Length Constraints: Maximum length of 2147483647.

TargetNodeType

The node type that the cluster will have after the resize operation is complete.

Type: String

Length Constraints: Maximum length of 2147483647.

TargetNumberOfNodes

The number of nodes that the cluster will have after the resize operation is complete.

Type: Integer

TotalResizeDataInMegaBytes

The estimated total amount of data, in megabytes, on the cluster before the resize operation began.

Type: Long

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

ResizeNotFound

A resize operation for the specified cluster is not found.

HTTP Status Code: 404

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of CancelResize.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=CancelResize
&ClusterIdentifier=mycluster
&ManualSnapshotRetentionPeriod=30
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<CancelResizeResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <CancelResizeResult>
    <TargetNodeType>dc2.large</TargetNodeType>
    <TargetEncryptionType>NONE</TargetEncryptionType>
    <TargetClusterType>single-node</TargetClusterType>
    <ResizeType>ClassicResize</ResizeType>
    <Status>CANCELLING</Status>
  </CancelResizeResult>
  <ResponseMetadata>
    <RequestId>2bb73dd4-282d-11ea-9caa-c956bec1ce87</RequestId>
  </ResponseMetadata>
</CancelResizeResponse>
```

See Also

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

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

CopyClusterSnapshot

Copies the specified automated cluster snapshot to a new manual cluster snapshot. The source must be an automated snapshot and it must be in the available state.

When you delete a cluster, Amazon Redshift deletes any automated snapshots of the cluster. Also, when the retention period of the snapshot expires, Amazon Redshift automatically deletes it. If you want to keep an automated snapshot for a longer period, you can make a manual copy of the snapshot. Manual snapshots are retained until you delete them.

For more information about working with snapshots, go to Amazon Redshift Snapshots in the *Amazon Redshift Cluster Management Guide*.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

SourceSnapshotIdentifier

The identifier for the source snapshot.

Constraints:

- Must be the identifier for a valid automated snapshot whose state is `available`.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

TargetSnapshotIdentifier

The identifier given to the new manual snapshot.

Constraints:

- Cannot be null, empty, or blank.
- Must contain from 1 to 255 alphanumeric characters or hyphens.
- First character must be a letter.
- Cannot end with a hyphen or contain two consecutive hyphens.

- Must be unique for the AWS account that is making the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

ManualSnapshotRetentionPeriod

The number of days that a manual snapshot is retained. If the value is -1, the manual snapshot is retained indefinitely.

The value must be either -1 or an integer between 1 and 3,653.

The default value is -1.

Type: Integer

Required: No

SourceSnapshotClusterIdentifier

The identifier of the cluster the source snapshot was created from. This parameter is required if your IAM user has a policy containing a snapshot resource element that specifies anything other than * for the cluster name.

Constraints:

- Must be the identifier for a valid cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following element is returned by the service.

Snapshot

Describes a snapshot.

Type: Snapshot object

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

ClusterSnapshotAlreadyExists

The value specified as a snapshot identifier is already used by an existing snapshot.

HTTP Status Code: 400

ClusterSnapshotNotFound

The snapshot identifier does not refer to an existing cluster snapshot.

HTTP Status Code: 404

ClusterSnapshotQuotaExceeded

The request would result in the user exceeding the allowed number of cluster snapshots.

HTTP Status Code: 400

InvalidClusterSnapshotState

The specified cluster snapshot is not in the `available` state, or other accounts are authorized to access the snapshot.

HTTP Status Code: 400

InvalidRetentionPeriodFault

The retention period specified is either in the past or is not a valid value.

The value must be either -1 or an integer between 1 and 3,653.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of CopyClusterSnapshot.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=CopyClusterSnapshot
&SourceSnapshotIdentifier=mysnapshotid1
&TargetSnapshotIdentifier=mysnapshotid2
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<CopyClusterSnapshotResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <CopyClusterSnapshotResult>
    <Snapshot>
      <SnapshotRetentionStartTime>2019-12-26T19:15:49.354Z</SnapshotRetentionStartTime>
      <ClusterIdentifier>mycluster</ClusterIdentifier>
      <EncryptedWithHSM>false</EncryptedWithHSM>
      <NumberOfNodes>1</NumberOfNodes>
      <OwnerAccount>123456789012</OwnerAccount>
      <AvailabilityZone>us-east-2a</AvailabilityZone>
      <ClusterVersion>1.0</ClusterVersion>
      <ManualSnapshotRetentionPeriod>-1</ManualSnapshotRetentionPeriod>
      <TotalBackupSizeInMegaBytes>41.0</TotalBackupSizeInMegaBytes>
      <VpcId>vpc-a1abc1a1</VpcId>
      <BackupProgressInMegaBytes>14.0</BackupProgressInMegaBytes>
      <CurrentBackupRateInMegaBytesPerSecond>0.0</
CurrentBackupRateInMegaBytesPerSecond>
      <ElapsedTimeInSeconds>0</ElapsedTimeInSeconds>
      <ClusterCreateTime>2019-12-25T11:21:49.458Z</ClusterCreateTime>
      <MasterUsername>adminuser</MasterUsername>
      <DBName>dev</DBName>
```

```
      <ActualIncrementalBackupSizeInMegaBytes>14.0</
ActualIncrementalBackupSizeInMegaBytes>
      <SnapshotType>manual</SnapshotType>
      <EnhancedVpcRouting>false</EnhancedVpcRouting>
      <SnapshotIdentifier>mysnapshotid2</SnapshotIdentifier>
      <NodeType>dc2.large</NodeType>
      <Tags/>
      <Encrypted>true</Encrypted>
      <EstimatedSecondsToCompletion>-1</EstimatedSecondsToCompletion>
      <Port>5439</Port>
      <MaintenanceTrackName>current</MaintenanceTrackName>
      <SnapshotCreateTime>2019-12-26T19:15:48.359Z</SnapshotCreateTime>
      <KmsKeyId>arn:aws:kms:us-east-2:123456789012:key/bPxRfih3yCo8nvbEXAMPLEKEY</
KmsKeyId>
      <Status>available</Status>
    </Snapshot>
  </CopyClusterSnapshotResult>
  <ResponseMetadata>
    <RequestId>45c7d545-2820-11ea-9caa-c956bec1ce87</RequestId>
  </ResponseMetadata>
</CopyClusterSnapshotResponse>
```

See Also

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

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

CreateAuthenticationProfile

Creates an authentication profile with the specified parameters.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

AuthenticationProfileContent

The content of the authentication profile in JSON format. The maximum length of the JSON string is determined by a quota for your account.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

AuthenticationProfileName

The name of the authentication profile to be created.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[a-zA-Z0-9\-]+$`

Required: Yes

Response Elements

The following elements are returned by the service.

AuthenticationProfileContent

The content of the authentication profile in JSON format.

Type: String

Length Constraints: Maximum length of 2147483647.

AuthenticationProfileName

The name of the authentication profile that was created.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[a-zA-Z0-9\-]+$`

Errors

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

AuthenticationProfileAlreadyExistsFault

The authentication profile already exists.

HTTP Status Code: 400

AuthenticationProfileQuotaExceededFault

The size or number of authentication profiles has exceeded the quota. The maximum length of the JSON string and maximum number of authentication profiles is determined by a quota for your account.

HTTP Status Code: 400

InvalidAuthenticationProfileRequestFault

The authentication profile request is not valid. The profile name can't be null or empty. The authentication profile API operation must be available in the AWS Region.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET

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

CreateCluster

Creates a new cluster with the specified parameters.

To create a cluster in Virtual Private Cloud (VPC), you must provide a cluster subnet group name. The cluster subnet group identifies the subnets of your VPC that Amazon Redshift uses when creating the cluster. For more information about managing clusters, go to Amazon Redshift Clusters in the *Amazon Redshift Cluster Management Guide*.

VPC Block Public Access (BPA) enables you to block resources in VPCs and subnets that you own in a Region from reaching or being reached from the internet through internet gateways and egress-only internet gateways. If a subnet group for a provisioned cluster is in an account with VPC BPA turned on, the following capabilities are blocked:

- Creating a public cluster
- Restoring a public cluster
- Modifying a private cluster to be public
- Adding a subnet with VPC BPA turned on to the subnet group when there's at least one public cluster within the group

For more information about VPC BPA, see Block public access to VPCs and subnets in the *Amazon VPC User Guide*.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

A unique identifier for the cluster. You use this identifier to refer to the cluster for any subsequent cluster operations such as deleting or modifying. The identifier also appears in the Amazon Redshift console.

Constraints:

- Must contain from 1 to 63 alphanumeric characters or hyphens.
- Alphabetic characters must be lowercase.
- First character must be a letter.

- Cannot end with a hyphen or contain two consecutive hyphens.
- Must be unique for all clusters within an AWS account.

Example: `myexamplecluster`

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

MasterUsername

The user name associated with the admin user account for the cluster that is being created.

Constraints:

- Must be 1 - 128 alphanumeric characters or hyphens. The user name can't be `PUBLIC`.
- Must contain only lowercase letters, numbers, underscore, plus sign, period (dot), at symbol (@), or hyphen.
- The first character must be a letter.
- Must not contain a colon (:) or a slash (/).
- Cannot be a reserved word. A list of reserved words can be found in Reserved Words in the Amazon Redshift Database Developer Guide.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

NodeType

The node type to be provisioned for the cluster. For information about node types, go to Working with Clusters in the *Amazon Redshift Cluster Management Guide*.

Valid Values: `dc2.large` | `dc2.8xlarge` | `ra3.large` | `ra3.xlplus` | `ra3.4xlarge` | `ra3.16xlarge`

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

AdditionalInfo

Reserved.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

AllowVersionUpgrade

If `true`, major version upgrades can be applied during the maintenance window to the Amazon Redshift engine that is running on the cluster.

When a new major version of the Amazon Redshift engine is released, you can request that the service automatically apply upgrades during the maintenance window to the Amazon Redshift engine that is running on your cluster.

Default: `true`

Type: Boolean

Required: No

AquaConfigurationStatus

This parameter is retired. It does not set the AQUA configuration status. Amazon Redshift automatically determines whether to use AQUA (Advanced Query Accelerator).

Type: String

Valid Values: `enabled | disabled | auto`

Required: No

AutomatedSnapshotRetentionPeriod

The number of days that automated snapshots are retained. If the value is 0, automated snapshots are disabled. Even if automated snapshots are disabled, you can still create manual snapshots when you want with CreateClusterSnapshot.

You can't disable automated snapshots for RA3 node types. Set the automated retention period from 1-35 days.

Default: 1

Constraints: Must be a value from 0 to 35.

Type: Integer

Required: No

AvailabilityZone

The EC2 Availability Zone (AZ) in which you want Amazon Redshift to provision the cluster. For example, if you have several EC2 instances running in a specific Availability Zone, then you might want the cluster to be provisioned in the same zone in order to decrease network latency.

Default: A random, system-chosen Availability Zone in the region that is specified by the endpoint.

Example: `us-east-2d`

Constraint: The specified Availability Zone must be in the same region as the current endpoint.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

AvailabilityZoneRelocation

The option to enable relocation for an Amazon Redshift cluster between Availability Zones after the cluster is created.

Type: Boolean

Required: No

ClusterParameterGroupName

The name of the parameter group to be associated with this cluster.

Default: The default Amazon Redshift cluster parameter group. For information about the default parameter group, go to Working with Amazon Redshift Parameter Groups

Constraints:

- Must be 1 to 255 alphanumeric characters or hyphens.
- First character must be a letter.
- Cannot end with a hyphen or contain two consecutive hyphens.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ClusterSecurityGroups.ClusterSecurityGroupName.N

A list of security groups to be associated with this cluster.

Default: The default cluster security group for Amazon Redshift.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

ClusterSubnetGroupName

The name of a cluster subnet group to be associated with this cluster.

If this parameter is not provided the resulting cluster will be deployed outside virtual private cloud (VPC).

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ClusterType

The type of the cluster. When cluster type is specified as

- `single-node`, the **NumberOfNodes** parameter is not required.
- `multi-node`, the **NumberOfNodes** parameter is required.

Valid Values: `multi-node` | `single-node`

Default: `multi-node`

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ClusterVersion

The version of the Amazon Redshift engine software that you want to deploy on the cluster.

The version selected runs on all the nodes in the cluster.

Constraints: Only version 1.0 is currently available.

Example: `1.0`

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

DBName

The name of the first database to be created when the cluster is created.

To create additional databases after the cluster is created, connect to the cluster with a SQL client and use SQL commands to create a database. For more information, go to Create a Database in the Amazon Redshift Database Developer Guide.

Default: `dev`

Constraints:

- Must contain 1 to 64 alphanumeric characters.
- Must contain only lowercase letters.
- Cannot be a word that is reserved by the service. A list of reserved words can be found in Reserved Words in the Amazon Redshift Database Developer Guide.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

DefaultIamRoleArn

The Amazon Resource Name (ARN) for the IAM role that was set as default for the cluster when the cluster was created.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ElasticIp

The Elastic IP (EIP) address for the cluster.

Constraints: The cluster must be provisioned in EC2-VPC and publicly-accessible through an Internet gateway. Don't specify the Elastic IP address for a publicly accessible cluster with availability zone relocation turned on. For more information about provisioning clusters in EC2-VPC, go to Supported Platforms to Launch Your Cluster in the Amazon Redshift Cluster Management Guide.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Encrypted

If `true`, the data in the cluster is encrypted at rest. If you set the value on this parameter to `false`, the request will fail.

Default: true

Type: Boolean

Required: No

EnhancedVpcRouting

An option that specifies whether to create the cluster with enhanced VPC routing enabled. To create a cluster that uses enhanced VPC routing, the cluster must be in a VPC. For more information, see Enhanced VPC Routing in the Amazon Redshift Cluster Management Guide.

If this option is `true`, enhanced VPC routing is enabled.

Default: false

Type: Boolean

Required: No

HsmClientCertificateIdentifier

Specifies the name of the HSM client certificate the Amazon Redshift cluster uses to retrieve the data encryption keys stored in an HSM.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

HsmConfigurationIdentifier

Specifies the name of the HSM configuration that contains the information the Amazon Redshift cluster can use to retrieve and store keys in an HSM.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

IamRoles.IamRoleArn.N

A list of AWS Identity and Access Management (IAM) roles that can be used by the cluster to access other AWS services. You must supply the IAM roles in their Amazon Resource Name (ARN) format.

The maximum number of IAM roles that you can associate is subject to a quota. For more information, go to Quotas and limits in the *Amazon Redshift Cluster Management Guide*.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

IpAddressType

The IP address types that the cluster supports. Possible values are `ipv4` and `dualstack`.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

KmsKeyId

The AWS Key Management Service (KMS) key ID of the encryption key that you want to use to encrypt data in the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

LoadSampleData

A flag that specifies whether to load sample data once the cluster is created.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaintenanceTrackName

An optional parameter for the name of the maintenance track for the cluster. If you don't provide a maintenance track name, the cluster is assigned to the `current` track.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ManageMasterPassword

If `true`, Amazon Redshift uses AWS Secrets Manager to manage this cluster's admin credentials. You can't use `MasterUserPassword` if `ManageMasterPassword` is true. If `ManageMasterPassword` is false or not set, Amazon Redshift uses `MasterUserPassword` for the admin user account's password.

Type: Boolean

Required: No

ManualSnapshotRetentionPeriod

The default number of days to retain a manual snapshot. If the value is -1, the snapshot is retained indefinitely. This setting doesn't change the retention period of existing snapshots.

The value must be either -1 or an integer between 1 and 3,653.

Type: Integer

Required: No

MasterPasswordSecretKmsKeyId

The ID of the AWS Key Management Service (KMS) key used to encrypt and store the cluster's admin credentials secret. You can only use this parameter if `ManageMasterPassword` is true.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MasterUserPassword

The password associated with the admin user account for the cluster that is being created.

You can't use `MasterUserPassword` if `ManageMasterPassword` is `true`.

Constraints:

- Must be between 8 and 64 characters in length.
- Must contain at least one uppercase letter.
- Must contain at least one lowercase letter.
- Must contain one number.
- Can be any printable ASCII character (ASCII code 33-126) except `'` (single quote), `"` (double quote), \, /, or `@`.

Type: String

Required: No

MultiAZ

If true, Amazon Redshift will deploy the cluster in two Availability Zones (AZ).

Type: Boolean

Required: No

NumberOfNodes

The number of compute nodes in the cluster. This parameter is required when the **ClusterType** parameter is specified as `multi-node`.

For information about determining how many nodes you need, go to Working with Clusters in the *Amazon Redshift Cluster Management Guide*.

If you don't specify this parameter, you get a single-node cluster. When requesting a multi-node cluster, you must specify the number of nodes that you want in the cluster.

Default: 1

Constraints: Value must be at least 1 and no more than 100.

Type: Integer

Required: No

Port

The port number on which the cluster accepts incoming connections.

The cluster is accessible only via the JDBC and ODBC connection strings. Part of the connection string requires the port on which the cluster will listen for incoming connections.

Default: `5439`

Valid Values:

- For clusters with ra3 nodes - Select a port within the ranges `5431-5455` or `8191-8215`. (If you have an existing cluster with ra3 nodes, it isn't required that you change the port to these ranges.)
- For clusters with dc2 nodes - Select a port within the range `1150-65535`.

Type: Integer

Required: No

PreferredMaintenanceWindow

The weekly time range (in UTC) during which automated cluster maintenance can occur.

Format: `ddd:hh24:mi-ddd:hh24:mi`

Default: A 30-minute window selected at random from an 8-hour block of time per region, occurring on a random day of the week. For more information about the time blocks for each region, see Maintenance Windows in Amazon Redshift Cluster Management Guide.

Valid Days: Mon | Tue | Wed | Thu | Fri | Sat | Sun

Constraints: Minimum 30-minute window.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

PubliclyAccessible

If `true`, the cluster can be accessed from a public network.

Default: false

Type: Boolean

Required: No

RedshiftIdcApplicationArn

The Amazon resource name (ARN) of the Amazon Redshift IAM Identity Center application.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SnapshotScheduleIdentifier

A unique identifier for the snapshot schedule.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Tags.Tag.N

A list of tag instances.

Type: Array of Tag objects

Required: No

VpcSecurityGroupIds.VpcSecurityGroupId.N

A list of Virtual Private Cloud (VPC) security groups to be associated with the cluster.

Default: The default VPC security group is associated with the cluster.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following element is returned by the service.

Cluster

Describes a cluster.

Type: Cluster object

Errors

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

ClusterAlreadyExists

The account already has a cluster with the given identifier.

HTTP Status Code: 400

ClusterParameterGroupNotFound

The parameter group name does not refer to an existing parameter group.

HTTP Status Code: 404

ClusterQuotaExceeded

The request would exceed the allowed number of cluster instances for this account. For information about increasing your quota, go to Limits in Amazon Redshift in the *Amazon Redshift Cluster Management Guide*.

HTTP Status Code: 400

ClusterSecurityGroupNotFound

The cluster security group name does not refer to an existing cluster security group.

HTTP Status Code: 404

ClusterSubnetGroupNotFoundFault

The cluster subnet group name does not refer to an existing cluster subnet group.

HTTP Status Code: 400

DependentServiceRequestThrottlingFault

The request cannot be completed because a dependent service is throttling requests made by Amazon Redshift on your behalf. Wait and retry the request.

HTTP Status Code: 400

HsmClientCertificateNotFoundFault

There is no Amazon Redshift HSM client certificate with the specified identifier.

HTTP Status Code: 400

HsmConfigurationNotFoundFault

There is no Amazon Redshift HSM configuration with the specified identifier.

HTTP Status Code: 400

InsufficientClusterCapacity

The number of nodes specified exceeds the allotted capacity of the cluster.

HTTP Status Code: 400

InvalidClusterSubnetGroupStateFault

The cluster subnet group cannot be deleted because it is in use.

HTTP Status Code: 400

InvalidClusterTrack

The provided cluster track name is not valid.

HTTP Status Code: 400

InvalidElasticIpFault

The Elastic IP (EIP) is invalid or cannot be found.

HTTP Status Code: 400

InvalidRetentionPeriodFault

The retention period specified is either in the past or is not a valid value.

The value must be either -1 or an integer between 1 and 3,653.

HTTP Status Code: 400

InvalidSubnet

The requested subnet is not valid, or not all of the subnets are in the same VPC.

HTTP Status Code: 400

InvalidTagFault

The tag is invalid.

HTTP Status Code: 400

InvalidVPCNetworkStateFault

The cluster subnet group does not cover all Availability Zones.

HTTP Status Code: 400

Ipv6CidrBlockNotFoundFault

There are no subnets in your VPC with associated IPv6 CIDR blocks. To use dual-stack mode, associate an IPv6 CIDR block with each subnet in your VPC.

HTTP Status Code: 400

LimitExceededFault

The encryption key has exceeded its grant limit in AWS KMS.

HTTP Status Code: 400

NumberOfNodesPerClusterLimitExceeded

The operation would exceed the number of nodes allowed for a cluster.

HTTP Status Code: 400

NumberOfNodesQuotaExceeded

The operation would exceed the number of nodes allotted to the account. For information about increasing your quota, go to Limits in Amazon Redshift in the *Amazon Redshift Cluster Management Guide*.

HTTP Status Code: 400

RedshiftIdcApplicationNotExists

The application you attempted to find doesn't exist.

HTTP Status Code: 404

SnapshotScheduleNotFound

We could not find the specified snapshot schedule.

HTTP Status Code: 400

TagLimitExceededFault

You have exceeded the number of tags allowed.

HTTP Status Code: 400

UnauthorizedOperation

Your account is not authorized to perform the requested operation.

HTTP Status Code: 400

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of CreateCluster.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=CreateCluster
&ClusterIdentifier=mycluster
&NodeType=dc2.large
&MasterUsername=adminuser
&MasterUserPassword=A1b2c3d4
&NumberOfNodes=2
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<CreateClusterResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <CreateClusterResult>
    <Cluster>
      <AllowVersionUpgrade>true</AllowVersionUpgrade>
      <ClusterIdentifier>mycluster</ClusterIdentifier>
      <NumberOfNodes>2</NumberOfNodes>
      <ClusterVersion>1.0</ClusterVersion>
      <ManualSnapshotRetentionPeriod>-1</ManualSnapshotRetentionPeriod>
      <ClusterAvailabilityStatus>Modifying</ClusterAvailabilityStatus>
      <VpcId>vpc-a1abc1a1</VpcId>
      <PubliclyAccessible>false</PubliclyAccessible>
      <MasterUsername>adminuser</MasterUsername>
      <DBName>dev</DBName>
      <EnhancedVpcRouting>false</EnhancedVpcRouting>
      <IamRoles/>
```

```
      <ClusterSecurityGroups/>
      <NodeType>dc2.large</NodeType>
      <ClusterSubnetGroupName>default</ClusterSubnetGroupName>
      <NextMaintenanceWindowStartTime>2019-12-27T04:00:00Z</
NextMaintenanceWindowStartTime>
      <DeferredMaintenanceWindows/>
      <Tags/>
      <VpcSecurityGroups>
        <VpcSecurityGroup>
          <VpcSecurityGroupId>sh-a1a123ab</VpcSecurityGroupId>
          <Status>active</Status>
        </VpcSecurityGroup>
      </VpcSecurityGroups>
      <ClusterParameterGroups>
        <ClusterParameterGroup>
          <ParameterGroupName>default.redshift-1.0</ParameterGroupName>
          <ParameterApplyStatus>in-sync</ParameterApplyStatus>
        </ClusterParameterGroup>
      </ClusterParameterGroups>
      <Encrypted>true</Encrypted>
      <MaintenanceTrackName>current</MaintenanceTrackName>
      <PendingModifiedValues>
        <MasterUserPassword>****</MasterUserPassword>
      </PendingModifiedValues>
      <PreferredMaintenanceWindow>fri:04:00-fri:04:30</PreferredMaintenanceWindow>
      <AutomatedSnapshotRetentionPeriod>1</AutomatedSnapshotRetentionPeriod>
      <ClusterStatus>creating</ClusterStatus>
    </Cluster>
  </CreateClusterResult>
  <ResponseMetadata>
    <RequestId>61a11272-281d-11ea-8397-219d1980588b</RequestId>
  </ResponseMetadata>
</CreateClusterResponse>
```

See Also

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

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

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

CreateClusterParameterGroup

Creates an Amazon Redshift parameter group.

Creating parameter groups is independent of creating clusters. You can associate a cluster with a parameter group when you create the cluster. You can also associate an existing cluster with a parameter group after the cluster is created by using ModifyCluster.

Parameters in the parameter group define specific behavior that applies to the databases you create on the cluster. For more information about parameters and parameter groups, go to Amazon Redshift Parameter Groups in the *Amazon Redshift Cluster Management Guide*.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

Description

A description of the parameter group.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

ParameterGroupFamily

The Amazon Redshift engine version to which the cluster parameter group applies. The cluster engine version determines the set of parameters.

To get a list of valid parameter group family names, you can call DescribeClusterParameterGroups. By default, Amazon Redshift returns a list of all the parameter groups that are owned by your AWS account, including the default parameter groups for each Amazon Redshift engine version. The parameter group family names associated with the default parameter groups provide you the valid values. For example, a valid family name is "redshift-1.0".

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

ParameterGroupName

The name of the cluster parameter group.

Constraints:

- Must be 1 to 255 alphanumeric characters or hyphens
- First character must be a letter.
- Cannot end with a hyphen or contain two consecutive hyphens.
- Must be unique withing your AWS account.

> **Note**
>
> This value is stored as a lower-case string.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Tags.Tag.N

A list of tag instances.

Type: Array of Tag objects

Required: No

Response Elements

The following element is returned by the service.

ClusterParameterGroup

Describes a parameter group.

Type: ClusterParameterGroup object

Errors

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

ClusterParameterGroupAlreadyExists

A cluster parameter group with the same name already exists.

HTTP Status Code: 400

ClusterParameterGroupQuotaExceeded

The request would result in the user exceeding the allowed number of cluster parameter groups. For information about increasing your quota, go to Limits in Amazon Redshift in the *Amazon Redshift Cluster Management Guide*.

HTTP Status Code: 400

InvalidTagFault

The tag is invalid.

HTTP Status Code: 400

TagLimitExceededFault

You have exceeded the number of tags allowed.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of CreateClusterParameterGroup.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=CreateClusterParameterGroup
&ParameterGroupName=myclusterparametergroup
&ParameterGroupFamily=redshift-1.0
&Description=My+first+cluster+parameter+group
```

```
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<CreateClusterParameterGroupResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <CreateClusterParameterGroupResult>
    <ClusterParameterGroup>
      <ParameterGroupName>myclusterparametergroup</ParameterGroupName>
      <Description>My first cluster parameter group</Description>
      <ParameterGroupFamily>redshift-1.0</ParameterGroupFamily>
      <Tags/>
    </ClusterParameterGroup>
  </CreateClusterParameterGroupResult>
  <ResponseMetadata>
    <RequestId>d52df43b-281e-11ea-8314-974e2ba81189</RequestId>
  </ResponseMetadata>
</CreateClusterParameterGroupResponse>
```

See Also

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

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

- AWS SDK for Ruby V3

CreateClusterSecurityGroup

Creates a new Amazon Redshift security group. You use security groups to control access to non-VPC clusters.

For information about managing security groups, go to Amazon Redshift Cluster Security Groups in the *Amazon Redshift Cluster Management Guide*.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterSecurityGroupName

The name for the security group. Amazon Redshift stores the value as a lowercase string.

Constraints:

- Must contain no more than 255 alphanumeric characters or hyphens.
- Must not be "Default".
- Must be unique for all security groups that are created by your AWS account.

Example: `examplesecuritygroup`

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Description

A description for the security group.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Tags.Tag.N

A list of tag instances.

Type: Array of Tag objects

Required: No

Response Elements

The following element is returned by the service.

ClusterSecurityGroup

Describes a security group.

Type: ClusterSecurityGroup object

Errors

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

ClusterSecurityGroupAlreadyExists

A cluster security group with the same name already exists.

HTTP Status Code: 400

InvalidTagFault

The tag is invalid.

HTTP Status Code: 400

QuotaExceeded.ClusterSecurityGroup

The request would result in the user exceeding the allowed number of cluster security groups. For information about increasing your quota, go to Limits in Amazon Redshift in the *Amazon Redshift Cluster Management Guide*.

HTTP Status Code: 400

TagLimitExceededFault

You have exceeded the number of tags allowed.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of CreateClusterSecurityGroup.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
   ?Action=CreateClusterSecurityGroup
   &ClusterSecurityGroupName=securitygroup1
   &Description=my security group
   &Version=2012-12-01
   &x-amz-algorithm=AWS4-HMAC-SHA256
   &x-amz-credential=AKIAIOSFODNN7EXAMPLE/20130123/us-east-2/redshift/aws4_request
   &x-amz-date=20130123T005817Z
   &x-amz-signedheaders=content-type;host;x-amz-date
```

Sample Response

```
<CreateClusterSecurityGroupResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <CreateClusterSecurityGroupResult>
    <ClusterSecurityGroup>
      <EC2SecurityGroups/>
      <IPRanges/>
      <Description>my security group</Description>
      <ClusterSecurityGroupName>securitygroup1</ClusterSecurityGroupName>
    </ClusterSecurityGroup>
  </CreateClusterSecurityGroupResult>
  <ResponseMetadata>
    <RequestId>f9ee270f-64f7-11e2-a8da-655adc216806</RequestId>
  </ResponseMetadata>
</CreateClusterSecurityGroupResponse>
```

See Also

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

- AWS Command Line Interface

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

CreateClusterSnapshot

Creates a manual snapshot of the specified cluster. The cluster must be in the `available` state.

For more information about working with snapshots, go to Amazon Redshift Snapshots in the *Amazon Redshift Cluster Management Guide*.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The cluster identifier for which you want a snapshot.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

SnapshotIdentifier

A unique identifier for the snapshot that you are requesting. This identifier must be unique for all snapshots within the AWS account.

Constraints:

- Cannot be null, empty, or blank
- Must contain from 1 to 255 alphanumeric characters or hyphens
- First character must be a letter
- Cannot end with a hyphen or contain two consecutive hyphens

Example: `my-snapshot-id`

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

ManualSnapshotRetentionPeriod

The number of days that a manual snapshot is retained. If the value is -1, the manual snapshot is retained indefinitely.

The value must be either -1 or an integer between 1 and 3,653.

The default value is -1.

Type: Integer

Required: No

Tags.Tag.N

A list of tag instances.

Type: Array of Tag objects

Required: No

Response Elements

The following element is returned by the service.

Snapshot

Describes a snapshot.

Type: Snapshot object

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

ClusterSnapshotAlreadyExists

The value specified as a snapshot identifier is already used by an existing snapshot.

HTTP Status Code: 400

ClusterSnapshotQuotaExceeded

The request would result in the user exceeding the allowed number of cluster snapshots.

HTTP Status Code: 400

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

InvalidRetentionPeriodFault

The retention period specified is either in the past or is not a valid value.

The value must be either -1 or an integer between 1 and 3,653.

HTTP Status Code: 400

InvalidTagFault

The tag is invalid.

HTTP Status Code: 400

TagLimitExceededFault

You have exceeded the number of tags allowed.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of CreateClusterSnapshot.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=CreateClusterSnapshot
&SnapshotIdentifier=mysnapshotid
&ClusterIdentifier=mycluster
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
```

```
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<CreateClusterSnapshotResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <CreateClusterSnapshotResult>
    <Snapshot>
      <ClusterIdentifier>mycluster</ClusterIdentifier>
      <EncryptedWithHSM>false</EncryptedWithHSM>
      <NumberOfNodes>2</NumberOfNodes>
      <OwnerAccount>123456789012</OwnerAccount>
      <AvailabilityZone>us-east-2a</AvailabilityZone>
      <ClusterVersion>1.0</ClusterVersion>
      <ManualSnapshotRetentionPeriod>-1</ManualSnapshotRetentionPeriod>
      <TotalBackupSizeInMegaBytes>-1.0</TotalBackupSizeInMegaBytes>
      <VpcId>vpc-a1abc1a1</VpcId>
      <BackupProgressInMegaBytes>0.0</BackupProgressInMegaBytes>
      <CurrentBackupRateInMegaBytesPerSecond>0.0</
CurrentBackupRateInMegaBytesPerSecond>
      <ElapsedTimeInSeconds>0</ElapsedTimeInSeconds>
      <ClusterCreateTime>2019-12-26T20:25:38.716Z</ClusterCreateTime>
      <MasterUsername>adminuser</MasterUsername>
      <DBName>dev</DBName>
      <ActualIncrementalBackupSizeInMegaBytes>-1.0</
ActualIncrementalBackupSizeInMegaBytes>
      <SnapshotType>manual</SnapshotType>
      <EnhancedVpcRouting>false</EnhancedVpcRouting>
      <SnapshotIdentifier>mysnapshotid</SnapshotIdentifier>
      <NodeType>dc2.large</NodeType>
      <Tags/>
      <Encrypted>false</Encrypted>
      <EstimatedSecondsToCompletion>-1</EstimatedSecondsToCompletion>
      <Port>5439</Port>
      <MaintenanceTrackName>current</MaintenanceTrackName>
      <SnapshotCreateTime>2019-12-26T22:38:18.854Z</SnapshotCreateTime>
      <Status>creating</Status>
    </Snapshot>
  </CreateClusterSnapshotResult>
  <ResponseMetadata>
    <RequestId>69dec674-2830-11ea-9caa-c956bec1ce87</RequestId>
  </ResponseMetadata>
</CreateClusterSnapshotResponse>
```

See Also

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

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

CreateClusterSubnetGroup

Creates a new Amazon Redshift subnet group. You must provide a list of one or more subnets in your existing Amazon Virtual Private Cloud (Amazon VPC) when creating Amazon Redshift subnet group.

For information about subnet groups, go to Amazon Redshift Cluster Subnet Groups in the *Amazon Redshift Cluster Management Guide*.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterSubnetGroupName

The name for the subnet group. Amazon Redshift stores the value as a lowercase string.

Constraints:

- Must contain no more than 255 alphanumeric characters or hyphens.
- Must not be "Default".
- Must be unique for all subnet groups that are created by your AWS account.

Example: `examplesubnetgroup`

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Description

A description for the subnet group.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

SubnetIds.SubnetIdentifier.N

An array of VPC subnet IDs. A maximum of 20 subnets can be modified in a single request.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: Yes

Tags.Tag.N

A list of tag instances.

Type: Array of Tag objects

Required: No

Response Elements

The following element is returned by the service.

ClusterSubnetGroup

Describes a subnet group.

Type: ClusterSubnetGroup object

Errors

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

ClusterSubnetGroupAlreadyExists

A *ClusterSubnetGroupName* is already used by an existing cluster subnet group.

HTTP Status Code: 400

ClusterSubnetGroupQuotaExceeded

The request would result in user exceeding the allowed number of cluster subnet groups. For information about increasing your quota, go to Limits in Amazon Redshift in the *Amazon Redshift Cluster Management Guide*.

HTTP Status Code: 400

ClusterSubnetQuotaExceededFault

The request would result in user exceeding the allowed number of subnets in a cluster subnet groups. For information about increasing your quota, go to Limits in Amazon Redshift in the *Amazon Redshift Cluster Management Guide*.

HTTP Status Code: 400

DependentServiceRequestThrottlingFault

The request cannot be completed because a dependent service is throttling requests made by Amazon Redshift on your behalf. Wait and retry the request.

HTTP Status Code: 400

InvalidSubnet

The requested subnet is not valid, or not all of the subnets are in the same VPC.

HTTP Status Code: 400

InvalidTagFault

The tag is invalid.

HTTP Status Code: 400

TagLimitExceededFault

You have exceeded the number of tags allowed.

HTTP Status Code: 400

UnauthorizedOperation

Your account is not authorized to perform the requested operation.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of CreateClusterSubnetGroup.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=CreateClusterSubnetGroup
&ClusterSubnetGroupName=mysubnetgroup
&Description=My+subnet+group
&SubnetIds.SubnetIdentifier.1=subnet-a1b23abc
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<CreateClusterSubnetGroupResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <CreateClusterSubnetGroupResult>
    <ClusterSubnetGroup>
      <VpcId>vpc-a1abc1a1</VpcId>
      <Description>My subnet group</Description>
      <Subnets>
        <Subnet>
          <SubnetStatus>Active</SubnetStatus>
          <SubnetIdentifier>subnet-a1b23abc</SubnetIdentifier>
          <SubnetAvailabilityZone>
            <Name>us-east-2e</Name>
          </SubnetAvailabilityZone>
        </Subnet>
      </Subnets>
      <ClusterSubnetGroupName>mysubnetgroup</ClusterSubnetGroupName>
      <SubnetGroupStatus>Complete</SubnetGroupStatus>
      <Tags/>
    </ClusterSubnetGroup>
  </CreateClusterSubnetGroupResult>
  <ResponseMetadata>
    <RequestId>7062cbdc-2832-11ea-a940-1b28a85fd753</RequestId>
  </ResponseMetadata>
</CreateClusterSubnetGroupResponse>
```

See Also

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

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

CreateCustomDomainAssociation

Used to create a custom domain name for a cluster. Properties include the custom domain name, the cluster the custom domain is associated with, and the certificate Amazon Resource Name (ARN).

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The cluster identifier that the custom domain is associated with.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

CustomDomainCertificateArn

The certificate Amazon Resource Name (ARN) for the custom domain name association.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:[\w+=/,.@-]+:acm:[\w+=/,.@-]*:[0-9]+:[\w+=,.@-]+(/[\w+=,.@-]+)*`

Required: Yes

CustomDomainName

The custom domain name for a custom domain association.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 253.

Pattern: `^(((?!-)[A-Za-z0-9-]{0,62}[A-Za-z0-9])\.)+((?!-)[A-Za-z0-9-]{1,62}[A-Za-z0-9])$`

Required: Yes

Response Elements

The following elements are returned by the service.

ClusterIdentifier

The identifier of the cluster that the custom domain is associated with.

Type: String

Length Constraints: Maximum length of 2147483647.

CustomDomainCertExpiryTime

The expiration time for the certificate for the custom domain.

Type: String

Length Constraints: Maximum length of 2147483647.

CustomDomainCertificateArn

The Amazon Resource Name (ARN) for the certificate associated with the custom domain name.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:[\w+=/,.@-]+:acm:[\w+=/,.@-]*:[0-9]+:[\w+=,.@-]+(/[\w+=,.@-]+)*`

CustomDomainName

The custom domain name for the association result.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 253.

Pattern: `^(((?!-)[A-Za-z0-9-]{0,62}[A-Za-z0-9])\.)+((?!-)[A-Za-z0-9-]{1,62}[A-Za-z0-9])$`

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

CustomCnameAssociationFault

An error occurred when an attempt was made to change the custom domain association.

HTTP Status Code: 400

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

CreateEndpointAccess

Creates a Redshift-managed VPC endpoint.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

EndpointName

The Redshift-managed VPC endpoint name.

An endpoint name must contain 1-30 characters. Valid characters are A-Z, a-z, 0-9, and hyphen(-). The first character must be a letter. The name can't contain two consecutive hyphens or end with a hyphen.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

SubnetGroupName

The subnet group from which Amazon Redshift chooses the subnet to deploy the endpoint.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

ClusterIdentifier

The cluster identifier of the cluster to access.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ResourceOwner

The AWS account ID of the owner of the cluster. This is only required if the cluster is in another AWS account.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

VpcSecurityGroupIds.VpcSecurityGroupId.N

The security group that defines the ports, protocols, and sources for inbound traffic that you are authorizing into your endpoint.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following elements are returned by the service.

Address

The DNS address of the endpoint.

Type: String

Length Constraints: Maximum length of 2147483647.

ClusterIdentifier

The cluster identifier of the cluster associated with the endpoint.

Type: String

Length Constraints: Maximum length of 2147483647.

EndpointCreateTime

The time (UTC) that the endpoint was created.

Type: Timestamp

EndpointName

The name of the endpoint.

Type: String

Length Constraints: Maximum length of 2147483647.

EndpointStatus

The status of the endpoint.

Type: String

Length Constraints: Maximum length of 2147483647.

Port

The port number on which the cluster accepts incoming connections.

Type: Integer

ResourceOwner

The AWS account ID of the owner of the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

SubnetGroupName

The subnet group name where Amazon Redshift chooses to deploy the endpoint.

Type: String

Length Constraints: Maximum length of 2147483647.

VpcEndpoint

The connection endpoint for connecting to an Amazon Redshift cluster through the proxy.

Type: VpcEndpoint object

VpcSecurityGroups.VpcSecurityGroup.N

The security groups associated with the endpoint.

Type: Array of VpcSecurityGroupMembership objects

Errors

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

AccessToClusterDenied

You are not authorized to access the cluster.

HTTP Status Code: 400

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

ClusterSubnetGroupNotFoundFault

The cluster subnet group name does not refer to an existing cluster subnet group.

HTTP Status Code: 400

EndpointAlreadyExists

The account already has a Redshift-managed VPC endpoint with the given identifier.

HTTP Status Code: 400

EndpointsPerAuthorizationLimitExceeded

The number of Redshift-managed VPC endpoints per authorization has exceeded its limit.

HTTP Status Code: 400

EndpointsPerClusterLimitExceeded

The number of Redshift-managed VPC endpoints per cluster has exceeded its limit.

HTTP Status Code: 400

InvalidClusterSecurityGroupState

The state of the cluster security group is not `available`.

HTTP Status Code: 400

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

UnauthorizedOperation

Your account is not authorized to perform the requested operation.

HTTP Status Code: 400

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

CreateEventSubscription

Creates an Amazon Redshift event notification subscription. This action requires an ARN (Amazon Resource Name) of an Amazon SNS topic created by either the Amazon Redshift console, the Amazon SNS console, or the Amazon SNS API. To obtain an ARN with Amazon SNS, you must create a topic in Amazon SNS and subscribe to the topic. The ARN is displayed in the SNS console.

You can specify the source type, and lists of Amazon Redshift source IDs, event categories, and event severities. Notifications will be sent for all events you want that match those criteria. For example, you can specify source type = cluster, source ID = my-cluster-1 and mycluster2, event categories = Availability, Backup, and severity = ERROR. The subscription will only send notifications for those ERROR events in the Availability and Backup categories for the specified clusters.

If you specify both the source type and source IDs, such as source type = cluster and source identifier = my-cluster-1, notifications will be sent for all the cluster events for my-cluster-1. If you specify a source type but do not specify a source identifier, you will receive notice of the events for the objects of that type in your AWS account. If you do not specify either the SourceType nor the SourceIdentifier, you will be notified of events generated from all Amazon Redshift sources belonging to your AWS account. You must specify a source type if you specify a source ID.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

SnsTopicArn

The Amazon Resource Name (ARN) of the Amazon SNS topic used to transmit the event notifications. The ARN is created by Amazon SNS when you create a topic and subscribe to it.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

SubscriptionName

The name of the event subscription to be created.

Constraints:

- Cannot be null, empty, or blank.
- Must contain from 1 to 255 alphanumeric characters or hyphens.
- First character must be a letter.
- Cannot end with a hyphen or contain two consecutive hyphens.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Enabled

A boolean value; set to `true` to activate the subscription, and set to `false` to create the subscription but not activate it.

Type: Boolean

Required: No

EventCategories.EventCategory.N

Specifies the Amazon Redshift event categories to be published by the event notification subscription.

Values: configuration, management, monitoring, security, pending

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

Severity

Specifies the Amazon Redshift event severity to be published by the event notification subscription.

Values: ERROR, INFO

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SourceIds.SourceId.N

A list of one or more identifiers of Amazon Redshift source objects. All of the objects must be of the same type as was specified in the source type parameter. The event subscription will return only events generated by the specified objects. If not specified, then events are returned for all objects within the source type specified.

Example: my-cluster-1, my-cluster-2

Example: my-snapshot-20131010

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

SourceType

The type of source that will be generating the events. For example, if you want to be notified of events generated by a cluster, you would set this parameter to cluster. If this value is not specified, events are returned for all Amazon Redshift objects in your AWS account. You must specify a source type in order to specify source IDs.

Valid values: cluster, cluster-parameter-group, cluster-security-group, cluster-snapshot, and scheduled-action.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Tags.Tag.N

A list of tag instances.

Type: Array of Tag objects

Required: No

Response Elements

The following element is returned by the service.

EventSubscription

Describes event subscriptions.

Type: EventSubscription object

Errors

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

EventSubscriptionQuotaExceeded

The request would exceed the allowed number of event subscriptions for this account. For information about increasing your quota, go to Limits in Amazon Redshift in the *Amazon Redshift Cluster Management Guide*.

HTTP Status Code: 400

InvalidTagFault

The tag is invalid.

HTTP Status Code: 400

SNSInvalidTopic

Amazon SNS has responded that there is a problem with the specified Amazon SNS topic.

HTTP Status Code: 400

SNSNoAuthorization

You do not have permission to publish to the specified Amazon SNS topic.

HTTP Status Code: 400

SNSTopicArnNotFound

An Amazon SNS topic with the specified Amazon Resource Name (ARN) does not exist.

HTTP Status Code: 404

SourceNotFound

The specified Amazon Redshift event source could not be found.

HTTP Status Code: 404

SubscriptionAlreadyExist

There is already an existing event notification subscription with the specified name.

HTTP Status Code: 400

SubscriptionCategoryNotFound

The value specified for the event category was not one of the allowed values, or it specified a category that does not apply to the specified source type. The allowed values are Configuration, Management, Monitoring, and Security.

HTTP Status Code: 404

SubscriptionEventIdNotFound

An Amazon Redshift event with the specified event ID does not exist.

HTTP Status Code: 404

SubscriptionSeverityNotFound

The value specified for the event severity was not one of the allowed values, or it specified a severity that does not apply to the specified source type. The allowed values are ERROR and INFO.

HTTP Status Code: 404

TagLimitExceededFault

You have exceeded the number of tags allowed.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of CreateEventSubscription.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
```

```
       ?Action=CreateEventSubscription
&SubscriptionName=mysubscription
&SnsTopicArn=arn%3Aaws%3Asns%3Aus-east-2%3A123456789012%3AMySNStopic
&SourceType=cluster
&SourceIds.SourceId.1=mycluster
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<CreateEventSubscriptionResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <CreateEventSubscriptionResult>
    <EventSubscription>
      <Severity>INFO</Severity>
      <CustSubscriptionId>mysubscription</CustSubscriptionId>
      <SourceType>cluster</SourceType>
      <SnsTopicArn>arn:aws:sns:us-east-2:123456789012:MySNStopic</SnsTopicArn>
      <SourceIdsList>
        <SourceId>mycluster</SourceId>
      </SourceIdsList>
      <EventCategoriesList/>
      <SubscriptionCreationTime>2019-12-26T22:58:57.382Z</SubscriptionCreationTime>
      <Enabled>true</Enabled>
      <Tags/>
      <Status>active</Status>
      <CustomerAwsId>123456789012</CustomerAwsId>
    </EventSubscription>
  </CreateEventSubscriptionResult>
  <ResponseMetadata>
    <RequestId>4c096ab5-2833-11ea-a940-1b28a85fd753</RequestId>
  </ResponseMetadata>
</CreateEventSubscriptionResponse>
```

See Also

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

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

CreateHsmClientCertificate

Creates an HSM client certificate that an Amazon Redshift cluster will use to connect to the client's HSM in order to store and retrieve the keys used to encrypt the cluster databases.

The command returns a public key, which you must store in the HSM. In addition to creating the HSM certificate, you must create an Amazon Redshift HSM configuration that provides a cluster the information needed to store and use encryption keys in the HSM. For more information, go to Hardware Security Modules in the *Amazon Redshift Cluster Management Guide*.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

HsmClientCertificateIdentifier

The identifier to be assigned to the new HSM client certificate that the cluster will use to connect to the HSM to use the database encryption keys.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Tags.Tag.N

A list of tag instances.

Type: Array of Tag objects

Required: No

Response Elements

The following element is returned by the service.

HsmClientCertificate

Returns information about an HSM client certificate. The certificate is stored in a secure Hardware Storage Module (HSM), and used by the Amazon Redshift cluster to encrypt data files.

Type: HsmClientCertificate object

Errors

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

HsmClientCertificateAlreadyExistsFault

There is already an existing Amazon Redshift HSM client certificate with the specified identifier.

HTTP Status Code: 400

HsmClientCertificateQuotaExceededFault

The quota for HSM client certificates has been reached. For information about increasing your quota, go to Limits in Amazon Redshift in the *Amazon Redshift Cluster Management Guide*.

HTTP Status Code: 400

InvalidTagFault

The tag is invalid.

HTTP Status Code: 400

TagLimitExceededFault

You have exceeded the number of tags allowed.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of CreateHsmClientCertificate.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=CreateHsmClientCertificate
&HsmClientCertificateIdentifier=myhsmclientcert
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
```

```
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<CreateHsmClientCertificateResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <CreateHsmClientCertificateResult>
    <HsmClientCertificate>
      <HsmClientCertificateIdentifier>myhsmclientcert</HsmClientCertificateIdentifier>
      <HsmClientCertificatePublicKey>-----BEGIN CERTIFICATE-----
MIICiTCCAfICCQD6m7oRw0uXOjANBgkqhkiG9w0BAQUFADCBiDELMAkGA1UEBhMC
VVMxCzAJBgNVBAgTAldBMRAwDgYDVQQHEwdTZWF0dGxlMQ8wDQYDVQQKEwZBbWF6
b24xFDASBgNVBAsTC0lBTSBDb25zb2xlMRIwEAYDVQQDEwlUZXN0Q2lsYWMxHzAd
BgkqhkiG9w0BCQEWEG5vb25lQGFtYXpvbi5jb20wHhcNMTEwNDI1MjA0NTIxWhcN
MTIwNDI0MjA0NTIxWjCBiDELMAkGA1UEBhMCVVMxCzAJBgNVBAgTAldBMRAwDgYD
VQQHEwdTZWF0dGxlMQ8wDQYDVQQKEwZBbWF6b24xFDASBgNVBAsTC0lBTSBDb25z
b2xlMRIwEAYDVQQDEwlUZXN0Q2lsYWMxHzAdBgkqhkiG9w0BCQEWEG5vb25lQGFt
YXpvbi5jb20wgZ8wDQYJKoZIhvcNAQEBBQADgY0AMIGJAoGBAMaK0dn+a4GmWIWJ
21uUSfwfEvySWtC2XADZ4nB+BLYgVIk60CpiwsZ3G93vUEIO3IyNoH/f0wYK8m9T
rDHudUZg3qX4waLG5M43q7Wgc/MbQITxOUSQv7c7ugFFDzQGBzZswY6786m86gpE
Ibb3OhjZnzcvQAaRHhdlQWIMm2nrAgMBAAEwDQYJKoZIhvcNAQEFBQADgYEAtCu4
nUhVVxYUntneD9+h8Mg9q6q+auNKyExzyLwaxlAoo7TJHidbtS4J5iNmZgXL0Fkb
FFBjvSfpJIlJ00zbhNYS5f6GuoEDmFJl0ZxBHjJnyp378OD8uTs7fLvjx79LjSTb
NYiytVbZPQUQ5Yaxu2jXnimvw3rEXAMPLE=
-----END CERTIFICATE-----
</HsmClientCertificatePublicKey>
      <Tags/>
    </HsmClientCertificate>
  </CreateHsmClientCertificateResult>
  <ResponseMetadata>
    <RequestId>917e54c0-2833-11ea-9caa-c956bec1ce87</RequestId>
  </ResponseMetadata>
</CreateHsmClientCertificateResponse>
```

See Also

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

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

CreateHsmConfiguration

Creates an HSM configuration that contains the information required by an Amazon Redshift cluster to store and use database encryption keys in a Hardware Security Module (HSM). After creating the HSM configuration, you can specify it as a parameter when creating a cluster. The cluster will then store its encryption keys in the HSM.

In addition to creating an HSM configuration, you must also create an HSM client certificate. For more information, go to Hardware Security Modules in the Amazon Redshift Cluster Management Guide.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

Description

A text description of the HSM configuration to be created.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

HsmConfigurationIdentifier

The identifier to be assigned to the new Amazon Redshift HSM configuration.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

HsmIpAddress

The IP address that the Amazon Redshift cluster must use to access the HSM.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

HsmPartitionName

The name of the partition in the HSM where the Amazon Redshift clusters will store their database encryption keys.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

HsmPartitionPassword

The password required to access the HSM partition.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

HsmServerPublicCertificate

The HSMs public certificate file. When using Cloud HSM, the file name is server.pem.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Tags.Tag.N

A list of tag instances.

Type: Array of Tag objects

Required: No

Response Elements

The following element is returned by the service.

HsmConfiguration

Returns information about an HSM configuration, which is an object that describes to Amazon Redshift clusters the information they require to connect to an HSM where they can store database encryption keys.

Type: HsmConfiguration object

Errors

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

HsmConfigurationAlreadyExistsFault

There is already an existing Amazon Redshift HSM configuration with the specified identifier.

HTTP Status Code: 400

HsmConfigurationQuotaExceededFault

The quota for HSM configurations has been reached. For information about increasing your quota, go to Limits in Amazon Redshift in the *Amazon Redshift Cluster Management Guide*.

HTTP Status Code: 400

InvalidTagFault

The tag is invalid.

HTTP Status Code: 400

TagLimitExceededFault

You have exceeded the number of tags allowed.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of CreateHsmConfiguration.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=CreateHsmConfiguration
&HsmConfigurationIdentifier=myhsmconnection
&Description=My+HSM+connection
&HsmIpAddress=192.0.2.09
&HsmPartitionName=myhsmpartition
&HsmPartitionPassword=A1b2c3d4
&HsmServerPublicCertificate=myhsmclientcert
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<CreateHsmConfigurationResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <CreateHsmConfigurationResult>
    <HsmConfiguration>
      <Description>My HSM connection</Description>
      <HsmPartitionName>myhsmpartition</HsmPartitionName>
      <HsmConfigurationIdentifier>myhsmconnection</HsmConfigurationIdentifier>
      <Tags/>
      <HsmIpAddress>192.0.2.09</HsmIpAddress>
    </HsmConfiguration>
  </CreateHsmConfigurationResult>
  <ResponseMetadata>
    <RequestId>e106be9e-2833-11ea-9caa-c956bec1ce87</RequestId>
  </ResponseMetadata>
</CreateHsmConfigurationResponse>
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET

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

CreateIntegration

Creates a zero-ETL integration or S3 event integration with Amazon Redshift.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

IntegrationName

The name of the integration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 63.

Pattern: `^[a-zA-Z][a-zA-Z0-9]*(-[a-zA-Z0-9]+)*$`

Required: Yes

SourceArn

The Amazon Resource Name (ARN) of the database to use as the source for replication.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `^arn:aws[a-z\-]*:(s3|dynamodb):.*:.*:[a-zA-Z0-9._\-\/]+$`

Required: Yes

TargetArn

The Amazon Resource Name (ARN) of the Amazon Redshift data warehouse to use as the target for replication.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `^arn:aws[a-z\-]*:redshift(-serverless)?:[a-z0-9\-]+:[0-9]{12}:(namespace\/|namespace:)[a-z0-9\-]+$`

Required: Yes

AdditionalEncryptionContext , AdditionalEncryptionContext.entry.N.key (key), AdditionalEncryptionContext.entry.N.value (value)

An optional set of non-secret key–value pairs that contains additional contextual information about the data. For more information, see Encryption context in the *AWS Key Management Service Developer Guide*.

You can only include this parameter if you specify the `KMSKeyId` parameter.

Type: String to string map

Key Length Constraints: Maximum length of 2147483647.

Value Length Constraints: Maximum length of 2147483647.

Required: No

Description

A description of the integration.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1000.

Pattern: `^.*$`

Required: No

KMSKeyId

An AWS Key Management Service (AWS KMS) key identifier for the key to use to encrypt the integration. If you don't specify an encryption key, the default AWS owned key is used.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

TagList.Tag.N

A list of tags.

Type: Array of Tag objects

Required: No

Response Elements

The following elements are returned by the service.

AdditionalEncryptionContext , AdditionalEncryptionContext.entry.N.key (key), AdditionalEncryptionContext.entry.N.value (value)

The encryption context for the integration. For more information, see Encryption context in the *AWS Key Management Service Developer Guide*.

Type: String to string map

Key Length Constraints: Maximum length of 2147483647.

Value Length Constraints: Maximum length of 2147483647.

CreateTime

The time (UTC) when the integration was created.

Type: Timestamp

Description

The description of the integration.

Type: String

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

Pattern: `^.*$`

Errors.IntegrationError.N

Any errors associated with the integration.

Type: Array of IntegrationError objects

IntegrationArn

The Amazon Resource Name (ARN) of the integration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `^arn:aws[a-z\-]*:redshift:[a-z0-9\-]*:[0-9]*:integration:[0-9a-f]{8}-[0-9a-f]{4}-[0-9a-f]{4}-[0-9a-f]{4}-[0-9a-f]{12}$`

IntegrationName

The name of the integration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 63.

Pattern: `^[a-zA-Z][a-zA-Z0-9]*(-[a-zA-Z0-9]+)*$`

KMSKeyId

The AWS Key Management Service (AWS KMS) key identifier for the key used to encrypt the integration.

Type: String

Length Constraints: Maximum length of 2147483647.

SourceArn

The Amazon Resource Name (ARN) of the database used as the source for replication.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `^arn:aws[a-z\-]*:(s3|dynamodb):.*:.*:[a-zA-Z0-9._\-\/]+$`

Status

The current status of the integration.

Type: String

Valid Values: `creating | active | modifying | failed | deleting | syncing | needs_attention`

Tags.Tag.N

The list of tags associated with the integration.

Type: Array of Tag objects

TargetArn

The Amazon Resource Name (ARN) of the Amazon Redshift data warehouse to use as the target for replication.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `^arn:aws[a-z\-]*:redshift(-serverless)?:[a-z0-9\-]+:[0-9]{12}:(namespace\/|namespace:)[a-z0-9\-]+$`

Errors

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

IntegrationAlreadyExistsFault

The integration you are trying to create already exists.

HTTP Status Code: 400

IntegrationConflictOperationFault

A conflicting conditional operation is currently in progress against this resource. This typically occurs when there are multiple requests being made to the same resource at the same time, and these requests conflict with each other.

HTTP Status Code: 400

IntegrationQuotaExceededFault

You can't create any more zero-ETL or S3 event integrations because the quota has been reached.

HTTP Status Code: 400

IntegrationSourceNotFoundFault

The specified integration source can't be found.

HTTP Status Code: 404

IntegrationTargetNotFoundFault

The specified integration target can't be found.

HTTP Status Code: 404

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

InvalidTagFault

The tag is invalid.

HTTP Status Code: 400

TagLimitExceededFault

You have exceeded the number of tags allowed.

HTTP Status Code: 400

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

CreateRedshiftIdcApplication

Creates an Amazon Redshift application for use with IAM Identity Center.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

IamRoleArn

The IAM role ARN for the Amazon Redshift IAM Identity Center application instance. It has the required permissions to be assumed and invoke the IDC Identity Center API.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

IdcDisplayName

The display name for the Amazon Redshift IAM Identity Center application instance. It appears in the console.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 127.

Pattern: `[\w+=,.@-]+`

Required: Yes

IdcInstanceArn

The Amazon resource name (ARN) of the IAM Identity Center instance where Amazon Redshift creates a new managed application.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

RedshiftIdcApplicationName

The name of the Redshift application in IAM Identity Center.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 63.

Pattern: `[a-z][a-z0-9]*(-[a-z0-9]+)*`

Required: Yes

AuthorizedTokenIssuerList.member.N

The token issuer list for the Amazon Redshift IAM Identity Center application instance.

Type: Array of AuthorizedTokenIssuer objects

Required: No

IdentityNamespace

The namespace for the Amazon Redshift IAM Identity Center application instance. It determines which managed application verifies the connection token.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 127.

Pattern: `^[a-zA-Z0-9_+.#@$-]+$`

Required: No

ServiceIntegrations.member.N

A collection of service integrations for the Redshift IAM Identity Center application.

Type: Array of ServiceIntegrationsUnion objects

Required: No

Response Elements

The following element is returned by the service.

RedshiftIdcApplication

Contains properties for the Redshift IDC application.

Type: RedshiftIdcApplication object

Errors

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

DependentServiceAccessDenied

A dependent service denied access for the integration.

HTTP Status Code: 403

DependentServiceUnavailableFault

Your request cannot be completed because a dependent internal service is temporarily unavailable. Wait 30 to 60 seconds and try again.

HTTP Status Code: 400

RedshiftIdcApplicationAlreadyExists

The application you attempted to add already exists.

HTTP Status Code: 400

RedshiftIdcApplicationQuotaExceeded

The maximum number of Redshift IAM Identity Center applications was exceeded.

HTTP Status Code: 400

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface

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

CreateScheduledAction

Creates a scheduled action. A scheduled action contains a schedule and an Amazon Redshift API action. For example, you can create a schedule of when to run the `ResizeCluster` API operation.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

IamRole

The IAM role to assume to run the target action. For more information about this parameter, see ScheduledAction.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Schedule

The schedule in `at( )` or `cron( )` format. For more information about this parameter, see ScheduledAction.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

ScheduledActionName

The name of the scheduled action. The name must be unique within an account. For more information about this parameter, see ScheduledAction.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

TargetAction

A JSON format string of the Amazon Redshift API operation with input parameters. For more information about this parameter, see ScheduledAction.

Type: ScheduledActionType object

Required: Yes

Enable

If true, the schedule is enabled. If false, the scheduled action does not trigger. For more information about `state` of the scheduled action, see ScheduledAction.

Type: Boolean

Required: No

EndTime

The end time in UTC of the scheduled action. After this time, the scheduled action does not trigger. For more information about this parameter, see ScheduledAction.

Type: Timestamp

Required: No

ScheduledActionDescription

The description of the scheduled action.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

StartTime

The start time in UTC of the scheduled action. Before this time, the scheduled action does not trigger. For more information about this parameter, see ScheduledAction.

Type: Timestamp

Required: No

Response Elements

The following elements are returned by the service.

EndTime

The end time in UTC when the schedule is no longer active. After this time, the scheduled action does not trigger.

Type: Timestamp

IamRole

The IAM role to assume to run the scheduled action. This IAM role must have permission to run the Amazon Redshift API operation in the scheduled action. This IAM role must allow the Amazon Redshift scheduler (Principal scheduler.redshift.amazonaws.com) to assume permissions on your behalf. For more information about the IAM role to use with the Amazon Redshift scheduler, see Using Identity-Based Policies for Amazon Redshift in the *Amazon Redshift Cluster Management Guide*.

Type: String

Length Constraints: Maximum length of 2147483647.

NextInvocations.ScheduledActionTime.N

List of times when the scheduled action will run.

Type: Array of timestamps

Schedule

The schedule for a one-time (at format) or recurring (cron format) scheduled action. Schedule invocations must be separated by at least one hour.

Format of at expressions is "`at(yyyy-mm-ddThh:mm:ss)`". For example, "`at(2016-03-04T17:27:00)`".

Format of cron expressions is "`cron(Minutes Hours Day-of-month Month Day-of-week Year)`". For example, "`cron(0 10 ? * MON *)`". For more information, see Cron Expressions in the *Amazon CloudWatch Events User Guide*.

Type: String

Length Constraints: Maximum length of 2147483647.

ScheduledActionDescription

The description of the scheduled action.

Type: String

Length Constraints: Maximum length of 2147483647.

ScheduledActionName

The name of the scheduled action.

Type: String

Length Constraints: Maximum length of 2147483647.

StartTime

The start time in UTC when the schedule is active. Before this time, the scheduled action does not trigger.

Type: Timestamp

State

The state of the scheduled action. For example, `DISABLED`.

Type: String

Valid Values: `ACTIVE | DISABLED`

TargetAction

A JSON format string of the Amazon Redshift API operation with input parameters.

`"{\"ResizeCluster\":{\"NodeType\":\"ra3.4xlarge\",\"ClusterIdentifier\":\"my-test-cluster\",\"NumberOfNodes\":3}}"`.

Type: ScheduledActionType object

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

InvalidSchedule

The schedule you submitted isn't valid.

HTTP Status Code: 400

InvalidScheduledAction

The scheduled action is not valid.

HTTP Status Code: 400

ScheduledActionAlreadyExists

The scheduled action already exists.

HTTP Status Code: 400

ScheduledActionQuotaExceeded

The quota for scheduled actions exceeded.

HTTP Status Code: 400

ScheduledActionTypeUnsupported

The action type specified for a scheduled action is not supported.

HTTP Status Code: 400

UnauthorizedOperation

Your account is not authorized to perform the requested operation.

HTTP Status Code: 400

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

CreateSnapshotCopyGrant

Creates a snapshot copy grant that permits Amazon Redshift to use an encrypted symmetric key from AWS Key Management Service (KMS) to encrypt copied snapshots in a destination region.

For more information about managing snapshot copy grants, go to Amazon Redshift Database Encryption in the *Amazon Redshift Cluster Management Guide*.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

SnapshotCopyGrantName

The name of the snapshot copy grant. This name must be unique in the region for the AWS account.

Constraints:

- Must contain from 1 to 63 alphanumeric characters or hyphens.
- Alphabetic characters must be lowercase.
- First character must be a letter.
- Cannot end with a hyphen or contain two consecutive hyphens.
- Must be unique for all clusters within an AWS account.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

KmsKeyId

The unique identifier of the encrypted symmetric key to which to grant Amazon Redshift permission. If no key is specified, the default key is used.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Tags.Tag.N

A list of tag instances.

Type: Array of Tag objects

Required: No

Response Elements

The following element is returned by the service.

SnapshotCopyGrant

The snapshot copy grant that grants Amazon Redshift permission to encrypt copied snapshots with the specified encrypted symmetric key from AWS KMS in the destination region.

For more information about managing snapshot copy grants, go to Amazon Redshift Database Encryption in the *Amazon Redshift Cluster Management Guide*.

Type: SnapshotCopyGrant object

Errors

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

DependentServiceRequestThrottlingFault

The request cannot be completed because a dependent service is throttling requests made by Amazon Redshift on your behalf. Wait and retry the request.

HTTP Status Code: 400

InvalidTagFault

The tag is invalid.

HTTP Status Code: 400

LimitExceededFault

The encryption key has exceeded its grant limit in AWS KMS.

HTTP Status Code: 400

SnapshotCopyGrantAlreadyExistsFault

The snapshot copy grant can't be created because a grant with the same name already exists.

HTTP Status Code: 400

SnapshotCopyGrantQuotaExceededFault

The AWS account has exceeded the maximum number of snapshot copy grants in this region.

HTTP Status Code: 400

TagLimitExceededFault

You have exceeded the number of tags allowed.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of CreateSnapshotCopyGrant.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=CreateSnapshotCopyGrant
&SnapshotCopyGrantName=mysnapshotcopygrantnew
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<CreateSnapshotCopyGrantResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <CreateSnapshotCopyGrantResult>
```

```
    <SnapshotCopyGrant>
      <SnapshotCopyGrantName>mysnapshotcopygrantnew</SnapshotCopyGrantName>
      <KmsKeyId>arn:aws:kms:us-east-2:123456789012:key/bPxRfih3yCo8nvbEXAMPLEKEY</
KmsKeyId>
      <Tags/>
    </SnapshotCopyGrant>
  </CreateSnapshotCopyGrantResult>
  <ResponseMetadata>
    <RequestId>085f3206-2837-11ea-9939-5fccefa818c0</RequestId>
  </ResponseMetadata>
</CreateSnapshotCopyGrantResponse>
```

See Also

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

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

CreateSnapshotSchedule

Create a snapshot schedule that can be associated to a cluster and which overrides the default system backup schedule.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

DryRun

Type: Boolean

Required: No

NextInvocations

Type: Integer

Required: No

ScheduleDefinitions.ScheduleDefinition.N

The definition of the snapshot schedule. The definition is made up of schedule expressions, for example "cron(30 12 *)" or "rate(12 hours)".

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

ScheduleDescription

The description of the snapshot schedule.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ScheduleIdentifier

A unique identifier for a snapshot schedule. Only alphanumeric characters are allowed for the identifier.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Tags.Tag.N

An optional set of tags you can use to search for the schedule.

Type: Array of Tag objects

Required: No

Response Elements

The following elements are returned by the service.

AssociatedClusterCount

The number of clusters associated with the schedule.

Type: Integer

AssociatedClusters.ClusterAssociatedToSchedule.N

A list of clusters associated with the schedule. A maximum of 100 clusters is returned.

Type: Array of ClusterAssociatedToSchedule objects

NextInvocations.SnapshotTime.N

Type: Array of timestamps

ScheduleDefinitions.ScheduleDefinition.N

A list of ScheduleDefinitions.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

ScheduleDescription

The description of the schedule.

Type: String

Length Constraints: Maximum length of 2147483647.

ScheduleIdentifier

A unique identifier for the schedule.

Type: String

Length Constraints: Maximum length of 2147483647.

Tags.Tag.N

An optional set of tags describing the schedule.

Type: Array of Tag objects

Errors

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

InvalidSchedule

The schedule you submitted isn't valid.

HTTP Status Code: 400

InvalidTagFault

The tag is invalid.

HTTP Status Code: 400

ScheduleDefinitionTypeUnsupported

The definition you submitted is not supported.

HTTP Status Code: 400

SnapshotScheduleAlreadyExists

The specified snapshot schedule already exists.

HTTP Status Code: 400

SnapshotScheduleQuotaExceeded

You have exceeded the quota of snapshot schedules.

HTTP Status Code: 400

TagLimitExceededFault

You have exceeded the number of tags allowed.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of CreateSnapshotSchedule.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=CreateSnapshotSchedule
&ScheduleDefinitions.ScheduleDefinition.1=rate%2812+hours%29
&ScheduleIdentifier=mysnapshotschedule
&ScheduleDescription=My+schedule+description
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<CreateSnapshotScheduleResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <CreateSnapshotScheduleResult>
```

```
    <ScheduleDefinitions>
      <ScheduleDefinition>rate(12 hours)</ScheduleDefinition>
    </ScheduleDefinitions>
    <ScheduleDescription>My schedule description</ScheduleDescription>
    <ScheduleIdentifier>mysnapshotschedule</ScheduleIdentifier>
    <Tags/>
  </CreateSnapshotScheduleResult>
  <ResponseMetadata>
    <RequestId>6f3e2f58-2837-11ea-9939-5fccefa818c0</RequestId>
  </ResponseMetadata>
</CreateSnapshotScheduleResponse>
```

See Also

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

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

CreateTags

Adds tags to a cluster.

A resource can have up to 50 tags. If you try to create more than 50 tags for a resource, you will receive an error and the attempt will fail.

If you specify a key that already exists for the resource, the value for that key will be updated with the new value.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ResourceName

The Amazon Resource Name (ARN) to which you want to add the tag or tags. For example, `arn:aws:redshift:us-east-2:123456789:cluster:t1`.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Tags.Tag.N

One or more name/value pairs to add as tags to the specified resource. Each tag name is passed in with the parameter `Key` and the corresponding value is passed in with the parameter `Value`. The `Key` and `Value` parameters are separated by a comma (,). Separate multiple tags with a space. For example, `--tags "Key"="owner","Value"="admin" "Key"="environment","Value"="test" "Key"="version","Value"="1.0"`.

Type: Array of Tag objects

Required: Yes

Errors

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

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

InvalidTagFault

The tag is invalid.

HTTP Status Code: 400

ResourceNotFoundFault

The resource could not be found.

HTTP Status Code: 404

TagLimitExceededFault

You have exceeded the number of tags allowed.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of CreateTags.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=CreateTags
&ResourceName=arn%3Aaws%3Aredshift%3Aus-east-2%3A123456789012%3Acluster%3Amycluster
&Tags.Tag.1.Key=mytag
&Tags.Tag.1.Value=newtag
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<CreateTagsResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <ResponseMetadata>
    <RequestId>bf5cbe2f-2837-11ea-9467-b9a67a99da45</RequestId>
  </ResponseMetadata>
</CreateTagsResponse>
```

See Also

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

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

CreateUsageLimit

Creates a usage limit for a specified Amazon Redshift feature on a cluster. The usage limit is identified by the returned usage limit identifier.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

Amount

The limit amount. If time-based, this amount is in minutes. If data-based, this amount is in terabytes (TB). The value must be a positive number.

Type: Long

Required: Yes

ClusterIdentifier

The identifier of the cluster that you want to limit usage.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

FeatureType

The Amazon Redshift feature that you want to limit.

Type: String

Valid Values: `spectrum | concurrency-scaling | cross-region-datasharing`

Required: Yes

LimitType

The type of limit. Depending on the feature type, this can be based on a time duration or data size. If `FeatureType` is `spectrum`, then `LimitType` must be `data-scanned`. If `FeatureType` is `concurrency-scaling`, then `LimitType` must be `time`. If `FeatureType` is `cross-region-datasharing`, then `LimitType` must be `data-scanned`.

Type: String

Valid Values: `time | data-scanned`

Required: Yes

BreachAction

The action that Amazon Redshift takes when the limit is reached. The default is log. For more information about this parameter, see UsageLimit.

Type: String

Valid Values: `log | emit-metric | disable`

Required: No

Period

The time period that the amount applies to. A `weekly` period begins on Sunday. The default is `monthly`.

Type: String

Valid Values: `daily | weekly | monthly`

Required: No

Tags.Tag.N

A list of tag instances.

Type: Array of Tag objects

Required: No

Response Elements

The following elements are returned by the service.

Amount

The limit amount. If time-based, this amount is in minutes. If data-based, this amount is in terabytes (TB).

Type: Long

BreachAction

The action that Amazon Redshift takes when the limit is reached. Possible values are:

- **log** - To log an event in a system table. The default is log.
- **emit-metric** - To emit CloudWatch metrics.
- **disable** - To disable the feature until the next usage period begins.

Type: String

Valid Values: `log | emit-metric | disable`

ClusterIdentifier

The identifier of the cluster with a usage limit.

Type: String

Length Constraints: Maximum length of 2147483647.

FeatureType

The Amazon Redshift feature to which the limit applies.

Type: String

Valid Values: `spectrum | concurrency-scaling | cross-region-datasharing`

LimitType

The type of limit. Depending on the feature type, this can be based on a time duration or data size.

Type: String

Valid Values: `time | data-scanned`

Period

The time period that the amount applies to. A `weekly` period begins on Sunday. The default is `monthly`.

Type: String

Valid Values: `daily | weekly | monthly`

Tags.Tag.N

A list of tag instances.

Type: Array of Tag objects

UsageLimitId

The identifier of the usage limit.

Type: String

Length Constraints: Maximum length of 2147483647.

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

InvalidUsageLimit

The usage limit is not valid.

HTTP Status Code: 400

LimitExceededFault

The encryption key has exceeded its grant limit in AWS KMS.

HTTP Status Code: 400

TagLimitExceededFault

You have exceeded the number of tags allowed.

HTTP Status Code: 400

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

UsageLimitAlreadyExists

The usage limit already exists.

HTTP Status Code: 400

See Also

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

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

DeauthorizeDataShare

From a datashare producer account, removes authorization from the specified datashare.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ConsumerIdentifier

The identifier of the data consumer that is to have authorization removed from the datashare. This identifier is an AWS account ID or a keyword, such as ADX.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

DataShareArn

The namespace Amazon Resource Name (ARN) of the datashare to remove authorization from.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Response Elements

The following elements are returned by the service.

AllowPubliclyAccessibleConsumers

A value that specifies whether the datashare can be shared to a publicly accessible cluster.

Type: Boolean

DataShareArn

The Amazon Resource Name (ARN) of the datashare that the consumer is to use.

Type: String

Length Constraints: Maximum length of 2147483647.

DataShareAssociations.member.N

A value that specifies when the datashare has an association between producer and data consumers.

Type: Array of DataShareAssociation objects

DataShareType

The type of the datashare created by RegisterNamespace.

Type: String

Valid Values: `INTERNAL`

ManagedBy

The identifier of a datashare to show its managing entity.

Type: String

Length Constraints: Maximum length of 2147483647.

ProducerArn

The Amazon Resource Name (ARN) of the producer namespace.

Type: String

Length Constraints: Maximum length of 2147483647.

Errors

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

InvalidDataShareFault

There is an error with the datashare.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DeauthorizeDataShare.

Sample Request

```
 https://redshift.us-east-2.amazonaws.com/
        ?Action=DeauthorizeDataShare
        &ConsumerIdentifier=275247490162
        &DataShareArn=arn%3Aaws%3Aredshift%3Aus-east-1%3A827630067164%3Adatashare
%3Aaf06285e-8a45-4ee9-b598-648c218c8ff1%2Ftestshare2
        &SignatureMethod=HmacSHA256&SignatureVersion=4
        &Version=2012-12-01
        &X-Amz-Algorithm=AWS4-HMAC-SHA256
        &X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
        &X-Amz-Date=20190825T160000Z
        &X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-
date
        &X-Amz-
Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DeauthorizeDataShareResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
            <DeauthorizeDataShareResult>
                <AllowPubliclyAccessibleConsumers>false</
AllowPubliclyAccessibleConsumers>
                <ProducerNamespaceArn>arn:aws:redshift:us-
east-1:827630067164:namespace:af06285e-8a45-4ee9-b598-648c218c8ff1</
ProducerNamespaceArn>
                <DataShareAr>arn:aws:redshift:us-
east-1:827630067164:datashare:af06285e-8a45-4ee9-b598-648c218c8ff1/testshare2</
DataShareArn>
                <DataShareAssociations>
                    <member>
                        <ConsumerIdentifier>275247490162</ConsumerIdentifier>
                        <StatusChangeDate>2020-10-30T17:39:04.021910</StatusChangeDate>
                        <CreatedDate>2020-10-29T22:31:53.495665</CreatedDate>
                        <Status>DEAUTHORIZED</Status>
                    </member>
                </DataShareAssociations>
```

```
            </DeauthorizeDataShareResult>
            <ResponseMetadata>
                <RequestId>7c915a04-fe35-4be1-b71d-363efaa95a08</RequestId>
            </ResponseMetadata>
        </DeauthorizeDataShareResponse>
```

See Also

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

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

DeleteAuthenticationProfile

Deletes an authentication profile.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

AuthenticationProfileName

The name of the authentication profile to delete.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[a-zA-Z0-9\-]+$`

Required: Yes

Response Elements

The following element is returned by the service.

AuthenticationProfileName

The name of the authentication profile that was deleted.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[a-zA-Z0-9\-]+$`

Errors

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

AuthenticationProfileNotFoundFault

The authentication profile can't be found.

HTTP Status Code: 404

InvalidAuthenticationProfileRequestFault

The authentication profile request is not valid. The profile name can't be null or empty. The authentication profile API operation must be available in the AWS Region.

HTTP Status Code: 400

See Also

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

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

DeleteCluster

Deletes a previously provisioned cluster without its final snapshot being created. A successful response from the web service indicates that the request was received correctly. Use DescribeClusters to monitor the status of the deletion. The delete operation cannot be canceled or reverted once submitted. For more information about managing clusters, go to Amazon Redshift Clusters in the *Amazon Redshift Cluster Management Guide*.

If you want to shut down the cluster and retain it for future use, set *SkipFinalClusterSnapshot* to `false` and specify a name for *FinalClusterSnapshotIdentifier*. You can later restore this snapshot to resume using the cluster. If a final cluster snapshot is requested, the status of the cluster will be "final-snapshot" while the snapshot is being taken, then it's "deleting" once Amazon Redshift begins deleting the cluster.

For more information about managing clusters, go to Amazon Redshift Clusters in the *Amazon Redshift Cluster Management Guide*.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The identifier of the cluster to be deleted.

Constraints:

- Must contain lowercase characters.
- Must contain from 1 to 63 alphanumeric characters or hyphens.
- First character must be a letter.
- Cannot end with a hyphen or contain two consecutive hyphens.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

FinalClusterSnapshotIdentifier

The identifier of the final snapshot that is to be created immediately before deleting the cluster. If this parameter is provided, *SkipFinalClusterSnapshot* must be `false`.

Constraints:

- Must be 1 to 255 alphanumeric characters.
- First character must be a letter.
- Cannot end with a hyphen or contain two consecutive hyphens.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

FinalClusterSnapshotRetentionPeriod

The number of days that a manual snapshot is retained. If the value is -1, the manual snapshot is retained indefinitely.

The value must be either -1 or an integer between 1 and 3,653.

The default value is -1.

Type: Integer

Required: No

SkipFinalClusterSnapshot

Determines whether a final snapshot of the cluster is created before Amazon Redshift deletes the cluster. If `true`, a final cluster snapshot is not created. If `false`, a final cluster snapshot is created before the cluster is deleted.

> **Note**
>
> The *FinalClusterSnapshotIdentifier* parameter must be specified if *SkipFinalClusterSnapshot* is `false`.

Default: `false`

Type: Boolean

Required: No

Response Elements

The following element is returned by the service.

Cluster

Describes a cluster.

Type: Cluster object

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

ClusterSnapshotAlreadyExists

The value specified as a snapshot identifier is already used by an existing snapshot.

HTTP Status Code: 400

ClusterSnapshotQuotaExceeded

The request would result in the user exceeding the allowed number of cluster snapshots.

HTTP Status Code: 400

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

InvalidRetentionPeriodFault

The retention period specified is either in the past or is not a valid value.

The value must be either -1 or an integer between 1 and 3,653.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DeleteCluster.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DeleteCluster
&ClusterIdentifier=mycluster
&SkipFinalClusterSnapshot=true
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DeleteClusterResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <DeleteClusterResult>
    <Cluster>
      <AllowVersionUpgrade>true</AllowVersionUpgrade>
      <ClusterIdentifier>mycluster</ClusterIdentifier>
      <NumberOfNodes>2</NumberOfNodes>
      <AvailabilityZone>us-east-2a</AvailabilityZone>
      <ClusterVersion>1.0</ClusterVersion>
      <ManualSnapshotRetentionPeriod>-1</ManualSnapshotRetentionPeriod>
      <ClusterAvailabilityStatus>Modifying</ClusterAvailabilityStatus>
      <Endpoint>
        <Port>5439</Port>
        <Address>mycluster.cmeaswqeuae.us-east-2.redshift.amazonaws.com</Address>
      </Endpoint>
      <VpcId>vpc-a1abc1a1</VpcId>
      <PubliclyAccessible>false</PubliclyAccessible>
      <ClusterCreateTime>2019-12-26T20:25:38.716Z</ClusterCreateTime>
      <MasterUsername>adminuser</MasterUsername>
      <DBName>dev</DBName>
      <EnhancedVpcRouting>false</EnhancedVpcRouting>
      <IamRoles/>
```

```
      <ClusterSecurityGroups/>
      <NodeType>dc2.large</NodeType>
      <ClusterSubnetGroupName>default</ClusterSubnetGroupName>
      <NextMaintenanceWindowStartTime>2019-12-27T04:00:00Z</
NextMaintenanceWindowStartTime>
      <DeferredMaintenanceWindows/>
      <Tags>
        <Tag>
          <Value>newtag</Value>
          <Key>mytag</Key>
        </Tag>
      </Tags>
      <VpcSecurityGroups>
        <VpcSecurityGroup>
          <VpcSecurityGroupId>sh-a1a123ab</VpcSecurityGroupId>
          <Status>active</Status>
        </VpcSecurityGroup>
      </VpcSecurityGroups>
      <ClusterParameterGroups>
        <ClusterParameterGroup>
          <ParameterGroupName>default.redshift-1.0</ParameterGroupName>
          <ParameterApplyStatus>in-sync</ParameterApplyStatus>
        </ClusterParameterGroup>
      </ClusterParameterGroups>
      <Encrypted>true</Encrypted>
      <MaintenanceTrackName>current</MaintenanceTrackName>
      <PendingModifiedValues>
        <ClusterType>single-node</ClusterType>
        <NodeType>dc2.large</NodeType>
      </PendingModifiedValues>
      <PreferredMaintenanceWindow>fri:04:00-fri:04:30</PreferredMaintenanceWindow>
      <AutomatedSnapshotRetentionPeriod>1</AutomatedSnapshotRetentionPeriod>
      <ClusterStatus>deleting</ClusterStatus>
    </Cluster>
  </DeleteClusterResult>
  <ResponseMetadata>
    <RequestId>4b6dd471-2838-11ea-b6af-7126da6f11af</RequestId>
  </ResponseMetadata>
</DeleteClusterResponse>
```

See Also

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

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

DeleteClusterParameterGroup

Deletes a specified Amazon Redshift parameter group.

> **Note**
>
> You cannot delete a parameter group if it is associated with a cluster.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ParameterGroupName

The name of the parameter group to be deleted.

Constraints:

- Must be the name of an existing cluster parameter group.
- Cannot delete a default cluster parameter group.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Errors

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

ClusterParameterGroupNotFound

The parameter group name does not refer to an existing parameter group.

HTTP Status Code: 404

InvalidClusterParameterGroupState

The cluster parameter group action can not be completed because another task is in progress that involves the parameter group. Wait a few moments and try the operation again.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DeleteClusterParameterGroup.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DeleteClusterParameterGroup
&ParameterGroupName=myclusterparametergroup
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DeleteClusterParameterGroupResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <ResponseMetadata>
    <RequestId>95c53381-2838-11ea-a07c-5d44c0d19e91</RequestId>
  </ResponseMetadata>
</DeleteClusterParameterGroupResponse>
```

See Also

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

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

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

DeleteClusterSecurityGroup

Deletes an Amazon Redshift security group.

> **Note**
>
> You cannot delete a security group that is associated with any clusters. You cannot delete the default security group.

For information about managing security groups, go to Amazon Redshift Cluster Security Groups in the *Amazon Redshift Cluster Management Guide*.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterSecurityGroupName

The name of the cluster security group to be deleted.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Errors

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

ClusterSecurityGroupNotFound

The cluster security group name does not refer to an existing cluster security group.

HTTP Status Code: 404

InvalidClusterSecurityGroupState

The state of the cluster security group is not `available`.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DeleteClusterSecurityGroup.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
    ?Action=DeleteClusterSecurityGroup
    &ClusterSecurityGroupName=securitygroup1
    &Version=2012-12-01
    &x-amz-algorithm=AWS4-HMAC-SHA256
    &x-amz-credential=AKIAIOSFODNN7EXAMPLE/20121208/us-east-2/redshift/aws4_request
    &x-amz-date=20121208T015926Z
    &x-amz-signedheaders=content-type;host;x-amz-date
```

Sample Response

```
<DeleteClusterSecurityGroupResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <ResponseMetadata>
    <RequestId>e54e05dc-40da-11e2-955f-313c36e9e01d</RequestId>
  </ResponseMetadata>
</DeleteClusterSecurityGroupResponse>
```

See Also

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

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

- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteClusterSnapshot

Deletes the specified manual snapshot. The snapshot must be in the `available` state, with no other users authorized to access the snapshot.

Unlike automated snapshots, manual snapshots are retained even after you delete your cluster. Amazon Redshift does not delete your manual snapshots. You must delete manual snapshot explicitly to avoid getting charged. If other accounts are authorized to access the snapshot, you must revoke all of the authorizations before you can delete the snapshot.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

SnapshotIdentifier

The unique identifier of the manual snapshot to be deleted.

Constraints: Must be the name of an existing snapshot that is in the `available`, `failed`, or `cancelled` state.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

SnapshotClusterIdentifier

The unique identifier of the cluster the snapshot was created from. This parameter is required if your IAM user has a policy containing a snapshot resource element that specifies anything other than * for the cluster name.

Constraints: Must be the name of valid cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following element is returned by the service.

Snapshot

Describes a snapshot.

Type: Snapshot object

Errors

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

ClusterSnapshotNotFound

The snapshot identifier does not refer to an existing cluster snapshot.

HTTP Status Code: 404

InvalidClusterSnapshotState

The specified cluster snapshot is not in the `available` state, or other accounts are authorized to access the snapshot.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DeleteClusterSnapshot.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DeleteClusterSnapshot
&SnapshotIdentifier=mysnapshotid
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
```

```
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DeleteClusterSnapshotResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <DeleteClusterSnapshotResult>
    <Snapshot>
      <SnapshotRetentionStartTime>2019-12-26T22:38:40.158Z</SnapshotRetentionStartTime>
      <ClusterIdentifier>mycluster</ClusterIdentifier>
      <EncryptedWithHSM>false</EncryptedWithHSM>
      <NumberOfNodes>2</NumberOfNodes>
      <OwnerAccount>123456789012</OwnerAccount>
      <AvailabilityZone>us-east-2a</AvailabilityZone>
      <ClusterVersion>1.0</ClusterVersion>
      <ManualSnapshotRetentionPeriod>-1</ManualSnapshotRetentionPeriod>
      <TotalBackupSizeInMegaBytes>55.0</TotalBackupSizeInMegaBytes>
      <VpcId>vpc-a1abc1a1</VpcId>
      <BackupProgressInMegaBytes>31.0</BackupProgressInMegaBytes>
      <CurrentBackupRateInMegaBytesPerSecond>25.5354</
CurrentBackupRateInMegaBytesPerSecond>
      <ElapsedTimeInSeconds>1</ElapsedTimeInSeconds>
      <ClusterCreateTime>2019-12-26T20:25:38.716Z</ClusterCreateTime>
      <MasterUsername>adminuser</MasterUsername>
      <DBName>dev</DBName>
      <ActualIncrementalBackupSizeInMegaBytes>31.0</
ActualIncrementalBackupSizeInMegaBytes>
      <SnapshotType>manual</SnapshotType>
      <EnhancedVpcRouting>false</EnhancedVpcRouting>
      <SnapshotIdentifier>mysnapshotid</SnapshotIdentifier>
      <NodeType>dc2.large</NodeType>
      <Tags/>
      <Encrypted>false</Encrypted>
      <Port>5439</Port>
      <EstimatedSecondsToCompletion>0</EstimatedSecondsToCompletion>
      <MaintenanceTrackName>current</MaintenanceTrackName>
      <SnapshotCreateTime>2019-12-26T22:38:38.944Z</SnapshotCreateTime>
      <Status>deleted</Status>
    </Snapshot>
  </DeleteClusterSnapshotResult>
  <ResponseMetadata>
```

```
    <RequestId>08614243-2839-11ea-8cc9-43f1872b4b75</RequestId>
  </ResponseMetadata>
</DeleteClusterSnapshotResponse>
```

See Also

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

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

DeleteClusterSubnetGroup

Deletes the specified cluster subnet group.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterSubnetGroupName

The name of the cluster subnet group name to be deleted.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Errors

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

ClusterSubnetGroupNotFoundFault

The cluster subnet group name does not refer to an existing cluster subnet group.

HTTP Status Code: 400

InvalidClusterSubnetGroupStateFault

The cluster subnet group cannot be deleted because it is in use.

HTTP Status Code: 400

InvalidClusterSubnetStateFault

The state of the subnet is invalid.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DeleteClusterSubnetGroup.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DeleteClusterSubnetGroup
&ClusterSubnetGroupName=mysubnetgroup
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DeleteClusterSubnetGroupResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <ResponseMetadata>
    <RequestId>35a0d116-2839-11ea-9939-5fccefa818c0</RequestId>
  </ResponseMetadata>
</DeleteClusterSubnetGroupResponse>
```

See Also

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

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

- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DeleteCustomDomainAssociation

Contains information about deleting a custom domain association for a cluster.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The identifier of the cluster to delete a custom domain association for.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

CustomDomainName

The custom domain name for the custom domain association.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 253.

Pattern: `^(((?!-)[A-Za-z0-9-]{0,62}[A-Za-z0-9])\.)+((?!-)[A-Za-z0-9-]{1,62}[A-Za-z0-9])$`

Required: Yes

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

CustomCnameAssociationFault

An error occurred when an attempt was made to change the custom domain association.

HTTP Status Code: 400

CustomDomainAssociationNotFoundFault

An error occurred. The custom domain name couldn't be found.

HTTP Status Code: 404

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

DeleteEndpointAccess

Deletes a Redshift-managed VPC endpoint.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

EndpointName

The Redshift-managed VPC endpoint to delete.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Response Elements

The following elements are returned by the service.

Address

The DNS address of the endpoint.

Type: String

Length Constraints: Maximum length of 2147483647.

ClusterIdentifier

The cluster identifier of the cluster associated with the endpoint.

Type: String

Length Constraints: Maximum length of 2147483647.

EndpointCreateTime

The time (UTC) that the endpoint was created.

Type: Timestamp

EndpointName

The name of the endpoint.

Type: String

Length Constraints: Maximum length of 2147483647.

EndpointStatus

The status of the endpoint.

Type: String

Length Constraints: Maximum length of 2147483647.

Port

The port number on which the cluster accepts incoming connections.

Type: Integer

ResourceOwner

The AWS account ID of the owner of the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

SubnetGroupName

The subnet group name where Amazon Redshift chooses to deploy the endpoint.

Type: String

Length Constraints: Maximum length of 2147483647.

VpcEndpoint

The connection endpoint for connecting to an Amazon Redshift cluster through the proxy.

Type: VpcEndpoint object

VpcSecurityGroups.VpcSecurityGroup.N

The security groups associated with the endpoint.

Type: Array of VpcSecurityGroupMembership objects

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

EndpointNotFound

The endpoint name doesn't refer to an existing endpoint.

HTTP Status Code: 404

InvalidClusterSecurityGroupState

The state of the cluster security group is not `available`.

HTTP Status Code: 400

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

InvalidEndpointState

The status of the endpoint is not valid.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET

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

DeleteEventSubscription

Deletes an Amazon Redshift event notification subscription.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

SubscriptionName

The name of the Amazon Redshift event notification subscription to be deleted.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Errors

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

InvalidSubscriptionStateFault

The subscription request is invalid because it is a duplicate request. This subscription request is already in progress.

HTTP Status Code: 400

SubscriptionNotFound

An Amazon Redshift event notification subscription with the specified name does not exist.

HTTP Status Code: 404

Examples

Example

This example illustrates one usage of DeleteEventSubscription.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DeleteEventSubscription
&SubscriptionName=mysubscription
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DeleteEventSubscriptionResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <ResponseMetadata>
    <RequestId>8beeeeac-2839-11ea-9467-b9a67a99da45</RequestId>
  </ResponseMetadata>
</DeleteEventSubscriptionResponse>
```

See Also

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

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

DeleteHsmClientCertificate

Deletes the specified HSM client certificate.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

HsmClientCertificateIdentifier

The identifier of the HSM client certificate to be deleted.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Errors

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

HsmClientCertificateNotFoundFault

There is no Amazon Redshift HSM client certificate with the specified identifier.

HTTP Status Code: 400

InvalidHsmClientCertificateStateFault

The specified HSM client certificate is not in the `available` state, or it is still in use by one or more Amazon Redshift clusters.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DeleteHsmClientCertificate.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DeleteHsmClientCertificate
&HsmClientCertificateIdentifier=myhsmclientcert
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DeleteHsmClientCertificateResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <ResponseMetadata>
    <RequestId>ff0388ec-2839-11ea-b6af-7126da6f11af</RequestId>
  </ResponseMetadata>
</DeleteHsmClientCertificateResponse>
```

See Also

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

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

DeleteHsmConfiguration

Deletes the specified Amazon Redshift HSM configuration.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

HsmConfigurationIdentifier

The identifier of the Amazon Redshift HSM configuration to be deleted.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Errors

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

HsmConfigurationNotFoundFault

There is no Amazon Redshift HSM configuration with the specified identifier.

HTTP Status Code: 400

InvalidHsmConfigurationStateFault

The specified HSM configuration is not in the `available` state, or it is still in use by one or more Amazon Redshift clusters.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DeleteHsmConfiguration.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DeleteHsmConfiguration
&HsmConfigurationIdentifier=myhsmconnection
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DeleteHsmConfigurationResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <ResponseMetadata>
    <RequestId>3d45f314-283a-11ea-8397-219d1980588b</RequestId>
  </ResponseMetadata>
</DeleteHsmConfigurationResponse>
```

See Also

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

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

DeleteIntegration

Deletes a zero-ETL integration or S3 event integration with Amazon Redshift.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

IntegrationArn

The unique identifier of the integration to delete.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `^arn:aws[a-z\-]*:redshift:[a-z0-9\-]*:[0-9]*:integration:[0-9a-f]{8}-[0-9a-f]{4}-[0-9a-f]{4}-[0-9a-f]{4}-[0-9a-f]{12}$`

Required: Yes

Response Elements

The following elements are returned by the service.

AdditionalEncryptionContext , AdditionalEncryptionContext.entry.N.key (key), AdditionalEncryptionContext.entry.N.value (value)

The encryption context for the integration. For more information, see Encryption context in the *AWS Key Management Service Developer Guide*.

Type: String to string map

Key Length Constraints: Maximum length of 2147483647.

Value Length Constraints: Maximum length of 2147483647.

CreateTime

The time (UTC) when the integration was created.

Type: Timestamp

Description

The description of the integration.

Type: String

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

Pattern: `^.*$`

Errors.IntegrationError.N

Any errors associated with the integration.

Type: Array of IntegrationError objects

IntegrationArn

The Amazon Resource Name (ARN) of the integration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `^arn:aws[a-z\-]*:redshift:[a-z0-9\-]*:[0-9]*:integration:[0-9a-f]{8}-[0-9a-f]{4}-[0-9a-f]{4}-[0-9a-f]{4}-[0-9a-f]{12}$`

IntegrationName

The name of the integration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 63.

Pattern: `^[a-zA-Z][a-zA-Z0-9]*(-[a-zA-Z0-9]+)*$`

KMSKeyId

The AWS Key Management Service (AWS KMS) key identifier for the key used to encrypt the integration.

Type: String

Length Constraints: Maximum length of 2147483647.

SourceArn

The Amazon Resource Name (ARN) of the database used as the source for replication.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `^arn:aws[a-z\-]*:(s3|dynamodb):.*:.*:[a-zA-Z0-9._\-\/]+$`

Status

The current status of the integration.

Type: String

Valid Values: `creating | active | modifying | failed | deleting | syncing | needs_attention`

Tags.Tag.N

The list of tags associated with the integration.

Type: Array of Tag objects

TargetArn

The Amazon Resource Name (ARN) of the Amazon Redshift data warehouse to use as the target for replication.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `^arn:aws[a-z\-]*:redshift(-serverless)?:[a-z0-9\-]+:[0-9]{12}:(namespace\/|namespace:)[a-z0-9\-]+$`

Errors

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

IntegrationConflictOperationFault

A conflicting conditional operation is currently in progress against this resource. This typically occurs when there are multiple requests being made to the same resource at the same time, and these requests conflict with each other.

HTTP Status Code: 400

IntegrationConflictStateFault

The integration is in an invalid state and can't perform the requested operation.

HTTP Status Code: 400

IntegrationNotFoundFault

The integration can't be found.

HTTP Status Code: 404

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

DeletePartner

Deletes a partner integration from a cluster. Data can still flow to the cluster until the integration is deleted at the partner's website.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

AccountId

The AWS account ID that owns the cluster.

Type: String

Length Constraints: Fixed length of 12.

Pattern: `^[0-9]+$`

Required: Yes

ClusterIdentifier

The cluster identifier of the cluster that receives data from the partner.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[a-zA-Z0-9\-]+$`

Required: Yes

DatabaseName

The name of the database that receives data from the partner.

Type: String

Length Constraints: Maximum length of 127.

Pattern: `^[\p{L}_][\p{L}\p{N}@$#_]+$`

Required: Yes

PartnerName

The name of the partner that is authorized to send data.

Type: String

Length Constraints: Maximum length of 255.

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

Required: Yes

Response Elements

The following elements are returned by the service.

DatabaseName

The name of the database that receives data from the partner.

Type: String

Length Constraints: Maximum length of 127.

Pattern: `^[\p{L}_][\p{L}\p{N}@$#_]+$`

PartnerName

The name of the partner that is authorized to send data.

Type: String

Length Constraints: Maximum length of 255.

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

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

PartnerNotFound

The name of the partner was not found.

HTTP Status Code: 404

UnauthorizedPartnerIntegration

The partner integration is not authorized.

HTTP Status Code: 401

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

DeleteRedshiftIdcApplication

Deletes an Amazon Redshift IAM Identity Center application.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

RedshiftIdcApplicationArn

The ARN for a deleted Amazon Redshift IAM Identity Center application.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Errors

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

DependentServiceAccessDenied

A dependent service denied access for the integration.

HTTP Status Code: 403

DependentServiceUnavailableFault

Your request cannot be completed because a dependent internal service is temporarily unavailable. Wait 30 to 60 seconds and try again.

HTTP Status Code: 400

RedshiftIdcApplicationNotExists

The application you attempted to find doesn't exist.

HTTP Status Code: 404

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

DeleteResourcePolicy

Deletes the resource policy for a specified resource.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ResourceArn

The Amazon Resource Name (ARN) of the resource of which its resource policy is deleted.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Errors

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

ResourceNotFoundFault

The resource could not be found.

HTTP Status Code: 404

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET

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

DeleteScheduledAction

Deletes a scheduled action.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ScheduledActionName

The name of the scheduled action to delete.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Errors

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

ScheduledActionNotFound

The scheduled action cannot be found.

HTTP Status Code: 400

UnauthorizedOperation

Your account is not authorized to perform the requested operation.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DeleteScheduledAction.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
```

```
       ?Action=DeleteScheduledAction
&ScheduledActionName=myscheduledaction
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DeleteScheduledActionResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <ResponseMetadata>
    <RequestId>2c20099c-283b-11ea-9caa-c956bec1ce87</RequestId>
  </ResponseMetadata>
</DeleteScheduledActionResponse>
```

See Also

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

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

DeleteSnapshotCopyGrant

Deletes the specified snapshot copy grant.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

SnapshotCopyGrantName

The name of the snapshot copy grant to delete.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Errors

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

InvalidSnapshotCopyGrantStateFault

The snapshot copy grant can't be deleted because it is used by one or more clusters.

HTTP Status Code: 400

SnapshotCopyGrantNotFoundFault

The specified snapshot copy grant can't be found. Make sure that the name is typed correctly and that the grant exists in the destination region.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DeleteSnapshotCopyGrant.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DeleteSnapshotCopyGrant
&SnapshotCopyGrantName=mysnapshotcopygrantname
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DeleteSnapshotCopyGrantResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <ResponseMetadata>
    <RequestId>a0c0f3ad-283c-11ea-a940-1b28a85fd753</RequestId>
  </ResponseMetadata>
</DeleteSnapshotCopyGrantResponse>
```

See Also

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

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

DeleteSnapshotSchedule

Deletes a snapshot schedule.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ScheduleIdentifier

A unique identifier of the snapshot schedule to delete.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Errors

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

InvalidClusterSnapshotScheduleState

The cluster snapshot schedule state is not valid.

HTTP Status Code: 400

SnapshotScheduleNotFound

We could not find the specified snapshot schedule.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DeleteSnapshotSchedule.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
```

```
       ?Action=DeleteSnapshotSchedule
&ScheduleIdentifier=mysnapshotschedule
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DeleteSnapshotScheduleResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <ResponseMetadata>
    <RequestId>165cd56f-283d-11ea-a940-1b28a85fd753</RequestId>
  </ResponseMetadata>
</DeleteSnapshotScheduleResponse>
```

See Also

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

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

DeleteTags

Deletes tags from a resource. You must provide the ARN of the resource from which you want to delete the tag or tags.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ResourceName

The Amazon Resource Name (ARN) from which you want to remove the tag or tags. For example, `arn:aws:redshift:us-east-2:123456789:cluster:t1`.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

TagKeys.TagKey.N

The tag key that you want to delete.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: Yes

Errors

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

InvalidTagFault

The tag is invalid.

HTTP Status Code: 400

ResourceNotFoundFault

The resource could not be found.

HTTP Status Code: 404

Examples

Example

This example illustrates one usage of DeleteTags.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DeleteTags
&ResourceName=arn%3Aaws%3Aredshift%3Aus-east-2%3A123456789012%3Acluster%3Amycluster
&TagKeys.TagKey.1=mytag
&TagKeys.TagKey.2=newtag
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DeleteTagsResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <ResponseMetadata>
    <RequestId>bd69e08c-283d-11ea-9939-5fccefa818c0</RequestId>
  </ResponseMetadata>
</DeleteTagsResponse>
```

See Also

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

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

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

DeleteUsageLimit

Deletes a usage limit from a cluster.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

UsageLimitId

The identifier of the usage limit to delete.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Errors

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

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

UsageLimitNotFound

The usage limit identifier can't be found.

HTTP Status Code: 404

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET

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

DeregisterNamespace

Deregisters a cluster or serverless namespace from the AWS Glue Data Catalog.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ConsumerIdentifiers.member.N

An array containing the ID of the consumer account that you want to deregister the cluster or serverless namespace from.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Maximum length of 2147483647.

Required: Yes

NamespaceIdentifier

The unique identifier of the cluster or serverless namespace that you want to deregister.

Type: NamespaceIdentifierUnion object

Note: This object is a Union. Only one member of this object can be specified or returned.

Required: Yes

Response Elements

The following element is returned by the service.

Status

The registration status of the cluster or serverless namespace.

Type: String

Valid Values: `Registering | Deregistering`

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

InvalidNamespaceFault

The namespace isn't valid because the namespace doesn't exist. Provide a valid namespace.

HTTP Status Code: 400

See Also

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

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

DescribeAccountAttributes

Returns a list of attributes attached to an account

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

AttributeNames.AttributeName.N

A list of attribute names.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following element is returned by the service.

AccountAttributes.AccountAttribute.N

A list of attributes assigned to an account.

Type: Array of AccountAttribute objects

Errors

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

Examples

Example

This example illustrates one usage of DescribeAccountAttributes.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
```

```
       ?Action=DescribeAccountAttributes
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DescribeAccountAttributesResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <DescribeAccountAttributesResult>
    <AccountAttributes>
      <AccountAttribute>
        <AttributeValues>
          <AttributeValueTarget>
            <AttributeValue>45</AttributeValue>
          </AttributeValueTarget>
        </AttributeValues>
        <AttributeName>max-defer-maintenance-duration</AttributeName>
      </AccountAttribute>
    </AccountAttributes>
  </DescribeAccountAttributesResult>
  <ResponseMetadata>
    <RequestId>fbb48802-283d-11ea-9467-b9a67a99da45</RequestId>
  </ResponseMetadata>
</DescribeAccountAttributesResponse>
```

See Also

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

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

- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

DescribeAuthenticationProfiles

Describes an authentication profile.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

AuthenticationProfileName

The name of the authentication profile to describe. If not specified then all authentication profiles owned by the account are listed.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[a-zA-Z0-9\-]+$`

Required: No

Response Elements

The following element is returned by the service.

AuthenticationProfiles.member.N

The list of authentication profiles.

Type: Array of AuthenticationProfile objects

Errors

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

AuthenticationProfileNotFoundFault

The authentication profile can't be found.

HTTP Status Code: 404

InvalidAuthenticationProfileRequestFault

The authentication profile request is not valid. The profile name can't be null or empty. The authentication profile API operation must be available in the AWS Region.

HTTP Status Code: 400

See Also

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

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

DescribeClusterDbRevisions

Returns an array of `ClusterDbRevision` objects.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

A unique identifier for a cluster whose `ClusterDbRevisions` you are requesting. This parameter is case sensitive. All clusters defined for an account are returned by default.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Marker

An optional parameter that specifies the starting point for returning a set of response records. When the results of a `DescribeClusterDbRevisions` request exceed the value specified in `MaxRecords`, Amazon Redshift returns a value in the `marker` field of the response. You can retrieve the next set of response records by providing the returned `marker` value in the `marker` parameter and retrying the request.

Constraints: You can specify either the `ClusterIdentifier` parameter, or the `marker` parameter, but not both.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of response records to return in each call. If the number of remaining response records exceeds the specified MaxRecords value, a value is returned in the `marker` field of the response. You can retrieve the next set of response records by providing the returned `marker` value in the `marker` parameter and retrying the request.

Default: 100

Constraints: minimum 20, maximum 100.

Type: Integer

Required: No

Response Elements

The following elements are returned by the service.

ClusterDbRevisions.ClusterDbRevision.N

A list of revisions.

Type: Array of ClusterDbRevision objects

Marker

A string representing the starting point for the next set of revisions. If a value is returned in a response, you can retrieve the next set of revisions by providing the value in the `marker` parameter and retrying the command. If the `marker` field is empty, all revisions have already been returned.

Type: String

Length Constraints: Maximum length of 2147483647.

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DescribeClusterDbRevisions.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DescribeClusterDbRevisions
&ClusterIdentifier=mycluster
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DescribeClusterDbRevisionsResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <DescribeClusterDbRevisionsResult>
    <ClusterDbRevisions>
      <ClusterDbRevision>
        <DatabaseRevisionReleaseDate>2019-12-23T19:11:37.360Z</
DatabaseRevisionReleaseDate>
        <ClusterIdentifier>mycluster</ClusterIdentifier>
        <RevisionTargets/>
        <CurrentDatabaseRevision>11978</CurrentDatabaseRevision>
      </ClusterDbRevision>
    </ClusterDbRevisions>
  </DescribeClusterDbRevisionsResult>
  <ResponseMetadata>
    <RequestId>28c11f9d-283e-11ea-8cc9-43f1872b4b75</RequestId>
  </ResponseMetadata>
</DescribeClusterDbRevisionsResponse>
```

See Also

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

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

DescribeClusterParameterGroups

Returns a list of Amazon Redshift parameter groups, including parameter groups you created and the default parameter group. For each parameter group, the response includes the parameter group name, description, and parameter group family name. You can optionally specify a name to retrieve the description of a specific parameter group.

For more information about parameters and parameter groups, go to Amazon Redshift Parameter Groups in the *Amazon Redshift Cluster Management Guide*.

If you specify both tag keys and tag values in the same request, Amazon Redshift returns all parameter groups that match any combination of the specified keys and values. For example, if you have `owner` and `environment` for tag keys, and `admin` and `test` for tag values, all parameter groups that have any combination of those values are returned.

If both tag keys and values are omitted from the request, parameter groups are returned regardless of whether they have tag keys or values associated with them.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

Marker

An optional parameter that specifies the starting point to return a set of response records. When the results of a DescribeClusterParameterGroups request exceed the value specified in `MaxRecords`, AWS returns a value in the `Marker` field of the response. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of response records to return in each call. If the number of remaining response records exceeds the specified `MaxRecords` value, a value is returned in a `marker`

field of the response. You can retrieve the next set of records by retrying the command with the returned marker value.

Default: `100`

Constraints: minimum 20, maximum 100.

Type: Integer

Required: No

ParameterGroupName

The name of a specific parameter group for which to return details. By default, details about all parameter groups and the default parameter group are returned.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

TagKeys.TagKey.N

A tag key or keys for which you want to return all matching cluster parameter groups that are associated with the specified key or keys. For example, suppose that you have parameter groups that are tagged with keys called `owner` and `environment`. If you specify both of these tag keys in the request, Amazon Redshift returns a response with the parameter groups that have either or both of these tag keys associated with them.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

TagValues.TagValue.N

A tag value or values for which you want to return all matching cluster parameter groups that are associated with the specified tag value or values. For example, suppose that you have parameter groups that are tagged with values called `admin` and `test`. If you specify both of these tag values in the request, Amazon Redshift returns a response with the parameter groups that have either or both of these tag values associated with them.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following elements are returned by the service.

Marker

A value that indicates the starting point for the next set of response records in a subsequent request. If a value is returned in a response, you can retrieve the next set of records by providing this returned marker value in the `Marker` parameter and retrying the command. If the `Marker` field is empty, all response records have been retrieved for the request.

Type: String

Length Constraints: Maximum length of 2147483647.

ParameterGroups.ClusterParameterGroup.N

A list of ClusterParameterGroup instances. Each instance describes one cluster parameter group.

Type: Array of ClusterParameterGroup objects

Errors

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

ClusterParameterGroupNotFound

The parameter group name does not refer to an existing parameter group.

HTTP Status Code: 404

InvalidTagFault

The tag is invalid.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DescribeClusterParameterGroups.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DescribeClusterParameterGroups
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DescribeClusterParameterGroupsResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <DescribeClusterParameterGroupsResult>
    <ParameterGroups>
      <ClusterParameterGroup>
        <ParameterGroupName>default.redshift-1.0</ParameterGroupName>
        <Description>Default parameter group for redshift-1.0</Description>
        <ParameterGroupFamily>redshift-1.0</ParameterGroupFamily>
        <Tags/>
      </ClusterParameterGroup>
      <ClusterParameterGroup>
        <ParameterGroupName>myclusterparametergroup</ParameterGroupName>
        <Description>My first cluster parameter group</Description>
        <ParameterGroupFamily>redshift-1.0</ParameterGroupFamily>
        <Tags/>
      </ClusterParameterGroup>
    </ParameterGroups>
  </DescribeClusterParameterGroupsResult>
  <ResponseMetadata>
    <RequestId>71d08207-2831-11ea-9939-5fccefa818c0</RequestId>
  </ResponseMetadata>
</DescribeClusterParameterGroupsResponse>
```

See Also

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

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

DescribeClusterParameters

Returns a detailed list of parameters contained within the specified Amazon Redshift parameter group. For each parameter the response includes information such as parameter name, description, data type, value, whether the parameter value is modifiable, and so on.

You can specify *source* filter to retrieve parameters of only specific type. For example, to retrieve parameters that were modified by a user action such as from ModifyClusterParameterGroup, you can specify *source* equal to *user*.

For more information about parameters and parameter groups, go to Amazon Redshift Parameter Groups in the *Amazon Redshift Cluster Management Guide*.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ParameterGroupName

The name of a cluster parameter group for which to return details.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Marker

An optional parameter that specifies the starting point to return a set of response records. When the results of a DescribeClusterParameters request exceed the value specified in `MaxRecords`, AWS returns a value in the `Marker` field of the response. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of response records to return in each call. If the number of remaining response records exceeds the specified `MaxRecords` value, a value is returned in a `marker` field of the response. You can retrieve the next set of records by retrying the command with the returned marker value.

Default: `100`

Constraints: minimum 20, maximum 100.

Type: Integer

Required: No

Source

The parameter types to return. Specify `user` to show parameters that are different form the default. Similarly, specify `engine-default` to show parameters that are the same as the default parameter group.

Default: All parameter types returned.

Valid Values: `user` | `engine-default`

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following elements are returned by the service.

Marker

A value that indicates the starting point for the next set of response records in a subsequent request. If a value is returned in a response, you can retrieve the next set of records by providing this returned marker value in the `Marker` parameter and retrying the command. If the `Marker` field is empty, all response records have been retrieved for the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Parameters.Parameter.N

A list of Parameter instances. Each instance lists the parameters of one cluster parameter group.

Type: Array of Parameter objects

Errors

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

ClusterParameterGroupNotFound

The parameter group name does not refer to an existing parameter group.

HTTP Status Code: 404

Examples

Example

This example illustrates one usage of DescribeClusterParameters.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
    ?Action=DescribeClusterParameters
&ParameterGroupName=myclusterparametergroup
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DescribeClusterParametersResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <DescribeClusterParametersResult>
```

```
    <Parameters>
      <Parameter>
        <ApplyType>static</ApplyType>
        <AllowedValues>true,false</AllowedValues>
        <DataType>boolean</DataType>
        <Description>Use auto analyze</Description>
        <Source>engine-default</Source>
        <ParameterName>auto_analyze</ParameterName>
        <ParameterValue>true</ParameterValue>
        <IsModifiable>true</IsModifiable>
      </Parameter>
      <Parameter>
        <ApplyType>static</ApplyType>
        <DataType>string</DataType>
        <Description>Sets the display format for date and time values.</Description>
        <Source>engine-default</Source>
        <ParameterName>datestyle</ParameterName>
        <ParameterValue>ISO, MDY</ParameterValue>
        <IsModifiable>true</IsModifiable>
      </Parameter>
      <Parameter>
        <ApplyType>static</ApplyType>
        <AllowedValues>true,false</AllowedValues>
        <DataType>boolean</DataType>
        <Description>parameter for audit logging purpose</Description>
        <Source>engine-default</Source>
        <ParameterName>enable_user_activity_logging</ParameterName>
        <ParameterValue>false</ParameterValue>
        <IsModifiable>true</IsModifiable>
      </Parameter>
      <Parameter>
        <ApplyType>static</ApplyType>
        <AllowedValues>-15-2</AllowedValues>
        <DataType>integer</DataType>
        <Description>Sets the number of digits displayed for floating-point values</
Description>
        <Source>engine-default</Source>
        <ParameterName>extra_float_digits</ParameterName>
        <ParameterValue>0</ParameterValue>
        <IsModifiable>true</IsModifiable>
      </Parameter>
      <Parameter>
        <ApplyType>static</ApplyType>
        <AllowedValues>0-10</AllowedValues>
```

```
        <DataType>integer</DataType>
        <Description>The maximum concurrency scaling clusters can be used.</
Description>
        <Source>engine-default</Source>
        <ParameterName>max_concurrency_scaling_clusters</ParameterName>
        <ParameterValue>1</ParameterValue>
        <IsModifiable>true</IsModifiable>
      </Parameter>
      <Parameter>
        <ApplyType>static</ApplyType>
        <AllowedValues>0-14400000</AllowedValues>
        <DataType>integer</DataType>
        <Description>Sets the max cursor result set size</Description>
        <Source>engine-default</Source>
        <ParameterName>max_cursor_result_set_size</ParameterName>
        <ParameterValue>default</ParameterValue>
        <IsModifiable>true</IsModifiable>
      </Parameter>
      <Parameter>
        <ApplyType>static</ApplyType>
        <DataType>string</DataType>
        <Description>This parameter applies a user-defined label to a group of queries
 that are run during the same session..</Description>
        <Source>engine-default</Source>
        <ParameterName>query_group</ParameterName>
        <ParameterValue>default</ParameterValue>
        <IsModifiable>true</IsModifiable>
      </Parameter>
      <Parameter>
        <ApplyType>static</ApplyType>
        <AllowedValues>true,false</AllowedValues>
        <DataType>boolean</DataType>
        <Description>require ssl for all databaseconnections</Description>
        <Source>engine-default</Source>
        <ParameterName>require_ssl</ParameterName>
        <ParameterValue>false</ParameterValue>
        <IsModifiable>true</IsModifiable>
      </Parameter>
      <Parameter>
        <ApplyType>static</ApplyType>
        <DataType>string</DataType>
        <Description>Sets the schema search order for names that are not schema-
qualified.</Description>
        <Source>engine-default</Source>
```

```
        <ParameterName>search_path</ParameterName>
        <ParameterValue>$user, public</ParameterValue>
        <IsModifiable>true</IsModifiable>
      </Parameter>
      <Parameter>
        <ApplyType>static</ApplyType>
        <AllowedValues>0,100-2147483647</AllowedValues>
        <DataType>integer</DataType>
        <Description>Stops any statement that takes over the specified number of
 milliseconds.</Description>
        <Source>engine-default</Source>
        <ParameterName>statement_timeout</ParameterName>
        <ParameterValue>0</ParameterValue>
        <IsModifiable>true</IsModifiable>
      </Parameter>
      <Parameter>
        <ApplyType>static</ApplyType>
        <AllowedValues>true,false</AllowedValues>
        <DataType>boolean</DataType>
        <Description>Use fips ssl library</Description>
        <Source>engine-default</Source>
        <ParameterName>use_fips_ssl</ParameterName>
        <ParameterValue>false</ParameterValue>
        <IsModifiable>true</IsModifiable>
      </Parameter>
      <Parameter>
        <ApplyType>static</ApplyType>
        <DataType>string</DataType>
        <Description>wlm json configuration</Description>
        <Source>engine-default</Source>
        <ParameterName>wlm_json_configuration</ParameterName>
        <ParameterValue>[{"auto_wlm":true}]</ParameterValue>
        <IsModifiable>true</IsModifiable>
      </Parameter>
    </Parameters>
  </DescribeClusterParametersResult>
  <ResponseMetadata>
    <RequestId>a22ce073-2831-11ea-a940-1b28a85fd753</RequestId>
  </ResponseMetadata>
</DescribeClusterParametersResponse>
```

See Also

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

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

DescribeClusters

Returns properties of provisioned clusters including general cluster properties, cluster database properties, maintenance and backup properties, and security and access properties. This operation supports pagination. For more information about managing clusters, go to Amazon Redshift Clusters in the *Amazon Redshift Cluster Management Guide*.

If you specify both tag keys and tag values in the same request, Amazon Redshift returns all clusters that match any combination of the specified keys and values. For example, if you have `owner` and `environment` for tag keys, and `admin` and `test` for tag values, all clusters that have any combination of those values are returned.

If both tag keys and values are omitted from the request, clusters are returned regardless of whether they have tag keys or values associated with them.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The unique identifier of a cluster whose properties you are requesting. This parameter is case sensitive.

The default is that all clusters defined for an account are returned.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Marker

An optional parameter that specifies the starting point to return a set of response records. When the results of a DescribeClusters request exceed the value specified in `MaxRecords`, AWS returns a value in the `Marker` field of the response. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Constraints: You can specify either the **ClusterIdentifier** parameter or the **Marker** parameter, but not both.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of response records to return in each call. If the number of remaining response records exceeds the specified `MaxRecords` value, a value is returned in a `marker` field of the response. You can retrieve the next set of records by retrying the command with the returned marker value.

Default: `100`

Constraints: minimum 20, maximum 100.

Type: Integer

Required: No

TagKeys.TagKey.N

A tag key or keys for which you want to return all matching clusters that are associated with the specified key or keys. For example, suppose that you have clusters that are tagged with keys called `owner` and `environment`. If you specify both of these tag keys in the request, Amazon Redshift returns a response with the clusters that have either or both of these tag keys associated with them.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

TagValues.TagValue.N

A tag value or values for which you want to return all matching clusters that are associated with the specified tag value or values. For example, suppose that you have clusters that are tagged with values called `admin` and `test`. If you specify both of these tag values in the request, Amazon Redshift returns a response with the clusters that have either or both of these tag values associated with them.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following elements are returned by the service.

Clusters.Cluster.N

A list of `Cluster` objects, where each object describes one cluster.

Type: Array of Cluster objects

Marker

A value that indicates the starting point for the next set of response records in a subsequent request. If a value is returned in a response, you can retrieve the next set of records by providing this returned marker value in the `Marker` parameter and retrying the command. If the `Marker` field is empty, all response records have been retrieved for the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

InvalidTagFault

The tag is invalid.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DescribeClusters.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DescribeClusters
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DescribeClustersResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <DescribeClustersResult>
    <Clusters>
      <Cluster>
        <AllowVersionUpgrade>true</AllowVersionUpgrade>
        <ClusterIdentifier>mycluster</ClusterIdentifier>
        <ClusterRevisionNumber>11978</ClusterRevisionNumber>
        <NumberOfNodes>1</NumberOfNodes>
        <ClusterPublicKey>ssh-rsa AAAABexamplepublickey...LzrwzEXAMPLE Amazon-
Redshift</ClusterPublicKey>
        <AvailabilityZone>us-east-2f</AvailabilityZone>
        <ClusterVersion>1.0</ClusterVersion>
        <ManualSnapshotRetentionPeriod>-1</ManualSnapshotRetentionPeriod>
        <ClusterAvailabilityStatus>Available</ClusterAvailabilityStatus>
        <Endpoint>
          <Port>5439</Port>
          <Address>mycluster.cmeaswqeuae.us-east-2.redshift.amazonaws.com</Address>
        </Endpoint>
        <VpcId>vpc-a1abc1a1</VpcId>
        <PubliclyAccessible>false</PubliclyAccessible>
        <ClusterCreateTime>2019-12-23T23:21:27.977Z</ClusterCreateTime>
        <ClusterSnapshotCopyStatus>
          <ManualSnapshotRetentionPeriod>-1</ManualSnapshotRetentionPeriod>
```

```
          <DestinationRegion>us-east-1</DestinationRegion>
          <RetentionPeriod>15</RetentionPeriod>
        </ClusterSnapshotCopyStatus>
        <MasterUsername>adminuser</MasterUsername>
        <DBName>dev</DBName>
        <EnhancedVpcRouting>false</EnhancedVpcRouting>
        <IamRoles/>
        <ClusterSecurityGroups/>
        <NodeType>dc2.large</NodeType>
        <ClusterSubnetGroupName>default</ClusterSubnetGroupName>
        <NextMaintenanceWindowStartTime>2020-01-12T23:15:00Z</
NextMaintenanceWindowStartTime>
        <DeferredMaintenanceWindows>
          <DeferredMaintenanceWindow>
            <DeferMaintenanceEndTime>2020-01-09T18:18:39.354Z</DeferMaintenanceEndTime>
            <DeferMaintenanceIdentifier>dfm-MuEIBOA9bi0aZ1Vjh0cy</
DeferMaintenanceIdentifier>
            <DeferMaintenanceStartTime>2019-12-10T18:18:39.354Z</
DeferMaintenanceStartTime>
          </DeferredMaintenanceWindow>
        </DeferredMaintenanceWindows>
        <Tags/>
        <VpcSecurityGroups>
          <VpcSecurityGroup>
            <VpcSecurityGroupId>sh-a1a123ab</VpcSecurityGroupId>
            <Status>active</Status>
          </VpcSecurityGroup>
        </VpcSecurityGroups>
        <ClusterParameterGroups>
          <ClusterParameterGroup>
            <ParameterGroupName>default.redshift-1.0</ParameterGroupName>
            <ParameterApplyStatus>in-sync</ParameterApplyStatus>
          </ClusterParameterGroup>
        </ClusterParameterGroups>
        <Encrypted>false</Encrypted>
        <ClusterNodes>
          <member>
            <PrivateIPAddress>172.31.64.51</PrivateIPAddress>
            <NodeRole>SHARED</NodeRole>
            <PublicIPAddress>54.162.164.238</PublicIPAddress>
          </member>
        </ClusterNodes>
        <MaintenanceTrackName>current</MaintenanceTrackName>
        <PendingModifiedValues/>
```

```
        <PreferredMaintenanceWindow>sun:23:15-sun:23:45</PreferredMaintenanceWindow>
        <AutomatedSnapshotRetentionPeriod>1</AutomatedSnapshotRetentionPeriod>
        <ClusterStatus>available</ClusterStatus>
      </Cluster>
    </Clusters>
  </DescribeClustersResult>
  <ResponseMetadata>
    <RequestId>e47f901c-283e-11ea-8397-219d1980588b</RequestId>
  </ResponseMetadata>
</DescribeClustersResponse>
```

See Also

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

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

DescribeClusterSecurityGroups

Returns information about Amazon Redshift security groups. If the name of a security group is specified, the response will contain only information about only that security group.

For information about managing security groups, go to Amazon Redshift Cluster Security Groups in the *Amazon Redshift Cluster Management Guide*.

If you specify both tag keys and tag values in the same request, Amazon Redshift returns all security groups that match any combination of the specified keys and values. For example, if you have `owner` and `environment` for tag keys, and `admin` and `test` for tag values, all security groups that have any combination of those values are returned.

If both tag keys and values are omitted from the request, security groups are returned regardless of whether they have tag keys or values associated with them.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterSecurityGroupName

The name of a cluster security group for which you are requesting details. You must specify either the **Marker** parameter or a **ClusterSecurityGroupName** parameter, but not both.

Example: `securitygroup1`

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Marker

An optional parameter that specifies the starting point to return a set of response records. When the results of a DescribeClusterSecurityGroups request exceed the value specified in `MaxRecords`, AWS returns a value in the `Marker` field of the response. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Constraints: You must specify either the **ClusterSecurityGroupName** parameter or the **Marker** parameter, but not both.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of response records to return in each call. If the number of remaining response records exceeds the specified `MaxRecords` value, a value is returned in a `marker` field of the response. You can retrieve the next set of records by retrying the command with the returned marker value.

Default: `100`

Constraints: minimum 20, maximum 100.

Type: Integer

Required: No

TagKeys.TagKey.N

A tag key or keys for which you want to return all matching cluster security groups that are associated with the specified key or keys. For example, suppose that you have security groups that are tagged with keys called `owner` and `environment`. If you specify both of these tag keys in the request, Amazon Redshift returns a response with the security groups that have either or both of these tag keys associated with them.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

TagValues.TagValue.N

A tag value or values for which you want to return all matching cluster security groups that are associated with the specified tag value or values. For example, suppose that you have security groups that are tagged with values called `admin` and `test`. If you specify both of these tag

values in the request, Amazon Redshift returns a response with the security groups that have either or both of these tag values associated with them.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following elements are returned by the service.

ClusterSecurityGroups.ClusterSecurityGroup.N

A list of ClusterSecurityGroup instances.

Type: Array of ClusterSecurityGroup objects

Marker

A value that indicates the starting point for the next set of response records in a subsequent request. If a value is returned in a response, you can retrieve the next set of records by providing this returned marker value in the `Marker` parameter and retrying the command. If the `Marker` field is empty, all response records have been retrieved for the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Errors

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

ClusterSecurityGroupNotFound

The cluster security group name does not refer to an existing cluster security group.

HTTP Status Code: 404

InvalidTagFault

The tag is invalid.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DescribeClusterSecurityGroups.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
    ?Action=DescribeClusterSecurityGroups
    &Version=2012-12-01
    &x-amz-algorithm=AWS4-HMAC-SHA256
    &x-amz-credential=AKIAIOSFODNN7EXAMPLE/20130123/us-east-2/redshift/aws4_request
    &x-amz-date=20130123T010237Z
    &x-amz-signedheaders=content-type;host;x-amz-date
```

Sample Response

```
<DescribeClusterSecurityGroupsResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <DescribeClusterSecurityGroupsResult>
    <ClusterSecurityGroups>
      <ClusterSecurityGroup>
        <EC2SecurityGroups/>
        <IPRanges>
          <IPRange>
            <CIDRIP>0.0.0.0/0</CIDRIP>
            <Status>authorized</Status>
          </IPRange>
        </IPRanges>
        <Description>default</Description>
        <ClusterSecurityGroupName>default</ClusterSecurityGroupName>
      </ClusterSecurityGroup>
      <ClusterSecurityGroup>
        <EC2SecurityGroups/>
        <IPRanges/>
        <Description>my security group</Description>
        <ClusterSecurityGroupName>securitygroup1</ClusterSecurityGroupName>
      </ClusterSecurityGroup>
    </ClusterSecurityGroups>
```

```
  </DescribeClusterSecurityGroupsResult>
  <ResponseMetadata>
    <RequestId>947a8305-64f8-11e2-bec0-17624ad140dd</RequestId>
  </ResponseMetadata>
</DescribeClusterSecurityGroupsResponse>
```

See Also

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

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

DescribeClusterSnapshots

Returns one or more snapshot objects, which contain metadata about your cluster snapshots. By default, this operation returns information about all snapshots of all clusters that are owned by your AWS account. No information is returned for snapshots owned by inactive AWS accounts.

If you specify both tag keys and tag values in the same request, Amazon Redshift returns all snapshots that match any combination of the specified keys and values. For example, if you have `owner` and `environment` for tag keys, and `admin` and `test` for tag values, all snapshots that have any combination of those values are returned. Only snapshots that you own are returned in the response; shared snapshots are not returned with the tag key and tag value request parameters.

If both tag keys and values are omitted from the request, snapshots are returned regardless of whether they have tag keys or values associated with them.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterExists

A value that indicates whether to return snapshots only for an existing cluster. You can perform table-level restore only by using a snapshot of an existing cluster, that is, a cluster that has not been deleted. Values for this parameter work as follows:

- If `ClusterExists` is set to `true`, `ClusterIdentifier` is required.
- If `ClusterExists` is set to `false` and `ClusterIdentifier` isn't specified, all snapshots associated with deleted clusters (orphaned snapshots) are returned.
- If `ClusterExists` is set to `false` and `ClusterIdentifier` is specified for a deleted cluster, snapshots associated with that cluster are returned.
- If `ClusterExists` is set to `false` and `ClusterIdentifier` is specified for an existing cluster, no snapshots are returned.

Type: Boolean

Required: No

ClusterIdentifier

The identifier of the cluster which generated the requested snapshots.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

EndTime

A time value that requests only snapshots created at or before the specified time. The time value is specified in ISO 8601 format. For more information about ISO 8601, go to the ISO8601 Wikipedia page.

Example: `2012-07-16T18:00:00Z`

Type: Timestamp

Required: No

Marker

An optional parameter that specifies the starting point to return a set of response records. When the results of a DescribeClusterSnapshots request exceed the value specified in `MaxRecords`, AWS returns a value in the `Marker` field of the response. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of response records to return in each call. If the number of remaining response records exceeds the specified `MaxRecords` value, a value is returned in a `marker` field of the response. You can retrieve the next set of records by retrying the command with the returned marker value.

Default: `100`

Constraints: minimum 20, maximum 100.

Type: Integer

Required: No

OwnerAccount

The AWS account used to create or copy the snapshot. Use this field to filter the results to snapshots owned by a particular account. To describe snapshots you own, either specify your AWS account, or do not specify the parameter.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SnapshotArn

The Amazon Resource Name (ARN) of the snapshot associated with the message to describe cluster snapshots.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SnapshotIdentifier

The snapshot identifier of the snapshot about which to return information.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SnapshotType

The type of snapshots for which you are requesting information. By default, snapshots of all types are returned.

Valid Values: `automated` | `manual`

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SortingEntities.SnapshotSortingEntity.N

Type: Array of SnapshotSortingEntity objects

Required: No

StartTime

A value that requests only snapshots created at or after the specified time. The time value is specified in ISO 8601 format. For more information about ISO 8601, go to the ISO8601 Wikipedia page.

Example: `2012-07-16T18:00:00Z`

Type: Timestamp

Required: No

TagKeys.TagKey.N

A tag key or keys for which you want to return all matching cluster snapshots that are associated with the specified key or keys. For example, suppose that you have snapshots that are tagged with keys called `owner` and `environment`. If you specify both of these tag keys in the request, Amazon Redshift returns a response with the snapshots that have either or both of these tag keys associated with them.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

TagValues.TagValue.N

A tag value or values for which you want to return all matching cluster snapshots that are associated with the specified tag value or values. For example, suppose that you have snapshots that are tagged with values called `admin` and `test`. If you specify both of these tag values in the request, Amazon Redshift returns a response with the snapshots that have either or both of these tag values associated with them.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following elements are returned by the service.

Marker

A value that indicates the starting point for the next set of response records in a subsequent request. If a value is returned in a response, you can retrieve the next set of records by providing this returned marker value in the `Marker` parameter and retrying the command. If the `Marker` field is empty, all response records have been retrieved for the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Snapshots.Snapshot.N

A list of Snapshot instances.

Type: Array of Snapshot objects

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

ClusterSnapshotNotFound

The snapshot identifier does not refer to an existing cluster snapshot.

HTTP Status Code: 404

InvalidTagFault

The tag is invalid.

HTTP Status Code: 400

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DescribeClusterSnapshots.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DescribeClusterSnapshots
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DescribeClusterSnapshotsResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <DescribeClusterSnapshotsResult>
    <Snapshots>
      <Snapshot>
        <SnapshotRetentionStartTime>2019-12-26T22:38:40.158Z</
SnapshotRetentionStartTime>
        <ClusterIdentifier>mycluster</ClusterIdentifier>
        <EncryptedWithHSM>false</EncryptedWithHSM>
        <NumberOfNodes>2</NumberOfNodes>
        <OwnerAccount>123456789012</OwnerAccount>
        <AvailabilityZone>us-east-2a</AvailabilityZone>
        <ClusterVersion>1.0</ClusterVersion>
        <ManualSnapshotRetentionPeriod>-1</ManualSnapshotRetentionPeriod>
```

```
        <TotalBackupSizeInMegaBytes>55.0</TotalBackupSizeInMegaBytes>
        <VpcId>vpc-a1abc1a1</VpcId>
        <BackupProgressInMegaBytes>31.0</BackupProgressInMegaBytes>
        <CurrentBackupRateInMegaBytesPerSecond>25.5354</
CurrentBackupRateInMegaBytesPerSecond>
        <ElapsedTimeInSeconds>1</ElapsedTimeInSeconds>
        <ClusterCreateTime>2019-12-26T20:25:38.716Z</ClusterCreateTime>
        <MasterUsername>adminuser</MasterUsername>
        <DBName>dev</DBName>
        <ActualIncrementalBackupSizeInMegaBytes>31.0</
ActualIncrementalBackupSizeInMegaBytes>
        <SnapshotType>manual</SnapshotType>
        <EnhancedVpcRouting>false</EnhancedVpcRouting>
        <SnapshotIdentifier>mysnapshotid</SnapshotIdentifier>
        <NodeType>dc2.large</NodeType>
        <Tags/>
        <RestorableNodeTypes>
          <NodeType>dc2.large</NodeType>
        </RestorableNodeTypes>
        <Encrypted>false</Encrypted>
        <EstimatedSecondsToCompletion>0</EstimatedSecondsToCompletion>
        <Port>5439</Port>
        <MaintenanceTrackName>current</MaintenanceTrackName>
        <SnapshotCreateTime>2019-12-26T22:38:38.944Z</SnapshotCreateTime>
        <Status>available</Status>
      </Snapshot>
    </Snapshots>
  </DescribeClusterSnapshotsResult>
  <ResponseMetadata>
    <RequestId>f1fdebc9-2831-11ea-9939-5fccefa818c0</RequestId>
  </ResponseMetadata>
</DescribeClusterSnapshotsResponse>
```

See Also

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

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

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

DescribeClusterSubnetGroups

Returns one or more cluster subnet group objects, which contain metadata about your cluster subnet groups. By default, this operation returns information about all cluster subnet groups that are defined in your AWS account.

If you specify both tag keys and tag values in the same request, Amazon Redshift returns all subnet groups that match any combination of the specified keys and values. For example, if you have `owner` and `environment` for tag keys, and `admin` and `test` for tag values, all subnet groups that have any combination of those values are returned.

If both tag keys and values are omitted from the request, subnet groups are returned regardless of whether they have tag keys or values associated with them.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterSubnetGroupName

The name of the cluster subnet group for which information is requested.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Marker

An optional parameter that specifies the starting point to return a set of response records. When the results of a DescribeClusterSubnetGroups request exceed the value specified in `MaxRecords`, AWS returns a value in the `Marker` field of the response. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of response records to return in each call. If the number of remaining response records exceeds the specified `MaxRecords` value, a value is returned in a `marker` field of the response. You can retrieve the next set of records by retrying the command with the returned marker value.

Default: `100`

Constraints: minimum 20, maximum 100.

Type: Integer

Required: No

TagKeys.TagKey.N

A tag key or keys for which you want to return all matching cluster subnet groups that are associated with the specified key or keys. For example, suppose that you have subnet groups that are tagged with keys called `owner` and `environment`. If you specify both of these tag keys in the request, Amazon Redshift returns a response with the subnet groups that have either or both of these tag keys associated with them.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

TagValues.TagValue.N

A tag value or values for which you want to return all matching cluster subnet groups that are associated with the specified tag value or values. For example, suppose that you have subnet groups that are tagged with values called `admin` and `test`. If you specify both of these tag values in the request, Amazon Redshift returns a response with the subnet groups that have either or both of these tag values associated with them.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following elements are returned by the service.

ClusterSubnetGroups.ClusterSubnetGroup.N

A list of ClusterSubnetGroup instances.

Type: Array of ClusterSubnetGroup objects

Marker

A value that indicates the starting point for the next set of response records in a subsequent request. If a value is returned in a response, you can retrieve the next set of records by providing this returned marker value in the `Marker` parameter and retrying the command. If the `Marker` field is empty, all response records have been retrieved for the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Errors

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

ClusterSubnetGroupNotFoundFault

The cluster subnet group name does not refer to an existing cluster subnet group.

HTTP Status Code: 400

InvalidTagFault

The tag is invalid.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DescribeClusterSubnetGroups.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DescribeClusterSubnetGroups
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DescribeClusterSubnetGroupsResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <DescribeClusterSubnetGroupsResult>
    <ClusterSubnetGroups>
      <ClusterSubnetGroup>
        <VpcId>vpc-a1abc1a1</VpcId>
        <Description>default</Description>
        <Subnets>
          <Subnet>
            <SubnetStatus>Active</SubnetStatus>
            <SubnetIdentifier>subnet-a1b23aba</SubnetIdentifier>
            <SubnetAvailabilityZone>
              <Name>us-east-2a</Name>
            </SubnetAvailabilityZone>
          </Subnet>
          <Subnet>
            <SubnetStatus>Active</SubnetStatus>
            <SubnetIdentifier>subnet-a1b23abb</SubnetIdentifier>
            <SubnetAvailabilityZone>
              <Name>us-east-2b</Name>
            </SubnetAvailabilityZone>
          </Subnet>
          <Subnet>
            <SubnetStatus>Active</SubnetStatus>
            <SubnetIdentifier>subnet-a1b23abc</SubnetIdentifier>
            <SubnetAvailabilityZone>
              <Name>us-east-2c</Name>
            </SubnetAvailabilityZone>
          </Subnet>
```

```
        </Subnets>
        <ClusterSubnetGroupName>default</ClusterSubnetGroupName>
        <SubnetGroupStatus>Complete</SubnetGroupStatus>
        <Tags/>
      </ClusterSubnetGroup>
    </ClusterSubnetGroups>
  </DescribeClusterSubnetGroupsResult>
  <ResponseMetadata>
    <RequestId>29fd403c-2832-11ea-8397-219d1980588b</RequestId>
  </ResponseMetadata>
</DescribeClusterSubnetGroupsResponse>
```

See Also

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

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

DescribeClusterTracks

Returns a list of all the available maintenance tracks.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

MaintenanceTrackName

The name of the maintenance track.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Marker

An optional parameter that specifies the starting point to return a set of response records. When the results of a `DescribeClusterTracks` request exceed the value specified in `MaxRecords`, Amazon Redshift returns a value in the `Marker` field of the response. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

An integer value for the maximum number of maintenance tracks to return.

Type: Integer

Required: No

Response Elements

The following elements are returned by the service.

MaintenanceTracks.MaintenanceTrack.N

A list of maintenance tracks output by the `DescribeClusterTracks` operation.

Type: Array of MaintenanceTrack objects

Marker

The starting point to return a set of response tracklist records. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Errors

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

InvalidClusterTrack

The provided cluster track name is not valid.

HTTP Status Code: 400

UnauthorizedOperation

Your account is not authorized to perform the requested operation.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DescribeClusterTracks.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DescribeClusterTracks
```

```
&MaintenanceTrackName=current
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DescribeClusterTracksResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <DescribeClusterTracksResult>
    <MaintenanceTracks>
      <MaintenanceTrack>
        <UpdateTargets>
          <UpdateTarget>
            <DatabaseVersion>1.0.11746</DatabaseVersion>
            <MaintenanceTrackName>preview_features</MaintenanceTrackName>
            <SupportedOperations>
              <SupportedOperation>
                <OperationName>restore-from-cluster-snapshot</OperationName>
              </SupportedOperation>
            </SupportedOperations>
          </UpdateTarget>
          <UpdateTarget>
            <DatabaseVersion>1.0.11116</DatabaseVersion>
            <MaintenanceTrackName>trailing</MaintenanceTrackName>
            <SupportedOperations>
              <SupportedOperation>
                <OperationName>restore-from-cluster-snapshot</OperationName>
              </SupportedOperation>
              <SupportedOperation>
                <OperationName>modify-cluster</OperationName>
              </SupportedOperation>
            </SupportedOperations>
          </UpdateTarget>
        </UpdateTargets>
        <DatabaseVersion>1.0.11978</DatabaseVersion>
        <MaintenanceTrackName>current</MaintenanceTrackName>
      </MaintenanceTrack>
    </MaintenanceTracks>
  </DescribeClusterTracksResult>
```

```
  <ResponseMetadata>
    <RequestId>7db182a3-283e-11ea-9caa-c956bec1ce87</RequestId>
  </ResponseMetadata>
</DescribeClusterTracksResponse>
```

See Also

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

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

DescribeClusterVersions

Returns descriptions of the available Amazon Redshift cluster versions. You can call this operation even before creating any clusters to learn more about the Amazon Redshift versions. For more information about managing clusters, go to Amazon Redshift Clusters in the *Amazon Redshift Cluster Management Guide*.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterParameterGroupFamily

The name of a specific cluster parameter group family to return details for.

Constraints:

- Must be 1 to 255 alphanumeric characters
- First character must be a letter
- Cannot end with a hyphen or contain two consecutive hyphens

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ClusterVersion

The specific cluster version to return.

Example: `1.0`

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Marker

An optional parameter that specifies the starting point to return a set of response records. When the results of a DescribeClusterVersions request exceed the value specified in

`MaxRecords`, AWS returns a value in the `Marker` field of the response. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of response records to return in each call. If the number of remaining response records exceeds the specified `MaxRecords` value, a value is returned in a `marker` field of the response. You can retrieve the next set of records by retrying the command with the returned marker value.

Default: `100`

Constraints: minimum 20, maximum 100.

Type: Integer

Required: No

Response Elements

The following elements are returned by the service.

ClusterVersions.ClusterVersion.N

A list of `Version` elements.

Type: Array of ClusterVersion objects

Marker

A value that indicates the starting point for the next set of response records in a subsequent request. If a value is returned in a response, you can retrieve the next set of records by providing this returned marker value in the `Marker` parameter and retrying the command. If the `Marker` field is empty, all response records have been retrieved for the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Errors

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

Examples

Example

This example illustrates one usage of DescribeClusterVersions.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
    ?Action=DescribeClusterVersions
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DescribeClusterVersionsResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <DescribeClusterVersionsResult>
    <ClusterVersions>
      <ClusterVersion>
        <ClusterParameterGroupFamily>redshift-1.0</ClusterParameterGroupFamily>
        <Description>release db engine 1.0.54</Description>
        <ClusterVersion>1.0</ClusterVersion>
      </ClusterVersion>
    </ClusterVersions>
  </DescribeClusterVersionsResult>
  <ResponseMetadata>
    <RequestId>be41d43b-283e-11ea-8cc9-43f1872b4b75</RequestId>
  </ResponseMetadata>
```

```
</DescribeClusterVersionsResponse>
```

See Also

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

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

DescribeCustomDomainAssociations

Contains information about custom domain associations for a cluster.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

CustomDomainCertificateArn

The certificate Amazon Resource Name (ARN) for the custom domain association.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:[\w+=/,.@-]+:acm:[\w+=/,.@-]*:[0-9]+:[\w+=,.@-]+(/[\w+=,.@-]+)*`

Required: No

CustomDomainName

The custom domain name for the custom domain association.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 253.

Pattern: `^(((?!-)[A-Za-z0-9-]{0,62}[A-Za-z0-9])\.)+((?!-)[A-Za-z0-9-]{1,62}[A-Za-z0-9])$`

Required: No

Marker

The marker for the custom domain association.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum records setting for the associated custom domain.

Type: Integer

Required: No

Response Elements

The following elements are returned by the service.

Associations.Association.N

The associations for the custom domain.

Type: Array of Association objects

Marker

The marker for the custom domain association.

Type: String

Length Constraints: Maximum length of 2147483647.

Errors

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

CustomDomainAssociationNotFoundFault

An error occurred. The custom domain name couldn't be found.

HTTP Status Code: 404

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

DescribeDataShares

Shows the status of any inbound or outbound datashares available in the specified account.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

DataShareArn

The Amazon resource name (ARN) of the datashare to describe details of.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Marker

An optional parameter that specifies the starting point to return a set of response records. When the results of a DescribeDataShares request exceed the value specified in `MaxRecords`, AWS returns a value in the `Marker` field of the response. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of response records to return in each call. If the number of remaining response records exceeds the specified `MaxRecords` value, a value is returned in a `marker` field of the response. You can retrieve the next set of records by retrying the command with the returned marker value.

Type: Integer

Required: No

Response Elements

The following elements are returned by the service.

DataShares.member.N

The results returned from describing datashares.

Type: Array of DataShare objects

Marker

An optional parameter that specifies the starting point to return a set of response records. When the results of a DescribeDataShares request exceed the value specified in `MaxRecords`, AWS returns a value in the `Marker` field of the response. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Errors

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

InvalidDataShareFault

There is an error with the datashare.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DescribeDataShares.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
        ?Action=DescribeDataShares
```

```
        &NamespaceArn=arn%3Aaws%3Aredshift%3Aus-east-2%3A827630067164%3Adatashare
%3Aaf06285e-8a45-4ee9-b598-648c218c8ff1
        &DataShareRelationship=PRODUCER
        &SignatureMethod=HmacSHA256&SignatureVersion=4
        &Version=2012-12-01
        &X-Amz-Algorithm=AWS4-HMAC-SHA256
        &X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
        &X-Amz-Date=20190825T160000Z
        &X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-
date
        &X-Amz-
Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DescribeDataSharesResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
            <DescribeDataSharesResult>
                <DataShares>
                    <member>
                        <ProducerNamespaceArn>arn:aws:redshift:us-
east-1:275247490162:namespace:fd59653e-4ace-4952-a102-286dad7263ca</
ProducerNamespaceArn>
                        <AllowPubliclyAccessibleConsumers>true</
AllowPubliclyAccessibleConsumers>
                        <DataShareArn>arn:aws:redshift:us-
east-1:275247490162:datashare:fd59653e-4ace-4952-a102-286dad7263ca/testshare2</
DataShareArn>
                        <DataShareAssociations>
                            <member>
                                <StatusChangeDate>2020-10-29T22:55:58.971101</
StatusChangeDate>
                                <ConsumerIdentifier>827630067164</ConsumerIdentifier>
                                <CreatedDate>2020-10-29T22:54:34.187829</CreatedDate>
                                <Status>PENDING_ACCEPTANCE</Status>
                            </member>
                        </DataShareAssociations>
                    </member>
                    <member>
                        <ProducerNamespaceArn>arn:aws:redshift:us-
east-1:275247490162:namespace:fd59653e-4ace-4952-a102-286dad7263ca</
ProducerNamespaceArn>
                        <AllowPubliclyAccessibleConsumers>=>true</
AllowPubliclyAccessibleConsumers>
```

```
                        <DataShareArn>arn:aws:redshift:us-
east-1:275247490162:datashare:fd59653e-4ace-4952-a102-286dad7263ca/testshare</
DataShareArn>
                        <DataShareAssociations>
                            <member>
                                <StatusChangeDate>2020-10-30T16:05:51.137152</
StatusChangeDate>
                                <ConsumerIdentifier>827630067164</ConsumerIdentifier>
                                <CreatedDate>2020-10-29T22:51:42.639841</CreatedDate>
                                <Status>ACTIVE</Status>
                            </member>
                        </DataShareAssociations>
                    </member>
                    <member>
                        <ProducerNamespaceArn>arn:aws:redshift:us-
east-1:275247490162:namespace:fd59653e-4ace-4952-a102-286dad7263ca</
ProducerNamespaceArn>
                        <AllowPubliclyAccessibleConsumers>true</
AllowPubliclyAccessibleConsumers>
                        <DataShareArn>arn:aws:redshift:us-
east-1:275247490162:datashare:fd59653e-4ace-4952-a102-286dad7263ca/testshare1</
DataShareArn>
                        <DataShareAssociations>
                            <member>
                                <StatusChangeDate>2020-10-30T17:43:02.108138</
StatusChangeDate>
                                <ConsumerIdentifier<827630067164</ConsumerIdentifier>
                                <CreatedDate>2020-10-29T22:54:27.948849</CreatedDate>
                                <Status>ACTIVE</Status>
                            </member>
                        </DataShareAssociations>
                    </member>
                </DataShares>
            </DescribeDataSharesResult>
            <ResponseMetadata>
                <RequestId>1acb9710-0880-4703-9fd7-60863b5c7ddc</RequestId>
            <ResponseMetadata>
        </DescribeDataSharesResponse>
```

See Also

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

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

DescribeDataSharesForConsumer

Returns a list of datashares where the account identifier being called is a consumer account identifier.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ConsumerArn

The Amazon Resource Name (ARN) of the consumer namespace that returns in the list of datashares.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Marker

An optional parameter that specifies the starting point to return a set of response records. When the results of a DescribeDataSharesForConsumer request exceed the value specified in `MaxRecords`, AWS returns a value in the `Marker` field of the response. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of response records to return in each call. If the number of remaining response records exceeds the specified `MaxRecords` value, a value is returned in a `marker` field of the response. You can retrieve the next set of records by retrying the command with the returned marker value.

Type: Integer

Required: No

Status

An identifier giving the status of a datashare in the consumer cluster. If this field is specified, Amazon Redshift returns the list of datashares that have the specified status.

Type: String

Valid Values: `ACTIVE | AVAILABLE`

Required: No

Response Elements

The following elements are returned by the service.

DataShares.member.N

Shows the results of datashares available for consumers.

Type: Array of DataShare objects

Marker

An optional parameter that specifies the starting point to return a set of response records. When the results of a DescribeDataSharesForConsumer request exceed the value specified in `MaxRecords`, AWS returns a value in the `Marker` field of the response. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Errors

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

InvalidNamespaceFault

The namespace isn't valid because the namespace doesn't exist. Provide a valid namespace.

HTTP Status Code: 400

See Also

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

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

DescribeDataSharesForProducer

Returns a list of datashares when the account identifier being called is a producer account identifier.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

Marker

An optional parameter that specifies the starting point to return a set of response records. When the results of a DescribeDataSharesForProducer request exceed the value specified in `MaxRecords`, AWS returns a value in the `Marker` field of the response. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of response records to return in each call. If the number of remaining response records exceeds the specified `MaxRecords` value, a value is returned in a `marker` field of the response. You can retrieve the next set of records by retrying the command with the returned marker value.

Type: Integer

Required: No

ProducerArn

The Amazon Resource Name (ARN) of the producer namespace that returns in the list of datashares.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Status

An identifier giving the status of a datashare in the producer. If this field is specified, Amazon Redshift returns the list of datashares that have the specified status.

Type: String

Valid Values: `ACTIVE | AUTHORIZED | PENDING_AUTHORIZATION | DEAUTHORIZED | REJECTED`

Required: No

Response Elements

The following elements are returned by the service.

DataShares.member.N

Shows the results of datashares available for producers.

Type: Array of DataShare objects

Marker

An optional parameter that specifies the starting point to return a set of response records. When the results of a DescribeDataSharesForProducer request exceed the value specified in `MaxRecords`, AWS returns a value in the `Marker` field of the response. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Errors

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

InvalidNamespaceFault

The namespace isn't valid because the namespace doesn't exist. Provide a valid namespace.

HTTP Status Code: 400

See Also

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

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

DescribeDefaultClusterParameters

Returns a list of parameter settings for the specified parameter group family.

For more information about parameters and parameter groups, go to Amazon Redshift Parameter Groups in the *Amazon Redshift Cluster Management Guide*.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ParameterGroupFamily

The name of the cluster parameter group family.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Marker

An optional parameter that specifies the starting point to return a set of response records. When the results of a DescribeDefaultClusterParameters request exceed the value specified in `MaxRecords`, AWS returns a value in the `Marker` field of the response. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of response records to return in each call. If the number of remaining response records exceeds the specified `MaxRecords` value, a value is returned in a `marker` field of the response. You can retrieve the next set of records by retrying the command with the returned marker value.

Default: 100

Constraints: minimum 20, maximum 100.

Type: Integer

Required: No

Response Elements

The following element is returned by the service.

DefaultClusterParameters

Describes the default cluster parameters for a parameter group family.

Type: DefaultClusterParameters object

Errors

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

Examples

Example

This example illustrates one usage of DescribeDefaultClusterParameters.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DescribeDefaultClusterParameters
&ParameterGroupFamily=redshift-1.0
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response


```
<DescribeDefaultClusterParametersResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <DescribeDefaultClusterParametersResult>
    <DefaultClusterParameters>
      <ParameterGroupFamily>redshift-1.0</ParameterGroupFamily>
      <Parameters>
        <Parameter>
          <ApplyType>static</ApplyType>
          <AllowedValues>true,false</AllowedValues>
          <DataType>boolean</DataType>
          <Description>Use auto analyze</Description>
          <Source>engine-default</Source>
          <ParameterName>auto_analyze</ParameterName>
          <ParameterValue>true</ParameterValue>
          <IsModifiable>true</IsModifiable>
        </Parameter>
        <Parameter>
          <ApplyType>static</ApplyType>
          <DataType>string</DataType>
          <Description>Sets the display format for date and time values.</Description>
          <Source>engine-default</Source>
          <ParameterName>datestyle</ParameterName>
          <ParameterValue>ISO, MDY</ParameterValue>
          <IsModifiable>true</IsModifiable>
        </Parameter>
        <Parameter>
          <ApplyType>static</ApplyType>
          <AllowedValues>true,false</AllowedValues>
          <DataType>boolean</DataType>
          <Description>parameter for audit logging purpose</Description>
          <Source>engine-default</Source>
          <ParameterName>enable_user_activity_logging</ParameterName>
          <ParameterValue>false</ParameterValue>
          <IsModifiable>true</IsModifiable>
        </Parameter>
        <Parameter>
          <ApplyType>static</ApplyType>
          <AllowedValues>-15-2</AllowedValues>
          <DataType>integer</DataType>
          <Description>Sets the number of digits displayed for floating-point values</
Description>
          <Source>engine-default</Source>
```

```
          <ParameterName>extra_float_digits</ParameterName>
          <ParameterValue>0</ParameterValue>
          <IsModifiable>true</IsModifiable>
        </Parameter>
        <Parameter>
          <ApplyType>static</ApplyType>
          <AllowedValues>0-10</AllowedValues>
          <DataType>integer</DataType>
          <Description>The maximum concurrency scaling clusters can be used.</
Description>
          <Source>engine-default</Source>
          <ParameterName>max_concurrency_scaling_clusters</ParameterName>
          <ParameterValue>1</ParameterValue>
          <IsModifiable>true</IsModifiable>
        </Parameter>
        <Parameter>
          <ApplyType>static</ApplyType>
          <AllowedValues>0-14400000</AllowedValues>
          <DataType>integer</DataType>
          <Description>Sets the max cursor result set size</Description>
          <Source>engine-default</Source>
          <ParameterName>max_cursor_result_set_size</ParameterName>
          <ParameterValue>default</ParameterValue>
          <IsModifiable>true</IsModifiable>
        </Parameter>
        <Parameter>
          <ApplyType>static</ApplyType>
          <DataType>string</DataType>
          <Description>This parameter applies a user-defined label to a group of
 queries that are run during the same session..</Description>
          <Source>engine-default</Source>
          <ParameterName>query_group</ParameterName>
          <ParameterValue>default</ParameterValue>
          <IsModifiable>true</IsModifiable>
        </Parameter>
        <Parameter>
          <ApplyType>static</ApplyType>
          <AllowedValues>true,false</AllowedValues>
          <DataType>boolean</DataType>
          <Description>require ssl for all databaseconnections</Description>
          <Source>engine-default</Source>
          <ParameterName>require_ssl</ParameterName>
          <ParameterValue>false</ParameterValue>
          <IsModifiable>true</IsModifiable>
```

```
        </Parameter>
        <Parameter>
          <ApplyType>static</ApplyType>
          <DataType>string</DataType>
          <Description>Sets the schema search order for names that are not schema-
qualified.</Description>
          <Source>engine-default</Source>
          <ParameterName>search_path</ParameterName>
          <ParameterValue>$user, public</ParameterValue>
          <IsModifiable>true</IsModifiable>
        </Parameter>
        <Parameter>
          <ApplyType>static</ApplyType>
          <AllowedValues>0,100-2147483647</AllowedValues>
          <DataType>integer</DataType>
          <Description>Stops any statement that takes over the specified number of
 milliseconds.</Description>
          <Source>engine-default</Source>
          <ParameterName>statement_timeout</ParameterName>
          <ParameterValue>0</ParameterValue>
          <IsModifiable>true</IsModifiable>
        </Parameter>
        <Parameter>
          <ApplyType>static</ApplyType>
          <AllowedValues>true,false</AllowedValues>
          <DataType>boolean</DataType>
          <Description>Use fips ssl library</Description>
          <Source>engine-default</Source>
          <ParameterName>use_fips_ssl</ParameterName>
          <ParameterValue>false</ParameterValue>
          <IsModifiable>true</IsModifiable>
        </Parameter>
        <Parameter>
          <ApplyType>static</ApplyType>
          <DataType>string</DataType>
          <Description>wlm json configuration</Description>
          <Source>engine-default</Source>
          <ParameterName>wlm_json_configuration</ParameterName>
          <ParameterValue>[{"auto_wlm":true}]</ParameterValue>
          <IsModifiable>true</IsModifiable>
        </Parameter>
      </Parameters>
    </DefaultClusterParameters>
  </DescribeDefaultClusterParametersResult>
```

```
  <ResponseMetadata>
    <RequestId>2ee9dbcc-283f-11ea-8a28-2fd1719d0e86</RequestId>
  </ResponseMetadata>
</DescribeDefaultClusterParametersResponse>
```

See Also

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

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

DescribeEndpointAccess

Describes a Redshift-managed VPC endpoint.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The cluster identifier associated with the described endpoint.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

EndpointName

The name of the endpoint to be described.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Marker

An optional pagination token provided by a previous `DescribeEndpointAccess` request. If this parameter is specified, the response includes only records beyond the marker, up to the value specified by the `MaxRecords` parameter.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of records to include in the response. If more records exist than the specified `MaxRecords` value, a pagination token called a `Marker` is included in the response so that the remaining results can be retrieved.

Type: Integer

Required: No

ResourceOwner

The AWS account ID of the owner of the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

VpcId

The virtual private cloud (VPC) identifier with access to the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following elements are returned by the service.

EndpointAccessList.member.N

The list of endpoints with access to the cluster.

Type: Array of EndpointAccess objects

Marker

An optional pagination token provided by a previous `DescribeEndpointAccess` request. If this parameter is specified, the response includes only records beyond the marker, up to the value specified by the `MaxRecords` parameter.

Type: String

Length Constraints: Maximum length of 2147483647.

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

EndpointNotFound

The endpoint name doesn't refer to an existing endpoint.

HTTP Status Code: 404

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

See Also

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

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

DescribeEndpointAuthorization

Describes an endpoint authorization.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

Account

The AWS account ID of either the cluster owner (grantor) or grantee. If `Grantee` parameter is true, then the `Account` value is of the grantor.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ClusterIdentifier

The cluster identifier of the cluster to access.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Grantee

Indicates whether to check authorization from a grantor or grantee point of view. If true, Amazon Redshift returns endpoint authorizations that you've been granted. If false (default), checks authorization from a grantor point of view.

Type: Boolean

Required: No

Marker

An optional pagination token provided by a previous `DescribeEndpointAuthorization` request. If this parameter is specified, the response includes only records beyond the marker, up to the value specified by the `MaxRecords` parameter.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of records to include in the response. If more records exist than the specified `MaxRecords` value, a pagination token called a `Marker` is included in the response so that the remaining results can be retrieved.

Type: Integer

Required: No

Response Elements

The following elements are returned by the service.

EndpointAuthorizationList.member.N

The authorizations to an endpoint.

Type: Array of EndpointAuthorization objects

Marker

An optional pagination token provided by a previous `DescribeEndpointAuthorization` request. If this parameter is specified, the response includes only records beyond the marker, up to the value specified by the `MaxRecords` parameter.

Type: String

Length Constraints: Maximum length of 2147483647.

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

DescribeEventCategories

Displays a list of event categories for all event source types, or for a specified source type. For a list of the event categories and source types, go to Amazon Redshift Event Notifications.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

SourceType

The source type, such as cluster or parameter group, to which the described event categories apply.

Valid values: cluster, cluster-snapshot, cluster-parameter-group, cluster-security-group, and scheduled-action.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following element is returned by the service.

EventCategoriesMapList.EventCategoriesMap.N

A list of event categories descriptions.

Type: Array of EventCategoriesMap objects

Errors

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

Examples

Example

This example illustrates one usage of DescribeEventCategories.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DescribeEventCategories
&SourceType=cluster
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DescribeEventCategoriesResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <DescribeEventCategoriesResult>
    <EventCategoriesMapList>
      <EventCategoriesMap>
        <SourceType>cluster</SourceType>
        <Events>
          <EventInfoMap>
            <Severity>INFO</Severity>
            <EventDescription>Cluster <cluster name> created at <time in UTC>.</
EventDescription>
            <EventId>REDSHIFT-EVENT-2000</EventId>
            <EventCategories>
              <EventCategory>management</EventCategory>
            </EventCategories>
          </EventInfoMap>
          <EventInfoMap>
            <Severity>INFO</Severity>
            <EventDescription>Cluster <cluster name> deleted at <time in UTC>.</
EventDescription>
            <EventId>REDSHIFT-EVENT-2001</EventId>
            <EventCategories>
              <EventCategory>management</EventCategory>
```

```
            </EventCategories>
          </EventInfoMap>
        </Events>
      </EventCategoriesMap>
    </EventCategoriesMapList>
  </DescribeEventCategoriesResult>
  <ResponseMetadata>
    <RequestId>5ad8a6a4-283f-11ea-a940-1b28a85fd753</RequestId>
  </ResponseMetadata>
</DescribeEventCategoriesResponse>
```

See Also

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

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

DescribeEvents

Returns events related to clusters, security groups, snapshots, and parameter groups for the past 14 days. Events specific to a particular cluster, security group, snapshot or parameter group can be obtained by providing the name as a parameter. By default, the past hour of events are returned.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

Duration

The number of minutes prior to the time of the request for which to retrieve events. For example, if the request is sent at 18:00 and you specify a duration of 60, then only events which have occurred after 17:00 will be returned.

Default: `60`

Type: Integer

Required: No

EndTime

The end of the time interval for which to retrieve events, specified in ISO 8601 format. For more information about ISO 8601, go to the ISO8601 Wikipedia page.

Example: `2009-07-08T18:00Z`

Type: Timestamp

Required: No

Marker

An optional parameter that specifies the starting point to return a set of response records. When the results of a DescribeEvents request exceed the value specified in `MaxRecords`, AWS returns a value in the `Marker` field of the response. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of response records to return in each call. If the number of remaining response records exceeds the specified `MaxRecords` value, a value is returned in a `marker` field of the response. You can retrieve the next set of records by retrying the command with the returned marker value.

Default: `100`

Constraints: minimum 20, maximum 100.

Type: Integer

Required: No

SourceIdentifier

The identifier of the event source for which events will be returned. If this parameter is not specified, then all sources are included in the response.

Constraints:

If *SourceIdentifier* is supplied, *SourceType* must also be provided.

- Specify a cluster identifier when *SourceType* is `cluster`.
- Specify a cluster security group name when *SourceType* is `cluster-security-group`.
- Specify a cluster parameter group name when *SourceType* is `cluster-parameter-group`.
- Specify a cluster snapshot identifier when *SourceType* is `cluster-snapshot`.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SourceType

The event source to retrieve events for. If no value is specified, all events are returned.

Constraints:

If *SourceType* is supplied, *SourceIdentifier* must also be provided.

- Specify `cluster` when *SourceIdentifier* is a cluster identifier.

- Specify `cluster-security-group` when *SourceIdentifier* is a cluster security group name.
- Specify `cluster-parameter-group` when *SourceIdentifier* is a cluster parameter group name.
- Specify `cluster-snapshot` when *SourceIdentifier* is a cluster snapshot identifier.

Type: String

Valid Values: `cluster | cluster-parameter-group | cluster-security-group | cluster-snapshot | scheduled-action`

Required: No

StartTime

The beginning of the time interval to retrieve events for, specified in ISO 8601 format. For more information about ISO 8601, go to the ISO8601 Wikipedia page.

Example: `2009-07-08T18:00Z`

Type: Timestamp

Required: No

Response Elements

The following elements are returned by the service.

Events.Event.N

A list of `Event` instances.

Type: Array of Event objects

Marker

A value that indicates the starting point for the next set of response records in a subsequent request. If a value is returned in a response, you can retrieve the next set of records by providing this returned marker value in the `Marker` parameter and retrying the command. If the `Marker` field is empty, all response records have been retrieved for the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Errors

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

Examples

Example

This example illustrates one usage of DescribeEvents.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DescribeEvents
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DescribeEventsResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <DescribeEventsResult>
    <Events>
      <Event>
        <Date>2019-12-26T23:36:48.457Z</Date>
        <Severity>INFO</Severity>
        <EventId>REDSHIFT-EVENT-1004</EventId>
        <SourceIdentifier>myclusterparametergroup</SourceIdentifier>
        <SourceType>cluster-parameter-group</SourceType>
        <EventCategories>
          <EventCategory>configuration</EventCategory>
        </EventCategories>
        <Message>Cluster parameter group 'myclusterparametergroup' was deleted at
 2019-12-26 23:36 UTC.</Message>
      </Event>
      <Event>
        <Date>2019-12-26T23:40:00.753Z</Date>
        <Severity>INFO</Severity>
        <EventId>REDSHIFT-EVENT-2011</EventId>
```

```
        <SourceIdentifier>mysnapshotid</SourceIdentifier>
        <SourceType>cluster-snapshot</SourceType>
        <EventCategories>
          <EventCategory>management</EventCategory>
        </EventCategories>
        <Message>The cluster snapshot 'mysnapshotid' for Amazon Redshift cluster
 'mycluster' was deleted at 2019-12-26 23:40 UTC.</Message>
      </Event>
      <Event>
        <Date>2019-12-26T23:42:43.247Z</Date>
        <Severity>INFO</Severity>
        <EventId>REDSHIFT-EVENT-2001</EventId>
        <SourceIdentifier>mycluster</SourceIdentifier>
        <SourceType>cluster</SourceType>
        <EventCategories>
          <EventCategory>management</EventCategory>
        </EventCategories>
        <Message>Amazon Redshift cluster 'mycluster' has been deleted at 2019-12-26
 23:42 UTC. A final snapshot was not saved.</Message>
      </Event>
      <Event>
        <Date>2019-12-26T23:55:04.170Z</Date>
        <Severity>INFO</Severity>
        <EventId>REDSHIFT-EVENT-3614</EventId>
        <SourceIdentifier>myscheduledaction</SourceIdentifier>
        <SourceType>scheduled-action</SourceType>
        <EventCategories>
          <EventCategory>management</EventCategory>
        </EventCategories>
        <Message>The scheduled action 'myscheduledaction' was created at 2019-12-26
 23:55 UTC. The first invocation is scheduled at 2019-12-31 00:00 UTC.</Message>
      </Event>
      <Event>
        <Date>2019-12-26T23:55:19.846Z</Date>
        <Severity>INFO</Severity>
        <EventId>REDSHIFT-EVENT-3627</EventId>
        <SourceIdentifier>myscheduledaction</SourceIdentifier>
        <SourceType>scheduled-action</SourceType>
        <EventCategories>
          <EventCategory>management</EventCategory>
        </EventCategories>
        <Message>Scheduled action 'myscheduledaction' was deleted at 2019-12-26 23:55
 UTC.</Message>
      </Event>
```

```
      <Event>
        <Date>2019-12-27T00:16:36.767Z</Date>
        <Severity>INFO</Severity>
        <EventId>REDSHIFT-EVENT-2000</EventId>
        <SourceIdentifier>mycluster</SourceIdentifier>
        <SourceType>cluster</SourceType>
        <EventCategories>
          <EventCategory>management</EventCategory>
        </EventCategories>
        <Message>Amazon Redshift cluster 'mycluster' has been created at 2019-12-27
 00:16 UTC and is ready for use.</Message>
      </Event>
    </Events>
  </DescribeEventsResult>
  <ResponseMetadata>
    <RequestId>eb82309b-283f-11ea-9caa-c956bec1ce87</RequestId>
  </ResponseMetadata>
</DescribeEventsResponse>
```

See Also

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

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

DescribeEventSubscriptions

Lists descriptions of all the Amazon Redshift event notification subscriptions for a customer account. If you specify a subscription name, lists the description for that subscription.

If you specify both tag keys and tag values in the same request, Amazon Redshift returns all event notification subscriptions that match any combination of the specified keys and values. For example, if you have `owner` and `environment` for tag keys, and `admin` and `test` for tag values, all subscriptions that have any combination of those values are returned.

If both tag keys and values are omitted from the request, subscriptions are returned regardless of whether they have tag keys or values associated with them.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

Marker

An optional parameter that specifies the starting point to return a set of response records. When the results of a DescribeEventSubscriptions request exceed the value specified in `MaxRecords`, AWS returns a value in the `Marker` field of the response. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of response records to return in each call. If the number of remaining response records exceeds the specified `MaxRecords` value, a value is returned in a `marker` field of the response. You can retrieve the next set of records by retrying the command with the returned marker value.

Default: `100`

Constraints: minimum 20, maximum 100.

Type: Integer

Required: No

SubscriptionName

The name of the Amazon Redshift event notification subscription to be described.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

TagKeys.TagKey.N

A tag key or keys for which you want to return all matching event notification subscriptions that are associated with the specified key or keys. For example, suppose that you have subscriptions that are tagged with keys called `owner` and `environment`. If you specify both of these tag keys in the request, Amazon Redshift returns a response with the subscriptions that have either or both of these tag keys associated with them.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

TagValues.TagValue.N

A tag value or values for which you want to return all matching event notification subscriptions that are associated with the specified tag value or values. For example, suppose that you have subscriptions that are tagged with values called `admin` and `test`. If you specify both of these tag values in the request, Amazon Redshift returns a response with the subscriptions that have either or both of these tag values associated with them.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following elements are returned by the service.

EventSubscriptionsList.EventSubscription.N

A list of event subscriptions.

Type: Array of EventSubscription objects

Marker

A value that indicates the starting point for the next set of response records in a subsequent request. If a value is returned in a response, you can retrieve the next set of records by providing this returned marker value in the `Marker` parameter and retrying the command. If the `Marker` field is empty, all response records have been retrieved for the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Errors

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

InvalidTagFault

The tag is invalid.

HTTP Status Code: 400

SubscriptionNotFound

An Amazon Redshift event notification subscription with the specified name does not exist.

HTTP Status Code: 404

Examples

Example

This example illustrates one usage of DescribeEventSubscriptions.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
```

```
       ?Action=DescribeEventSubscriptions
&SubscriptionName=mysubscription
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DescribeEventSubscriptionsResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <DescribeEventSubscriptionsResult>
    <EventSubscriptionsList>
      <EventSubscription>
        <Severity>ERROR</Severity>
        <CustSubscriptionId>mysubscription</CustSubscriptionId>
        <SnsTopicArn>arn:aws:sns:us-east-2:123456789012:MySNStopic</SnsTopicArn>
        <SourceIdsList/>
        <EventCategoriesList/>
        <SubscriptionCreationTime>2019-12-27T00:27:43.748Z</SubscriptionCreationTime>
        <Enabled>true</Enabled>
        <Tags/>
        <Status>active</Status>
        <CustomerAwsId>123456789012</CustomerAwsId>
      </EventSubscription>
    </EventSubscriptionsList>
  </DescribeEventSubscriptionsResult>
  <ResponseMetadata>
    <RequestId>b80f1c37-283f-11ea-9caa-c956bec1ce87</RequestId>
  </ResponseMetadata>
</DescribeEventSubscriptionsResponse>
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET

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

DescribeHsmClientCertificates

Returns information about the specified HSM client certificate. If no certificate ID is specified, returns information about all the HSM certificates owned by your AWS account.

If you specify both tag keys and tag values in the same request, Amazon Redshift returns all HSM client certificates that match any combination of the specified keys and values. For example, if you have `owner` and `environment` for tag keys, and `admin` and `test` for tag values, all HSM client certificates that have any combination of those values are returned.

If both tag keys and values are omitted from the request, HSM client certificates are returned regardless of whether they have tag keys or values associated with them.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

HsmClientCertificateIdentifier

The identifier of a specific HSM client certificate for which you want information. If no identifier is specified, information is returned for all HSM client certificates owned by your AWS account.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Marker

An optional parameter that specifies the starting point to return a set of response records. When the results of a DescribeHsmClientCertificates request exceed the value specified in `MaxRecords`, AWS returns a value in the `Marker` field of the response. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of response records to return in each call. If the number of remaining response records exceeds the specified `MaxRecords` value, a value is returned in a `marker` field of the response. You can retrieve the next set of records by retrying the command with the returned marker value.

Default: `100`

Constraints: minimum 20, maximum 100.

Type: Integer

Required: No

TagKeys.TagKey.N

A tag key or keys for which you want to return all matching HSM client certificates that are associated with the specified key or keys. For example, suppose that you have HSM client certificates that are tagged with keys called `owner` and `environment`. If you specify both of these tag keys in the request, Amazon Redshift returns a response with the HSM client certificates that have either or both of these tag keys associated with them.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

TagValues.TagValue.N

A tag value or values for which you want to return all matching HSM client certificates that are associated with the specified tag value or values. For example, suppose that you have HSM client certificates that are tagged with values called `admin` and `test`. If you specify both of these tag values in the request, Amazon Redshift returns a response with the HSM client certificates that have either or both of these tag values associated with them.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following elements are returned by the service.

HsmClientCertificates.HsmClientCertificate.N

A list of the identifiers for one or more HSM client certificates used by Amazon Redshift clusters to store and retrieve database encryption keys in an HSM.

Type: Array of HsmClientCertificate objects

Marker

A value that indicates the starting point for the next set of response records in a subsequent request. If a value is returned in a response, you can retrieve the next set of records by providing this returned marker value in the `Marker` parameter and retrying the command. If the `Marker` field is empty, all response records have been retrieved for the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Errors

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

HsmClientCertificateNotFoundFault

There is no Amazon Redshift HSM client certificate with the specified identifier.

HTTP Status Code: 400

InvalidTagFault

The tag is invalid.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DescribeHsmClientCertificates.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DescribeHsmClientCertificates
&HsmClientCertificateIdentifier=myhsmclientcert
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DescribeHsmClientCertificatesResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <DescribeHsmClientCertificatesResult>
    <HsmClientCertificates>
      <HsmClientCertificate>
        <HsmClientCertificateIdentifier>myhsmclientcert</
HsmClientCertificateIdentifier>
        <HsmClientCertificatePublicKey>-----BEGIN CERTIFICATE-----
MIICiTCCAfICCQD6m7oRw0uXOjANBgkqhkiG9w0BAQUFADCBiDELMAkGA1UEBhMC
VVMxCzAJBgNVBAgTAldBMRAwDgYDVQQHEwdTZWF0dGxlMQ8wDQYDVQQKEwZBbWF6
b24xFDASBgNVBAsTC0lBTSBDb25zb2xlMRIwEAYDVQQDEwlUZXN0Q2lsYWMxHzAd
BgkqhkiG9w0BCQEWEG5vb25lQGFtYXpvbi5jb20wHhcNMTEwNDI1MjA0NTIxWhcN
MTIwNDI0MjA0NTIxWjCBiDELMAkGA1UEBhMCVVMxCzAJBgNVBAgTAldBMRAwDgYD
VQQHEwdTZWF0dGxlMQ8wDQYDVQQKEwZBbWF6b24xFDASBgNVBAsTC0lBTSBDb25z
b2xlMRIwEAYDVQQDEwlUZXN0Q2lsYWMxHzAdBgkqhkiG9w0BCQEWEG5vb25lQGFt
YXpvbi5jb20wgZ8wDQYJKoZIhvcNAQEBBQADgY0AMIGJAoGBAMaK0dn+a4GmWIWJ
21uUSfwfEvySWtC2XADZ4nB+BLYgVIk60CpiwsZ3G93vUEIO3IyNoH/f0wYK8m9T
rDHudUZg3qX4waLG5M43q7Wgc/MbQITxOUSQv7c7ugFFDzQGBzZswY6786m86gpE
Ibb3OhjZnzcvQAaRHhdlQWIMm2nrAgMBAAEwDQYJKoZIhvcNAQEFBQADgYEAtCu4
nUhVVxYUntneD9+h8Mg9q6q+auNKyExzyLwaxlAoo7TJHidbtS4J5iNmZgXL0Fkb
FFBjvSfpJIlJ00zbhNYS5f6GuoEDmFJl0ZxBHjJnyp378OD8uTs7fLvjx79LjSTb
NYiytVbZPQUQ5Yaxu2jXnimvw3rEXAMPLE=
-----END CERTIFICATE-----
</HsmClientCertificatePublicKey>
        <Tags/>
      </HsmClientCertificate>
    </HsmClientCertificates>
  </DescribeHsmClientCertificatesResult>
```

```
  <ResponseMetadata>
    <RequestId>83526b29-28cb-11ea-9939-5fccefa818c0</RequestId>
  </ResponseMetadata>
</DescribeHsmClientCertificatesResponse>
```

See Also

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

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

DescribeHsmConfigurations

Returns information about the specified Amazon Redshift HSM configuration. If no configuration ID is specified, returns information about all the HSM configurations owned by your AWS account.

If you specify both tag keys and tag values in the same request, Amazon Redshift returns all HSM connections that match any combination of the specified keys and values. For example, if you have `owner` and `environment` for tag keys, and `admin` and `test` for tag values, all HSM connections that have any combination of those values are returned.

If both tag keys and values are omitted from the request, HSM connections are returned regardless of whether they have tag keys or values associated with them.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

HsmConfigurationIdentifier

The identifier of a specific Amazon Redshift HSM configuration to be described. If no identifier is specified, information is returned for all HSM configurations owned by your AWS account.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Marker

An optional parameter that specifies the starting point to return a set of response records. When the results of a DescribeHsmConfigurations request exceed the value specified in `MaxRecords`, AWS returns a value in the `Marker` field of the response. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of response records to return in each call. If the number of remaining response records exceeds the specified `MaxRecords` value, a value is returned in a `marker` field of the response. You can retrieve the next set of records by retrying the command with the returned marker value.

Default: `100`

Constraints: minimum 20, maximum 100.

Type: Integer

Required: No

TagKeys.TagKey.N

A tag key or keys for which you want to return all matching HSM configurations that are associated with the specified key or keys. For example, suppose that you have HSM configurations that are tagged with keys called `owner` and `environment`. If you specify both of these tag keys in the request, Amazon Redshift returns a response with the HSM configurations that have either or both of these tag keys associated with them.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

TagValues.TagValue.N

A tag value or values for which you want to return all matching HSM configurations that are associated with the specified tag value or values. For example, suppose that you have HSM configurations that are tagged with values called `admin` and `test`. If you specify both of these tag values in the request, Amazon Redshift returns a response with the HSM configurations that have either or both of these tag values associated with them.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following elements are returned by the service.

HsmConfigurations.HsmConfiguration.N

A list of `HsmConfiguration` objects.

Type: Array of HsmConfiguration objects

Marker

A value that indicates the starting point for the next set of response records in a subsequent request. If a value is returned in a response, you can retrieve the next set of records by providing this returned marker value in the `Marker` parameter and retrying the command. If the `Marker` field is empty, all response records have been retrieved for the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Errors

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

HsmConfigurationNotFoundFault

There is no Amazon Redshift HSM configuration with the specified identifier.

HTTP Status Code: 400

InvalidTagFault

The tag is invalid.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DescribeHsmConfigurations.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DescribeHsmConfigurations
&HsmConfigurationIdentifier=myhsmconnection
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DescribeHsmConfigurationsResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <DescribeHsmConfigurationsResult>
    <HsmConfigurations>
      <HsmConfiguration>
        <Description>My HSM partition</Description>
        <HsmPartitionName>myhsmpartition</HsmPartitionName>
        <HsmConfigurationIdentifier>myhsmconnection</HsmConfigurationIdentifier>
        <Tags/>
        <HsmIpAddress>192.0.2.09</HsmIpAddress>
      </HsmConfiguration>
    </HsmConfigurations>
  </DescribeHsmConfigurationsResult>
  <ResponseMetadata>
    <RequestId>367be4c0-28cc-11ea-8314-974e2ba81189</RequestId>
  </ResponseMetadata>
</DescribeHsmConfigurationsResponse>
```

See Also

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

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

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

DescribeInboundIntegrations

Returns a list of inbound integrations.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

IntegrationArn

The Amazon Resource Name (ARN) of the inbound integration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `^arn:aws[a-z\-]*:.+:[a-z0-9\-]*:[0-9]*:integration:[0-9a-f]{8}-[0-9a-f]{4}-[0-9a-f]{4}-[0-9a-f]{4}-[0-9a-f]{12}$`

Required: No

Marker

An optional parameter that specifies the starting point to return a set of response records. When the results of a DescribeInboundIntegrations request exceed the value specified in `MaxRecords`, AWS returns a value in the `Marker` field of the response. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of response records to return in each call. If the number of remaining response records exceeds the specified `MaxRecords` value, a value is returned in a `marker` field of the response. You can retrieve the next set of records by retrying the command with the returned marker value.

Default: `100`

Constraints: minimum 20, maximum 100.

Type: Integer

Required: No

TargetArn

The Amazon Resource Name (ARN) of the target of an inbound integration.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `^arn:aws[a-z\-]*:redshift(-serverless)?:[a-z0-9\-]+:[0-9]{12}:(namespace\/|namespace:)[a-z0-9\-]+$`

Required: No

Response Elements

The following elements are returned by the service.

InboundIntegrations.InboundIntegration.N

A list of InboundIntegration instances.

Type: Array of InboundIntegration objects

Marker

A value that indicates the starting point for the next set of response records in a subsequent request. If a value is returned in a response, you can retrieve the next set of records by providing this returned marker value in the `Marker` parameter and retrying the command. If the `Marker` field is empty, all response records have been retrieved for the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Errors

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

IntegrationNotFoundFault

The integration can't be found.

HTTP Status Code: 404

InvalidNamespaceFault

The namespace isn't valid because the namespace doesn't exist. Provide a valid namespace.

HTTP Status Code: 400

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

DescribeIntegrations

Describes one or more zero-ETL or S3 event integrations with Amazon Redshift.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

Filters.DescribeIntegrationsFilter.N

A filter that specifies one or more resources to return.

Type: Array of DescribeIntegrationsFilter objects

Required: No

IntegrationArn

The unique identifier of the integration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `^arn:aws[a-z\-]*:redshift:[a-z0-9\-]*:[0-9]*:integration:[0-9a-f]{8}-[0-9a-f]{4}-[0-9a-f]{4}-[0-9a-f]{4}-[0-9a-f]{12}$`

Required: No

Marker

An optional pagination token provided by a previous `DescribeIntegrations` request. If this parameter is specified, the response includes only records beyond the marker, up to the value specified by `MaxRecords`.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of response records to return in each call. If the number of remaining response records exceeds the specified `MaxRecords` value, a value is returned in a `marker`

field of the response. You can retrieve the next set of records by retrying the command with the returned marker value.

Default: `100`

Constraints: minimum 20, maximum 100.

Type: Integer

Required: No

Response Elements

The following elements are returned by the service.

Integrations.Integration.N

List of integrations that are described.

Type: Array of Integration objects

Marker

A value that indicates the starting point for the next set of response records in a subsequent request. If a value is returned in a response, you can retrieve the next set of records by providing this returned marker value in the `Marker` parameter and retrying the command. If the `Marker` field is empty, all response records have been retrieved for the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Errors

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

IntegrationNotFoundFault

The integration can't be found.

HTTP Status Code: 404

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

DescribeLoggingStatus

Describes whether information, such as queries and connection attempts, is being logged for the specified Amazon Redshift cluster.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The identifier of the cluster from which to get the logging status.

Example: `examplecluster`

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Response Elements

The following elements are returned by the service.

BucketName

The name of the S3 bucket where the log files are stored.

Type: String

Length Constraints: Maximum length of 2147483647.

LastFailureMessage

The message indicating that logs failed to be delivered.

Type: String

Length Constraints: Maximum length of 2147483647.

LastFailureTime

The last time when logs failed to be delivered.

Type: Timestamp

LastSuccessfulDeliveryTime

The last time that logs were delivered.

Type: Timestamp

LogDestinationType

The log destination type. An enum with possible values of `s3` and `cloudwatch`.

Type: String

Valid Values: `s3 | cloudwatch`

LogExports.member.N

The collection of exported log types. Possible values are `connectionlog`, `useractivitylog`, and `userlog`.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

LoggingEnabled

`true` if logging is on, `false` if logging is off.

Type: Boolean

S3KeyPrefix

The prefix applied to the log file names.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `[\p{L}\p{Z}\p{N}_.:/=+\-@]*`

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DescribeLoggingStatus.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DescribeLoggingStatus
&ClusterIdentifier=mycluster
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DescribeLoggingStatusResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <DescribeLoggingStatusResult>
    <LoggingEnabled>false</LoggingEnabled>
  </DescribeLoggingStatusResult>
  <ResponseMetadata>
    <RequestId>9ed2dcec-28cc-11ea-b6af-7126da6f11af</RequestId>
  </ResponseMetadata>
</DescribeLoggingStatusResponse>
```

See Also

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

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

DescribeNodeConfigurationOptions

Returns properties of possible node configurations such as node type, number of nodes, and disk usage for the specified action type.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ActionType

The action type to evaluate for possible node configurations. Specify "restore-cluster" to get configuration combinations based on an existing snapshot. Specify "recommend-node-config" to get configuration recommendations based on an existing cluster or snapshot. Specify "resize-cluster" to get configuration combinations for elastic resize based on an existing cluster.

Type: String

Valid Values: `restore-cluster | recommend-node-config | resize-cluster`

Required: Yes

ClusterIdentifier

The identifier of the cluster to evaluate for possible node configurations.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Filter.NodeConfigurationOptionsFilter.N

A set of name, operator, and value items to filter the results.

Type: Array of NodeConfigurationOptionsFilter objects

Required: No

Marker

An optional parameter that specifies the starting point to return a set of response records. When the results of a DescribeNodeConfigurationOptions request exceed the value specified

in `MaxRecords`, AWS returns a value in the `Marker` field of the response. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of response records to return in each call. If the number of remaining response records exceeds the specified `MaxRecords` value, a value is returned in a `marker` field of the response. You can retrieve the next set of records by retrying the command with the returned marker value.

Default: `500`

Constraints: minimum 100, maximum 500.

Type: Integer

Required: No

OwnerAccount

The AWS account used to create or copy the snapshot. Required if you are restoring a snapshot you do not own, optional if you own the snapshot.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SnapshotArn

The Amazon Resource Name (ARN) of the snapshot associated with the message to describe node configuration.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SnapshotIdentifier

The identifier of the snapshot to evaluate for possible node configurations.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following elements are returned by the service.

Marker

A value that indicates the starting point for the next set of response records in a subsequent request. If a value is returned in a response, you can retrieve the next set of records by providing this returned marker value in the `Marker` parameter and retrying the command. If the `Marker` field is empty, all response records have been retrieved for the request.

Type: String

Length Constraints: Maximum length of 2147483647.

NodeConfigurationOptionList.NodeConfigurationOption.N

A list of valid node configurations.

Type: Array of NodeConfigurationOption objects

Errors

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

AccessToSnapshotDenied

The owner of the specified snapshot has not authorized your account to access the snapshot.

HTTP Status Code: 400

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

ClusterSnapshotNotFound

The snapshot identifier does not refer to an existing cluster snapshot.

HTTP Status Code: 404

InvalidClusterSnapshotState

The specified cluster snapshot is not in the `available` state, or other accounts are authorized to access the snapshot.

HTTP Status Code: 400

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DescribeNodeConfigurationOptions.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DescribeNodeConfigurationOptions
&ActionType=restore-cluster
&SnapshotIdentifier=mysnapshotid
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
```

```
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DescribeNodeConfigurationOptionsResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <DescribeNodeConfigurationOptionsResult>
    <NodeConfigurationOptionList>
      <NodeConfigurationOption>
        <EstimatedDiskUtilizationPercent>0.01</EstimatedDiskUtilizationPercent>
        <NumberOfNodes>2</NumberOfNodes>
        <NodeType>dc2.large</NodeType>
      </NodeConfigurationOption>
      <NodeConfigurationOption>
        <EstimatedDiskUtilizationPercent>0.01</EstimatedDiskUtilizationPercent>
        <NumberOfNodes>4</NumberOfNodes>
        <NodeType>dc2.large</NodeType>
      </NodeConfigurationOption>
      <NodeConfigurationOption>
        <EstimatedDiskUtilizationPercent>0.01</EstimatedDiskUtilizationPercent>
        <NumberOfNodes>2</NumberOfNodes>
        <NodeType>ra3.4xlarge</NodeType>
      </NodeConfigurationOption>
      <NodeConfigurationOption>
        <EstimatedDiskUtilizationPercent>0.01</EstimatedDiskUtilizationPercent>
        <NumberOfNodes>4</NumberOfNodes>
        <NodeType>ra3.4xlarge</NodeType>
      </NodeConfigurationOption>
    </NodeConfigurationOptionList>
  </DescribeNodeConfigurationOptionsResult>
  <ResponseMetadata>
    <RequestId>ed601e39-28cc-11ea-a940-1b28a85fd753</RequestId>
  </ResponseMetadata>
</DescribeNodeConfigurationOptionsResponse>
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET

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

DescribeOrderableClusterOptions

Returns a list of orderable cluster options. Before you create a new cluster you can use this operation to find what options are available, such as the EC2 Availability Zones (AZ) in the specific AWS Region that you can specify, and the node types you can request. The node types differ by available storage, memory, CPU and price. With the cost involved you might want to obtain a list of cluster options in the specific region and specify values when creating a cluster. For more information about managing clusters, go to Amazon Redshift Clusters in the *Amazon Redshift Cluster Management Guide*.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterVersion

The version filter value. Specify this parameter to show only the available offerings matching the specified version.

Default: All versions.

Constraints: Must be one of the version returned from DescribeClusterVersions.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Marker

An optional parameter that specifies the starting point to return a set of response records. When the results of a DescribeOrderableClusterOptions request exceed the value specified in `MaxRecords`, AWS returns a value in the `Marker` field of the response. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of response records to return in each call. If the number of remaining response records exceeds the specified `MaxRecords` value, a value is returned in a `marker` field of the response. You can retrieve the next set of records by retrying the command with the returned marker value.

Default: `100`

Constraints: minimum 20, maximum 100.

Type: Integer

Required: No

NodeType

The node type filter value. Specify this parameter to show only the available offerings matching the specified node type.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following elements are returned by the service.

Marker

A value that indicates the starting point for the next set of response records in a subsequent request. If a value is returned in a response, you can retrieve the next set of records by providing this returned marker value in the `Marker` parameter and retrying the command. If the `Marker` field is empty, all response records have been retrieved for the request.

Type: String

Length Constraints: Maximum length of 2147483647.

OrderableClusterOptions.OrderableClusterOption.N

An `OrderableClusterOption` structure containing information about orderable options for the cluster.

Type: Array of OrderableClusterOption objects

Errors

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

Examples

Example

This example illustrates one usage of DescribeOrderableClusterOptions.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DescribeOrderableClusterOptions
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DescribeOrderableClusterOptionsResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <DescribeOrderableClusterOptionsResult>
    <OrderableClusterOptions>
      <OrderableClusterOption>
        <ClusterType>multi-node</ClusterType>
        <AvailabilityZones>
          <AvailabilityZone>
            <Name>us-east-2a</Name>
            <SupportedPlatforms>
              <SupportedPlatform>
```

```
                <Name>VPC</Name>
              </SupportedPlatform>
            </SupportedPlatforms>
          </AvailabilityZone>
          <AvailabilityZone>
            <Name>us-east-2b</Name>
            <SupportedPlatforms>
              <SupportedPlatform>
                <Name>VPC</Name>
              </SupportedPlatform>
            </SupportedPlatforms>
          </AvailabilityZone>
          <AvailabilityZone>
            <Name>us-east-2c</Name>
            <SupportedPlatforms>
              <SupportedPlatform>
                <Name>VPC</Name>
              </SupportedPlatform>
            </SupportedPlatforms>
          </AvailabilityZone>
          <AvailabilityZone>
            <Name>us-east-2d</Name>
            <SupportedPlatforms>
              <SupportedPlatform>
                <Name>VPC</Name>
              </SupportedPlatform>
            </SupportedPlatforms>
          </AvailabilityZone>
          <AvailabilityZone>
            <Name>us-east-2e</Name>
            <SupportedPlatforms>
              <SupportedPlatform>
                <Name>VPC</Name>
              </SupportedPlatform>
            </SupportedPlatforms>
          </AvailabilityZone>
          <AvailabilityZone>
            <Name>us-east-2f</Name>
            <SupportedPlatforms>
              <SupportedPlatform>
                <Name>VPC</Name>
              </SupportedPlatform>
            </SupportedPlatforms>
          </AvailabilityZone>
```

```
        </AvailabilityZones>
        <NodeType>dc2.8xlarge</NodeType>
        <ClusterVersion>1.0</ClusterVersion>
      </OrderableClusterOption>
        <ClusterType>multi-node</ClusterType>
        <AvailabilityZones>
          <AvailabilityZone>
            <Name>us-east-2a</Name>
            <SupportedPlatforms>
              <SupportedPlatform>
                <Name>VPC</Name>
              </SupportedPlatform>
            </SupportedPlatforms>
          </AvailabilityZone>
          <AvailabilityZone>
            <Name>us-east-2b</Name>
            <SupportedPlatforms>
              <SupportedPlatform>
                <Name>VPC</Name>
              </SupportedPlatform>
            </SupportedPlatforms>
          </AvailabilityZone>
          <AvailabilityZone>
            <Name>us-east-2c</Name>
            <SupportedPlatforms>
              <SupportedPlatform>
                <Name>VPC</Name>
              </SupportedPlatform>
            </SupportedPlatforms>
          </AvailabilityZone>
          <AvailabilityZone>
            <Name>us-east-2f</Name>
            <SupportedPlatforms>
              <SupportedPlatform>
                <Name>VPC</Name>
              </SupportedPlatform>
            </SupportedPlatforms>
          </AvailabilityZone>
        </AvailabilityZones>
        <NodeType>ra3.16xlarge</NodeType>
        <ClusterVersion>1.0</ClusterVersion>
      </OrderableClusterOption>
    </OrderableClusterOptions>
  </DescribeOrderableClusterOptionsResult>
```

```
  <ResponseMetadata>
    <RequestId>28e69ca9-28cd-11ea-8a28-2fd1719d0e86</RequestId>
  </ResponseMetadata>
</DescribeOrderableClusterOptionsResponse>
```

See Also

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

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

DescribePartners

Returns information about the partner integrations defined for a cluster.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

AccountId

The AWS account ID that owns the cluster.

Type: String

Length Constraints: Fixed length of 12.

Pattern: `^[0-9]+$`

Required: Yes

ClusterIdentifier

The cluster identifier of the cluster whose partner integration is being described.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[a-zA-Z0-9\-]+$`

Required: Yes

DatabaseName

The name of the database whose partner integration is being described. If database name is not specified, then all databases in the cluster are described.

Type: String

Length Constraints: Maximum length of 127.

Pattern: `^[\p{L}_][\p{L}\p{N}@$#_]+$`

Required: No

PartnerName

The name of the partner that is being described. If partner name is not specified, then all partner integrations are described.

Type: String

Length Constraints: Maximum length of 255.

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

Required: No

Response Elements

The following element is returned by the service.

PartnerIntegrationInfoList.PartnerIntegrationInfo.N

A list of partner integrations.

Type: Array of PartnerIntegrationInfo objects

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

UnauthorizedPartnerIntegration

The partner integration is not authorized.

HTTP Status Code: 401

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

DescribeRedshiftIdcApplications

Lists the Amazon Redshift IAM Identity Center applications.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

Marker

A value that indicates the starting point for the next set of response records in a subsequent request. If a value is returned in a response, you can retrieve the next set of records by providing this returned marker value in the Marker parameter and retrying the command. If the Marker field is empty, all response records have been retrieved for the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of response records to return in each call. If the number of remaining response records exceeds the specified MaxRecords value, a value is returned in a marker field of the response. You can retrieve the next set of records by retrying the command with the returned marker value.

Type: Integer

Required: No

RedshiftIdcApplicationArn

The ARN for the Redshift application that integrates with IAM Identity Center.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following elements are returned by the service.

Marker

A value that indicates the starting point for the next set of response records in a subsequent request. If a value is returned in a response, you can retrieve the next set of records by providing this returned marker value in the Marker parameter and retrying the command. If the Marker field is empty, all response records have been retrieved for the request.

Type: String

Length Constraints: Maximum length of 2147483647.

RedshiftIdcApplications.member.N

The list of Amazon Redshift IAM Identity Center applications.

Type: Array of RedshiftIdcApplication objects

Errors

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

DependentServiceAccessDenied

A dependent service denied access for the integration.

HTTP Status Code: 403

DependentServiceUnavailableFault

Your request cannot be completed because a dependent internal service is temporarily unavailable. Wait 30 to 60 seconds and try again.

HTTP Status Code: 400

RedshiftIdcApplicationNotExists

The application you attempted to find doesn't exist.

HTTP Status Code: 404

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

DescribeReservedNodeExchangeStatus

Returns exchange status details and associated metadata for a reserved-node exchange. Statuses include such values as in progress and requested.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

Marker

An optional pagination token provided by a previous `DescribeReservedNodeExchangeStatus` request. If this parameter is specified, the response includes only records beyond the marker, up to the value specified by the `MaxRecords` parameter. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of response records to return in each call. If the number of remaining response records exceeds the specified `MaxRecords` value, a value is returned in a `Marker` field of the response. You can retrieve the next set of records by retrying the command with the returned marker value.

Type: Integer

Required: No

ReservedNodeExchangeRequestId

The identifier of the reserved-node exchange request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ReservedNodeId

The identifier of the source reserved node in a reserved-node exchange request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following elements are returned by the service.

Marker

A pagination token provided by a previous `DescribeReservedNodeExchangeStatus` request.

Type: String

Length Constraints: Maximum length of 2147483647.

ReservedNodeExchangeStatusDetails.ReservedNodeExchangeStatus.N

The details of the reserved-node exchange request, including the status, request time, source reserved-node identifier, and additional details.

Type: Array of ReservedNodeExchangeStatus objects

Errors

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

ReservedNodeExchangeNotFond

The reserved-node exchange status wasn't found.

HTTP Status Code: 404

ReservedNodeNotFound

The specified reserved compute node not found.

HTTP Status Code: 404

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

DescribeReservedNodeOfferings

Returns a list of the available reserved node offerings by Amazon Redshift with their descriptions including the node type, the fixed and recurring costs of reserving the node and duration the node will be reserved for you. These descriptions help you determine which reserve node offering you want to purchase. You then use the unique offering ID in you call to PurchaseReservedNodeOffering to reserve one or more nodes for your Amazon Redshift cluster.

For more information about reserved node offerings, go to Purchasing Reserved Nodes in the *Amazon Redshift Cluster Management Guide*.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

Marker

An optional parameter that specifies the starting point to return a set of response records. When the results of a DescribeReservedNodeOfferings request exceed the value specified in `MaxRecords`, AWS returns a value in the `Marker` field of the response. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of response records to return in each call. If the number of remaining response records exceeds the specified `MaxRecords` value, a value is returned in a `marker` field of the response. You can retrieve the next set of records by retrying the command with the returned marker value.

Default: `100`

Constraints: minimum 20, maximum 100.

Type: Integer

Required: No

ReservedNodeOfferingId

The unique identifier for the offering.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following elements are returned by the service.

Marker

A value that indicates the starting point for the next set of response records in a subsequent request. If a value is returned in a response, you can retrieve the next set of records by providing this returned marker value in the `Marker` parameter and retrying the command. If the `Marker` field is empty, all response records have been retrieved for the request.

Type: String

Length Constraints: Maximum length of 2147483647.

ReservedNodeOfferings.ReservedNodeOffering.N

A list of `ReservedNodeOffering` objects.

Type: Array of ReservedNodeOffering objects

Errors

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

DependentServiceUnavailableFault

Your request cannot be completed because a dependent internal service is temporarily unavailable. Wait 30 to 60 seconds and try again.

HTTP Status Code: 400

ReservedNodeOfferingNotFound

Specified offering does not exist.

HTTP Status Code: 404

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DescribeReservedNodeOfferings.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DescribeReservedNodeOfferings
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DescribeReservedNodeOfferingsResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <DescribeReservedNodeOfferingsResult>
    <ReservedNodeOfferings>
      <ReservedNodeOffering>
        <Duration>94608000</Duration>
        <UsagePrice>0.0</UsagePrice>
        <ReservedNodeOfferingId>12345678-12ab-12a1-1a2a-12ab-12a12aEXAMPLE</
ReservedNodeOfferingId>
        <OfferingType>No Upfront</OfferingType>
        <ReservedNodeOfferingType>Regular</ReservedNodeOfferingType>
```

```
        <RecurringCharges>
          <RecurringCharge>
            <RecurringChargeAmount>5.6724</RecurringChargeAmount>
            <RecurringChargeFrequency>Hourly</RecurringChargeFrequency>
          </RecurringCharge>
        </RecurringCharges>
        <NodeType>ra3.16xlarge</NodeType>
        <FixedPrice>0.0</FixedPrice>
        <CurrencyCode>USD</CurrencyCode>
      </ReservedNodeOffering>
      <ReservedNodeOffering>
        <Duration>31536000</Duration>
        <UsagePrice>0.0</UsagePrice>
        <ReservedNodeOfferingId>12345678-12ab-12a1-1a2a-12ab-12a12bEXAMPLE</
ReservedNodeOfferingId>
        <OfferingType>Partial Upfront</OfferingType>
        <ReservedNodeOfferingType>Regular</ReservedNodeOfferingType>
        <RecurringCharges>
          <RecurringCharge>
            <RecurringChargeAmount>0.075</RecurringChargeAmount>
            <RecurringChargeFrequency>Hourly</RecurringChargeFrequency>
          </RecurringCharge>
        </RecurringCharges>
        <NodeType>dc2.large</NodeType>
        <FixedPrice>750.0</FixedPrice>
        <CurrencyCode>USD</CurrencyCode>
      </ReservedNodeOffering>
    </ReservedNodeOfferings>
  </DescribeReservedNodeOfferingsResult>
  <ResponseMetadata>
    <RequestId>680f96a7-28cd-11ea-8314-974e2ba81189</RequestId>
  </ResponseMetadata>
</DescribeReservedNodeOfferingsResponse>
```


See Also

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

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

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

DescribeReservedNodes

Returns the descriptions of the reserved nodes.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

Marker

An optional parameter that specifies the starting point to return a set of response records. When the results of a DescribeReservedNodes request exceed the value specified in `MaxRecords`, AWS returns a value in the `Marker` field of the response. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of response records to return in each call. If the number of remaining response records exceeds the specified `MaxRecords` value, a value is returned in a `marker` field of the response. You can retrieve the next set of records by retrying the command with the returned marker value.

Default: `100`

Constraints: minimum 20, maximum 100.

Type: Integer

Required: No

ReservedNodeId

Identifier for the node reservation.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following elements are returned by the service.

Marker

A value that indicates the starting point for the next set of response records in a subsequent request. If a value is returned in a response, you can retrieve the next set of records by providing this returned marker value in the `Marker` parameter and retrying the command. If the `Marker` field is empty, all response records have been retrieved for the request.

Type: String

Length Constraints: Maximum length of 2147483647.

ReservedNodes.ReservedNode.N

The list of `ReservedNode` objects.

Type: Array of ReservedNode objects

Errors

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

DependentServiceUnavailableFault

Your request cannot be completed because a dependent internal service is temporarily unavailable. Wait 30 to 60 seconds and try again.

HTTP Status Code: 400

ReservedNodeNotFound

The specified reserved compute node not found.

HTTP Status Code: 404

Examples

Example

This example illustrates one usage of DescribeReservedNodes.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DescribeReservedNodes
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DescribeReservedNodesResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <DescribeReservedNodesResult>
    <ReservedNodes>
      <ReservedNode>
        <ReservedNodeId>12345678-12ab-12a1-1a2a-12ab-12a12aEXAMPLE</ReservedNodeId>
        <OfferingType>All Upfront</OfferingType>
        <ReservedNodeOfferingType>Regular</ReservedNodeOfferingType>
        <RecurringCharges>
          <RecurringCharge>
            <RecurringChargeAmount>0.0</RecurringChargeAmount>
            <RecurringChargeFrequency>Hourly</RecurringChargeFrequency>
          </RecurringCharge>
        </RecurringCharges>
        <NodeType>dc2.large</NodeType>
        <FixedPrice>1380.0</FixedPrice>
        <Duration>31536000</Duration>
        <UsagePrice>0.0</UsagePrice>
        <ReservedNodeOfferingId>12345678-12ab-12a1-1a2a-12ab-12a12bEXAMPLE</
ReservedNodeOfferingId>
        <StartTime>2019-12-23T22:33:53.881Z</StartTime>
        <NodeCount>1</NodeCount>
        <State>active</State>
        <CurrencyCode>USD</CurrencyCode>
```

```
      </ReservedNode>
    </ReservedNodes>
  </DescribeReservedNodesResult>
  <ResponseMetadata>
    <RequestId>d451d255-28cd-11ea-8314-974e2ba81189</RequestId>
  </ResponseMetadata>
</DescribeReservedNodesResponse>
```

See Also

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

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

DescribeResize

Returns information about the last resize operation for the specified cluster. If no resize operation has ever been initiated for the specified cluster, a `HTTP 404` error is returned. If a resize operation was initiated and completed, the status of the resize remains as `SUCCEEDED` until the next resize.

A resize operation can be requested using ModifyCluster and specifying a different number or type of nodes for the cluster.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The unique identifier of a cluster whose resize progress you are requesting. This parameter is case-sensitive.

By default, resize operations for all clusters defined for an AWS account are returned.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Response Elements

The following elements are returned by the service.

AvgResizeRateInMegaBytesPerSecond

The average rate of the resize operation over the last few minutes, measured in megabytes per second. After the resize operation completes, this value shows the average rate of the entire resize operation.

Type: Double

DataTransferProgressPercent

The percent of data transferred from source cluster to target cluster.

Type: Double

ElapsedTimeInSeconds

The amount of seconds that have elapsed since the resize operation began. After the resize operation completes, this value shows the total actual time, in seconds, for the resize operation.

Type: Long

EstimatedTimeToCompletionInSeconds

The estimated time remaining, in seconds, until the resize operation is complete. This value is calculated based on the average resize rate and the estimated amount of data remaining to be processed. Once the resize operation is complete, this value will be 0.

Type: Long

ImportTablesCompleted.member.N

The names of tables that have been completely imported .

Valid Values: List of table names.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

ImportTablesInProgress.member.N

The names of tables that are being currently imported.

Valid Values: List of table names.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

ImportTablesNotStarted.member.N

The names of tables that have not been yet imported.

Valid Values: List of table names

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Message

An optional string to provide additional details about the resize action.

Type: String

Length Constraints: Maximum length of 2147483647.

ProgressInMegaBytes

While the resize operation is in progress, this value shows the current amount of data, in megabytes, that has been processed so far. When the resize operation is complete, this value shows the total amount of data, in megabytes, on the cluster, which may be more or less than TotalResizeDataInMegaBytes (the estimated total amount of data before resize).

Type: Long

ResizeType

An enum with possible values of `ClassicResize` and `ElasticResize`. These values describe the type of resize operation being performed.

Type: String

Length Constraints: Maximum length of 2147483647.

Status

The status of the resize operation.

Valid Values: `NONE` | `IN_PROGRESS` | `FAILED` | `SUCCEEDED` | `CANCELLING`

Type: String

Length Constraints: Maximum length of 2147483647.

TargetClusterType

The cluster type after the resize operation is complete.

Valid Values: `multi-node` | `single-node`

Type: String

Length Constraints: Maximum length of 2147483647.

TargetEncryptionType

The type of encryption for the cluster after the resize is complete.

Possible values are `KMS` and `None`.

Type: String

Length Constraints: Maximum length of 2147483647.

TargetNodeType

The node type that the cluster will have after the resize operation is complete.

Type: String

Length Constraints: Maximum length of 2147483647.

TargetNumberOfNodes

The number of nodes that the cluster will have after the resize operation is complete.

Type: Integer

TotalResizeDataInMegaBytes

The estimated total amount of data, in megabytes, on the cluster before the resize operation began.

Type: Long

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

ResizeNotFound

A resize operation for the specified cluster is not found.

HTTP Status Code: 404

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DescribeResize.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DescribeResize
&ClusterIdentifier=mycluster
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DescribeResizeResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <DescribeResizeResult>
    <AvgResizeRateInMegaBytesPerSecond>0.1498</AvgResizeRateInMegaBytesPerSecond>
    <TargetNodeType>dc2.large</TargetNodeType>
    <TargetEncryptionType>NONE</TargetEncryptionType>
    <EstimatedTimeToCompletionInSeconds>0</EstimatedTimeToCompletionInSeconds>
    <ProgressInMegaBytes>55</ProgressInMegaBytes>
    <DataTransferProgressPercent>100.0</DataTransferProgressPercent>
    <TotalResizeDataInMegaBytes>55</TotalResizeDataInMegaBytes>
    <ElapsedTimeInSeconds>1226</ElapsedTimeInSeconds>
    <TargetClusterType>single-node</TargetClusterType>
    <ResizeType>ClassicResize</ResizeType>
    <Status>SUCCEEDED</Status>
```

```
  </DescribeResizeResult>
  <ResponseMetadata>
    <RequestId>6a152dbe-28d1-11ea-8cc9-43f1872b4b75</RequestId>
  </ResponseMetadata>
</DescribeResizeResponse>
```

See Also

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

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

DescribeScheduledActions

Describes properties of scheduled actions.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

Active

If true, retrieve only active scheduled actions. If false, retrieve only disabled scheduled actions.

Type: Boolean

Required: No

EndTime

The end time in UTC of the scheduled action to retrieve. Only active scheduled actions that have invocations before this time are retrieved.

Type: Timestamp

Required: No

Filters.ScheduledActionFilter.N

List of scheduled action filters.

Type: Array of ScheduledActionFilter objects

Required: No

Marker

An optional parameter that specifies the starting point to return a set of response records. When the results of a DescribeScheduledActions request exceed the value specified in `MaxRecords`, AWS returns a value in the `Marker` field of the response. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of response records to return in each call. If the number of remaining response records exceeds the specified `MaxRecords` value, a value is returned in a `marker` field of the response. You can retrieve the next set of records by retrying the command with the returned marker value.

Default: `100`

Constraints: minimum 20, maximum 100.

Type: Integer

Required: No

ScheduledActionName

The name of the scheduled action to retrieve.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

StartTime

The start time in UTC of the scheduled actions to retrieve. Only active scheduled actions that have invocations after this time are retrieved.

Type: Timestamp

Required: No

TargetActionType

The type of the scheduled actions to retrieve.

Type: String

Valid Values: `ResizeCluster | PauseCluster | ResumeCluster`

Required: No

Response Elements

The following elements are returned by the service.

Marker

An optional parameter that specifies the starting point to return a set of response records. When the results of a DescribeScheduledActions request exceed the value specified in `MaxRecords`, AWS returns a value in the `Marker` field of the response. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Type: String

Length Constraints: Maximum length of 2147483647.

ScheduledActions.ScheduledAction.N

List of retrieved scheduled actions.

Type: Array of ScheduledAction objects

Errors

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

ScheduledActionNotFound

The scheduled action cannot be found.

HTTP Status Code: 400

UnauthorizedOperation

Your account is not authorized to perform the requested operation.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DescribeScheduledActions.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DescribeScheduledActions
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DescribeScheduledActionsResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <DescribeScheduledActionsResult>
    <ScheduledActions>
      <ScheduledAction>
        <IamRole>arn:aws:iam::123456789012:role/myRedshiftRole</IamRole>
        <Schedule>at(2019-12-10T00:07:00)</Schedule>
        <ScheduledActionName>myscheduledaction</ScheduledActionName>
        <TargetAction>
          <ResizeCluster>
            <ClusterIdentifier>mycluster</ClusterIdentifier>
            <Classic>false</Classic>
            <NumberOfNodes>4</NumberOfNodes>
          </ResizeCluster>
        </TargetAction>
        <NextInvocations/>
        <State>DISABLED</State>
      </ScheduledAction>
    </ScheduledActions>
  </DescribeScheduledActionsResult>
  <ResponseMetadata>
    <RequestId>d9377e44-28d1-11ea-b6af-7126da6f11af</RequestId>
  </ResponseMetadata>
```

```
</DescribeScheduledActionsResponse>
```

See Also

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

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

DescribeSnapshotCopyGrants

Returns a list of snapshot copy grants owned by the AWS account in the destination region.

For more information about managing snapshot copy grants, go to Amazon Redshift Database Encryption in the *Amazon Redshift Cluster Management Guide*.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

Marker

An optional parameter that specifies the starting point to return a set of response records. When the results of a `DescribeSnapshotCopyGrant` request exceed the value specified in `MaxRecords`, AWS returns a value in the `Marker` field of the response. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Constraints: You can specify either the **SnapshotCopyGrantName** parameter or the **Marker** parameter, but not both.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of response records to return in each call. If the number of remaining response records exceeds the specified `MaxRecords` value, a value is returned in a `marker` field of the response. You can retrieve the next set of records by retrying the command with the returned marker value.

Default: `100`

Constraints: minimum 20, maximum 100.

Type: Integer

Required: No

SnapshotCopyGrantName

The name of the snapshot copy grant.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

TagKeys.TagKey.N

A tag key or keys for which you want to return all matching resources that are associated with the specified key or keys. For example, suppose that you have resources tagged with keys called `owner` and `environment`. If you specify both of these tag keys in the request, Amazon Redshift returns a response with all resources that have either or both of these tag keys associated with them.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

TagValues.TagValue.N

A tag value or values for which you want to return all matching resources that are associated with the specified value or values. For example, suppose that you have resources tagged with values called `admin` and `test`. If you specify both of these tag values in the request, Amazon Redshift returns a response with all resources that have either or both of these tag values associated with them.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following elements are returned by the service.

Marker

An optional parameter that specifies the starting point to return a set of response records. When the results of a `DescribeSnapshotCopyGrant` request exceed the value specified in `MaxRecords`, AWS returns a value in the `Marker` field of the response. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Constraints: You can specify either the **SnapshotCopyGrantName** parameter or the **Marker** parameter, but not both.

Type: String

Length Constraints: Maximum length of 2147483647.

SnapshotCopyGrants.SnapshotCopyGrant.N

The list of `SnapshotCopyGrant` objects.

Type: Array of SnapshotCopyGrant objects

Errors

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

InvalidTagFault

The tag is invalid.

HTTP Status Code: 400

SnapshotCopyGrantNotFoundFault

The specified snapshot copy grant can't be found. Make sure that the name is typed correctly and that the grant exists in the destination region.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DescribeSnapshotCopyGrants.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DescribeSnapshotCopyGrants
&SnapshotCopyGrantName=mysnapshotcopygrantnew
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DescribeSnapshotCopyGrantsResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <DescribeSnapshotCopyGrantsResult>
    <SnapshotCopyGrants>
      <SnapshotCopyGrant>
        <SnapshotCopyGrantName>mysnapshotcopygrantnew</SnapshotCopyGrantName>
        <KmsKeyId>arn:aws:kms:us-east-2:123456789012:key/bPxRfih3yCo8nvbEXAMPLEKEY</
KmsKeyId>
        <Tags/>
      </SnapshotCopyGrant>
    </SnapshotCopyGrants>
  </DescribeSnapshotCopyGrantsResult>
  <ResponseMetadata>
    <RequestId>3a843f76-28d2-11ea-9caa-c956bec1ce87</RequestId>
  </ResponseMetadata>
</DescribeSnapshotCopyGrantsResponse>
```

See Also

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

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

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

DescribeSnapshotSchedules

Returns a list of snapshot schedules.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The unique identifier for the cluster whose snapshot schedules you want to view.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Marker

A value that indicates the starting point for the next set of response records in a subsequent request. If a value is returned in a response, you can retrieve the next set of records by providing this returned marker value in the `marker` parameter and retrying the command. If the `marker` field is empty, all response records have been retrieved for the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number or response records to return in each call. If the number of remaining response records exceeds the specified `MaxRecords` value, a value is returned in a `marker` field of the response. You can retrieve the next set of records by retrying the command with the returned `marker` value.

Type: Integer

Required: No

ScheduleIdentifier

A unique identifier for a snapshot schedule.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

TagKeys.TagKey.N

The key value for a snapshot schedule tag.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

TagValues.TagValue.N

The value corresponding to the key of the snapshot schedule tag.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following elements are returned by the service.

Marker

A value that indicates the starting point for the next set of response records in a subsequent request. If a value is returned in a response, you can retrieve the next set of records by providing this returned marker value in the `marker` parameter and retrying the command. If the `marker` field is empty, all response records have been retrieved for the request.

Type: String

Length Constraints: Maximum length of 2147483647.

SnapshotSchedules.SnapshotSchedule.N

A list of SnapshotSchedules.

Type: Array of SnapshotSchedule objects

Errors

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

Examples

Example

This example illustrates one usage of DescribeSnapshotSchedules.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DescribeSnapshotSchedules
&ClusterIdentifier=mycluster
&ScheduleIdentifier=mysnapshotschedule
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DescribeSnapshotSchedulesResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <DescribeSnapshotSchedulesResult>
    <SnapshotSchedules>
      <SnapshotSchedule>
        <ScheduleDefinitions>
          <ScheduleDefinition>rate(12 hours)</ScheduleDefinition>
        </ScheduleDefinitions>
        <ScheduleDescription>My schedule description</ScheduleDescription>
        <AssociatedClusterCount>1</AssociatedClusterCount>
        <AssociatedClusters>
          <ClusterAssociatedToSchedule>
            <ScheduleAssociationState>ACTIVE</ScheduleAssociationState>
```

```
            <ClusterIdentifier>mycluster</ClusterIdentifier>
          </ClusterAssociatedToSchedule>
        </AssociatedClusters>
        <ScheduleIdentifier>mysnapshotschedule</ScheduleIdentifier>
        <Tags/>
      </SnapshotSchedule>
    </SnapshotSchedules>
  </DescribeSnapshotSchedulesResult>
  <ResponseMetadata>
    <RequestId>65030ae0-28d3-11ea-9caa-c956bec1ce87</RequestId>
  </ResponseMetadata>
</DescribeSnapshotSchedulesResponse>
```

See Also

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

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

DescribeStorage

Returns account level backups storage size and provisional storage.

Response Elements

The following elements are returned by the service.

TotalBackupSizeInMegaBytes

The total amount of storage currently used for snapshots.

Type: Double

TotalProvisionedStorageInMegaBytes

The total amount of storage currently provisioned.

Type: Double

Errors

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

Examples

Example

This example illustrates one usage of DescribeStorage.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DescribeStorage
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DescribeStorageResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <DescribeStorageResult>
    <TotalProvisionedStorageInMegaBytes>491520.0</TotalProvisionedStorageInMegaBytes>
    <TotalBackupSizeInMegaBytes>26.0</TotalBackupSizeInMegaBytes>
  </DescribeStorageResult>
  <ResponseMetadata>
    <RequestId>d6b07363-28d3-11ea-8397-219d1980588b</RequestId>
  </ResponseMetadata>
</DescribeStorageResponse>
```

See Also

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

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

DescribeTableRestoreStatus

Lists the status of one or more table restore requests made using the RestoreTableFromClusterSnapshot API action. If you don't specify a value for the `TableRestoreRequestId` parameter, then `DescribeTableRestoreStatus` returns the status of all table restore requests ordered by the date and time of the request in ascending order. Otherwise `DescribeTableRestoreStatus` returns the status of the table specified by `TableRestoreRequestId`.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The Amazon Redshift cluster that the table is being restored to.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Marker

An optional pagination token provided by a previous `DescribeTableRestoreStatus` request. If this parameter is specified, the response includes only records beyond the marker, up to the value specified by the `MaxRecords` parameter.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of records to include in the response. If more records exist than the specified `MaxRecords` value, a pagination token called a marker is included in the response so that the remaining results can be retrieved.

Type: Integer

Required: No

TableRestoreRequestId

The identifier of the table restore request to return status for. If you don't specify a `TableRestoreRequestId` value, then `DescribeTableRestoreStatus` returns the status of all in-progress table restore requests.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following elements are returned by the service.

Marker

A pagination token that can be used in a subsequent DescribeTableRestoreStatus request.

Type: String

Length Constraints: Maximum length of 2147483647.

TableRestoreStatusDetails.TableRestoreStatus.N

A list of status details for one or more table restore requests.

Type: Array of TableRestoreStatus objects

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

TableRestoreNotFoundFault

The specified `TableRestoreRequestId` value was not found.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DescribeTableRestoreStatus.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DescribeTableRestoreStatus
&ClusterIdentifier=mycluster
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DescribeTableRestoreStatusResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <DescribeTableRestoreStatusResult>
    <TableRestoreStatusDetails>
      <TableRestoreStatus>
        <NewTableName>mytable-clone</NewTableName>
        <ClusterIdentifier>mycluster</ClusterIdentifier>
        <SnapshotIdentifier>mysnapshotid</SnapshotIdentifier>
        <RequestTime>2019-12-27T18:22:12.257Z</RequestTime>
        <SourceTableName>mytable</SourceTableName>
        <SourceDatabaseName>dev</SourceDatabaseName>
        <TableRestoreRequestId>z1116630-0e80-46f4-ba86-bd9670411ebd</
TableRestoreRequestId>
        <TargetDatabaseName>dev</TargetDatabaseName>
        <SourceSchemaName>public</SourceSchemaName>
```

```
        <TargetSchemaName>public</TargetSchemaName>
        <Status>IN_PROGRESS</Status>
      </TableRestoreStatus>
    </TableRestoreStatusDetails>
  </DescribeTableRestoreStatusResult>
  <ResponseMetadata>
    <RequestId>3a0cf005-28d6-11ea-9caa-c956bec1ce87</RequestId>
  </ResponseMetadata>
</DescribeTableRestoreStatusResponse>
```

See Also

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

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

DescribeTags

Returns a list of tags. You can return tags from a specific resource by specifying an ARN, or you can return all tags for a given type of resource, such as clusters, snapshots, and so on.

The following are limitations for `DescribeTags`:

- You cannot specify an ARN and a resource-type value together in the same request.
- You cannot use the `MaxRecords` and `Marker` parameters together with the ARN parameter.
- The `MaxRecords` parameter can be a range from 10 to 50 results to return in a request.

If you specify both tag keys and tag values in the same request, Amazon Redshift returns all resources that match any combination of the specified keys and values. For example, if you have `owner` and `environment` for tag keys, and `admin` and `test` for tag values, all resources that have any combination of those values are returned.

If both tag keys and values are omitted from the request, resources are returned regardless of whether they have tag keys or values associated with them.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

Marker

A value that indicates the starting point for the next set of response records in a subsequent request. If a value is returned in a response, you can retrieve the next set of records by providing this returned marker value in the `marker` parameter and retrying the command. If the `marker` field is empty, all response records have been retrieved for the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number or response records to return in each call. If the number of remaining response records exceeds the specified `MaxRecords` value, a value is returned in a `marker`

field of the response. You can retrieve the next set of records by retrying the command with the returned `marker` value.

Type: Integer

Required: No

ResourceName

The Amazon Resource Name (ARN) for which you want to describe the tag or tags. For example, `arn:aws:redshift:us-east-2:123456789:cluster:t1`.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ResourceType

The type of resource with which you want to view tags. Valid resource types are:

- Cluster
- CIDR/IP
- EC2 security group
- Snapshot
- Cluster security group
- Subnet group
- HSM connection
- HSM certificate
- Parameter group
- Snapshot copy grant
- Integration (zero-ETL integration or S3 event integration)

> **Note**
>
> To describe the tags associated with an `integration`, don't specify `ResourceType`, instead specify the `ResourceName` of the integration.

For more information about Amazon Redshift resource types and constructing ARNs, go to Specifying Policy Elements: Actions, Effects, Resources, and Principals in the Amazon Redshift Cluster Management Guide.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

TagKeys.TagKey.N

A tag key or keys for which you want to return all matching resources that are associated with the specified key or keys. For example, suppose that you have resources tagged with keys called `owner` and `environment`. If you specify both of these tag keys in the request, Amazon Redshift returns a response with all resources that have either or both of these tag keys associated with them.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

TagValues.TagValue.N

A tag value or values for which you want to return all matching resources that are associated with the specified value or values. For example, suppose that you have resources tagged with values called `admin` and `test`. If you specify both of these tag values in the request, Amazon Redshift returns a response with all resources that have either or both of these tag values associated with them.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following elements are returned by the service.

Marker

A value that indicates the starting point for the next set of response records in a subsequent request. If a value is returned in a response, you can retrieve the next set of records by providing this returned marker value in the `Marker` parameter and retrying the command. If the `Marker` field is empty, all response records have been retrieved for the request.

Type: String

Length Constraints: Maximum length of 2147483647.

TaggedResources.TaggedResource.N

A list of tags with their associated resources.

Type: Array of TaggedResource objects

Errors

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

InvalidTagFault

The tag is invalid.

HTTP Status Code: 400

ResourceNotFoundFault

The resource could not be found.

HTTP Status Code: 404

Examples

Example

This example illustrates one usage of DescribeTags.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DescribeTags
```

```
&ResourceName=arn%3Aaws%3Aredshift%3Aus-east-2%3A123456789012%3Acluster%3Amycluster
&TagKeys.TagKey.1=mytag
&TagValues.TagValue.1=newtag
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DescribeTagsResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <DescribeTagsResult>
    <TaggedResources>
      <TaggedResource>
        <ResourceName>arn:aws:redshift:us-east-2:123456789012:cluster:mycluster</
ResourceName>
        <Tag>
          <Value>newtag</Value>
          <Key>mytag</Key>
        </Tag>
        <ResourceType>cluster</ResourceType>
      </TaggedResource>
    </TaggedResources>
  </DescribeTagsResult>
  <ResponseMetadata>
    <RequestId>09b7e6a0-28da-11ea-8314-974e2ba81189</RequestId>
  </ResponseMetadata>
</DescribeTagsResponse>
```

See Also

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

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

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

DescribeUsageLimits

Shows usage limits on a cluster. Results are filtered based on the combination of input usage limit identifier, cluster identifier, and feature type parameters:

- If usage limit identifier, cluster identifier, and feature type are not provided, then all usage limit objects for the current account in the current region are returned.
- If usage limit identifier is provided, then the corresponding usage limit object is returned.
- If cluster identifier is provided, then all usage limit objects for the specified cluster are returned.
- If cluster identifier and feature type are provided, then all usage limit objects for the combination of cluster and feature are returned.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The identifier of the cluster for which you want to describe usage limits.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

FeatureType

The feature type for which you want to describe usage limits.

Type: String

Valid Values: `spectrum | concurrency-scaling | cross-region-datasharing`

Required: No

Marker

An optional parameter that specifies the starting point to return a set of response records. When the results of a DescribeUsageLimits request exceed the value specified in `MaxRecords`, AWS returns a value in the `Marker` field of the response. You can retrieve the next set of

response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of response records to return in each call. If the number of remaining response records exceeds the specified `MaxRecords` value, a value is returned in a `marker` field of the response. You can retrieve the next set of records by retrying the command with the returned marker value.

Default: `100`

Constraints: minimum 20, maximum 100.

Type: Integer

Required: No

TagKeys.TagKey.N

A tag key or keys for which you want to return all matching usage limit objects that are associated with the specified key or keys. For example, suppose that you have parameter groups that are tagged with keys called `owner` and `environment`. If you specify both of these tag keys in the request, Amazon Redshift returns a response with the usage limit objects have either or both of these tag keys associated with them.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

TagValues.TagValue.N

A tag value or values for which you want to return all matching usage limit objects that are associated with the specified tag value or values. For example, suppose that you have parameter groups that are tagged with values called `admin` and `test`. If you specify both of

these tag values in the request, Amazon Redshift returns a response with the usage limit objects that have either or both of these tag values associated with them.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

UsageLimitId

The identifier of the usage limit to describe.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following elements are returned by the service.

Marker

A value that indicates the starting point for the next set of response records in a subsequent request. If a value is returned in a response, you can retrieve the next set of records by providing this returned marker value in the `Marker` parameter and retrying the command. If the `Marker` field is empty, all response records have been retrieved for the request.

Type: String

Length Constraints: Maximum length of 2147483647.

UsageLimits.member.N

Contains the output from the DescribeUsageLimits action.

Type: Array of UsageLimit objects

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

DisableLogging

Stops logging information, such as queries and connection attempts, for the specified Amazon Redshift cluster.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The identifier of the cluster on which logging is to be stopped.

Example: `examplecluster`

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Response Elements

The following elements are returned by the service.

BucketName

The name of the S3 bucket where the log files are stored.

Type: String

Length Constraints: Maximum length of 2147483647.

LastFailureMessage

The message indicating that logs failed to be delivered.

Type: String

Length Constraints: Maximum length of 2147483647.

LastFailureTime

The last time when logs failed to be delivered.

Type: Timestamp

LastSuccessfulDeliveryTime

The last time that logs were delivered.

Type: Timestamp

LogDestinationType

The log destination type. An enum with possible values of `s3` and `cloudwatch`.

Type: String

Valid Values: `s3 | cloudwatch`

LogExports.member.N

The collection of exported log types. Possible values are `connectionlog`, `useractivitylog`, and `userlog`.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

LoggingEnabled

`true` if logging is on, `false` if logging is off.

Type: Boolean

S3KeyPrefix

The prefix applied to the log file names.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `[\p{L}\p{Z}\p{N}_.:/=+\-@]*`

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

DisableSnapshotCopy

Disables the automatic copying of snapshots from one region to another region for a specified cluster.

If your cluster and its snapshots are encrypted using an encrypted symmetric key from AWS Key Management Service, use DeleteSnapshotCopyGrant to delete the grant that grants Amazon Redshift permission to the key in the destination region.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The unique identifier of the source cluster that you want to disable copying of snapshots to a destination region.

Constraints: Must be the valid name of an existing cluster that has cross-region snapshot copy enabled.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Response Elements

The following element is returned by the service.

Cluster

Describes a cluster.

Type: Cluster object

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

SnapshotCopyAlreadyDisabledFault

The cluster already has cross-region snapshot copy disabled.

HTTP Status Code: 400

UnauthorizedOperation

Your account is not authorized to perform the requested operation.

HTTP Status Code: 400

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DisableSnapshotCopy.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=DisableSnapshotCopy
&ClusterIdentifier=mycluster
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
```

```
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DisableSnapshotCopyResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <DisableSnapshotCopyResult>
    <Cluster>
      <AllowVersionUpgrade>true</AllowVersionUpgrade>
      <ClusterIdentifier>mycluster</ClusterIdentifier>
      <NumberOfNodes>1</NumberOfNodes>
      <AvailabilityZone>us-east-2a</AvailabilityZone>
      <ClusterVersion>1.0</ClusterVersion>
      <ExpectedNextSnapshotScheduleTimeStatus>OnTrack</
ExpectedNextSnapshotScheduleTimeStatus>
      <ManualSnapshotRetentionPeriod>-1</ManualSnapshotRetentionPeriod>
      <ClusterAvailabilityStatus>Available</ClusterAvailabilityStatus>
      <Endpoint>
        <Port>5439</Port>
        <Address>mycluster.cmeaswqeuae.us-east-2.redshift.amazonaws.com</Address>
      </Endpoint>
      <VpcId>vpc-a1abc1a1</VpcId>
      <PubliclyAccessible>false</PubliclyAccessible>
      <ClusterCreateTime>2019-12-27T17:48:01.504Z</ClusterCreateTime>
      <MasterUsername>adminuser</MasterUsername>
      <DBName>dev</DBName>
      <EnhancedVpcRouting>false</EnhancedVpcRouting>
      <IamRoles/>
      <ClusterSecurityGroups/>
      <ExpectedNextSnapshotScheduleTime>2019-12-28T05:48:20.939Z</
ExpectedNextSnapshotScheduleTime>
      <NodeType>dc2.large</NodeType>
      <ClusterSubnetGroupName>default</ClusterSubnetGroupName>
      <NextMaintenanceWindowStartTime>2019-12-29T05:30:00Z</
NextMaintenanceWindowStartTime>
      <DeferredMaintenanceWindows/>
      <Tags>
        <Tag>
          <Value>newtag</Value>
          <Key>mytag</Key>
        </Tag>
      </Tags>
```

```
      <VpcSecurityGroups>
        <VpcSecurityGroup>
          <VpcSecurityGroupId>sh-a1a123ab</VpcSecurityGroupId>
          <Status>active</Status>
        </VpcSecurityGroup>
      </VpcSecurityGroups>
      <ClusterParameterGroups>
        <ClusterParameterGroup>
          <ParameterGroupName>default.redshift-1.0</ParameterGroupName>
          <ParameterApplyStatus>in-sync</ParameterApplyStatus>
        </ClusterParameterGroup>
      </ClusterParameterGroups>
      <Encrypted>false</Encrypted>
      <MaintenanceTrackName>current</MaintenanceTrackName>
      <PendingModifiedValues/>
      <PreferredMaintenanceWindow>sun:05:30-sun:06:00</PreferredMaintenanceWindow>
      <AutomatedSnapshotRetentionPeriod>1</AutomatedSnapshotRetentionPeriod>
      <ClusterStatus>available</ClusterStatus>
    </Cluster>
  </DisableSnapshotCopyResult>
  <ResponseMetadata>
    <RequestId>7ec20f61-28da-11ea-9939-5fccefa818c0</RequestId>
  </ResponseMetadata>
</DisableSnapshotCopyResponse>
```

See Also

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

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

- AWS SDK for Ruby V3

DisassociateDataShareConsumer

From a datashare consumer account, remove association for the specified datashare.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

DataShareArn

The Amazon Resource Name (ARN) of the datashare to remove association for.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

ConsumerArn

The Amazon Resource Name (ARN) of the consumer namespace that association for the datashare is removed from.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ConsumerRegion

From a datashare consumer account, removes association of a datashare from all the existing and future namespaces in the specified AWS Region.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

DisassociateEntireAccount

A value that specifies whether association for the datashare is removed from the entire account.

Type: Boolean

Required: No

Response Elements

The following elements are returned by the service.

AllowPubliclyAccessibleConsumers

A value that specifies whether the datashare can be shared to a publicly accessible cluster.

Type: Boolean

DataShareArn

The Amazon Resource Name (ARN) of the datashare that the consumer is to use.

Type: String

Length Constraints: Maximum length of 2147483647.

DataShareAssociations.member.N

A value that specifies when the datashare has an association between producer and data consumers.

Type: Array of DataShareAssociation objects

DataShareType

The type of the datashare created by RegisterNamespace.

Type: String

Valid Values: `INTERNAL`

ManagedBy

The identifier of a datashare to show its managing entity.

Type: String

Length Constraints: Maximum length of 2147483647.

ProducerArn

The Amazon Resource Name (ARN) of the producer namespace.

Type: String

Length Constraints: Maximum length of 2147483647.

Errors

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

InvalidDataShareFault

There is an error with the datashare.

HTTP Status Code: 400

InvalidNamespaceFault

The namespace isn't valid because the namespace doesn't exist. Provide a valid namespace.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of DisassociateDataShareConsumer.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
    ?Action=DisassociateDataShareConsumer
    &DataShareArn=arn%3Aaws%3Aredshift%3Aus-east-1%3A275247490162%3Adatashare
%3Afd59653e-4ace-4952-a102-286dad7263ca%2Ftestshare1
    &ConsumerArn=arn%3Aaws%3Aredshift%3Aus-east-1%3A275247490162%3Anamespace
%3A57beacb3-2f8a-4c22-a3e3-d2d73da7ee6a
    &DisassociateEntireAccount=false
    &SignatureMethod=HmacSHA256&SignatureVersion=4
    &Version=2012-12-01
    &X-Amz-Algorithm=AWS4-HMAC-SHA256
    &X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
    &X-Amz-Date=20190825T160000Z
    &X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
    &X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<DisassociateDataShareConsumerResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <DisassociateDataShareConsumerResult>
    <ProducerNamespaceArn>arn:aws:redshift:us-
east-1:827630067164:namespace:73ff3b6a-0fab-4122-8ba4-c6613d707a6e</
ProducerNamespaceArn>
    <AllowPubliclyAccessibleConsumers>true</AllowPubliclyAccessibleConsumers>
    <DataShareArn>arn:aws:redshift:us-
east-1:827630067164:datashare:73ff3b6a-0fab-4122-8ba4-c6613d707a6e/share_data</
DataShareArn>
    <DataShareAssociations/>
  </DisassociateDataShareConsumerResult>
  <ResponseMetadata>
    <RequestId>183c52e9-ba40-472c-9b31-66bfd7b20d88</RequestId>
  </ResponseMetadata>
</DisassociateDataShareConsumerResponse>
```

See Also

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

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

EnableLogging

Starts logging information, such as queries and connection attempts, for the specified Amazon Redshift cluster.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The identifier of the cluster on which logging is to be started.

Example: `examplecluster`

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

BucketName

The name of an existing S3 bucket where the log files are to be stored.

Constraints:

- Must be in the same region as the cluster
- The cluster must have read bucket and put object permissions

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

LogDestinationType

The log destination type. An enum with possible values of `s3` and `cloudwatch`.

Type: String

Valid Values: `s3 | cloudwatch`

Required: No

LogExports.member.N

The collection of exported log types. Possible values are `connectionlog`, `useractivitylog`, and `userlog`.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

S3KeyPrefix

The prefix applied to the log file names.

Valid characters are any letter from any language, any whitespace character, any numeric character, and the following characters: underscore (_), period (`.`), colon (`:`), slash (/), equal (=), plus (+), backslash (\), hyphen (-), at symbol (@).

Type: String

Length Constraints: Maximum length of 256.

Pattern: `[\p{L}\p{Z}\p{N}_.:/=+\-@]*`

Required: No

Response Elements

The following elements are returned by the service.

BucketName

The name of the S3 bucket where the log files are stored.

Type: String

Length Constraints: Maximum length of 2147483647.

LastFailureMessage

The message indicating that logs failed to be delivered.

Type: String

Length Constraints: Maximum length of 2147483647.

LastFailureTime

The last time when logs failed to be delivered.

Type: Timestamp

LastSuccessfulDeliveryTime

The last time that logs were delivered.

Type: Timestamp

LogDestinationType

The log destination type. An enum with possible values of `s3` and `cloudwatch`.

Type: String

Valid Values: `s3 | cloudwatch`

LogExports.member.N

The collection of exported log types. Possible values are `connectionlog`, `useractivitylog`, and `userlog`.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

LoggingEnabled

`true` if logging is on, `false` if logging is off.

Type: Boolean

S3KeyPrefix

The prefix applied to the log file names.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `[\p{L}\p{Z}\p{N}_.:/=+\-@]*`

Errors

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

BucketNotFoundFault

Could not find the specified S3 bucket.

HTTP Status Code: 400

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

InsufficientS3BucketPolicyFault

The cluster does not have read bucket or put object permissions on the S3 bucket specified when enabling logging.

HTTP Status Code: 400

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

InvalidS3BucketNameFault

The S3 bucket name is invalid. For more information about naming rules, go to Bucket Restrictions and Limitations in the Amazon Simple Storage Service (S3) Developer Guide.

HTTP Status Code: 400

InvalidS3KeyPrefixFault

The string specified for the logging S3 key prefix does not comply with the documented constraints.

HTTP Status Code: 400

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

EnableSnapshotCopy

Enables the automatic copy of snapshots from one region to another region for a specified cluster.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The unique identifier of the source cluster to copy snapshots from.

Constraints: Must be the valid name of an existing cluster that does not already have cross-region snapshot copy enabled.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

DestinationRegion

The destination AWS Region that you want to copy snapshots to.

Constraints: Must be the name of a valid AWS Region. For more information, see Regions and Endpoints in the Amazon Web Services General Reference.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

ManualSnapshotRetentionPeriod

The number of days to retain newly copied snapshots in the destination AWS Region after they are copied from the source AWS Region. If the value is -1, the manual snapshot is retained indefinitely.

The value must be either -1 or an integer between 1 and 3,653.

Type: Integer

Required: No

RetentionPeriod

The number of days to retain automated snapshots in the destination region after they are copied from the source region.

Default: 7.

Constraints: Must be at least 1 and no more than 35.

Type: Integer

Required: No

SnapshotCopyGrantName

The name of the snapshot copy grant to use when snapshots of an AWS KMS-encrypted cluster are copied to the destination region.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following element is returned by the service.

Cluster

Describes a cluster.

Type: Cluster object

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

CopyToRegionDisabledFault

Cross-region snapshot copy was temporarily disabled. Try your request again.

HTTP Status Code: 400

DependentServiceRequestThrottlingFault

The request cannot be completed because a dependent service is throttling requests made by Amazon Redshift on your behalf. Wait and retry the request.

HTTP Status Code: 400

IncompatibleOrderableOptions

The specified options are incompatible.

HTTP Status Code: 400

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

InvalidRetentionPeriodFault

The retention period specified is either in the past or is not a valid value.

The value must be either -1 or an integer between 1 and 3,653.

HTTP Status Code: 400

LimitExceededFault

The encryption key has exceeded its grant limit in AWS KMS.

HTTP Status Code: 400

SnapshotCopyAlreadyEnabledFault

The cluster already has cross-region snapshot copy enabled.

HTTP Status Code: 400

SnapshotCopyGrantNotFoundFault

The specified snapshot copy grant can't be found. Make sure that the name is typed correctly and that the grant exists in the destination region.

HTTP Status Code: 400

UnauthorizedOperation

Your account is not authorized to perform the requested operation.

HTTP Status Code: 400

UnknownSnapshotCopyRegionFault

The specified region is incorrect or does not exist.

HTTP Status Code: 404

Examples

Example

This example illustrates one usage of EnableSnapshotCopy.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=EnableSnapshotCopy
&ClusterIdentifier=mycluster
&DestinationRegion=us-east-1
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response


```
<EnableSnapshotCopyResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <EnableSnapshotCopyResult>
    <Cluster>
      <AllowVersionUpgrade>true</AllowVersionUpgrade>
      <ClusterIdentifier>mycluster</ClusterIdentifier>
      <NumberOfNodes>1</NumberOfNodes>
      <AvailabilityZone>us-east-2a</AvailabilityZone>
      <ClusterVersion>1.0</ClusterVersion>
      <ExpectedNextSnapshotScheduleTimeStatus>OnTrack</
ExpectedNextSnapshotScheduleTimeStatus>
      <ManualSnapshotRetentionPeriod>-1</ManualSnapshotRetentionPeriod>
      <ClusterAvailabilityStatus>Available</ClusterAvailabilityStatus>
      <Endpoint>
        <Port>5439</Port>
        <Address>mycluster.cmeaswqeuae.us-east-2.redshift.amazonaws.com</Address>
      </Endpoint>
      <VpcId>vpc-a1abc1a1</VpcId>
      <PubliclyAccessible>false</PubliclyAccessible>
      <ClusterCreateTime>2019-12-27T17:48:01.504Z</ClusterCreateTime>
      <ClusterSnapshotCopyStatus>
        <ManualSnapshotRetentionPeriod>-1</ManualSnapshotRetentionPeriod>
        <DestinationRegion>us-east-1</DestinationRegion>
        <RetentionPeriod>7</RetentionPeriod>
      </ClusterSnapshotCopyStatus>
      <MasterUsername>adminuser</MasterUsername>
      <DBName>dev</DBName>
      <EnhancedVpcRouting>false</EnhancedVpcRouting>
      <IamRoles/>
      <ClusterSecurityGroups/>
      <ExpectedNextSnapshotScheduleTime>2019-12-28T05:48:20.939Z</
ExpectedNextSnapshotScheduleTime>
      <NodeType>dc2.large</NodeType>
      <ClusterSubnetGroupName>default</ClusterSubnetGroupName>
      <NextMaintenanceWindowStartTime>2019-12-29T05:30:00Z</
NextMaintenanceWindowStartTime>
      <DeferredMaintenanceWindows/>
      <Tags>
        <Tag>
          <Value>newtag</Value>
          <Key>mytag</Key>
        </Tag>
      </Tags>
```

```
      <VpcSecurityGroups>
        <VpcSecurityGroup>
          <VpcSecurityGroupId>sh-a1a123ab</VpcSecurityGroupId>
          <Status>active</Status>
        </VpcSecurityGroup>
      </VpcSecurityGroups>
      <ClusterParameterGroups>
        <ClusterParameterGroup>
          <ParameterGroupName>default.redshift-1.0</ParameterGroupName>
          <ParameterApplyStatus>in-sync</ParameterApplyStatus>
        </ClusterParameterGroup>
      </ClusterParameterGroups>
      <Encrypted>false</Encrypted>
      <MaintenanceTrackName>current</MaintenanceTrackName>
      <PendingModifiedValues/>
      <PreferredMaintenanceWindow>sun:05:30-sun:06:00</PreferredMaintenanceWindow>
      <AutomatedSnapshotRetentionPeriod>1</AutomatedSnapshotRetentionPeriod>
      <ClusterStatus>available</ClusterStatus>
    </Cluster>
  </EnableSnapshotCopyResult>
  <ResponseMetadata>
    <RequestId>76c22d87-28da-11ea-8314-974e2ba81189</RequestId>
  </ResponseMetadata>
</EnableSnapshotCopyResponse>
```

See Also

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

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

- AWS SDK for Ruby V3

FailoverPrimaryCompute

Fails over the primary compute unit of the specified Multi-AZ cluster to another Availability Zone.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The unique identifier of the cluster for which the primary compute unit will be failed over to another Availability Zone.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Response Elements

The following element is returned by the service.

Cluster

Describes a cluster.

Type: Cluster object

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

UnauthorizedOperation

Your account is not authorized to perform the requested operation.

HTTP Status Code: 400

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

GetClusterCredentials

Returns a database user name and temporary password with temporary authorization to log on to an Amazon Redshift database. The action returns the database user name prefixed with `IAM:` if `AutoCreate` is `False` or `IAMA:` if `AutoCreate` is `True`. You can optionally specify one or more database user groups that the user will join at log on. By default, the temporary credentials expire in 900 seconds. You can optionally specify a duration between 900 seconds (15 minutes) and 3600 seconds (60 minutes). For more information, see Using IAM Authentication to Generate Database User Credentials in the Amazon Redshift Cluster Management Guide.

The AWS Identity and Access Management (IAM) user or role that runs GetClusterCredentials must have an IAM policy attached that allows access to all necessary actions and resources. For more information about permissions, see Resource Policies for GetClusterCredentials in the Amazon Redshift Cluster Management Guide.

If the `DbGroups` parameter is specified, the IAM policy must allow the `redshift:JoinGroup` action with access to the listed `dbgroups`.

In addition, if the `AutoCreate` parameter is set to `True`, then the policy must include the `redshift:CreateClusterUser` permission.

If the `DbName` parameter is specified, the IAM policy must allow access to the resource `dbname` for the specified database name.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

DbUser

The name of a database user. If a user name matching `DbUser` exists in the database, the temporary user credentials have the same permissions as the existing user. If `DbUser` doesn't exist in the database and `Autocreate` is `True`, a new user is created using the value for `DbUser` with PUBLIC permissions. If a database user matching the value for `DbUser` doesn't exist and `Autocreate` is `False`, then the command succeeds but the connection attempt will fail because the user doesn't exist in the database.

For more information, see CREATE USER in the Amazon Redshift Database Developer Guide.

Constraints:

- Must be 1 to 64 alphanumeric characters or hyphens. The user name can't be `PUBLIC`.
- Must contain uppercase or lowercase letters, numbers, underscore, plus sign, period (dot), at symbol (@), or hyphen.
- First character must be a letter.
- Must not contain a colon (:) or slash (/).
- Cannot be a reserved word. A list of reserved words can be found in Reserved Words in the Amazon Redshift Database Developer Guide.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

AutoCreate

Create a database user with the name specified for the user named in `DbUser` if one does not exist.

Type: Boolean

Required: No

ClusterIdentifier

The unique identifier of the cluster that contains the database for which you are requesting credentials. This parameter is case sensitive.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

CustomDomainName

The custom domain name for the cluster credentials.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

DbGroups.DbGroup.N

A list of the names of existing database groups that the user named in `DbUser` will join for the current session, in addition to any group memberships for an existing user. If not specified, a new user is added only to PUBLIC.

Database group name constraints

- Must be 1 to 64 alphanumeric characters or hyphens
- Must contain only lowercase letters, numbers, underscore, plus sign, period (dot), at symbol (@), or hyphen.
- First character must be a letter.
- Must not contain a colon (:) or slash (/).
- Cannot be a reserved word. A list of reserved words can be found in Reserved Words in the Amazon Redshift Database Developer Guide.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

DbName

The name of a database that `DbUser` is authorized to log on to. If `DbName` is not specified, `DbUser` can log on to any existing database.

Constraints:

- Must be 1 to 64 alphanumeric characters or hyphens
- Must contain uppercase or lowercase letters, numbers, underscore, plus sign, period (dot), at symbol (@), or hyphen.
- First character must be a letter.
- Must not contain a colon (:) or slash (/).
- Cannot be a reserved word. A list of reserved words can be found in Reserved Words in the Amazon Redshift Database Developer Guide.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

DurationSeconds

The number of seconds until the returned temporary password expires.

Constraint: minimum 900, maximum 3600.

Default: 900

Type: Integer

Required: No

Response Elements

The following elements are returned by the service.

DbPassword

A temporary password that authorizes the user name returned by `DbUser` to log on to the database `DbName`.

Type: String

DbUser

A database user name that is authorized to log on to the database `DbName` using the password `DbPassword`. If the specified DbUser exists in the database, the new user name has the same database permissions as the the user named in DbUser. By default, the user is added to PUBLIC. If the `DbGroups` parameter is specifed, `DbUser` is added to the listed groups for any sessions created using these credentials.

Type: String

Length Constraints: Maximum length of 2147483647.

Expiration

The date and time the password in `DbPassword` expires.

Type: Timestamp

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of GetClusterCredentials.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=GetClusterCredentials
&ClusterIdentifier=mycluster
&DbUser=adminuser
&DbName=dev
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<GetClusterCredentialsResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <GetClusterCredentialsResult>
    <DbUser>IAM:adminuser</DbUser>
```

```
    <Expiration>2019-12-27T19:44:51.001Z</Expiration>
    <DbPassword>AMAFUyyuros/QjxPTtgzcsuQsqzIasdzJEN04aCtWDzXx1O9d6UmpkBtvEeqFly/
EXAMPLE==</DbPassword>
  </GetClusterCredentialsResult>
  <ResponseMetadata>
    <RequestId>404b34b9-28df-11ea-a940-1b28a85fd753</RequestId>
  </ResponseMetadata>
</GetClusterCredentialsResponse>
```

See Also

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

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

GetClusterCredentialsWithIAM

Returns a database user name and temporary password with temporary authorization to log in to an Amazon Redshift database. The database user is mapped 1:1 to the source AWS Identity and Access Management (IAM) identity. For more information about IAM identities, see IAM Identities (users, user groups, and roles) in the AWS Identity and Access Management User Guide.

The AWS Identity and Access Management (IAM) identity that runs this operation must have an IAM policy attached that allows access to all necessary actions and resources. For more information about permissions, see Using identity-based policies (IAM policies) in the Amazon Redshift Cluster Management Guide.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The unique identifier of the cluster that contains the database for which you are requesting credentials.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 63.

Required: No

CustomDomainName

The custom domain name for the IAM message cluster credentials.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

DbName

The name of the database for which you are requesting credentials. If the database name is specified, the IAM policy must allow access to the resource `dbname` for the specified database name. If the database name is not specified, access to all databases is allowed.

Type: String

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

Required: No

DurationSeconds

The number of seconds until the returned temporary password expires.

Range: 900-3600. Default: 900.

Type: Integer

Required: No

Response Elements

The following elements are returned by the service.

DbPassword

A temporary password that you provide when you connect to a database.

Type: String

DbUser

A database user name that you provide when you connect to a database. The database user is mapped 1:1 to the source IAM identity.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 127.

Expiration

The time (UTC) when the temporary password expires. After this timestamp, a log in with the temporary password fails.

Type: Timestamp

NextRefreshTime

Reserved for future use.

Type: Timestamp

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

GetReservedNodeExchangeConfigurationOptions

Gets the configuration options for the reserved-node exchange. These options include information about the source reserved node and target reserved node offering. Details include the node type, the price, the node count, and the offering type.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ActionType

The action type of the reserved-node configuration. The action type can be an exchange initiated from either a snapshot or a resize.

Type: String

Valid Values: `restore-cluster | resize-cluster`

Required: Yes

ClusterIdentifier

The identifier for the cluster that is the source for a reserved-node exchange.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Marker

An optional pagination token provided by a previous `GetReservedNodeExchangeConfigurationOptions` request. If this parameter is specified, the response includes only records beyond the marker, up to the value specified by the `MaxRecords` parameter. You can retrieve the next set of response records by providing the returned marker value in the `Marker` parameter and retrying the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of response records to return in each call. If the number of remaining response records exceeds the specified `MaxRecords` value, a value is returned in a `Marker` field of the response. You can retrieve the next set of records by retrying the command with the returned marker value.

Type: Integer

Required: No

SnapshotIdentifier

The identifier for the snapshot that is the source for the reserved-node exchange.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following elements are returned by the service.

Marker

A pagination token provided by a previous `GetReservedNodeExchangeConfigurationOptions` request.

Type: String

Length Constraints: Maximum length of 2147483647.

ReservedNodeConfigurationOptionList.ReservedNodeConfigurationOption.N

the configuration options for the reserved-node exchange. These options include information about the source reserved node and target reserved node. Details include the node type, the price, the node count, and the offering type.

Type: Array of ReservedNodeConfigurationOption objects

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

ClusterSnapshotNotFound

The snapshot identifier does not refer to an existing cluster snapshot.

HTTP Status Code: 404

DependentServiceUnavailableFault

Your request cannot be completed because a dependent internal service is temporarily unavailable. Wait 30 to 60 seconds and try again.

HTTP Status Code: 400

InvalidReservedNodeState

Indicates that the Reserved Node being exchanged is not in an active state.

HTTP Status Code: 400

ReservedNodeAlreadyMigrated

Indicates that the reserved node has already been exchanged.

HTTP Status Code: 400

ReservedNodeNotFound

The specified reserved compute node not found.

HTTP Status Code: 404

ReservedNodeOfferingNotFound

Specified offering does not exist.

HTTP Status Code: 404

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

GetReservedNodeExchangeOfferings

Returns an array of DC2 ReservedNodeOfferings that matches the payment type, term, and usage price of the given DC1 reserved node.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ReservedNodeId

A string representing the node identifier for the DC1 Reserved Node to be exchanged.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Marker

A value that indicates the starting point for the next set of ReservedNodeOfferings.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

An integer setting the maximum number of ReservedNodeOfferings to retrieve.

Type: Integer

Required: No

Response Elements

The following elements are returned by the service.

Marker

An optional parameter that specifies the starting point for returning a set of response records. When the results of a `GetReservedNodeExchangeOfferings` request exceed the value

specified in MaxRecords, Amazon Redshift returns a value in the marker field of the response. You can retrieve the next set of response records by providing the returned marker value in the marker parameter and retrying the request.

Type: String

Length Constraints: Maximum length of 2147483647.

ReservedNodeOfferings.ReservedNodeOffering.N

Returns an array of ReservedNodeOffering objects.

Type: Array of ReservedNodeOffering objects

Errors

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

DependentServiceUnavailableFault

Your request cannot be completed because a dependent internal service is temporarily unavailable. Wait 30 to 60 seconds and try again.

HTTP Status Code: 400

InvalidReservedNodeState

Indicates that the Reserved Node being exchanged is not in an active state.

HTTP Status Code: 400

ReservedNodeAlreadyMigrated

Indicates that the reserved node has already been exchanged.

HTTP Status Code: 400

ReservedNodeNotFound

The specified reserved compute node not found.

HTTP Status Code: 404

ReservedNodeOfferingNotFound

Specified offering does not exist.

HTTP Status Code: 404

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of GetReservedNodeExchangeOfferings.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=GetReservedNodeExchangeOfferings
&ReservedNodeId=12345678-12ab-12a1-1a2a-12ab-12a12EXAMPLE
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<GetReservedNodeExchangeOfferingsResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <GetReservedNodeExchangeOfferingsResult>
    <ReservedNodeOfferings>
      <ReservedNodeOffering>
        <Duration>31536000</Duration>
        <UsagePrice>0.0</UsagePrice>
        <ReservedNodeOfferingId>12345678-12ab-12a1-1a2a-12ab-12a12EXAMPLE</
ReservedNodeOfferingId>
        <OfferingType>All Upfront</OfferingType>
        <ReservedNodeOfferingType>Regular</ReservedNodeOfferingType>
        <RecurringCharges>
          <RecurringCharge>
```

```
            <RecurringChargeAmount>0.0</RecurringChargeAmount>
            <RecurringChargeFrequency>Hourly</RecurringChargeFrequency>
          </RecurringCharge>
        </RecurringCharges>
        <NodeType>dc2.large</NodeType>
        <FixedPrice>0.0</FixedPrice>
        <CurrencyCode>USD</CurrencyCode>
      </ReservedNodeOffering>
    </ReservedNodeOfferings>
  </GetReservedNodeExchangeOfferingsResult>
  <ResponseMetadata>
    <RequestId>c75f325d-282f-11ea-9caa-c956bec1ce87</RequestId>
  </ResponseMetadata>
</GetReservedNodeExchangeOfferingsResponse>
```

See Also

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

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

GetResourcePolicy

Get the resource policy for a specified resource.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ResourceArn

The Amazon Resource Name (ARN) of the resource of which its resource policy is fetched.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Response Elements

The following element is returned by the service.

ResourcePolicy

The content of the resource policy.

Type: ResourcePolicy object

Errors

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

InvalidPolicyFault

The resource policy isn't valid.

HTTP Status Code: 400

ResourceNotFoundFault

The resource could not be found.

HTTP Status Code: 404

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

ListRecommendations

List the Amazon Redshift Advisor recommendations for one or multiple Amazon Redshift clusters in an AWS account.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The unique identifier of the Amazon Redshift cluster for which the list of Advisor recommendations is returned. If the neither the cluster identifier and the cluster namespace ARN parameters are specified, then recommendations for all clusters in the account are returned.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Marker

A value that indicates the starting point for the next set of response records in a subsequent request. If a value is returned in a response, you can retrieve the next set of records by providing this returned marker value in the Marker parameter and retrying the command. If the Marker field is empty, all response records have been retrieved for the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaxRecords

The maximum number of response records to return in each call. If the number of remaining response records exceeds the specified MaxRecords value, a value is returned in a marker field of the response. You can retrieve the next set of records by retrying the command with the returned marker value.

Type: Integer

Required: No

NamespaceArn

The Amazon Redshift cluster namespace Amazon Resource Name (ARN) for which the list of Advisor recommendations is returned. If the neither the cluster identifier and the cluster namespace ARN parameters are specified, then recommendations for all clusters in the account are returned.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following elements are returned by the service.

Marker

A value that indicates the starting point for the next set of response records in a subsequent request. If a value is returned in a response, you can retrieve the next set of records by providing this returned marker value in the Marker parameter and retrying the command. If the Marker field is empty, all response records have been retrieved for the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Recommendations.Recommendation.N

The Advisor recommendations for action on the Amazon Redshift cluster.

Type: Array of Recommendation objects

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

ModifyAquaConfiguration

This operation is retired. Calling this operation does not change AQUA configuration. Amazon Redshift automatically determines whether to use AQUA (Advanced Query Accelerator).

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The identifier of the cluster to be modified.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

AquaConfigurationStatus

This parameter is retired. Amazon Redshift automatically determines whether to use AQUA (Advanced Query Accelerator).

Type: String

Valid Values: `enabled | disabled | auto`

Required: No

Response Elements

The following element is returned by the service.

AquaConfiguration

This parameter is retired. Amazon Redshift automatically determines whether to use AQUA (Advanced Query Accelerator).

Type: AquaConfiguration object

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

ModifyAuthenticationProfile

Modifies an authentication profile.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

AuthenticationProfileContent

The new content of the authentication profile in JSON format. The maximum length of the JSON string is determined by a quota for your account.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

AuthenticationProfileName

The name of the authentication profile to replace.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[a-zA-Z0-9\-]+$`

Required: Yes

Response Elements

The following elements are returned by the service.

AuthenticationProfileContent

The updated content of the authentication profile in JSON format.

Type: String

Length Constraints: Maximum length of 2147483647.

AuthenticationProfileName

The name of the authentication profile that was replaced.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[a-zA-Z0-9\-]+$`

Errors

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

AuthenticationProfileNotFoundFault

The authentication profile can't be found.

HTTP Status Code: 404

AuthenticationProfileQuotaExceededFault

The size or number of authentication profiles has exceeded the quota. The maximum length of the JSON string and maximum number of authentication profiles is determined by a quota for your account.

HTTP Status Code: 400

InvalidAuthenticationProfileRequestFault

The authentication profile request is not valid. The profile name can't be null or empty. The authentication profile API operation must be available in the AWS Region.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET

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

ModifyCluster

Modifies the settings for a cluster.

You can also change node type and the number of nodes to scale up or down the cluster. When resizing a cluster, you must specify both the number of nodes and the node type even if one of the parameters does not change.

You can add another security or parameter group, or change the admin user password. Resetting a cluster password or modifying the security groups associated with a cluster do not need a reboot. However, modifying a parameter group requires a reboot for parameters to take effect. For more information about managing clusters, go to Amazon Redshift Clusters in the *Amazon Redshift Cluster Management Guide*.

VPC Block Public Access (BPA) enables you to block resources in VPCs and subnets that you own in a Region from reaching or being reached from the internet through internet gateways and egress-only internet gateways. If a subnet group for a provisioned cluster is in an account with VPC BPA turned on, the following capabilities are blocked:

- Creating a public cluster
- Restoring a public cluster
- Modifying a private cluster to be public
- Adding a subnet with VPC BPA turned on to the subnet group when there's at least one public cluster within the group

For more information about VPC BPA, see Block public access to VPCs and subnets in the *Amazon VPC User Guide*.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The unique identifier of the cluster to be modified.

Example: `examplecluster`

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

AllowVersionUpgrade

If `true`, major version upgrades will be applied automatically to the cluster during the maintenance window.

Default: `false`

Type: Boolean

Required: No

AutomatedSnapshotRetentionPeriod

The number of days that automated snapshots are retained. If the value is 0, automated snapshots are disabled. Even if automated snapshots are disabled, you can still create manual snapshots when you want with CreateClusterSnapshot.

If you decrease the automated snapshot retention period from its current value, existing automated snapshots that fall outside of the new retention period will be immediately deleted.

You can't disable automated snapshots for RA3 node types. Set the automated retention period from 1-35 days.

Default: Uses existing setting.

Constraints: Must be a value from 0 to 35.

Type: Integer

Required: No

AvailabilityZone

The option to initiate relocation for an Amazon Redshift cluster to the target Availability Zone.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

AvailabilityZoneRelocation

The option to enable relocation for an Amazon Redshift cluster between Availability Zones after the cluster modification is complete.

Type: Boolean

Required: No

ClusterParameterGroupName

The name of the cluster parameter group to apply to this cluster. This change is applied only after the cluster is rebooted. To reboot a cluster use RebootCluster.

Default: Uses existing setting.

Constraints: The cluster parameter group must be in the same parameter group family that matches the cluster version.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ClusterSecurityGroups.ClusterSecurityGroupName.N

A list of cluster security groups to be authorized on this cluster. This change is asynchronously applied as soon as possible.

Security groups currently associated with the cluster, and not in the list of groups to apply, will be revoked from the cluster.

Constraints:

- Must be 1 to 255 alphanumeric characters or hyphens
- First character must be a letter
- Cannot end with a hyphen or contain two consecutive hyphens

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

ClusterType

The new cluster type.

When you submit your cluster resize request, your existing cluster goes into a read-only mode. After Amazon Redshift provisions a new cluster based on your resize requirements, there will be outage for a period while the old cluster is deleted and your connection is switched to the new cluster. You can use DescribeResize to track the progress of the resize request.

Valid Values: `multi-node | single-node`

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ClusterVersion

The new version number of the Amazon Redshift engine to upgrade to.

For major version upgrades, if a non-default cluster parameter group is currently in use, a new cluster parameter group in the cluster parameter group family for the new version must be specified. The new cluster parameter group can be the default for that cluster parameter group family. For more information about parameters and parameter groups, go to Amazon Redshift Parameter Groups in the *Amazon Redshift Cluster Management Guide*.

Example: `1.0`

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ElasticIp

The Elastic IP (EIP) address for the cluster.

Constraints: The cluster must be provisioned in EC2-VPC and publicly-accessible through an Internet gateway. For more information about provisioning clusters in EC2-VPC, go to

Supported Platforms to Launch Your Cluster in the Amazon Redshift Cluster Management Guide.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Encrypted

Indicates whether the cluster is encrypted. If the value is encrypted (true) and you provide a value for the `KmsKeyId` parameter, we encrypt the cluster with the provided `KmsKeyId`. If you don't provide a `KmsKeyId`, we encrypt with the default key.

If the value is not encrypted (false), then the cluster is decrypted.

Type: Boolean

Required: No

EnhancedVpcRouting

An option that specifies whether to create the cluster with enhanced VPC routing enabled. To create a cluster that uses enhanced VPC routing, the cluster must be in a VPC. For more information, see Enhanced VPC Routing in the Amazon Redshift Cluster Management Guide.

If this option is `true`, enhanced VPC routing is enabled.

Default: false

Type: Boolean

Required: No

HsmClientCertificateIdentifier

Specifies the name of the HSM client certificate the Amazon Redshift cluster uses to retrieve the data encryption keys stored in an HSM.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

HsmConfigurationIdentifier

Specifies the name of the HSM configuration that contains the information the Amazon Redshift cluster can use to retrieve and store keys in an HSM.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

IpAddressType

The IP address types that the cluster supports. Possible values are `ipv4` and `dualstack`.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

KmsKeyId

The AWS Key Management Service (KMS) key ID of the encryption key that you want to use to encrypt data in the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaintenanceTrackName

The name for the maintenance track that you want to assign for the cluster. This name change is asynchronous. The new track name stays in the `PendingModifiedValues` for the cluster until the next maintenance window. When the maintenance track changes, the cluster is switched to the latest cluster release available for the maintenance track. At this point, the maintenance track name is applied.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ManageMasterPassword

If `true`, Amazon Redshift uses AWS Secrets Manager to manage this cluster's admin credentials. You can't use `MasterUserPassword` if `ManageMasterPassword` is true. If `ManageMasterPassword` is false or not set, Amazon Redshift uses `MasterUserPassword` for the admin user account's password.

Type: Boolean

Required: No

ManualSnapshotRetentionPeriod

The default for number of days that a newly created manual snapshot is retained. If the value is -1, the manual snapshot is retained indefinitely. This value doesn't retroactively change the retention periods of existing manual snapshots.

The value must be either -1 or an integer between 1 and 3,653.

The default value is -1.

Type: Integer

Required: No

MasterPasswordSecretKmsKeyId

The ID of the AWS Key Management Service (KMS) key used to encrypt and store the cluster's admin credentials secret. You can only use this parameter if `ManageMasterPassword` is true.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MasterUserPassword

The new password for the cluster admin user. This change is asynchronously applied as soon as possible. Between the time of the request and the completion of the request, the `MasterUserPassword` element exists in the `PendingModifiedValues` element of the operation response.

You can't use `MasterUserPassword` if `ManageMasterPassword` is `true`.

> **Note**
>
> Operations never return the password, so this operation provides a way to regain access to the admin user account for a cluster if the password is lost.

Default: Uses existing setting.

Constraints:

- Must be between 8 and 64 characters in length.
- Must contain at least one uppercase letter.
- Must contain at least one lowercase letter.
- Must contain one number.
- Can be any printable ASCII character (ASCII code 33-126) except `'` (single quote), `"` (double quote), \, /, or @.

Type: String

Required: No

MultiAZ

If true and the cluster is currently only deployed in a single Availability Zone, the cluster will be modified to be deployed in two Availability Zones.

Type: Boolean

Required: No

NewClusterIdentifier

The new identifier for the cluster.

Constraints:

- Must contain from 1 to 63 alphanumeric characters or hyphens.
- Alphabetic characters must be lowercase.
- First character must be a letter.
- Cannot end with a hyphen or contain two consecutive hyphens.

- Must be unique for all clusters within an AWS account.

Example: `examplecluster`

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

NodeType

The new node type of the cluster. If you specify a new node type, you must also specify the number of nodes parameter.

For more information about resizing clusters, go to Resizing Clusters in Amazon Redshift in the *Amazon Redshift Cluster Management Guide*.

Valid Values: `dc2.large` | `dc2.8xlarge` | `ra3.large` | `ra3.xlplus` | `ra3.4xlarge` | `ra3.16xlarge`

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

NumberOfNodes

The new number of nodes of the cluster. If you specify a new number of nodes, you must also specify the node type parameter.

For more information about resizing clusters, go to Resizing Clusters in Amazon Redshift in the *Amazon Redshift Cluster Management Guide*.

Valid Values: Integer greater than `0`.

Type: Integer

Required: No

Port

The option to change the port of an Amazon Redshift cluster.

Valid Values:

- For clusters with ra3 nodes - Select a port within the ranges `5431-5455` or `8191-8215`. (If you have an existing cluster with ra3 nodes, it isn't required that you change the port to these ranges.)
- For clusters with dc2 nodes - Select a port within the range `1150-65535`.

Type: Integer

Required: No

PreferredMaintenanceWindow

The weekly time range (in UTC) during which system maintenance can occur, if necessary. If system maintenance is necessary during the window, it may result in an outage.

This maintenance window change is made immediately. If the new maintenance window indicates the current time, there must be at least 120 minutes between the current time and end of the window in order to ensure that pending changes are applied.

Default: Uses existing setting.

Format: ddd:hh24:mi-ddd:hh24:mi, for example `wed:07:30-wed:08:00`.

Valid Days: Mon | Tue | Wed | Thu | Fri | Sat | Sun

Constraints: Must be at least 30 minutes.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

PubliclyAccessible

If `true`, the cluster can be accessed from a public network. Only clusters in VPCs can be set to be publicly available.

Default: false

Type: Boolean

Required: No

VpcSecurityGroupIds.VpcSecurityGroupId.N

A list of virtual private cloud (VPC) security groups to be associated with the cluster. This change is asynchronously applied as soon as possible.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following element is returned by the service.

Cluster

Describes a cluster.

Type: Cluster object

Errors

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

ClusterAlreadyExists

The account already has a cluster with the given identifier.

HTTP Status Code: 400

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

ClusterParameterGroupNotFound

The parameter group name does not refer to an existing parameter group.

HTTP Status Code: 404

ClusterSecurityGroupNotFound

The cluster security group name does not refer to an existing cluster security group.

HTTP Status Code: 404

CustomCnameAssociationFault

An error occurred when an attempt was made to change the custom domain association.

HTTP Status Code: 400

DependentServiceRequestThrottlingFault

The request cannot be completed because a dependent service is throttling requests made by Amazon Redshift on your behalf. Wait and retry the request.

HTTP Status Code: 400

HsmClientCertificateNotFoundFault

There is no Amazon Redshift HSM client certificate with the specified identifier.

HTTP Status Code: 400

HsmConfigurationNotFoundFault

There is no Amazon Redshift HSM configuration with the specified identifier.

HTTP Status Code: 400

InsufficientClusterCapacity

The number of nodes specified exceeds the allotted capacity of the cluster.

HTTP Status Code: 400

InvalidClusterSecurityGroupState

The state of the cluster security group is not `available`.

HTTP Status Code: 400

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

InvalidClusterTrack

The provided cluster track name is not valid.

HTTP Status Code: 400

InvalidElasticIpFault

The Elastic IP (EIP) is invalid or cannot be found.

HTTP Status Code: 400

InvalidRetentionPeriodFault

The retention period specified is either in the past or is not a valid value.

The value must be either -1 or an integer between 1 and 3,653.

HTTP Status Code: 400

Ipv6CidrBlockNotFoundFault

There are no subnets in your VPC with associated IPv6 CIDR blocks. To use dual-stack mode, associate an IPv6 CIDR block with each subnet in your VPC.

HTTP Status Code: 400

LimitExceededFault

The encryption key has exceeded its grant limit in AWS KMS.

HTTP Status Code: 400

NumberOfNodesPerClusterLimitExceeded

The operation would exceed the number of nodes allowed for a cluster.

HTTP Status Code: 400

NumberOfNodesQuotaExceeded

The operation would exceed the number of nodes allotted to the account. For information about increasing your quota, go to Limits in Amazon Redshift in the *Amazon Redshift Cluster Management Guide*.

HTTP Status Code: 400

TableLimitExceeded

The number of tables in the cluster exceeds the limit for the requested new cluster node type.

HTTP Status Code: 400

UnauthorizedOperation

Your account is not authorized to perform the requested operation.

HTTP Status Code: 400

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

UnsupportedOptionFault

A request option was specified that is not supported.

HTTP Status Code: 400

Examples

Example

This example changes the weekly preferred maintenance window for a cluster to be the minimum four hour window starting Sundays at 11:15 PM, and ending Mondays at 3:15 AM.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=ModifyCluster
&ClusterIdentifier=mycluster
&PreferredMaintenanceWindow=Sun%3A23%3A15-Mon%3A03%3A15
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response


```
<ModifyClusterResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <ModifyClusterResult>
    <Cluster>
      <AllowVersionUpgrade>true</AllowVersionUpgrade>
      <ClusterIdentifier>mycluster</ClusterIdentifier>
      <NumberOfNodes>1</NumberOfNodes>
      <AvailabilityZone>us-east-2a</AvailabilityZone>
      <ClusterVersion>1.0</ClusterVersion>
      <ExpectedNextSnapshotScheduleTimeStatus>OnTrack</
ExpectedNextSnapshotScheduleTimeStatus>
      <ManualSnapshotRetentionPeriod>-1</ManualSnapshotRetentionPeriod>
      <ClusterAvailabilityStatus>Available</ClusterAvailabilityStatus>
      <Endpoint>
        <Port>5439</Port>
        <Address>mycluster.cmeaswqeuae.us-east-2.redshift.amazonaws.com</Address>
      </Endpoint>
      <VpcId>vpc-a1abc1a1</VpcId>
      <PubliclyAccessible>false</PubliclyAccessible>
      <ClusterCreateTime>2019-12-27T17:48:01.504Z</ClusterCreateTime>
      <MasterUsername>adminuser</MasterUsername>
      <DBName>dev</DBName>
      <EnhancedVpcRouting>false</EnhancedVpcRouting>
      <IamRoles/>
      <ClusterSecurityGroups/>
      <ExpectedNextSnapshotScheduleTime>2019-12-28T05:48:20.939Z</
ExpectedNextSnapshotScheduleTime>
      <NodeType>dc2.large</NodeType>
      <ClusterSubnetGroupName>default</ClusterSubnetGroupName>
      <NextMaintenanceWindowStartTime>2019-12-29T23:15:00Z</
NextMaintenanceWindowStartTime>
      <DeferredMaintenanceWindows/>
      <Tags>
        <Tag>
          <Value>newtag</Value>
          <Key>mytag</Key>
        </Tag>
      </Tags>
      <VpcSecurityGroups>
        <VpcSecurityGroup>
          <VpcSecurityGroupId>sh-a1a123ab</VpcSecurityGroupId>
          <Status>active</Status>
        </VpcSecurityGroup>
```

```
      </VpcSecurityGroups>
      <ClusterParameterGroups>
        <ClusterParameterGroup>
          <ParameterGroupName>default.redshift-1.0</ParameterGroupName>
          <ParameterApplyStatus>in-sync</ParameterApplyStatus>
        </ClusterParameterGroup>
      </ClusterParameterGroups>
      <Encrypted>false</Encrypted>
      <MaintenanceTrackName>current</MaintenanceTrackName>
      <PendingModifiedValues/>
      <PreferredMaintenanceWindow>sun:23:15-mon:03:15</PreferredMaintenanceWindow>
      <AutomatedSnapshotRetentionPeriod>1</AutomatedSnapshotRetentionPeriod>
      <ClusterStatus>available</ClusterStatus>
    </Cluster>
  </ModifyClusterResult>
  <ResponseMetadata>
    <RequestId>819eaffd-28df-11ea-8397-219d1980588b</RequestId>
  </ResponseMetadata>
</ModifyClusterResponse>
```

See Also

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

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

ModifyClusterDbRevision

Modifies the database revision of a cluster. The database revision is a unique revision of the database running in a cluster.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The unique identifier of a cluster whose database revision you want to modify.

Example: `examplecluster`

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

RevisionTarget

The identifier of the database revision. You can retrieve this value from the response to the DescribeClusterDbRevisions request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Response Elements

The following element is returned by the service.

Cluster

Describes a cluster.

Type: Cluster object

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

ClusterOnLatestRevision

Cluster is already on the latest database revision.

HTTP Status Code: 400

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

- AWS SDK for Python
- AWS SDK for Ruby V3

ModifyClusterIamRoles

Modifies the list of AWS Identity and Access Management (IAM) roles that can be used by the cluster to access other AWS services.

The maximum number of IAM roles that you can associate is subject to a quota. For more information, go to Quotas and limits in the *Amazon Redshift Cluster Management Guide*.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The unique identifier of the cluster for which you want to associate or disassociate IAM roles.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

AddIamRoles.IamRoleArn.N

Zero or more IAM roles to associate with the cluster. The roles must be in their Amazon Resource Name (ARN) format.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

DefaultIamRoleArn

The Amazon Resource Name (ARN) for the IAM role that was set as default for the cluster when the cluster was last modified.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

RemoveIamRoles.IamRoleArn.N

Zero or more IAM roles in ARN format to disassociate from the cluster.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following element is returned by the service.

Cluster

Describes a cluster.

Type: Cluster object

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

Examples

Example

This example removes an AWS Identity and Access Management (IAM) role from a cluster.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=ModifyClusterIamRoles
&ClusterIdentifier=mycluster
&RemoveIamRoles.IamRoleArn.1=arn%3Aaws%3Aiam%3A%3A123456789012%3Arole%2FmyRedshiftRole
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<ModifyClusterIamRolesResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <ModifyClusterIamRolesResult>
    <Cluster>
      <AllowVersionUpgrade>true</AllowVersionUpgrade>
      <ClusterIdentifier>mycluster</ClusterIdentifier>
      <NumberOfNodes>1</NumberOfNodes>
      <AvailabilityZone>us-east-2a</AvailabilityZone>
      <ClusterVersion>1.0</ClusterVersion>
      <ExpectedNextSnapshotScheduleTimeStatus>OnTrack</
ExpectedNextSnapshotScheduleTimeStatus>
      <ManualSnapshotRetentionPeriod>-1</ManualSnapshotRetentionPeriod>
      <ClusterAvailabilityStatus>Available</ClusterAvailabilityStatus>
      <Endpoint>
        <Port>5439</Port>
        <Address>mycluster.cmeaswqeuae.us-east-2.redshift.amazonaws.com</Address>
      </Endpoint>
      <VpcId>vpc-a1abc1a1</VpcId>
      <PubliclyAccessible>false</PubliclyAccessible>
      <ClusterCreateTime>2019-12-27T17:48:01.504Z</ClusterCreateTime>
      <MasterUsername>adminuser</MasterUsername>
      <DBName>dev</DBName>
      <EnhancedVpcRouting>false</EnhancedVpcRouting>
      <IamRoles/>
      <ClusterSecurityGroups/>
      <ExpectedNextSnapshotScheduleTime>2019-12-28T05:48:20.939Z</
ExpectedNextSnapshotScheduleTime>
      <NodeType>dc2.large</NodeType>
```

```
      <ClusterSubnetGroupName>default</ClusterSubnetGroupName>
      <NextMaintenanceWindowStartTime>2019-12-29T23:15:00Z</
NextMaintenanceWindowStartTime>
      <DeferredMaintenanceWindows/>
      <Tags>
        <Tag>
          <Value>newtag</Value>
          <Key>mytag</Key>
        </Tag>
      </Tags>
      <VpcSecurityGroups>
        <VpcSecurityGroup>
          <VpcSecurityGroupId>sh-a1a123ab</VpcSecurityGroupId>
          <Status>active</Status>
        </VpcSecurityGroup>
      </VpcSecurityGroups>
      <ClusterParameterGroups>
        <ClusterParameterGroup>
          <ParameterGroupName>default.redshift-1.0</ParameterGroupName>
          <ParameterApplyStatus>in-sync</ParameterApplyStatus>
        </ClusterParameterGroup>
      </ClusterParameterGroups>
      <Encrypted>false</Encrypted>
      <MaintenanceTrackName>current</MaintenanceTrackName>
      <PendingModifiedValues/>
      <PreferredMaintenanceWindow>sun:23:15-mon:03:15</PreferredMaintenanceWindow>
      <AutomatedSnapshotRetentionPeriod>1</AutomatedSnapshotRetentionPeriod>
      <ClusterStatus>available</ClusterStatus>
    </Cluster>
  </ModifyClusterIamRolesResult>
  <ResponseMetadata>
    <RequestId>3ca20e36-28e0-11ea-8397-219d1980588b</RequestId>
  </ResponseMetadata>
</ModifyClusterIamRolesResponse>
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET

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

ModifyClusterMaintenance

Modifies the maintenance settings of a cluster.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

A unique identifier for the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

DeferMaintenance

A boolean indicating whether to enable the deferred maintenance window.

Type: Boolean

Required: No

DeferMaintenanceDuration

An integer indicating the duration of the maintenance window in days. If you specify a duration, you can't specify an end time. The duration must be 45 days or less.

Type: Integer

Required: No

DeferMaintenanceEndTime

A timestamp indicating end time for the deferred maintenance window. If you specify an end time, you can't specify a duration.

Type: Timestamp

Required: No

DeferMaintenanceIdentifier

A unique identifier for the deferred maintenance window.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

DeferMaintenanceStartTime

A timestamp indicating the start time for the deferred maintenance window.

Type: Timestamp

Required: No

Response Elements

The following element is returned by the service.

Cluster

Describes a cluster.

Type: Cluster object

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

Examples

Example

This example defers the maintenance of a cluster by duration of 30 days. You can also update or cancel a deferment.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=ModifyClusterMaintenance
&ClusterIdentifier=mycluster
&DeferMaintenance=true
&DeferMaintenanceDuration=30
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<ModifyClusterMaintenanceResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <ModifyClusterMaintenanceResult>
    <Cluster>
      <AllowVersionUpgrade>true</AllowVersionUpgrade>
      <ClusterIdentifier>mycluster</ClusterIdentifier>
      <NumberOfNodes>1</NumberOfNodes>
      <AvailabilityZone>us-east-2d</AvailabilityZone>
      <ClusterVersion>1.0</ClusterVersion>
      <ExpectedNextSnapshotScheduleTimeStatus>OnTrack</
ExpectedNextSnapshotScheduleTimeStatus>
      <ManualSnapshotRetentionPeriod>-1</ManualSnapshotRetentionPeriod>
      <ClusterAvailabilityStatus>Available</ClusterAvailabilityStatus>
      <Endpoint>
        <Port>5439</Port>
        <Address>mycluster.cmeaswqeuae.us-east-2.redshift.amazonaws.com</Address>
      </Endpoint>
      <VpcId>vpc-a1abc1a1</VpcId>
      <PubliclyAccessible>false</PubliclyAccessible>
```

```
      <ClusterCreateTime>2019-12-27T17:48:01.504Z</ClusterCreateTime>
      <MasterUsername>adminuser</MasterUsername>
      <DBName>dev</DBName>
      <EnhancedVpcRouting>false</EnhancedVpcRouting>
      <IamRoles/>
      <ClusterSecurityGroups/>
      <ExpectedNextSnapshotScheduleTime>2019-12-28T05:48:20.939Z</
ExpectedNextSnapshotScheduleTime>
      <NodeType>dc2.large</NodeType>
      <ClusterSubnetGroupName>default</ClusterSubnetGroupName>
      <NextMaintenanceWindowStartTime>2020-01-26T23:15:00Z</
NextMaintenanceWindowStartTime>
      <DeferredMaintenanceWindows>
        <DeferredMaintenanceWindow>
          <DeferMaintenanceEndTime>2020-01-26T19:39:15.075Z</DeferMaintenanceEndTime>
          <DeferMaintenanceIdentifier>dfm-VcfYqSYqQ4tdXOqbKwOo</
DeferMaintenanceIdentifier>
          <DeferMaintenanceStartTime>2019-12-27T19:39:15.075Z</
DeferMaintenanceStartTime>
        </DeferredMaintenanceWindow>
      </DeferredMaintenanceWindows>
      <Tags>
        <Tag>
          <Value>newtag</Value>
          <Key>mytag</Key>
        </Tag>
      </Tags>
      <VpcSecurityGroups>
        <VpcSecurityGroup>
          <VpcSecurityGroupId>sh-a1a123ab</VpcSecurityGroupId>
          <Status>active</Status>
        </VpcSecurityGroup>
      </VpcSecurityGroups>
      <ClusterParameterGroups>
        <ClusterParameterGroup>
          <ParameterGroupName>default.redshift-1.0</ParameterGroupName>
          <ParameterApplyStatus>in-sync</ParameterApplyStatus>
        </ClusterParameterGroup>
      </ClusterParameterGroups>
      <Encrypted>false</Encrypted>
      <MaintenanceTrackName>current</MaintenanceTrackName>
      <PendingModifiedValues/>
      <PreferredMaintenanceWindow>sun:23:15-mon:03:15</PreferredMaintenanceWindow>
      <AutomatedSnapshotRetentionPeriod>1</AutomatedSnapshotRetentionPeriod>
```

```
      <ClusterStatus>available</ClusterStatus>
    </Cluster>
  </ModifyClusterMaintenanceResult>
  <ResponseMetadata>
    <RequestId>908322d5-28e0-11ea-8314-974e2ba81189</RequestId>
  </ResponseMetadata>
</ModifyClusterMaintenanceResponse>
```

See Also

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

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

ModifyClusterParameterGroup

Modifies the parameters of a parameter group. For the parameters parameter, it can't contain ASCII characters.

For more information about parameters and parameter groups, go to Amazon Redshift Parameter Groups in the *Amazon Redshift Cluster Management Guide*.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ParameterGroupName

The name of the parameter group to be modified.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Parameters.Parameter.N

An array of parameters to be modified. A maximum of 20 parameters can be modified in a single request.

For each parameter to be modified, you must supply at least the parameter name and parameter value; other name-value pairs of the parameter are optional.

For the workload management (WLM) configuration, you must supply all the name-value pairs in the wlm_json_configuration parameter.

Type: Array of Parameter objects

Required: Yes

Response Elements

The following elements are returned by the service.

ParameterGroupName

The name of the cluster parameter group.

Type: String

Length Constraints: Maximum length of 2147483647.

ParameterGroupStatus

The status of the parameter group. For example, if you made a change to a parameter group name-value pair, then the change could be pending a reboot of an associated cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Errors

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

ClusterParameterGroupNotFound

The parameter group name does not refer to an existing parameter group.

HTTP Status Code: 404

InvalidClusterParameterGroupState

The cluster parameter group action can not be completed because another task is in progress that involves the parameter group. Wait a few moments and try the operation again.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of ModifyClusterParameterGroup.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
```

```
       ?Action=ModifyClusterParameterGroup
&ParameterGroupName=myclusterparametergroup
&Parameters.Parameter.1.ParameterName=auto_analyze
&Parameters.Parameter.1.ParameterValue=false
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<ModifyClusterParameterGroupResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <ModifyClusterParameterGroupResult>
    <ParameterGroupName>myclusterparametergroup</ParameterGroupName>
    <ParameterGroupStatus>Your parameter group has been updated. If you changed only
 dynamic parameters, associated clusters are being modified now. If you changed static
 parameters, all updates, including dynamic parameters, will be applied when you reboot
 the associated clusters.</ParameterGroupStatus>
  </ModifyClusterParameterGroupResult>
  <ResponseMetadata>
    <RequestId>565b33e6-28e9-11ea-9939-5fccefa818c0</RequestId>
  </ResponseMetadata>
</ModifyClusterParameterGroupResponse>
```

See Also

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

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

- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ModifyClusterSnapshot

Modifies the settings for a snapshot.

This exanmple modifies the manual retention period setting for a cluster snapshot.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

SnapshotIdentifier

The identifier of the snapshot whose setting you want to modify.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Force

A Boolean option to override an exception if the retention period has already passed.

Type: Boolean

Required: No

ManualSnapshotRetentionPeriod

The number of days that a manual snapshot is retained. If the value is -1, the manual snapshot is retained indefinitely.

If the manual snapshot falls outside of the new retention period, you can specify the force option to immediately delete the snapshot.

The value must be either -1 or an integer between 1 and 3,653.

Type: Integer

Required: No

Response Elements

The following element is returned by the service.

Snapshot

Describes a snapshot.

Type: Snapshot object

Errors

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

ClusterSnapshotNotFound

The snapshot identifier does not refer to an existing cluster snapshot.

HTTP Status Code: 404

InvalidClusterSnapshotState

The specified cluster snapshot is not in the `available` state, or other accounts are authorized to access the snapshot.

HTTP Status Code: 400

InvalidRetentionPeriodFault

The retention period specified is either in the past or is not a valid value.

The value must be either -1 or an integer between 1 and 3,653.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of ModifyClusterSnapshot.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=ModifyClusterSnapshot
&ClusterIdentifier=mycluster
&SnapshotIdentifier=mysnapshotid
&ManualSnapshotRetentionPeriod=10
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<ModifyClusterSnapshotResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <ModifyClusterSnapshotResult>
    <Snapshot>
      <SnapshotRetentionStartTime>2019-12-27T18:19:14.966Z</SnapshotRetentionStartTime>
      <ClusterIdentifier>mycluster</ClusterIdentifier>
      <EncryptedWithHSM>false</EncryptedWithHSM>
      <NumberOfNodes>1</NumberOfNodes>
      <OwnerAccount>123456789012</OwnerAccount>
      <AvailabilityZone>us-east-2a</AvailabilityZone>
      <ClusterVersion>1.0</ClusterVersion>
      <ManualSnapshotRetentionPeriod>10</ManualSnapshotRetentionPeriod>
      <TotalBackupSizeInMegaBytes>62758.0</TotalBackupSizeInMegaBytes>
      <VpcId>vpc-a1abc1a1</VpcId>
      <BackupProgressInMegaBytes>15.0</BackupProgressInMegaBytes>
      <CurrentBackupRateInMegaBytesPerSecond>5.4506</
CurrentBackupRateInMegaBytesPerSecond>
      <ClusterCreateTime>2019-12-23T23:21:27.977Z</ClusterCreateTime>
      <ElapsedTimeInSeconds>2</ElapsedTimeInSeconds>
      <MasterUsername>adminuser</MasterUsername>
      <DBName>dev</DBName>
      <ActualIncrementalBackupSizeInMegaBytes>15.0</
ActualIncrementalBackupSizeInMegaBytes>
      <SnapshotType>manual</SnapshotType>
      <EnhancedVpcRouting>false</EnhancedVpcRouting>
      <ManualSnapshotRemainingDays>9</ManualSnapshotRemainingDays>
      <SnapshotIdentifier>mysnapshotid</SnapshotIdentifier>
```

```
      <NodeType>dc2.large</NodeType>
      <Tags/>
      <Encrypted>false</Encrypted>
      <Port>5439</Port>
      <EstimatedSecondsToCompletion>0</EstimatedSecondsToCompletion>
      <MaintenanceTrackName>current</MaintenanceTrackName>
      <SnapshotCreateTime>2019-12-27T18:19:12.214Z</SnapshotCreateTime>
      <Status>available</Status>
    </Snapshot>
  </ModifyClusterSnapshotResult>
  <ResponseMetadata>
    <RequestId>f377d8a2-28e9-11ea-b6af-7126da6f11af</RequestId>
  </ResponseMetadata>
</ModifyClusterSnapshotResponse>
```

See Also

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

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

ModifyClusterSnapshotSchedule

Modifies a snapshot schedule for a cluster.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

A unique identifier for the cluster whose snapshot schedule you want to modify.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

DisassociateSchedule

A boolean to indicate whether to remove the assoiciation between the cluster and the schedule.

Type: Boolean

Required: No

ScheduleIdentifier

A unique alphanumeric identifier for the schedule that you want to associate with the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

InvalidClusterSnapshotScheduleState

The cluster snapshot schedule state is not valid.

HTTP Status Code: 400

SnapshotScheduleNotFound

We could not find the specified snapshot schedule.

HTTP Status Code: 400

Examples

Example

This example removes a snapshot schedule from a cluster.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=ModifyClusterSnapshotSchedule
&ClusterIdentifier=mycluster
&ScheduleIdentifier=mysnapshotschedule
&DisassociateSchedule=true
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<ModifyClusterSnapshotScheduleResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <ResponseMetadata>
    <RequestId>3ec38335-28ea-11ea-b6af-7126da6f11af</RequestId>
  </ResponseMetadata>
</ModifyClusterSnapshotScheduleResponse>
```

See Also

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

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

ModifyClusterSubnetGroup

Modifies a cluster subnet group to include the specified list of VPC subnets. The operation replaces the existing list of subnets with the new list of subnets.

VPC Block Public Access (BPA) enables you to block resources in VPCs and subnets that you own in a Region from reaching or being reached from the internet through internet gateways and egress-only internet gateways. If a subnet group for a provisioned cluster is in an account with VPC BPA turned on, the following capabilities are blocked:

- Creating a public cluster
- Restoring a public cluster
- Modifying a private cluster to be public
- Adding a subnet with VPC BPA turned on to the subnet group when there's at least one public cluster within the group

For more information about VPC BPA, see Block public access to VPCs and subnets in the *Amazon VPC User Guide*.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterSubnetGroupName

The name of the subnet group to be modified.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

SubnetIds.SubnetIdentifier.N

An array of VPC subnet IDs. A maximum of 20 subnets can be modified in a single request.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: Yes

Description

A text description of the subnet group to be modified.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following element is returned by the service.

ClusterSubnetGroup

Describes a subnet group.

Type: ClusterSubnetGroup object

Errors

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

ClusterSubnetGroupNotFoundFault

The cluster subnet group name does not refer to an existing cluster subnet group.

HTTP Status Code: 400

ClusterSubnetQuotaExceededFault

The request would result in user exceeding the allowed number of subnets in a cluster subnet groups. For information about increasing your quota, go to Limits in Amazon Redshift in the *Amazon Redshift Cluster Management Guide*.

HTTP Status Code: 400

DependentServiceRequestThrottlingFault

The request cannot be completed because a dependent service is throttling requests made by Amazon Redshift on your behalf. Wait and retry the request.

HTTP Status Code: 400

InvalidSubnet

The requested subnet is not valid, or not all of the subnets are in the same VPC.

HTTP Status Code: 400

SubnetAlreadyInUse

A specified subnet is already in use by another cluster.

HTTP Status Code: 400

UnauthorizedOperation

Your account is not authorized to perform the requested operation.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of ModifyClusterSubnetGroup.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=ModifyClusterSubnetGroup
&ClusterSubnetGroupName=mysubnetgroup
&SubnetIds.SubnetIdentifier.1=subnet-a1b21abc
&SubnetIds.SubnetIdentifier.2=subnet-a1b22abc
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<ModifyClusterSubnetGroupResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
```

```
  <ModifyClusterSubnetGroupResult>
    <ClusterSubnetGroup>
      <VpcId>vpc-a1abc1a1</VpcId>
      <Description>My subnet group</Description>
      <Subnets>
        <Subnet>
          <SubnetStatus>Active</SubnetStatus>
          <SubnetIdentifier>subnet-a1b21abc</SubnetIdentifier>
          <SubnetAvailabilityZone>
            <Name>us-east-2f</Name>
          </SubnetAvailabilityZone>
        </Subnet>
        <Subnet>
          <SubnetStatus>Active</SubnetStatus>
          <SubnetIdentifier>subnet-a1b22abc</SubnetIdentifier>
          <SubnetAvailabilityZone>
            <Name>us-east-2a</Name>
          </SubnetAvailabilityZone>
        </Subnet>
      </Subnets>
      <ClusterSubnetGroupName>mysubnetgroup</ClusterSubnetGroupName>
      <SubnetGroupStatus>Complete</SubnetGroupStatus>
      <Tags/>
    </ClusterSubnetGroup>
  </ModifyClusterSubnetGroupResult>
  <ResponseMetadata>
    <RequestId>0b638b21-28eb-11ea-8cc9-43f1872b4b75</RequestId>
  </ResponseMetadata>
</ModifyClusterSubnetGroupResponse>
```

See Also

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

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

- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ModifyCustomDomainAssociation

Contains information for changing a custom domain association.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The identifier of the cluster to change a custom domain association for.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

CustomDomainCertificateArn

The certificate Amazon Resource Name (ARN) for the changed custom domain association.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:[\w+=/,.@-]+:acm:[\w+=/,.@-]*:[0-9]+:[\w+=,.@-]+(/[\w+=,.@-]+)*`

Required: Yes

CustomDomainName

The custom domain name for a changed custom domain association.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 253.

Pattern: `^(((?!-)[A-Za-z0-9-]{0,62}[A-Za-z0-9])\.)+((?!-)[A-Za-z0-9-]{1,62}[A-Za-z0-9])$`

Required: Yes

Response Elements

The following elements are returned by the service.

ClusterIdentifier

The identifier of the cluster associated with the result for the changed custom domain association.

Type: String

Length Constraints: Maximum length of 2147483647.

CustomDomainCertExpiryTime

The certificate expiration time associated with the result for the changed custom domain association.

Type: String

Length Constraints: Maximum length of 2147483647.

CustomDomainCertificateArn

The certificate Amazon Resource Name (ARN) associated with the result for the changed custom domain association.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `arn:[\w+=/,.@-]+:acm:[\w+=/,.@-]*:[0-9]+:[\w+=,.@-]+(/[\w+=,.@-]+)*`

CustomDomainName

The custom domain name associated with the result for the changed custom domain association.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 253.

Pattern: `^(((?!-)[A-Za-z0-9-]{0,62}[A-Za-z0-9])\.)+((?!-)[A-Za-z0-9-]{1,62}[A-Za-z0-9])$`

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

CustomCnameAssociationFault

An error occurred when an attempt was made to change the custom domain association.

HTTP Status Code: 400

CustomDomainAssociationNotFoundFault

An error occurred. The custom domain name couldn't be found.

HTTP Status Code: 404

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

- AWS SDK for Python
- AWS SDK for Ruby V3

ModifyEndpointAccess

Modifies a Redshift-managed VPC endpoint.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

EndpointName

The endpoint to be modified.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

VpcSecurityGroupIds.VpcSecurityGroupId.N

The complete list of VPC security groups associated with the endpoint after the endpoint is modified.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following elements are returned by the service.

Address

The DNS address of the endpoint.

Type: String

Length Constraints: Maximum length of 2147483647.

ClusterIdentifier

The cluster identifier of the cluster associated with the endpoint.

Type: String

Length Constraints: Maximum length of 2147483647.

EndpointCreateTime

The time (UTC) that the endpoint was created.

Type: Timestamp

EndpointName

The name of the endpoint.

Type: String

Length Constraints: Maximum length of 2147483647.

EndpointStatus

The status of the endpoint.

Type: String

Length Constraints: Maximum length of 2147483647.

Port

The port number on which the cluster accepts incoming connections.

Type: Integer

ResourceOwner

The AWS account ID of the owner of the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

SubnetGroupName

The subnet group name where Amazon Redshift chooses to deploy the endpoint.

Type: String

Length Constraints: Maximum length of 2147483647.

VpcEndpoint

The connection endpoint for connecting to an Amazon Redshift cluster through the proxy.

Type: VpcEndpoint object

VpcSecurityGroups.VpcSecurityGroup.N

The security groups associated with the endpoint.

Type: Array of VpcSecurityGroupMembership objects

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

EndpointNotFound

The endpoint name doesn't refer to an existing endpoint.

HTTP Status Code: 404

InvalidClusterSecurityGroupState

The state of the cluster security group is not `available`.

HTTP Status Code: 400

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

InvalidEndpointState

The status of the endpoint is not valid.

HTTP Status Code: 400

UnauthorizedOperation

Your account is not authorized to perform the requested operation.

HTTP Status Code: 400

See Also

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

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

ModifyEventSubscription

Modifies an existing Amazon Redshift event notification subscription.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

SubscriptionName

The name of the modified Amazon Redshift event notification subscription.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Enabled

A Boolean value indicating if the subscription is enabled. `true` indicates the subscription is enabled

Type: Boolean

Required: No

EventCategories.EventCategory.N

Specifies the Amazon Redshift event categories to be published by the event notification subscription.

Values: configuration, management, monitoring, security, pending

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

Severity

Specifies the Amazon Redshift event severity to be published by the event notification subscription.

Values: ERROR, INFO

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SnsTopicArn

The Amazon Resource Name (ARN) of the SNS topic to be used by the event notification subscription.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SourceIds.SourceId.N

A list of one or more identifiers of Amazon Redshift source objects. All of the objects must be of the same type as was specified in the source type parameter. The event subscription will return only events generated by the specified objects. If not specified, then events are returned for all objects within the source type specified.

Example: my-cluster-1, my-cluster-2

Example: my-snapshot-20131010

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

SourceType

The type of source that will be generating the events. For example, if you want to be notified of events generated by a cluster, you would set this parameter to cluster. If this value is not specified, events are returned for all Amazon Redshift objects in your AWS account. You must specify a source type in order to specify source IDs.

Valid values: cluster, cluster-parameter-group, cluster-security-group, cluster-snapshot, and scheduled-action.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following element is returned by the service.

EventSubscription

Describes event subscriptions.

Type: EventSubscription object

Errors

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

InvalidSubscriptionStateFault

The subscription request is invalid because it is a duplicate request. This subscription request is already in progress.

HTTP Status Code: 400

SNSInvalidTopic

Amazon SNS has responded that there is a problem with the specified Amazon SNS topic.

HTTP Status Code: 400

SNSNoAuthorization

You do not have permission to publish to the specified Amazon SNS topic.

HTTP Status Code: 400

SNSTopicArnNotFound

An Amazon SNS topic with the specified Amazon Resource Name (ARN) does not exist.

HTTP Status Code: 404

SourceNotFound

The specified Amazon Redshift event source could not be found.

HTTP Status Code: 404

SubscriptionCategoryNotFound

The value specified for the event category was not one of the allowed values, or it specified a category that does not apply to the specified source type. The allowed values are Configuration, Management, Monitoring, and Security.

HTTP Status Code: 404

SubscriptionEventIdNotFound

An Amazon Redshift event with the specified event ID does not exist.

HTTP Status Code: 404

SubscriptionNotFound

An Amazon Redshift event notification subscription with the specified name does not exist.

HTTP Status Code: 404

SubscriptionSeverityNotFound

The value specified for the event severity was not one of the allowed values, or it specified a severity that does not apply to the specified source type. The allowed values are ERROR and INFO.

HTTP Status Code: 404

Examples

Example

This example disables an event notification subscription.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=ModifyEventSubscription
```

```
&SubscriptionName=mysubscription
&Enabled=false
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<ModifyEventSubscriptionResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <ModifyEventSubscriptionResult>
    <EventSubscription>
      <Severity>ERROR</Severity>
      <CustSubscriptionId>mysubscription</CustSubscriptionId>
      <SnsTopicArn>arn:aws:sns:us-east-2:123456789012:MySNStopic</SnsTopicArn>
      <SourceIdsList/>
      <EventCategoriesList/>
      <SubscriptionCreationTime>2019-12-27T00:27:43.748Z</SubscriptionCreationTime>
      <Enabled>false</Enabled>
      <Tags/>
      <Status>active</Status>
      <CustomerAwsId>123456789012</CustomerAwsId>
    </EventSubscription>
  </ModifyEventSubscriptionResult>
  <ResponseMetadata>
    <RequestId>ab342788-28f2-11ea-a940-1b28a85fd753</RequestId>
  </ResponseMetadata>
</ModifyEventSubscriptionResponse>
```

See Also

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

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

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

ModifyIntegration

Modifies a zero-ETL integration or S3 event integration with Amazon Redshift.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

IntegrationArn

The unique identifier of the integration to modify.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `^arn:aws[a-z\-]*:redshift:[a-z0-9\-]*:[0-9]*:integration:[0-9a-f]{8}-[0-9a-f]{4}-[0-9a-f]{4}-[0-9a-f]{4}-[0-9a-f]{12}$`

Required: Yes

Description

A new description for the integration.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 1000.

Pattern: `^.*$`

Required: No

IntegrationName

A new name for the integration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 63.

Pattern: `^[a-zA-Z][a-zA-Z0-9]*(-[a-zA-Z0-9]+)*$`

Required: No

Response Elements

The following elements are returned by the service.

AdditionalEncryptionContext , AdditionalEncryptionContext.entry.N.key (key), AdditionalEncryptionContext.entry.N.value (value)

The encryption context for the integration. For more information, see Encryption context in the *AWS Key Management Service Developer Guide*.

Type: String to string map

Key Length Constraints: Maximum length of 2147483647.

Value Length Constraints: Maximum length of 2147483647.

CreateTime

The time (UTC) when the integration was created.

Type: Timestamp

Description

The description of the integration.

Type: String

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

Pattern: `^.*$`

Errors.IntegrationError.N

Any errors associated with the integration.

Type: Array of IntegrationError objects

IntegrationArn

The Amazon Resource Name (ARN) of the integration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `^arn:aws[a-z\-]*:redshift:[a-z0-9\-]*:[0-9]*:integration:[0-9a-f]{8}-[0-9a-f]{4}-[0-9a-f]{4}-[0-9a-f]{4}-[0-9a-f]{12}$`

IntegrationName

The name of the integration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 63.

Pattern: `^[a-zA-Z][a-zA-Z0-9]*(-[a-zA-Z0-9]+)*$`

KMSKeyId

The AWS Key Management Service (AWS KMS) key identifier for the key used to encrypt the integration.

Type: String

Length Constraints: Maximum length of 2147483647.

SourceArn

The Amazon Resource Name (ARN) of the database used as the source for replication.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `^arn:aws[a-z\-]*:(s3|dynamodb):.*:.*:[a-zA-Z0-9._\-\/]+$`

Status

The current status of the integration.

Type: String

Valid Values: `creating | active | modifying | failed | deleting | syncing | needs_attention`

Tags.Tag.N

The list of tags associated with the integration.

Type: Array of Tag objects

TargetArn

The Amazon Resource Name (ARN) of the Amazon Redshift data warehouse to use as the target for replication.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `^arn:aws[a-z\-]*:redshift(-serverless)?:[a-z0-9\-]+:[0-9]{12}:(namespace\/|namespace:)[a-z0-9\-]+$`

Errors

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

IntegrationAlreadyExistsFault

The integration you are trying to create already exists.

HTTP Status Code: 400

IntegrationConflictOperationFault

A conflicting conditional operation is currently in progress against this resource. This typically occurs when there are multiple requests being made to the same resource at the same time, and these requests conflict with each other.

HTTP Status Code: 400

IntegrationConflictStateFault

The integration is in an invalid state and can't perform the requested operation.

HTTP Status Code: 400

IntegrationNotFoundFault

The integration can't be found.

HTTP Status Code: 404

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

ModifyRedshiftIdcApplication

Changes an existing Amazon Redshift IAM Identity Center application.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

RedshiftIdcApplicationArn

The ARN for the Redshift application that integrates with IAM Identity Center.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

AuthorizedTokenIssuerList.member.N

The authorized token issuer list for the Amazon Redshift IAM Identity Center application to change.

Type: Array of AuthorizedTokenIssuer objects

Required: No

IamRoleArn

The IAM role ARN associated with the Amazon Redshift IAM Identity Center application to change. It has the required permissions to be assumed and invoke the IDC Identity Center API.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

IdcDisplayName

The display name for the Amazon Redshift IAM Identity Center application to change. It appears on the console.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 127.

Pattern: `[\w+=,.@-]+`

Required: No

IdentityNamespace

The namespace for the Amazon Redshift IAM Identity Center application to change. It determines which managed application verifies the connection token.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 127.

Pattern: `^[a-zA-Z0-9_+.#@$-]+$`

Required: No

ServiceIntegrations.member.N

A collection of service integrations associated with the application.

Type: Array of ServiceIntegrationsUnion objects

Required: No

Response Elements

The following element is returned by the service.

RedshiftIdcApplication

Contains properties for the Redshift IDC application.

Type: RedshiftIdcApplication object

Errors

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

DependentServiceAccessDenied

A dependent service denied access for the integration.

HTTP Status Code: 403

DependentServiceUnavailableFault

Your request cannot be completed because a dependent internal service is temporarily unavailable. Wait 30 to 60 seconds and try again.

HTTP Status Code: 400

RedshiftIdcApplicationNotExists

The application you attempted to find doesn't exist.

HTTP Status Code: 404

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

ModifyScheduledAction

Modifies a scheduled action.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ScheduledActionName

The name of the scheduled action to modify.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Enable

A modified enable flag of the scheduled action. If true, the scheduled action is active. If false, the scheduled action is disabled.

Type: Boolean

Required: No

EndTime

A modified end time of the scheduled action. For more information about this parameter, see ScheduledAction.

Type: Timestamp

Required: No

IamRole

A different IAM role to assume to run the target action. For more information about this parameter, see ScheduledAction.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Schedule

A modified schedule in either `at( )` or `cron( )` format. For more information about this parameter, see ScheduledAction.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ScheduledActionDescription

A modified description of the scheduled action.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

StartTime

A modified start time of the scheduled action. For more information about this parameter, see ScheduledAction.

Type: Timestamp

Required: No

TargetAction

A modified JSON format of the scheduled action. For more information about this parameter, see ScheduledAction.

Type: ScheduledActionType object

Required: No

Response Elements

The following elements are returned by the service.

EndTime

The end time in UTC when the schedule is no longer active. After this time, the scheduled action does not trigger.

Type: Timestamp

IamRole

The IAM role to assume to run the scheduled action. This IAM role must have permission to run the Amazon Redshift API operation in the scheduled action. This IAM role must allow the Amazon Redshift scheduler (Principal scheduler.redshift.amazonaws.com) to assume permissions on your behalf. For more information about the IAM role to use with the Amazon Redshift scheduler, see Using Identity-Based Policies for Amazon Redshift in the *Amazon Redshift Cluster Management Guide*.

Type: String

Length Constraints: Maximum length of 2147483647.

NextInvocations.ScheduledActionTime.N

List of times when the scheduled action will run.

Type: Array of timestamps

Schedule

The schedule for a one-time (at format) or recurring (cron format) scheduled action. Schedule invocations must be separated by at least one hour.

Format of at expressions is "`at(yyyy-mm-ddThh:mm:ss)`". For example, "`at(2016-03-04T17:27:00)`".

Format of cron expressions is "`cron(Minutes Hours Day-of-month Month Day-of-week Year)`". For example, "`cron(0 10 ? * MON *)`". For more information, see Cron Expressions in the *Amazon CloudWatch Events User Guide*.

Type: String

Length Constraints: Maximum length of 2147483647.

ScheduledActionDescription

The description of the scheduled action.

Type: String

Length Constraints: Maximum length of 2147483647.

ScheduledActionName

The name of the scheduled action.

Type: String

Length Constraints: Maximum length of 2147483647.

StartTime

The start time in UTC when the schedule is active. Before this time, the scheduled action does not trigger.

Type: Timestamp

State

The state of the scheduled action. For example, `DISABLED`.

Type: String

Valid Values: `ACTIVE | DISABLED`

TargetAction

A JSON format string of the Amazon Redshift API operation with input parameters.

`"{\"ResizeCluster\":{\"NodeType\":\"ra3.4xlarge\",\"ClusterIdentifier\":\"my-test-cluster\",\"NumberOfNodes\":3}}"`.

Type: ScheduledActionType object

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

InvalidSchedule

The schedule you submitted isn't valid.

HTTP Status Code: 400

InvalidScheduledAction

The scheduled action is not valid.

HTTP Status Code: 400

ScheduledActionNotFound

The scheduled action cannot be found.

HTTP Status Code: 400

ScheduledActionTypeUnsupported

The action type specified for a scheduled action is not supported.

HTTP Status Code: 400

UnauthorizedOperation

Your account is not authorized to perform the requested operation.

HTTP Status Code: 400

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

Examples

Example

This example adds description to an existing scheduled action.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
```

```
       ?Action=ModifyScheduledAction
&ScheduledActionName=myscheduledaction
&ScheduledActionDescription=My+scheduled+action
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<ModifyScheduledActionResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <ModifyScheduledActionResult>
    <IamRole>arn:aws:iam::123456789012:role/myRedshiftRole</IamRole>
    <Schedule>at(2019-12-31T00:00:00)</Schedule>
    <ScheduledActionName>myscheduledaction</ScheduledActionName>
    <TargetAction>
      <ResizeCluster>
        <ClusterType>multi-node</ClusterType>
        <ClusterIdentifier>mycluster</ClusterIdentifier>
        <Classic>true</Classic>
        <NumberOfNodes>3</NumberOfNodes>
        <NodeType>dc2.large</NodeType>
      </ResizeCluster>
    </TargetAction>
    <NextInvocations>
      <ScheduledActionTime>2019-12-31T00:00:00Z</ScheduledActionTime>
    </NextInvocations>
    <State>ACTIVE</State>
    <ScheduledActionDescription>My scheduled action</ScheduledActionDescription>
  </ModifyScheduledActionResult>
  <ResponseMetadata>
    <RequestId>a2388ba8-28f3-11ea-8a28-2fd1719d0e86</RequestId>
  </ResponseMetadata>
</ModifyScheduledActionResponse>
```

See Also

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

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

ModifySnapshotCopyRetentionPeriod

Modifies the number of days to retain snapshots in the destination AWS Region after they are copied from the source AWS Region. By default, this operation only changes the retention period of copied automated snapshots. The retention periods for both new and existing copied automated snapshots are updated with the new retention period. You can set the manual option to change only the retention periods of copied manual snapshots. If you set this option, only newly copied manual snapshots have the new retention period.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The unique identifier of the cluster for which you want to change the retention period for either automated or manual snapshots that are copied to a destination AWS Region.

Constraints: Must be the valid name of an existing cluster that has cross-region snapshot copy enabled.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

RetentionPeriod

The number of days to retain automated snapshots in the destination AWS Region after they are copied from the source AWS Region.

By default, this only changes the retention period of copied automated snapshots.

If you decrease the retention period for automated snapshots that are copied to a destination AWS Region, Amazon Redshift deletes any existing automated snapshots that were copied to the destination AWS Region and that fall outside of the new retention period.

Constraints: Must be at least 1 and no more than 35 for automated snapshots.

If you specify the `manual` option, only newly copied manual snapshots will have the new retention period.

If you specify the value of -1 newly copied manual snapshots are retained indefinitely.

Constraints: The number of days must be either -1 or an integer between 1 and 3,653 for manual snapshots.

Type: Integer

Required: Yes

Manual

Indicates whether to apply the snapshot retention period to newly copied manual snapshots instead of automated snapshots.

Type: Boolean

Required: No

Response Elements

The following element is returned by the service.

Cluster

Describes a cluster.

Type: Cluster object

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

InvalidRetentionPeriodFault

The retention period specified is either in the past or is not a valid value.

The value must be either -1 or an integer between 1 and 3,653.

HTTP Status Code: 400

SnapshotCopyDisabledFault

Cross-region snapshot copy was temporarily disabled. Try your request again.

HTTP Status Code: 400

UnauthorizedOperation

Your account is not authorized to perform the requested operation.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of ModifySnapshotCopyRetentionPeriod.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=ModifySnapshotCopyRetentionPeriod
&ClusterIdentifier=mycluster
&RetentionPeriod=15
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<ModifySnapshotCopyRetentionPeriodResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
```

```
  <ModifySnapshotCopyRetentionPeriodResult>
    <Cluster>
      <AllowVersionUpgrade>true</AllowVersionUpgrade>
      <ClusterIdentifier>mycluster</ClusterIdentifier>
      <NumberOfNodes>1</NumberOfNodes>
      <AvailabilityZone>us-east-2a</AvailabilityZone>
      <ClusterVersion>1.0</ClusterVersion>
      <ManualSnapshotRetentionPeriod>-1</ManualSnapshotRetentionPeriod>
      <ClusterAvailabilityStatus>Available</ClusterAvailabilityStatus>
      <Endpoint>
        <Port>5439</Port>
        <Address>mycluster.cmeaswqeuae.us-east-2.redshift.amazonaws.com</Address>
      </Endpoint>
      <VpcId>vpc-a1abc1a1</VpcId>
      <PubliclyAccessible>false</PubliclyAccessible>
      <ClusterCreateTime>2019-12-27T17:48:01.504Z</ClusterCreateTime>
      <ClusterSnapshotCopyStatus>
        <ManualSnapshotRetentionPeriod>-1</ManualSnapshotRetentionPeriod>
        <DestinationRegion>us-east-1</DestinationRegion>
        <RetentionPeriod>15</RetentionPeriod>
      </ClusterSnapshotCopyStatus>
      <MasterUsername>adminuser</MasterUsername>
      <DBName>dev</DBName>
      <EnhancedVpcRouting>false</EnhancedVpcRouting>
      <IamRoles/>
      <ClusterSecurityGroups/>
      <NodeType>dc2.large</NodeType>
      <ClusterSubnetGroupName>default</ClusterSubnetGroupName>
      <NextMaintenanceWindowStartTime>2020-01-26T23:15:00Z</
NextMaintenanceWindowStartTime>
      <DeferredMaintenanceWindows>
        <DeferredMaintenanceWindow>
          <DeferMaintenanceEndTime>2020-01-26T19:39:15.075Z</DeferMaintenanceEndTime>
          <DeferMaintenanceIdentifier>dfm-VcfYqSYqQ4tdXOqbKwOo</
DeferMaintenanceIdentifier>
          <DeferMaintenanceStartTime>2019-12-27T19:39:15.075Z</
DeferMaintenanceStartTime>
        </DeferredMaintenanceWindow>
      </DeferredMaintenanceWindows>
      <Tags>
        <Tag>
          <Value>newtag</Value>
          <Key>mytag</Key>
        </Tag>
```

```
      </Tags>
      <VpcSecurityGroups>
        <VpcSecurityGroup>
          <VpcSecurityGroupId>sh-a1a123ab</VpcSecurityGroupId>
          <Status>active</Status>
        </VpcSecurityGroup>
      </VpcSecurityGroups>
      <ClusterParameterGroups>
        <ClusterParameterGroup>
          <ParameterGroupName>default.redshift-1.0</ParameterGroupName>
          <ParameterApplyStatus>in-sync</ParameterApplyStatus>
        </ClusterParameterGroup>
      </ClusterParameterGroups>
      <Encrypted>false</Encrypted>
      <MaintenanceTrackName>current</MaintenanceTrackName>
      <PendingModifiedValues/>
      <PreferredMaintenanceWindow>sun:23:15-mon:03:15</PreferredMaintenanceWindow>
      <AutomatedSnapshotRetentionPeriod>1</AutomatedSnapshotRetentionPeriod>
      <ClusterStatus>available</ClusterStatus>
    </Cluster>
  </ModifySnapshotCopyRetentionPeriodResult>
  <ResponseMetadata>
    <RequestId>f24fc770-28f3-11ea-9467-b9a67a99da45</RequestId>
  </ResponseMetadata>
</ModifySnapshotCopyRetentionPeriodResponse>
```

See Also

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

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

- AWS SDK for Python
- AWS SDK for Ruby V3

ModifySnapshotSchedule

Modifies a snapshot schedule. Any schedule associated with a cluster is modified asynchronously.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ScheduleDefinitions.ScheduleDefinition.N

An updated list of schedule definitions. A schedule definition is made up of schedule expressions, for example, "cron(30 12 *)" or "rate(12 hours)".

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: Yes

ScheduleIdentifier

A unique alphanumeric identifier of the schedule to modify.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Response Elements

The following elements are returned by the service.

AssociatedClusterCount

The number of clusters associated with the schedule.

Type: Integer

AssociatedClusters.ClusterAssociatedToSchedule.N

A list of clusters associated with the schedule. A maximum of 100 clusters is returned.

Type: Array of ClusterAssociatedToSchedule objects

NextInvocations.SnapshotTime.N

Type: Array of timestamps

ScheduleDefinitions.ScheduleDefinition.N

A list of ScheduleDefinitions.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

ScheduleDescription

The description of the schedule.

Type: String

Length Constraints: Maximum length of 2147483647.

ScheduleIdentifier

A unique identifier for the schedule.

Type: String

Length Constraints: Maximum length of 2147483647.

Tags.Tag.N

An optional set of tags describing the schedule.

Type: Array of Tag objects

Errors

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

InvalidSchedule

The schedule you submitted isn't valid.

HTTP Status Code: 400

SnapshotScheduleNotFound

We could not find the specified snapshot schedule.

HTTP Status Code: 400

SnapshotScheduleUpdateInProgress

The specified snapshot schedule is already being updated.

HTTP Status Code: 400

Examples

Example

This example sets a snapshot schedule to the rate of every 10 hours.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=ModifySnapshotSchedule
&ScheduleIdentifier=mysnapshotschedule
&ScheduleDefinitions.ScheduleDefinition.1=rate%2810+hours%29
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<ModifySnapshotScheduleResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <ModifySnapshotScheduleResult>
    <ScheduleDefinitions>
      <ScheduleDefinition>rate(10 hours)</ScheduleDefinition>
    </ScheduleDefinitions>
    <ScheduleDescription>My schedule description</ScheduleDescription>
    <ScheduleIdentifier>mysnapshotschedule</ScheduleIdentifier>
    <Tags/>
```

```
  </ModifySnapshotScheduleResult>
  <ResponseMetadata>
    <RequestId>8c27532d-28f4-11ea-a940-1b28a85fd753</RequestId>
  </ResponseMetadata>
</ModifySnapshotScheduleResponse>
```

See Also

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

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

ModifyUsageLimit

Modifies a usage limit in a cluster. You can't modify the feature type or period of a usage limit.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

UsageLimitId

The identifier of the usage limit to modify.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Amount

The new limit amount. For more information about this parameter, see UsageLimit.

Type: Long

Required: No

BreachAction

The new action that Amazon Redshift takes when the limit is reached. For more information about this parameter, see UsageLimit.

Type: String

Valid Values: `log | emit-metric | disable`

Required: No

Response Elements

The following elements are returned by the service.

Amount

The limit amount. If time-based, this amount is in minutes. If data-based, this amount is in terabytes (TB).

Type: Long

BreachAction

The action that Amazon Redshift takes when the limit is reached. Possible values are:

- **log** - To log an event in a system table. The default is log.
- **emit-metric** - To emit CloudWatch metrics.
- **disable** - To disable the feature until the next usage period begins.

Type: String

Valid Values: `log | emit-metric | disable`

ClusterIdentifier

The identifier of the cluster with a usage limit.

Type: String

Length Constraints: Maximum length of 2147483647.

FeatureType

The Amazon Redshift feature to which the limit applies.

Type: String

Valid Values: `spectrum | concurrency-scaling | cross-region-datasharing`

LimitType

The type of limit. Depending on the feature type, this can be based on a time duration or data size.

Type: String

Valid Values: `time | data-scanned`

Period

The time period that the amount applies to. A `weekly` period begins on Sunday. The default is `monthly`.

Type: String

Valid Values: `daily | weekly | monthly`

Tags.Tag.N

A list of tag instances.

Type: Array of Tag objects

UsageLimitId

The identifier of the usage limit.

Type: String

Length Constraints: Maximum length of 2147483647.

Errors

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

InvalidUsageLimit

The usage limit is not valid.

HTTP Status Code: 400

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

UsageLimitNotFound

The usage limit identifier can't be found.

HTTP Status Code: 404

See Also

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

- AWS Command Line Interface

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

PauseCluster

Pauses a cluster.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The identifier of the cluster to be paused.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Response Elements

The following element is returned by the service.

Cluster

Describes a cluster.

Type: Cluster object

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

PurchaseReservedNodeOffering

Allows you to purchase reserved nodes. Amazon Redshift offers a predefined set of reserved node offerings. You can purchase one or more of the offerings. You can call the DescribeReservedNodeOfferings API to obtain the available reserved node offerings. You can call this API by providing a specific reserved node offering and the number of nodes you want to reserve.

For more information about reserved node offerings, go to Purchasing Reserved Nodes in the *Amazon Redshift Cluster Management Guide*.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ReservedNodeOfferingId

The unique identifier of the reserved node offering you want to purchase.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

NodeCount

The number of reserved nodes that you want to purchase.

Default: 1

Type: Integer

Required: No

Response Elements

The following element is returned by the service.

ReservedNode

Describes a reserved node. You can call the DescribeReservedNodeOfferings API to obtain the available reserved node offerings.

Type: ReservedNode object

Errors

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

ReservedNodeAlreadyExists

User already has a reservation with the given identifier.

HTTP Status Code: 404

ReservedNodeOfferingNotFound

Specified offering does not exist.

HTTP Status Code: 404

ReservedNodeQuotaExceeded

Request would exceed the user's compute node quota. For information about increasing your quota, go to Limits in Amazon Redshift in the *Amazon Redshift Cluster Management Guide*.

HTTP Status Code: 400

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of PurchaseReservedNodeOffering.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=PurchaseReservedNodeOffering
&ReservedNodeOfferingId=12345678-12ab-12a1-1a2a-12ab-12a12bEXAMPLE
```

```
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<PurchaseReservedNodeOfferingResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <PurchaseReservedNodeOfferingResult>
    <ReservedNode>
      <ReservedNodeId>12345678-12ab-12a1-1a2a-12ab-12a12aEXAMPLE</ReservedNodeId>
      <OfferingType>All Upfront</OfferingType>
      <ReservedNodeOfferingType>Regular</ReservedNodeOfferingType>
      <RecurringCharges/>
      <NodeType>ra3.4xlarge</NodeType>
      <FixedPrice>4295.0</FixedPrice>
      <Duration>31536000</Duration>
      <UsagePrice>0.0</UsagePrice>
      <ReservedNodeOfferingId>12345678-12ab-12a1-1a2a-12ab-12a12bEXAMPLE</
ReservedNodeOfferingId>
      <StartTime>2019-12-27T22:06:20.054Z</StartTime>
      <NodeCount>1</NodeCount>
      <State>payment-pending</State>
      <CurrencyCode>USD</CurrencyCode>
    </ReservedNode>
  </PurchaseReservedNodeOfferingResult>
  <ResponseMetadata>
    <RequestId>1c8a0fe4-28f5-11ea-8314-974e2ba81189</RequestId>
  </ResponseMetadata>
</PurchaseReservedNodeOfferingResponse>
```

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET

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

PutResourcePolicy

Updates the resource policy for a specified resource.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

Policy

The content of the resource policy being updated.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

ResourceArn

The Amazon Resource Name (ARN) of the resource of which its resource policy is updated.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Response Elements

The following element is returned by the service.

ResourcePolicy

The content of the updated resource policy.

Type: ResourcePolicy object

Errors

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

ConflictPolicyUpdateFault

There is a conflict while updating the resource policy.

HTTP Status Code: 409

InvalidPolicyFault

The resource policy isn't valid.

HTTP Status Code: 400

ResourceNotFoundFault

The resource could not be found.

HTTP Status Code: 404

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

RebootCluster

Reboots a cluster. This action is taken as soon as possible. It results in a momentary outage to the cluster, during which the cluster status is set to `rebooting`. A cluster event is created when the reboot is completed. Any pending cluster modifications (see ModifyCluster) are applied at this reboot. For more information about managing clusters, go to Amazon Redshift Clusters in the *Amazon Redshift Cluster Management Guide*.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The cluster identifier.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Response Elements

The following element is returned by the service.

Cluster

Describes a cluster.

Type: Cluster object

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of RebootCluster.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=RebootCluster
&ClusterIdentifier=mycluster
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<RebootClusterResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <RebootClusterResult>
    <Cluster>
      <AllowVersionUpgrade>true</AllowVersionUpgrade>
      <ClusterIdentifier>mycluster</ClusterIdentifier>
      <NumberOfNodes>1</NumberOfNodes>
      <AvailabilityZone>us-east-2a</AvailabilityZone>
      <ClusterVersion>1.0</ClusterVersion>
      <ManualSnapshotRetentionPeriod>-1</ManualSnapshotRetentionPeriod>
      <ClusterAvailabilityStatus>Modifying</ClusterAvailabilityStatus>
      <Endpoint>
        <Port>5439</Port>
        <Address>mycluster.cmeaswqeuae.us-east-2.redshift.amazonaws.com</Address>
      </Endpoint>
      <VpcId>vpc-a1abc1a1</VpcId>
```

```
      <PubliclyAccessible>false</PubliclyAccessible>
      <ClusterCreateTime>2019-12-27T17:48:01.504Z</ClusterCreateTime>
      <ClusterSnapshotCopyStatus>
        <ManualSnapshotRetentionPeriod>-1</ManualSnapshotRetentionPeriod>
        <DestinationRegion>us-east-1</DestinationRegion>
        <RetentionPeriod>15</RetentionPeriod>
      </ClusterSnapshotCopyStatus>
      <MasterUsername>adminuser</MasterUsername>
      <DBName>dev</DBName>
      <EnhancedVpcRouting>false</EnhancedVpcRouting>
      <IamRoles/>
      <ClusterSecurityGroups/>
      <NodeType>dc2.large</NodeType>
      <ClusterSubnetGroupName>default</ClusterSubnetGroupName>
      <NextMaintenanceWindowStartTime>2020-01-26T23:15:00Z</
NextMaintenanceWindowStartTime>
      <DeferredMaintenanceWindows>
        <DeferredMaintenanceWindow>
          <DeferMaintenanceEndTime>2020-01-26T19:39:15.075Z</DeferMaintenanceEndTime>
          <DeferMaintenanceIdentifier>dfm-VcfYqSYqQ4tdXOqbKwOo</
DeferMaintenanceIdentifier>
          <DeferMaintenanceStartTime>2019-12-27T19:39:15.075Z</
DeferMaintenanceStartTime>
        </DeferredMaintenanceWindow>
      </DeferredMaintenanceWindows>
      <Tags>
        <Tag>
          <Value>newtag</Value>
          <Key>mytag</Key>
        </Tag>
      </Tags>
      <VpcSecurityGroups>
        <VpcSecurityGroup>
          <VpcSecurityGroupId>sh-a1a123ab</VpcSecurityGroupId>
          <Status>active</Status>
        </VpcSecurityGroup>
      </VpcSecurityGroups>
      <ClusterParameterGroups>
        <ClusterParameterGroup>
          <ParameterGroupName>default.redshift-1.0</ParameterGroupName>
          <ParameterApplyStatus>in-sync</ParameterApplyStatus>
        </ClusterParameterGroup>
      </ClusterParameterGroups>
      <Encrypted>false</Encrypted>
```

```
      <MaintenanceTrackName>current</MaintenanceTrackName>
      <PendingModifiedValues/>
      <PreferredMaintenanceWindow>sun:23:15-mon:03:15</PreferredMaintenanceWindow>
      <AutomatedSnapshotRetentionPeriod>1</AutomatedSnapshotRetentionPeriod>
      <ClusterStatus>rebooting</ClusterStatus>
    </Cluster>
  </RebootClusterResult>
  <ResponseMetadata>
    <RequestId>6f1299dc-28f5-11ea-9caa-c956bec1ce87</RequestId>
  </ResponseMetadata>
</RebootClusterResponse>
```

See Also

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

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

RegisterNamespace

Registers a cluster or serverless namespace to the AWS Glue Data Catalog.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ConsumerIdentifiers.member.N

An array containing the ID of the consumer account that you want to register the namespace to.

Type: Array of strings

Array Members: Fixed number of 1 item.

Length Constraints: Maximum length of 2147483647.

Required: Yes

NamespaceIdentifier

The unique identifier of the cluster or serverless namespace that you want to register.

Type: NamespaceIdentifierUnion object

Note: This object is a Union. Only one member of this object can be specified or returned.

Required: Yes

Response Elements

The following element is returned by the service.

Status

The registration status of the cluster or serverless namespace.

Type: String

Valid Values: `Registering | Deregistering`

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

InvalidNamespaceFault

The namespace isn't valid because the namespace doesn't exist. Provide a valid namespace.

HTTP Status Code: 400

See Also

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

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

RejectDataShare

From a datashare consumer account, rejects the specified datashare.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

DataShareArn

The Amazon Resource Name (ARN) of the datashare to reject.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Response Elements

The following elements are returned by the service.

AllowPubliclyAccessibleConsumers

A value that specifies whether the datashare can be shared to a publicly accessible cluster.

Type: Boolean

DataShareArn

The Amazon Resource Name (ARN) of the datashare that the consumer is to use.

Type: String

Length Constraints: Maximum length of 2147483647.

DataShareAssociations.member.N

A value that specifies when the datashare has an association between producer and data consumers.

Type: Array of DataShareAssociation objects

DataShareType

The type of the datashare created by RegisterNamespace.

Type: String

Valid Values: `INTERNAL`

ManagedBy

The identifier of a datashare to show its managing entity.

Type: String

Length Constraints: Maximum length of 2147483647.

ProducerArn

The Amazon Resource Name (ARN) of the producer namespace.

Type: String

Length Constraints: Maximum length of 2147483647.

Errors

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

InvalidDataShareFault

There is an error with the datashare.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of RejectDataShare.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
        ?Action=RejectDataShare
```

```
        &DataShareArn=arn%3Aaws%3Ar&dshift%3Aus-east-1%3A275247490162%3Adatashare
%3Afd59653e-4ace-4952-a102-286dad7263ca%2Ftestshare1
        &SignatureMethod=HmacSHA256&SignatureVersion=4
        &Version=2012-12-01
        &X-Amz-Algorithm=AWS4-HMAC-SHA256
        &X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
        &X-Amz-Date=20190825T160000Z
        &X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-
date
        &X-Amz-
Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<RejectDataShareResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
            <RejectDataShareResult>
                <ProducerNamespaceArn>arn:aws:redshift:us-
east-1:275247490162:namespace:fd59653e-4ace-4952-a102-286dad7263ca</
ProducerNamespaceArn>
                <AllowPubliclyAccessibleConsumers>true</
AllowPubliclyAccessibleConsumers>
                <DataShareArn>arn:aws:redshift:us-
east-1:275247490162:datashare:fd59653e-4ace-4952-a102-286dad7263ca/testshare1</
DataShareArn>
                <DataShareAssociations>
                    <member>
                        <StatusChangeDate>2020-10-30T17:43:02.108138</StatusChangeDate>
                        <ConsumerIdentifier>827630067164</ConsumerIdentifier>
                        <CreatedDate>2020-10-29T22:54:27.948849</CreatedDate>
                        <Status>REJECTED</Status>
                    </member>
                </DataShareAssociations>
            </RejectDataShareResult>
            <ResponseMetadata>
                <RequestId>fc19bc1a-18c1-4888-a35e-3e1366775c36</RequestId>
            </ResponseMetadata>
        </RejectDataShareResponse>
```

See Also

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

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

ResetClusterParameterGroup

Sets one or more parameters of the specified parameter group to their default values and sets the source values of the parameters to "engine-default". To reset the entire parameter group specify the *ResetAllParameters* parameter. For parameter changes to take effect you must reboot any associated clusters.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ParameterGroupName

The name of the cluster parameter group to be reset.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Parameters.Parameter.N

An array of names of parameters to be reset. If *ResetAllParameters* option is not used, then at least one parameter name must be supplied.

Constraints: A maximum of 20 parameters can be reset in a single request.

Type: Array of Parameter objects

Required: No

ResetAllParameters

If `true`, all parameters in the specified parameter group will be reset to their default values.

Default: `true`

Type: Boolean

Required: No

Response Elements

The following elements are returned by the service.

ParameterGroupName

The name of the cluster parameter group.

Type: String

Length Constraints: Maximum length of 2147483647.

ParameterGroupStatus

The status of the parameter group. For example, if you made a change to a parameter group name-value pair, then the change could be pending a reboot of an associated cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Errors

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

ClusterParameterGroupNotFound

The parameter group name does not refer to an existing parameter group.

HTTP Status Code: 404

InvalidClusterParameterGroupState

The cluster parameter group action can not be completed because another task is in progress that involves the parameter group. Wait a few moments and try the operation again.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of ResetClusterParameterGroup.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=ResetClusterParameterGroup
&ParameterGroupName=myclusterparametergroup
&ResetAllParameters=true
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<ResetClusterParameterGroupResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <ResetClusterParameterGroupResult>
    <ParameterGroupName>myclusterparametergroup</ParameterGroupName>
    <ParameterGroupStatus>Your parameter group has been updated. If you changed only
 dynamic parameters, associated clusters are being modified now. If you changed static
 parameters, all updates, including dynamic parameters, will be applied when you reboot
 the associated clusters.</ParameterGroupStatus>
  </ResetClusterParameterGroupResult>
  <ResponseMetadata>
    <RequestId>9e0e57b9-28f5-11ea-9caa-c956bec1ce87</RequestId>
  </ResponseMetadata>
</ResetClusterParameterGroupResponse>
```

See Also

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

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

- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V3

ResizeCluster

Changes the size of the cluster. You can change the cluster's type, or change the number or type of nodes. The default behavior is to use the elastic resize method. With an elastic resize, your cluster is available for read and write operations more quickly than with the classic resize method.

Elastic resize operations have the following restrictions:

- You can only resize clusters of the following types:
  - dc2.large
  - dc2.8xlarge
  - ra3.large
  - ra3.xlplus
  - ra3.4xlarge
  - ra3.16xlarge
- The type of nodes that you add must match the node type for the cluster.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The unique identifier for the cluster to resize.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Classic

A boolean value indicating whether the resize operation is using the classic resize process. If you don't provide this parameter or set the value to `false`, the resize type is elastic.

Type: Boolean

Required: No

ClusterType

The new cluster type for the specified cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

NodeType

The new node type for the nodes you are adding. If not specified, the cluster's current node type is used.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

NumberOfNodes

The new number of nodes for the cluster. If not specified, the cluster's current number of nodes is used.

Type: Integer

Required: No

ReservedNodeId

The identifier of the reserved node.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

TargetReservedNodeOfferingId

The identifier of the target reserved node offering.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following element is returned by the service.

Cluster

Describes a cluster.

Type: Cluster object

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

DependentServiceUnavailableFault

Your request cannot be completed because a dependent internal service is temporarily unavailable. Wait 30 to 60 seconds and try again.

HTTP Status Code: 400

InsufficientClusterCapacity

The number of nodes specified exceeds the allotted capacity of the cluster.

HTTP Status Code: 400

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

InvalidReservedNodeState

Indicates that the Reserved Node being exchanged is not in an active state.

HTTP Status Code: 400

LimitExceededFault

The encryption key has exceeded its grant limit in AWS KMS.

HTTP Status Code: 400

NumberOfNodesPerClusterLimitExceeded

The operation would exceed the number of nodes allowed for a cluster.

HTTP Status Code: 400

NumberOfNodesQuotaExceeded

The operation would exceed the number of nodes allotted to the account. For information about increasing your quota, go to Limits in Amazon Redshift in the *Amazon Redshift Cluster Management Guide*.

HTTP Status Code: 400

ReservedNodeAlreadyExists

User already has a reservation with the given identifier.

HTTP Status Code: 404

ReservedNodeAlreadyMigrated

Indicates that the reserved node has already been exchanged.

HTTP Status Code: 400

ReservedNodeNotFound

The specified reserved compute node not found.

HTTP Status Code: 404

ReservedNodeOfferingNotFound

Specified offering does not exist.

HTTP Status Code: 404

UnauthorizedOperation

Your account is not authorized to perform the requested operation.

HTTP Status Code: 400

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

UnsupportedOptionFault

A request option was specified that is not supported.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of ResizeCluster.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=ResizeCluster
&ClusterIdentifier=mycluster
&ClusterType=multi-node
&NodeType=dc2.large
&NumberOfNodes=6
&Classic=true
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response


```
<ResizeClusterResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <ResizeClusterResult>
    <Cluster>
      <AllowVersionUpgrade>true</AllowVersionUpgrade>
      <ClusterIdentifier>mycluster</ClusterIdentifier>
      <NumberOfNodes>1</NumberOfNodes>
      <AvailabilityZone>us-east-2d</AvailabilityZone>
      <ClusterVersion>1.0</ClusterVersion>
      <ManualSnapshotRetentionPeriod>-1</ManualSnapshotRetentionPeriod>
      <ClusterAvailabilityStatus>Modifying</ClusterAvailabilityStatus>
      <Endpoint>
        <Port>5439</Port>
        <Address>mycluster.cmeaswqeuae.us-east-2.redshift.amazonaws.com</Address>
      </Endpoint>
      <VpcId>vpc-a1abc1a1</VpcId>
      <PubliclyAccessible>false</PubliclyAccessible>
      <ClusterCreateTime>2019-12-27T17:48:01.504Z</ClusterCreateTime>
      <ClusterSnapshotCopyStatus>
        <ManualSnapshotRetentionPeriod>-1</ManualSnapshotRetentionPeriod>
        <DestinationRegion>us-east-1</DestinationRegion>
        <RetentionPeriod>15</RetentionPeriod>
      </ClusterSnapshotCopyStatus>
      <MasterUsername>adminuser</MasterUsername>
      <DBName>dev</DBName>
      <EnhancedVpcRouting>false</EnhancedVpcRouting>
      <IamRoles/>
      <ResizeInfo>
        <AllowCancelResize>true</AllowCancelResize>
        <ResizeType>ClassicResize</ResizeType>
      </ResizeInfo>
      <ClusterSecurityGroups/>
      <NodeType>dc2.large</NodeType>
      <ClusterSubnetGroupName>default</ClusterSubnetGroupName>
      <NextMaintenanceWindowStartTime>2020-01-26T23:15:00Z</
NextMaintenanceWindowStartTime>
      <DeferredMaintenanceWindows>
        <DeferredMaintenanceWindow>
          <DeferMaintenanceEndTime>2020-01-26T19:39:15.075Z</DeferMaintenanceEndTime>
          <DeferMaintenanceIdentifier>dfm-VcfYqSYqQ4tdXOqbKwOo</
DeferMaintenanceIdentifier>
          <DeferMaintenanceStartTime>2019-12-27T19:39:15.075Z</
DeferMaintenanceStartTime>
```

```
        </DeferredMaintenanceWindow>
      </DeferredMaintenanceWindows>
      <Tags>
        <Tag>
          <Value>newtag</Value>
          <Key>mytag</Key>
        </Tag>
      </Tags>
      <VpcSecurityGroups>
        <VpcSecurityGroup>
          <VpcSecurityGroupId>sh-a1a123ab</VpcSecurityGroupId>
          <Status>active</Status>
        </VpcSecurityGroup>
      </VpcSecurityGroups>
      <ClusterParameterGroups>
        <ClusterParameterGroup>
          <ParameterGroupName>default.redshift-1.0</ParameterGroupName>
          <ParameterApplyStatus>in-sync</ParameterApplyStatus>
        </ClusterParameterGroup>
      </ClusterParameterGroups>
      <Encrypted>false</Encrypted>
      <MaintenanceTrackName>current</MaintenanceTrackName>
      <PendingModifiedValues>
        <ClusterType>multi-node</ClusterType>
        <NumberOfNodes>6</NumberOfNodes>
        <NodeType>dc2.large</NodeType>
      </PendingModifiedValues>
      <PreferredMaintenanceWindow>sun:23:15-mon:03:15</PreferredMaintenanceWindow>
      <AutomatedSnapshotRetentionPeriod>1</AutomatedSnapshotRetentionPeriod>
      <ClusterStatus>resizing</ClusterStatus>
    </Cluster>
  </ResizeClusterResult>
  <ResponseMetadata>
    <RequestId>d504c6c0-28f5-11ea-8cc9-43f1872b4b75</RequestId>
  </ResponseMetadata>
</ResizeClusterResponse>
```


See Also

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

- AWS Command Line Interface

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

RestoreFromClusterSnapshot

Creates a new cluster from a snapshot. By default, Amazon Redshift creates the resulting cluster with the same configuration as the original cluster from which the snapshot was created, except that the new cluster is created with the default cluster security and parameter groups. After Amazon Redshift creates the cluster, you can use the ModifyCluster API to associate a different security group and different parameter group with the restored cluster. If you are using a DS node type, you can also choose to change to another DS node type of the same size during restore.

If you restore a cluster into a VPC, you must provide a cluster subnet group where you want the cluster restored.

VPC Block Public Access (BPA) enables you to block resources in VPCs and subnets that you own in a Region from reaching or being reached from the internet through internet gateways and egress-only internet gateways. If a subnet group for a provisioned cluster is in an account with VPC BPA turned on, the following capabilities are blocked:

- Creating a public cluster
- Restoring a public cluster
- Modifying a private cluster to be public
- Adding a subnet with VPC BPA turned on to the subnet group when there's at least one public cluster within the group

For more information about VPC BPA, see Block public access to VPCs and subnets in the *Amazon VPC User Guide*.

For more information about working with snapshots, go to Amazon Redshift Snapshots in the *Amazon Redshift Cluster Management Guide*.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The identifier of the cluster that will be created from restoring the snapshot.

Constraints:

- Must contain from 1 to 63 alphanumeric characters or hyphens.
- Alphabetic characters must be lowercase.
- First character must be a letter.
- Cannot end with a hyphen or contain two consecutive hyphens.
- Must be unique for all clusters within an AWS account.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

AdditionalInfo

Reserved.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

AllowVersionUpgrade

If `true`, major version upgrades can be applied during the maintenance window to the Amazon Redshift engine that is running on the cluster.

Default: `true`

Type: Boolean

Required: No

AquaConfigurationStatus

This parameter is retired. It does not set the AQUA configuration status. Amazon Redshift automatically determines whether to use AQUA (Advanced Query Accelerator).

Type: String

Valid Values: `enabled | disabled | auto`

Required: No

AutomatedSnapshotRetentionPeriod

The number of days that automated snapshots are retained. If the value is 0, automated snapshots are disabled. Even if automated snapshots are disabled, you can still create manual snapshots when you want with CreateClusterSnapshot.

You can't disable automated snapshots for RA3 node types. Set the automated retention period from 1-35 days.

Default: The value selected for the cluster from which the snapshot was taken.

Constraints: Must be a value from 0 to 35.

Type: Integer

Required: No

AvailabilityZone

The Amazon EC2 Availability Zone in which to restore the cluster.

Default: A random, system-chosen Availability Zone.

Example: `us-east-2a`

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

AvailabilityZoneRelocation

The option to enable relocation for an Amazon Redshift cluster between Availability Zones after the cluster is restored.

Type: Boolean

Required: No

ClusterParameterGroupName

The name of the parameter group to be associated with this cluster.

Default: The default Amazon Redshift cluster parameter group. For information about the default parameter group, go to Working with Amazon Redshift Parameter Groups.

Constraints:

- Must be 1 to 255 alphanumeric characters or hyphens.
- First character must be a letter.
- Cannot end with a hyphen or contain two consecutive hyphens.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ClusterSecurityGroups.ClusterSecurityGroupName.N

A list of security groups to be associated with this cluster.

Default: The default cluster security group for Amazon Redshift.

Cluster security groups only apply to clusters outside of VPCs.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

ClusterSubnetGroupName

The name of the subnet group where you want to cluster restored.

A snapshot of cluster in VPC can be restored only in VPC. Therefore, you must provide subnet group name where you want the cluster restored.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

DefaultIamRoleArn

The Amazon Resource Name (ARN) for the IAM role that was set as default for the cluster when the cluster was last modified while it was restored from a snapshot.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ElasticIp

The Elastic IP (EIP) address for the cluster. Don't specify the Elastic IP address for a publicly accessible cluster with availability zone relocation turned on.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Encrypted

Enables support for restoring an unencrypted snapshot to a cluster encrypted with AWS Key Management Service (KMS) and a customer managed key.

Type: Boolean

Required: No

EnhancedVpcRouting

An option that specifies whether to create the cluster with enhanced VPC routing enabled. To create a cluster that uses enhanced VPC routing, the cluster must be in a VPC. For more information, see Enhanced VPC Routing in the Amazon Redshift Cluster Management Guide.

If this option is `true`, enhanced VPC routing is enabled.

Default: false

Type: Boolean

Required: No

HsmClientCertificateIdentifier

Specifies the name of the HSM client certificate the Amazon Redshift cluster uses to retrieve the data encryption keys stored in an HSM.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

HsmConfigurationIdentifier

Specifies the name of the HSM configuration that contains the information the Amazon Redshift cluster can use to retrieve and store keys in an HSM.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

IamRoles.IamRoleArn.N

A list of AWS Identity and Access Management (IAM) roles that can be used by the cluster to access other AWS services. You must supply the IAM roles in their Amazon Resource Name (ARN) format.

The maximum number of IAM roles that you can associate is subject to a quota. For more information, go to Quotas and limits in the *Amazon Redshift Cluster Management Guide*.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

IpAddressType

The IP address type for the cluster. Possible values are `ipv4` and `dualstack`.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

KmsKeyId

The AWS Key Management Service (KMS) key ID of the encryption key that encrypts data in the cluster restored from a shared snapshot. You can also provide the key ID when you restore from an unencrypted snapshot to an encrypted cluster in the same account. Additionally, you can specify a new KMS key ID when you restore from an encrypted snapshot in the same account in order to change it. In that case, the restored cluster is encrypted with the new KMS key ID.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaintenanceTrackName

The name of the maintenance track for the restored cluster. When you take a snapshot, the snapshot inherits the `MaintenanceTrack` value from the cluster. The snapshot might be on a different track than the cluster that was the source for the snapshot. For example, suppose that you take a snapshot of a cluster that is on the current track and then change the cluster to be on the trailing track. In this case, the snapshot and the source cluster are on different tracks.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ManageMasterPassword

If `true`, Amazon Redshift uses AWS Secrets Manager to manage the restored cluster's admin credentials. If `ManageMasterPassword` is false or not set, Amazon Redshift uses the admin credentials the cluster had at the time the snapshot was taken.

Type: Boolean

Required: No

ManualSnapshotRetentionPeriod

The default number of days to retain a manual snapshot. If the value is -1, the snapshot is retained indefinitely. This setting doesn't change the retention period of existing snapshots.

The value must be either -1 or an integer between 1 and 3,653.

Type: Integer

Required: No

MasterPasswordSecretKmsKeyId

The ID of the AWS Key Management Service (KMS) key used to encrypt and store the cluster's admin credentials secret. You can only use this parameter if `ManageMasterPassword` is true.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MultiAZ

If true, the snapshot will be restored to a cluster deployed in two Availability Zones.

Type: Boolean

Required: No

NodeType

The node type that the restored cluster will be provisioned with.

If you have a DC instance type, you must restore into that same instance type and size. In other words, you can only restore a dc2.large node type into another dc2 type. For more information about node types, see About Clusters and Nodes in the *Amazon Redshift Cluster Management Guide*.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

NumberOfNodes

The number of nodes specified when provisioning the restored cluster.

Type: Integer

Required: No

OwnerAccount

The AWS account used to create or copy the snapshot. Required if you are restoring a snapshot you do not own, optional if you own the snapshot.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Port

The port number on which the cluster accepts connections.

Default: The same port as the original cluster.

Valid values: For clusters with DC2 nodes, must be within the range `1150-65535`. For clusters with ra3 nodes, must be within the ranges `5431-5455` or `8191-8215`.

Type: Integer

Required: No

PreferredMaintenanceWindow

The weekly time range (in UTC) during which automated cluster maintenance can occur.

Format: `ddd:hh24:mi-ddd:hh24:mi`

Default: The value selected for the cluster from which the snapshot was taken. For more information about the time blocks for each region, see Maintenance Windows in Amazon Redshift Cluster Management Guide.

Valid Days: Mon | Tue | Wed | Thu | Fri | Sat | Sun

Constraints: Minimum 30-minute window.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

PubliclyAccessible

If `true`, the cluster can be accessed from a public network.

Default: false

Type: Boolean

Required: No

ReservedNodeId

The identifier of the target reserved node offering.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SnapshotArn

The Amazon Resource Name (ARN) of the snapshot associated with the message to restore from a cluster. You must specify this parameter or `snapshotIdentifier`, but not both.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SnapshotClusterIdentifier

The name of the cluster the source snapshot was created from. This parameter is required if your IAM user has a policy containing a snapshot resource element that specifies anything other than * for the cluster name.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SnapshotIdentifier

The name of the snapshot from which to create the new cluster. This parameter isn't case sensitive. You must specify this parameter or `snapshotArn`, but not both.

Example: `my-snapshot-id`

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SnapshotScheduleIdentifier

A unique identifier for the snapshot schedule.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

TargetReservedNodeOfferingId

The identifier of the target reserved node offering.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

VpcSecurityGroupIds.VpcSecurityGroupId.N

A list of Virtual Private Cloud (VPC) security groups to be associated with the cluster.

Default: The default VPC security group is associated with the cluster.

VPC security groups only apply to clusters in VPCs.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following element is returned by the service.

Cluster

Describes a cluster.

Type: Cluster object

Errors

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

AccessToSnapshotDenied

The owner of the specified snapshot has not authorized your account to access the snapshot.

HTTP Status Code: 400

ClusterAlreadyExists

The account already has a cluster with the given identifier.

HTTP Status Code: 400

ClusterParameterGroupNotFound

The parameter group name does not refer to an existing parameter group.

HTTP Status Code: 404

ClusterQuotaExceeded

The request would exceed the allowed number of cluster instances for this account. For information about increasing your quota, go to Limits in Amazon Redshift in the *Amazon Redshift Cluster Management Guide*.

HTTP Status Code: 400

ClusterSecurityGroupNotFound

The cluster security group name does not refer to an existing cluster security group.

HTTP Status Code: 404

ClusterSnapshotNotFound

The snapshot identifier does not refer to an existing cluster snapshot.

HTTP Status Code: 404

ClusterSubnetGroupNotFoundFault

The cluster subnet group name does not refer to an existing cluster subnet group.

HTTP Status Code: 400

DependentServiceRequestThrottlingFault

The request cannot be completed because a dependent service is throttling requests made by Amazon Redshift on your behalf. Wait and retry the request.

HTTP Status Code: 400

DependentServiceUnavailableFault

Your request cannot be completed because a dependent internal service is temporarily unavailable. Wait 30 to 60 seconds and try again.

HTTP Status Code: 400

HsmClientCertificateNotFoundFault

There is no Amazon Redshift HSM client certificate with the specified identifier.

HTTP Status Code: 400

HsmConfigurationNotFoundFault

There is no Amazon Redshift HSM configuration with the specified identifier.

HTTP Status Code: 400

InsufficientClusterCapacity

The number of nodes specified exceeds the allotted capacity of the cluster.

HTTP Status Code: 400

InvalidClusterSnapshotState

The specified cluster snapshot is not in the `available` state, or other accounts are authorized to access the snapshot.

HTTP Status Code: 400

InvalidClusterSubnetGroupStateFault

The cluster subnet group cannot be deleted because it is in use.

HTTP Status Code: 400

InvalidClusterTrack

The provided cluster track name is not valid.

HTTP Status Code: 400

InvalidElasticIpFault

The Elastic IP (EIP) is invalid or cannot be found.

HTTP Status Code: 400

InvalidReservedNodeState

Indicates that the Reserved Node being exchanged is not in an active state.

HTTP Status Code: 400

InvalidRestore

The restore is invalid.

HTTP Status Code: 406

InvalidSubnet

The requested subnet is not valid, or not all of the subnets are in the same VPC.

HTTP Status Code: 400

InvalidTagFault

The tag is invalid.

HTTP Status Code: 400

InvalidVPCNetworkStateFault

The cluster subnet group does not cover all Availability Zones.

HTTP Status Code: 400

Ipv6CidrBlockNotFoundFault

There are no subnets in your VPC with associated IPv6 CIDR blocks. To use dual-stack mode, associate an IPv6 CIDR block with each subnet in your VPC.

HTTP Status Code: 400

LimitExceededFault

The encryption key has exceeded its grant limit in AWS KMS.

HTTP Status Code: 400

NumberOfNodesPerClusterLimitExceeded

The operation would exceed the number of nodes allowed for a cluster.

HTTP Status Code: 400

NumberOfNodesQuotaExceeded

The operation would exceed the number of nodes allotted to the account. For information about increasing your quota, go to Limits in Amazon Redshift in the *Amazon Redshift Cluster Management Guide*.

HTTP Status Code: 400

ReservedNodeAlreadyExists

User already has a reservation with the given identifier.

HTTP Status Code: 404

ReservedNodeAlreadyMigrated

Indicates that the reserved node has already been exchanged.

HTTP Status Code: 400

ReservedNodeNotFound

The specified reserved compute node not found.

HTTP Status Code: 404

ReservedNodeOfferingNotFound

Specified offering does not exist.

HTTP Status Code: 404

SnapshotScheduleNotFound

We could not find the specified snapshot schedule.

HTTP Status Code: 400

TagLimitExceededFault

You have exceeded the number of tags allowed.

HTTP Status Code: 400

UnauthorizedOperation

Your account is not authorized to perform the requested operation.

HTTP Status Code: 400

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of RestoreFromClusterSnapshot.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=RestoreFromClusterSnapshot
&ClusterIdentifier=mycluster
&SnapshotIdentifier=mysnapshotid
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<RestoreFromClusterSnapshotResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <RestoreFromClusterSnapshotResult>
    <Cluster>
      <AllowVersionUpgrade>true</AllowVersionUpgrade>
      <ClusterIdentifier>mycluster</ClusterIdentifier>
      <NumberOfNodes>1</NumberOfNodes>
      <ClusterVersion>1.0</ClusterVersion>
      <ManualSnapshotRetentionPeriod>-1</ManualSnapshotRetentionPeriod>
      <ClusterAvailabilityStatus>Modifying</ClusterAvailabilityStatus>
      <VpcId>vpc-a1abc1a1</VpcId>
      <PubliclyAccessible>false</PubliclyAccessible>
      <MasterUsername>adminuser</MasterUsername>
      <DBName>dev</DBName>
```

```
      <EnhancedVpcRouting>false</EnhancedVpcRouting>
      <IamRoles/>
      <ClusterSecurityGroups/>
      <NodeType>dc2.large</NodeType>
      <ClusterSubnetGroupName>default</ClusterSubnetGroupName>
      <NextMaintenanceWindowStartTime>2019-12-29T23:15:00Z</
NextMaintenanceWindowStartTime>
      <DeferredMaintenanceWindows/>
      <Tags/>
      <VpcSecurityGroups>
        <VpcSecurityGroup>
          <VpcSecurityGroupId>sh-a1a123ab</VpcSecurityGroupId>
          <Status>active</Status>
        </VpcSecurityGroup>
      </VpcSecurityGroups>
      <ClusterParameterGroups>
        <ClusterParameterGroup>
          <ParameterGroupName>default.redshift-1.0</ParameterGroupName>
          <ParameterApplyStatus>in-sync</ParameterApplyStatus>
        </ClusterParameterGroup>
      </ClusterParameterGroups>
      <Encrypted>false</Encrypted>
      <MaintenanceTrackName>current</MaintenanceTrackName>
      <PendingModifiedValues/>
      <PreferredMaintenanceWindow>sun:23:15-sun:23:45</PreferredMaintenanceWindow>
      <AutomatedSnapshotRetentionPeriod>1</AutomatedSnapshotRetentionPeriod>
      <ClusterStatus>creating</ClusterStatus>
    </Cluster>
  </RestoreFromClusterSnapshotResult>
  <ResponseMetadata>
    <RequestId>56190ef5-28f6-11ea-8a28-2fd1719d0e86</RequestId>
  </ResponseMetadata>
</RestoreFromClusterSnapshotResponse>
```

See Also

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

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

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

RestoreTableFromClusterSnapshot

Creates a new table from a table in an Amazon Redshift cluster snapshot. You must create the new table within the Amazon Redshift cluster that the snapshot was taken from.

You cannot use `RestoreTableFromClusterSnapshot` to restore a table with the same name as an existing table in an Amazon Redshift cluster. That is, you cannot overwrite an existing table in a cluster with a restored table. If you want to replace your original table with a new, restored table, then rename or drop your original table before you call `RestoreTableFromClusterSnapshot`. When you have renamed your original table, then you can pass the original name of the table as the `NewTableName` parameter value in the call to `RestoreTableFromClusterSnapshot`. This way, you can replace the original table with the table created from the snapshot.

You can't use this operation to restore tables with interleaved sort keys.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The identifier of the Amazon Redshift cluster to restore the table to.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

NewTableName

The name of the table to create as a result of the current request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

SnapshotIdentifier

The identifier of the snapshot to restore the table from. This snapshot must have been created from the Amazon Redshift cluster specified by the `ClusterIdentifier` parameter.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

SourceDatabaseName

The name of the source database that contains the table to restore from.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

SourceTableName

The name of the source table to restore from.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

EnableCaseSensitiveIdentifier

Indicates whether name identifiers for database, schema, and table are case sensitive. If `true`, the names are case sensitive. If `false` (default), the names are not case sensitive.

Type: Boolean

Required: No

SourceSchemaName

The name of the source schema that contains the table to restore from. If you do not specify a `SourceSchemaName` value, the default is `public`.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

TargetDatabaseName

The name of the database to restore the table to.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

TargetSchemaName

The name of the schema to restore the table to.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following element is returned by the service.

TableRestoreStatus

Describes the status of a RestoreTableFromClusterSnapshot operation.

Type: TableRestoreStatus object

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

ClusterSnapshotNotFound

The snapshot identifier does not refer to an existing cluster snapshot.

HTTP Status Code: 404

InProgressTableRestoreQuotaExceededFault

You have exceeded the allowed number of table restore requests. Wait for your current table restore requests to complete before making a new request.

HTTP Status Code: 400

InvalidClusterSnapshotState

The specified cluster snapshot is not in the `available` state, or other accounts are authorized to access the snapshot.

HTTP Status Code: 400

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

InvalidTableRestoreArgument

The value specified for the `sourceDatabaseName`, `sourceSchemaName`, or `sourceTableName` parameter, or a combination of these, doesn't exist in the snapshot.

HTTP Status Code: 400

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of RestoreTableFromClusterSnapshot.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=RestoreTableFromClusterSnapshot
&ClusterIdentifier=mycluster
&SnapshotIdentifier=mysnapshotid
&SourceDatabaseName=dev
&SourceSchemaName=public
&SourceTableName=mytable
&TargetDatabaseName=dev
&TargetSchemaName=public
&NewTableName=mytable-clone
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<RestoreTableFromClusterSnapshotResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <RestoreTableFromClusterSnapshotResult>
    <TableRestoreStatus>
      <NewTableName>mytable-clone</NewTableName>
      <ClusterIdentifier>mycluster</ClusterIdentifier>
      <SnapshotIdentifier>mysnapshotid</SnapshotIdentifier>
      <RequestTime>2019-12-27T18:22:12.257Z</RequestTime>
      <SourceTableName>mytable</SourceTableName>
      <SourceDatabaseName>dev</SourceDatabaseName>
      <TableRestoreRequestId>z1116630-0e80-46f4-ba86-bd9670411ebd</
TableRestoreRequestId>
      <TargetDatabaseName>dev</TargetDatabaseName>
      <SourceSchemaName>public</SourceSchemaName>
      <TargetSchemaName>public</TargetSchemaName>
      <Status>PENDING</Status>
    </TableRestoreStatus>
  </RestoreTableFromClusterSnapshotResult>
  <ResponseMetadata>
    <RequestId>cd0df3b1-28d5-11ea-a07c-5d44c0d19e91</RequestId>
  </ResponseMetadata>
```

```
</RestoreTableFromClusterSnapshotResponse>
```

See Also

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

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

ResumeCluster

Resumes a paused cluster.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The identifier of the cluster to be resumed.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Response Elements

The following element is returned by the service.

Cluster

Describes a cluster.

Type: Cluster object

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

InsufficientClusterCapacity

The number of nodes specified exceeds the allotted capacity of the cluster.

HTTP Status Code: 400

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

RevokeClusterSecurityGroupIngress

Revokes an ingress rule in an Amazon Redshift security group for a previously authorized IP range or Amazon EC2 security group. To add an ingress rule, see AuthorizeClusterSecurityGroupIngress. For information about managing security groups, go to Amazon Redshift Cluster Security Groups in the *Amazon Redshift Cluster Management Guide*.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterSecurityGroupName

The name of the security Group from which to revoke the ingress rule.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

CIDRIP

The IP range for which to revoke access. This range must be a valid Classless Inter-Domain Routing (CIDR) block of IP addresses. If `CIDRIP` is specified, `EC2SecurityGroupName` and `EC2SecurityGroupOwnerId` cannot be provided.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

EC2SecurityGroupName

The name of the EC2 Security Group whose access is to be revoked. If `EC2SecurityGroupName` is specified, `EC2SecurityGroupOwnerId` must also be provided and `CIDRIP` cannot be provided.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

EC2SecurityGroupOwnerId

The AWS account number of the owner of the security group specified in the `EC2SecurityGroupName` parameter. The AWS access key ID is not an acceptable value. If `EC2SecurityGroupOwnerId` is specified, `EC2SecurityGroupName` must also be provided. and `CIDRIP` cannot be provided.

Example: `111122223333`

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following element is returned by the service.

ClusterSecurityGroup

Describes a security group.

Type: ClusterSecurityGroup object

Errors

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

AuthorizationNotFound

The specified CIDR IP range or EC2 security group is not authorized for the specified cluster security group.

HTTP Status Code: 404

ClusterSecurityGroupNotFound

The cluster security group name does not refer to an existing cluster security group.

HTTP Status Code: 404

InvalidClusterSecurityGroupState

The state of the cluster security group is not `available`.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of RevokeClusterSecurityGroupIngress.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
    ?Action=RevokeClusterSecurityGroupIngress
    &ClusterSecurityGroupName=securitygroup1
    &CIDRIP=192.168.40.3/32
    &Version=2012-12-01
    &x-amz-algorithm=AWS4-HMAC-SHA256
    &x-amz-credential=AKIAIOSFODNN7EXAMPLE/20130123/us-east-2/redshift/aws4_request
    &x-amz-date=20130123T021606Z
    &x-amz-signedheaders=content-type;host;x-amz-date
```

Sample Response

```
<RevokeClusterSecurityGroupIngressResponse xmlns="http://redshift.amazonaws.com/
doc/2012-12-01/">
  <RevokeClusterSecurityGroupIngressResult>
    <ClusterSecurityGroup>
      <EC2SecurityGroups/>
      <IPRanges/>
      <Description>my security group</Description>
      <ClusterSecurityGroupName>securitygroup1</ClusterSecurityGroupName>
    </ClusterSecurityGroup>
  </RevokeClusterSecurityGroupIngressResult>
  <ResponseMetadata>
    <RequestId>d8eff363-6502-11e2-a8da-655adc216806</RequestId>
  </ResponseMetadata>
</RevokeClusterSecurityGroupIngressResponse>
```

See Also

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

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

RevokeEndpointAccess

Revokes access to a cluster.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

Account

The AWS account ID whose access is to be revoked.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ClusterIdentifier

The cluster to revoke access from.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Force

Indicates whether to force the revoke action. If true, the Redshift-managed VPC endpoints associated with the endpoint authorization are also deleted.

Type: Boolean

Required: No

VpcIds.VpcIdentifier.N

The virtual private cloud (VPC) identifiers for which access is to be revoked.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following elements are returned by the service.

AllowedAllVPCs

Indicates whether all VPCs in the grantee account are allowed access to the cluster.

Type: Boolean

AllowedVPCs.VpcIdentifier.N

The VPCs allowed access to the cluster.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

AuthorizeTime

The time (UTC) when the authorization was created.

Type: Timestamp

ClusterIdentifier

The cluster identifier.

Type: String

Length Constraints: Maximum length of 2147483647.

ClusterStatus

The status of the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

EndpointCount

The number of Redshift-managed VPC endpoints created for the authorization.

Type: Integer

Grantee

The AWS account ID of the grantee of the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Grantor

The AWS account ID of the cluster owner.

Type: String

Length Constraints: Maximum length of 2147483647.

Status

The status of the authorization action.

Type: String

Valid Values: `Authorized | Revoking`

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

EndpointAuthorizationNotFound

The authorization for this endpoint can't be found.

HTTP Status Code: 404

EndpointNotFound

The endpoint name doesn't refer to an existing endpoint.

HTTP Status Code: 404

InvalidAuthorizationState

The status of the authorization is not valid.

HTTP Status Code: 400

InvalidClusterSecurityGroupState

The state of the cluster security group is not `available`.

HTTP Status Code: 400

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

InvalidEndpointState

The status of the endpoint is not valid.

HTTP Status Code: 400

See Also

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

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

RevokeSnapshotAccess

Removes the ability of the specified AWS account to restore the specified snapshot. If the account is currently restoring the snapshot, the restore will run to completion.

For more information about working with snapshots, go to Amazon Redshift Snapshots in the *Amazon Redshift Cluster Management Guide*.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

AccountWithRestoreAccess

The identifier of the AWS account that can no longer restore the specified snapshot.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

SnapshotArn

The Amazon Resource Name (ARN) of the snapshot associated with the message to revoke access.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SnapshotClusterIdentifier

The identifier of the cluster the snapshot was created from. This parameter is required if your IAM user has a policy containing a snapshot resource element that specifies anything other than * for the cluster name.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SnapshotIdentifier

The identifier of the snapshot that the account can no longer access.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Response Elements

The following element is returned by the service.

Snapshot

Describes a snapshot.

Type: Snapshot object

Errors

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

AccessToSnapshotDenied

The owner of the specified snapshot has not authorized your account to access the snapshot.

HTTP Status Code: 400

AuthorizationNotFound

The specified CIDR IP range or EC2 security group is not authorized for the specified cluster security group.

HTTP Status Code: 404

ClusterSnapshotNotFound

The snapshot identifier does not refer to an existing cluster snapshot.

HTTP Status Code: 404

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

RotateEncryptionKey

Rotates the encryption keys for a cluster.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

ClusterIdentifier

The unique identifier of the cluster that you want to rotate the encryption keys for.

Constraints: Must be the name of valid cluster that has encryption enabled.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Response Elements

The following element is returned by the service.

Cluster

Describes a cluster.

Type: Cluster object

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

DependentServiceRequestThrottlingFault

The request cannot be completed because a dependent service is throttling requests made by Amazon Redshift on your behalf. Wait and retry the request.

HTTP Status Code: 400

InvalidClusterState

The specified cluster is not in the `available` state.

HTTP Status Code: 400

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

Examples

Example

This example illustrates one usage of RotateEncryptionKey.

Sample Request

```
https://redshift.us-east-2.amazonaws.com/
       ?Action=RotateEncryptionKey
&ClusterIdentifier=mycluster
&SignatureMethod=HmacSHA256&SignatureVersion=4
&Version=2012-12-01
&X-Amz-Algorithm=AWS4-HMAC-SHA256
&X-Amz-Credential=AKIAIOSFODNN7EXAMPLE/20190817/us-east-2/redshift/aws4_request
&X-Amz-Date=20190825T160000Z
&X-Amz-SignedHeaders=content-type;host;user-agent;x-amz-content-sha256;x-amz-date
&X-Amz-Signature=0aa1234bb5cc678ddddd901ee2ff3aa45678b90c12d345e6ff789012345a6b7b
```

Sample Response

```
<RotateEncryptionKeyResponse xmlns="http://redshift.amazonaws.com/doc/2012-12-01/">
  <RotateEncryptionKeyResult>
    <Cluster>
      <AllowVersionUpgrade>true</AllowVersionUpgrade>
```

```
      <ClusterIdentifier>mycluster</ClusterIdentifier>
      <NumberOfNodes>1</NumberOfNodes>
      <AvailabilityZone>us-east-2a</AvailabilityZone>
      <ClusterVersion>1.0</ClusterVersion>
      <ManualSnapshotRetentionPeriod>-1</ManualSnapshotRetentionPeriod>
      <ClusterAvailabilityStatus>Modifying</ClusterAvailabilityStatus>
      <Endpoint>
        <Port>5439</Port>
        <Address>mycluster.cmeaswqeuae.us-east-2.redshift.amazonaws.com</Address>
      </Endpoint>
      <VpcId>vpc-a1abc1a1</VpcId>
      <PubliclyAccessible>false</PubliclyAccessible>
      <ClusterCreateTime>2019-12-25T11:21:49.458Z</ClusterCreateTime>
      <MasterUsername>adminuser</MasterUsername>
      <DBName>dev</DBName>
      <EnhancedVpcRouting>false</EnhancedVpcRouting>
      <IamRoles>
        <ClusterIamRole>
          <IamRoleArn>arn:aws:iam::123456789012:role/myRedshiftRole</IamRoleArn>
          <ApplyStatus>in-sync</ApplyStatus>
        </ClusterIamRole>
      </IamRoles>
      <ClusterSecurityGroups/>
      <NodeType>dc2.large</NodeType>
      <ClusterSubnetGroupName>default</ClusterSubnetGroupName>
      <NextMaintenanceWindowStartTime>2019-12-28T16:00:00Z</
NextMaintenanceWindowStartTime>
      <DeferredMaintenanceWindows/>
      <Tags/>
      <VpcSecurityGroups>
        <VpcSecurityGroup>
          <VpcSecurityGroupId>sh-a1a123ab</VpcSecurityGroupId>
          <Status>active</Status>
        </VpcSecurityGroup>
      </VpcSecurityGroups>
      <ClusterParameterGroups>
        <ClusterParameterGroup>
          <ParameterGroupName>default.redshift-1.0</ParameterGroupName>
          <ParameterApplyStatus>in-sync</ParameterApplyStatus>
        </ClusterParameterGroup>
      </ClusterParameterGroups>
      <Encrypted>true</Encrypted>
      <MaintenanceTrackName>current</MaintenanceTrackName>
      <PendingModifiedValues/>
```

```
      <PreferredMaintenanceWindow>sat:16:00-sat:16:30</PreferredMaintenanceWindow>
      <KmsKeyId>arn:aws:kms:us-east-2:123456789012:key/bPxRfih3yCo8nvbEXAMPLEKEY</
KmsKeyId>
      <AutomatedSnapshotRetentionPeriod>1</AutomatedSnapshotRetentionPeriod>
      <ClusterStatus>rotating-keys</ClusterStatus>
    </Cluster>
  </RotateEncryptionKeyResult>
  <ResponseMetadata>
    <RequestId>0cdb408d-28f7-11ea-8a28-2fd1719d0e86</RequestId>
  </ResponseMetadata>
</RotateEncryptionKeyResponse>
```

See Also

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

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

UpdatePartnerStatus

Updates the status of a partner integration.

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters.

AccountId

The AWS account ID that owns the cluster.

Type: String

Length Constraints: Fixed length of 12.

Pattern: `^[0-9]+$`

Required: Yes

ClusterIdentifier

The cluster identifier of the cluster whose partner integration status is being updated.

Type: String

Length Constraints: Maximum length of 63.

Pattern: `^[a-zA-Z0-9\-]+$`

Required: Yes

DatabaseName

The name of the database whose partner integration status is being updated.

Type: String

Length Constraints: Maximum length of 127.

Pattern: `^[\p{L}_][\p{L}\p{N}@$#_]+$`

Required: Yes

PartnerName

The name of the partner whose integration status is being updated.

Type: String

Length Constraints: Maximum length of 255.

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

Required: Yes

Status

The value of the updated status.

Type: String

Valid Values: `Active | Inactive | RuntimeFailure | ConnectionFailure`

Required: Yes

StatusMessage

The status message provided by the partner.

Type: String

Length Constraints: Maximum length of 262144.

Pattern: `^[\x20-\x7E]+$`

Required: No

Response Elements

The following elements are returned by the service.

DatabaseName

The name of the database that receives data from the partner.

Type: String

Length Constraints: Maximum length of 127.

Pattern: `^[\p{L}_][\p{L}\p{N}@$#_]+$`

PartnerName

The name of the partner that is authorized to send data.

Type: String

Length Constraints: Maximum length of 255.

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

Errors

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

ClusterNotFound

The `ClusterIdentifier` parameter does not refer to an existing cluster.

HTTP Status Code: 404

PartnerNotFound

The name of the partner was not found.

HTTP Status Code: 404

UnauthorizedPartnerIntegration

The partner integration is not authorized.

HTTP Status Code: 401

UnsupportedOperation

The requested operation isn't supported.

HTTP Status Code: 400

See Also

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

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

Data Types

The Amazon Redshift 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:

- AccountAttribute
- AccountWithRestoreAccess
- AquaConfiguration
- Association
- AttributeValueTarget
- AuthenticationProfile
- AuthorizedTokenIssuer
- AvailabilityZone
- CertificateAssociation
- Cluster
- ClusterAssociatedToSchedule
- ClusterDbRevision
- ClusterIamRole
- ClusterNode
- ClusterParameterGroup
- ClusterParameterGroupStatus
- ClusterParameterStatus
- ClusterSecurityGroup
- ClusterSecurityGroupMembership
- ClusterSnapshotCopyStatus

- ClusterSubnetGroup
- ClusterVersion
- DataShare
- DataShareAssociation
- DataTransferProgress
- DefaultClusterParameters
- DeferredMaintenanceWindow
- DeleteClusterSnapshotMessage
- DescribeIntegrationsFilter
- EC2SecurityGroup
- ElasticIpStatus
- Endpoint
- EndpointAccess
- EndpointAuthorization
- Event
- EventCategoriesMap
- EventInfoMap
- EventSubscription
- HsmClientCertificate
- HsmConfiguration
- HsmStatus
- InboundIntegration
- Integration
- IntegrationError
- IPRange
- LakeFormationQuery
- LakeFormationScopeUnion
- MaintenanceTrack
- NamespaceIdentifierUnion
- NetworkInterface

- NodeConfigurationOption
- NodeConfigurationOptionsFilter
- OrderableClusterOption
- Parameter
- PartnerIntegrationInfo
- PauseClusterMessage
- PendingModifiedValues
- ProvisionedIdentifier
- ReadWriteAccess
- Recommendation
- RecommendedAction
- RecurringCharge
- RedshiftIdcApplication
- ReferenceLink
- ReservedNode
- ReservedNodeConfigurationOption
- ReservedNodeExchangeStatus
- ReservedNodeOffering
- ResizeClusterMessage
- ResizeInfo
- ResourcePolicy
- RestoreStatus
- ResumeClusterMessage
- RevisionTarget
- S3AccessGrantsScopeUnion
- ScheduledAction
- ScheduledActionFilter
- ScheduledActionType
- SecondaryClusterInfo
- ServerlessIdentifier

- ServiceIntegrationsUnion
- Snapshot
- SnapshotCopyGrant
- SnapshotErrorMessage
- SnapshotSchedule
- SnapshotSortingEntity
- Subnet
- SupportedOperation
- SupportedPlatform
- TableRestoreStatus
- Tag
- TaggedResource
- UpdateTarget
- UsageLimit
- VpcEndpoint
- VpcSecurityGroupMembership

AccountAttribute

A name value pair that describes an aspect of an account.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

AttributeName

The name of the attribute.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

AttributeValues.AttributeValueTarget.N

A list of attribute values.

Type: Array of AttributeValueTarget 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

AccountWithRestoreAccess

Describes an AWS account authorized to restore a snapshot.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

AccountAlias

The identifier of an AWS support account authorized to restore a snapshot. For Support, the identifier is `amazon-redshift-support`.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

AccountId

The identifier of an AWS account authorized to restore a snapshot.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AquaConfiguration

The operation that uses this structure is retired. Amazon Redshift automatically determines whether to use AQUA (Advanced Query Accelerator).

Contents

> **Note**
>
> In the following list, the required parameters are described first.

AquaConfigurationStatus

This field is retired. Amazon Redshift automatically determines whether to use AQUA (Advanced Query Accelerator).

Type: String

Valid Values: `enabled | disabled | auto`

Required: No

AquaStatus

This field is retired. Amazon Redshift automatically determines whether to use AQUA (Advanced Query Accelerator).

Type: String

Valid Values: `enabled | disabled | applying`

Required: No

See Also

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

- AWS SDK for C++

- AWS SDK for Java V2
- AWS SDK for Ruby V3

Association

Contains information about the custom domain name association.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

CertificateAssociations.CertificateAssociation.N

A list of all associated clusters and domain names tied to a specific certificate.

Type: Array of CertificateAssociation objects

Required: No

CustomDomainCertificateArn

The Amazon Resource Name (ARN) for the certificate associated with the custom domain.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

CustomDomainCertificateExpiryDate

The expiration date for the certificate.

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

AttributeValueTarget

Describes an attribute value.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

AttributeValue

The value of the attribute.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

AuthenticationProfile

Describes an authentication profile.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

AuthenticationProfileContent

The content of the authentication profile in JSON format. The maximum length of the JSON string is determined by a quota for your account.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

AuthenticationProfileName

The name of the authentication profile.

Type: String

Length Constraints: Maximum length of 63.

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

AuthorizedTokenIssuer

The authorized token issuer for the Amazon Redshift IAM Identity Center application.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

AuthorizedAudiencesList.member.N

The list of audiences for the authorized token issuer for integrating Amazon Redshift with IDC Identity Center.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

TrustedTokenIssuerArn

The ARN for the authorized token issuer for integrating Amazon Redshift with IDC Identity Center.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2

- AWS SDK for Ruby V3

AvailabilityZone

Describes an availability zone.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

Name

The name of the availability zone.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SupportedPlatforms.SupportedPlatform.N

Type: Array of SupportedPlatform 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

CertificateAssociation

A cluster ID and custom domain name tied to a specific certificate. These are typically returned in a list.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

ClusterIdentifier

The cluster identifier for the certificate association.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

CustomDomainName

The custom domain name for the certificate association.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Cluster

Describes a cluster.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

AllowVersionUpgrade

A boolean value that, if `true`, indicates that major version upgrades will be applied automatically to the cluster during the maintenance window.

Type: Boolean

Required: No

AquaConfiguration

This field is retired. Amazon Redshift automatically determines whether to use AQUA (Advanced Query Accelerator).

Type: AquaConfiguration object

Required: No

AutomatedSnapshotRetentionPeriod

The number of days that automatic cluster snapshots are retained.

Type: Integer

Required: No

AvailabilityZone

The name of the Availability Zone in which the cluster is located.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

AvailabilityZoneRelocationStatus

Describes the status of the Availability Zone relocation operation.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ClusterAvailabilityStatus

The availability status of the cluster for queries. Possible values are the following:

- Available - The cluster is available for queries.
- Unavailable - The cluster is not available for queries.
- Maintenance - The cluster is intermittently available for queries due to maintenance activities.
- Modifying - The cluster is intermittently available for queries due to changes that modify the cluster.
- Failed - The cluster failed and is not available for queries.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ClusterCreateTime

The date and time that the cluster was created.

Type: Timestamp

Required: No

ClusterIdentifier

The unique identifier of the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ClusterNamespaceArn

The namespace Amazon Resource Name (ARN) of the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ClusterNodes.member.N

The nodes in the cluster.

Type: Array of ClusterNode objects

Required: No

ClusterParameterGroups.ClusterParameterGroup.N

The list of cluster parameter groups that are associated with this cluster. Each parameter group in the list is returned with its status.

Type: Array of ClusterParameterGroupStatus objects

Required: No

ClusterPublicKey

The public key for the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ClusterRevisionNumber

The specific revision number of the database in the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ClusterSecurityGroups.ClusterSecurityGroup.N

A list of cluster security group that are associated with the cluster. Each security group is represented by an element that contains `ClusterSecurityGroup.Name` and `ClusterSecurityGroup.Status` subelements.

Cluster security groups are used when the cluster is not created in an Amazon Virtual Private Cloud (VPC). Clusters that are created in a VPC use VPC security groups, which are listed by the **VpcSecurityGroups** parameter.

Type: Array of ClusterSecurityGroupMembership objects

Required: No

ClusterSnapshotCopyStatus

A value that returns the destination region and retention period that are configured for cross-region snapshot copy.

Type: ClusterSnapshotCopyStatus object

Required: No

ClusterStatus

The current state of the cluster. Possible values are the following:

- `available`
- `available, prep-for-resize`
- `available, resize-cleanup`
- `cancelling-resize`
- `creating`
- `deleting`
- `final-snapshot`
- `hardware-failure`
- `incompatible-hsm`
- `incompatible-network`
- `incompatible-parameters`
- `incompatible-restore`

- `modifying`
- `paused`
- `rebooting`
- `renaming`
- `resizing`
- `rotating-keys`
- `storage-full`
- `updating-hsm`

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ClusterSubnetGroupName

The name of the subnet group that is associated with the cluster. This parameter is valid only when the cluster is in a VPC.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ClusterVersion

The version ID of the Amazon Redshift engine that is running on the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

CustomDomainCertificateArn

The certificate Amazon Resource Name (ARN) for the custom domain name.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

CustomDomainCertificateExpiryDate

The expiration date for the certificate associated with the custom domain name.

Type: Timestamp

Required: No

CustomDomainName

The custom domain name associated with the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

DataTransferProgress

Type: DataTransferProgress object

Required: No

DBName

The name of the initial database that was created when the cluster was created. This same name is returned for the life of the cluster. If an initial database was not specified, a database named `dev`dev was created by default.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

DefaultIamRoleArn

The Amazon Resource Name (ARN) for the IAM role set as default for the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

DeferredMaintenanceWindows.DeferredMaintenanceWindow.N

Describes a group of `DeferredMaintenanceWindow` objects.

Type: Array of DeferredMaintenanceWindow objects

Required: No

ElasticIpStatus

The status of the elastic IP (EIP) address.

Type: ElasticIpStatus object

Required: No

ElasticResizeNumberOfNodeOptions

The number of nodes that you can resize the cluster to with the elastic resize method.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Encrypted

A boolean value that, if `true`, indicates that data in the cluster is encrypted at rest.

Type: Boolean

Required: No

Endpoint

The connection endpoint.

Type: Endpoint object

Required: No

EnhancedVpcRouting

An option that specifies whether to create the cluster with enhanced VPC routing enabled. To create a cluster that uses enhanced VPC routing, the cluster must be in a VPC. For more information, see Enhanced VPC Routing in the Amazon Redshift Cluster Management Guide.

If this option is `true`, enhanced VPC routing is enabled.

Default: false

Type: Boolean

Required: No

ExpectedNextSnapshotScheduleTime

The date and time when the next snapshot is expected to be taken for clusters with a valid snapshot schedule and backups enabled.

Type: Timestamp

Required: No

ExpectedNextSnapshotScheduleTimeStatus

The status of next expected snapshot for clusters having a valid snapshot schedule and backups enabled. Possible values are the following:

- OnTrack - The next snapshot is expected to be taken on time.
- Pending - The next snapshot is pending to be taken.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

HsmStatus

A value that reports whether the Amazon Redshift cluster has finished applying any hardware security module (HSM) settings changes specified in a modify cluster command.

Values: active, applying

Type: HsmStatus object

Required: No

IamRoles.ClusterIamRole.N

A list of AWS Identity and Access Management (IAM) roles that can be used by the cluster to access other AWS services.

Type: Array of ClusterIamRole objects

Required: No

IpAddressType

The IP address type for the cluster. Possible values are `ipv4` and `dualstack`.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

KmsKeyId

The AWS Key Management Service (KMS) key ID of the encryption key used to encrypt data in the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaintenanceTrackName

The name of the maintenance track for the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ManualSnapshotRetentionPeriod

The default number of days to retain a manual snapshot. If the value is -1, the snapshot is retained indefinitely. This setting doesn't change the retention period of existing snapshots.

The value must be either -1 or an integer between 1 and 3,653.

Type: Integer

Required: No

MasterPasswordSecretArn

The Amazon Resource Name (ARN) for the cluster's admin user credentials secret.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MasterPasswordSecretKmsKeyId

The ID of the AWS Key Management Service (KMS) key used to encrypt and store the cluster's admin credentials secret.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MasterUsername

The admin user name for the cluster. This name is used to connect to the database that is specified in the **DBName** parameter.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ModifyStatus

The status of a modify operation, if any, initiated for the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MultiAZ

A boolean value that, if true, indicates that the cluster is deployed in two Availability Zones.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MultiAZSecondary

The secondary compute unit of a cluster, if Multi-AZ deployment is turned on.

Type: SecondaryClusterInfo object

Required: No

NextMaintenanceWindowStartTime

The date and time in UTC when system maintenance can begin.

Type: Timestamp

Required: No

NodeType

The node type for the nodes in the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

NumberOfNodes

The number of compute nodes in the cluster.

Type: Integer

Required: No

PendingActions.member.N

Cluster operations that are waiting to be started.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

PendingModifiedValues

A value that, if present, indicates that changes to the cluster are pending. Specific pending changes are identified by subelements.

Type: PendingModifiedValues object

Required: No

PreferredMaintenanceWindow

The weekly time range, in Universal Coordinated Time (UTC), during which system maintenance can occur.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

PubliclyAccessible

A boolean value that, if `true`, indicates that the cluster can be accessed from a public network.

Default: false

Type: Boolean

Required: No

ReservedNodeExchangeStatus

The status of the reserved-node exchange request. Statuses include in-progress and requested.

Type: ReservedNodeExchangeStatus object

Required: No

ResizeInfo

Returns the following:

- AllowCancelResize: a boolean value indicating if the resize operation can be cancelled.
- ResizeType: Returns ClassicResize

Type: ResizeInfo object

Required: No

RestoreStatus

A value that describes the status of a cluster restore action. This parameter returns null if the cluster was not created by restoring a snapshot.

Type: RestoreStatus object

Required: No

SnapshotScheduleIdentifier

A unique identifier for the cluster snapshot schedule.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SnapshotScheduleState

The current state of the cluster snapshot schedule.

Type: String

Valid Values: `MODIFYING | ACTIVE | FAILED`

Required: No

Tags.Tag.N

The list of tags for the cluster.

Type: Array of Tag objects

Required: No

TotalStorageCapacityInMegaBytes

The total storage capacity of the cluster in megabytes.

Type: Long

Required: No

VpcId

The identifier of the VPC the cluster is in, if the cluster is in a VPC.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

VpcSecurityGroups.VpcSecurityGroup.N

A list of Amazon Virtual Private Cloud (Amazon VPC) security groups that are associated with the cluster. This parameter is returned only if the cluster is in a VPC.

Type: Array of VpcSecurityGroupMembership 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

ClusterAssociatedToSchedule

Contents

> **Note**
>
> In the following list, the required parameters are described first.

ClusterIdentifier

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ScheduleAssociationState

Type: String

Valid Values: `MODIFYING | ACTIVE | FAILED`

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ClusterDbRevision

Describes a `ClusterDbRevision`.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

ClusterIdentifier

The unique identifier of the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

CurrentDatabaseRevision

A string representing the current cluster version.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

DatabaseRevisionReleaseDate

The date on which the database revision was released.

Type: Timestamp

Required: No

RevisionTargets.RevisionTarget.N

A list of `RevisionTarget` objects, where each object describes the database revision that a cluster can be updated to.

Type: Array of RevisionTarget 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

ClusterIamRole

An AWS Identity and Access Management (IAM) role that can be used by the associated Amazon Redshift cluster to access other AWS services.

Contents

> **Note**
> In the following list, the required parameters are described first.

ApplyStatus

A value that describes the status of the IAM role's association with an Amazon Redshift cluster.

The following are possible statuses and descriptions.

- `in-sync`: The role is available for use by the cluster.
- `adding`: The role is in the process of being associated with the cluster.
- `removing`: The role is in the process of being disassociated with the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

IamRoleArn

The Amazon Resource Name (ARN) of the IAM role, for example, `arn:aws:iam::123456789012:role/RedshiftCopyUnload`.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ClusterNode

The identifier of a node in a cluster.

Contents

> **Note**
> In the following list, the required parameters are described first.

NodeRole

Whether the node is a leader node or a compute node.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

PrivateIPAddress

The private IP address of a node within a cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

PublicIPAddress

The public IP address of a node within a cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ClusterParameterGroup

Describes a parameter group.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

Description

The description of the parameter group.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ParameterGroupFamily

The name of the cluster parameter group family that this cluster parameter group is compatible with.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ParameterGroupName

The name of the cluster parameter group.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Tags.Tag.N

The list of tags for the cluster parameter group.

Type: Array of Tag 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

ClusterParameterGroupStatus

Describes the status of a parameter group.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

ClusterParameterStatusList.member.N

The list of parameter statuses.

For more information about parameters and parameter groups, go to Amazon Redshift Parameter Groups in the *Amazon Redshift Cluster Management Guide*.

Type: Array of ClusterParameterStatus objects

Required: No

ParameterApplyStatus

The status of parameter updates.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ParameterGroupName

The name of the cluster parameter group.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ClusterParameterStatus

Describes the status of a parameter group.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

ParameterApplyErrorDescription

The error that prevented the parameter from being applied to the database.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ParameterApplyStatus

The status of the parameter that indicates whether the parameter is in sync with the database, waiting for a cluster reboot, or encountered an error when being applied.

The following are possible statuses and descriptions.

- `in-sync`: The parameter value is in sync with the database.
- `pending-reboot`: The parameter value will be applied after the cluster reboots.
- `applying`: The parameter value is being applied to the database.
- `invalid-parameter`: Cannot apply the parameter value because it has an invalid value or syntax.
- `apply-deferred`: The parameter contains static property changes. The changes are deferred until the cluster reboots.
- `apply-error`: Cannot connect to the cluster. The parameter change will be applied after the cluster reboots.
- `unknown-error`: Cannot apply the parameter change right now. The change will be applied after the cluster reboots.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ParameterName

The name of the parameter.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ClusterSecurityGroup

Describes a security group.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

ClusterSecurityGroupName

The name of the cluster security group to which the operation was applied.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Description

A description of the security group.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

EC2SecurityGroups.EC2SecurityGroup.N

A list of EC2 security groups that are permitted to access clusters associated with this cluster security group.

Type: Array of EC2SecurityGroup objects

Required: No

IPRanges.IPRange.N

A list of IP ranges (CIDR blocks) that are permitted to access clusters associated with this cluster security group.

Type: Array of IPRange objects

Required: No

Tags.Tag.N

The list of tags for the cluster security group.

Type: Array of Tag 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

ClusterSecurityGroupMembership

Describes a cluster security group.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

ClusterSecurityGroupName

The name of the cluster security group.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Status

The status of the cluster security group.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ClusterSnapshotCopyStatus

Returns the destination region and retention period that are configured for cross-region snapshot copy.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

DestinationRegion

The destination region that snapshots are automatically copied to when cross-region snapshot copy is enabled.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ManualSnapshotRetentionPeriod

The number of days that automated snapshots are retained in the destination region after they are copied from a source region. If the value is -1, the manual snapshot is retained indefinitely.

The value must be either -1 or an integer between 1 and 3,653.

Type: Integer

Required: No

RetentionPeriod

The number of days that automated snapshots are retained in the destination region after they are copied from a source region.

Type: Long

Required: No

SnapshotCopyGrantName

The name of the snapshot copy grant.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ClusterSubnetGroup

Describes a subnet group.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

ClusterSubnetGroupName

The name of the cluster subnet group.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Description

The description of the cluster subnet group.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SubnetGroupStatus

The status of the cluster subnet group. Possible values are `Complete`, `Incomplete` and `Invalid`.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Subnets.Subnet.N

A list of the VPC Subnet elements.

Type: Array of Subnet objects

Required: No

SupportedClusterIpAddressTypes.item.N

The IP address types supported by this cluster subnet group. Possible values are `ipv4` and `dualstack`.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

Tags.Tag.N

The list of tags for the cluster subnet group.

Type: Array of Tag objects

Required: No

VpcId

The VPC ID of the cluster subnet group.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ClusterVersion

Describes a cluster version, including the parameter group family and description of the version.

Contents

> **Note**
> In the following list, the required parameters are described first.

ClusterParameterGroupFamily

The name of the cluster parameter group family for the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ClusterVersion

The version number used by the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Description

The description of the cluster version.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

DataShare

Contents

> **Note**
>
> In the following list, the required parameters are described first.

AllowPubliclyAccessibleConsumers

A value that specifies whether the datashare can be shared to a publicly accessible cluster.

Type: Boolean

Required: No

DataShareArn

The Amazon Resource Name (ARN) of the datashare that the consumer is to use.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

DataShareAssociations.member.N

A value that specifies when the datashare has an association between producer and data consumers.

Type: Array of DataShareAssociation objects

Required: No

DataShareType

The type of the datashare created by RegisterNamespace.

Type: String

Valid Values: `INTERNAL`

Required: No

ManagedBy

The identifier of a datashare to show its managing entity.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ProducerArn

The Amazon Resource Name (ARN) of the producer namespace.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

DataShareAssociation

The association of a datashare from a producer account with a data consumer.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

ConsumerAcceptedWrites

Specifies whether write operations were allowed during data share association.

Type: Boolean

Required: No

ConsumerIdentifier

The name of the consumer accounts that have an association with a producer datashare.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ConsumerRegion

The AWS Region of the consumer accounts that have an association with a producer datashare.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

CreatedDate

The creation date of the datashare that is associated.

Type: Timestamp

Required: No

ProducerAllowedWrites

Specifies whether write operations were allowed during data share authorization.

Type: Boolean

Required: No

Status

The status of the datashare that is associated.

Type: String

Valid Values: `ACTIVE | PENDING_AUTHORIZATION | AUTHORIZED | DEAUTHORIZED | REJECTED | AVAILABLE`

Required: No

StatusChangeDate

The status change data of the datashare that is associated.

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

DataTransferProgress

Describes the status of a cluster while it is in the process of resizing with an incremental resize.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

CurrentRateInMegaBytesPerSecond

Describes the data transfer rate in MB's per second.

Type: Double

Required: No

DataTransferredInMegaBytes

Describes the total amount of data that has been transfered in MB's.

Type: Long

Required: No

ElapsedTimeInSeconds

Describes the number of seconds that have elapsed during the data transfer.

Type: Long

Required: No

EstimatedTimeToCompletionInSeconds

Describes the estimated number of seconds remaining to complete the transfer.

Type: Long

Required: No

Status

Describes the status of the cluster. While the transfer is in progress the status is `transferringdata`.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

TotalDataInMegaBytes

Describes the total amount of data to be transfered in megabytes.

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

DefaultClusterParameters

Describes the default cluster parameters for a parameter group family.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

Marker

A value that indicates the starting point for the next set of response records in a subsequent request. If a value is returned in a response, you can retrieve the next set of records by providing this returned marker value in the `Marker` parameter and retrying the command. If the `Marker` field is empty, all response records have been retrieved for the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ParameterGroupFamily

The name of the cluster parameter group family to which the engine default parameters apply.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Parameters.Parameter.N

The list of cluster default parameters.

Type: Array of Parameter 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

DeferredMaintenanceWindow

Describes a deferred maintenance window

Contents

> **Note**
> In the following list, the required parameters are described first.

DeferMaintenanceEndTime

A timestamp for the end of the time period when we defer maintenance.

Type: Timestamp

Required: No

DeferMaintenanceIdentifier

A unique identifier for the maintenance window.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

DeferMaintenanceStartTime

A timestamp for the beginning of the time period when we defer maintenance.

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

DeleteClusterSnapshotMessage

Contents

> **Note**
>
> In the following list, the required parameters are described first.

SnapshotIdentifier

The unique identifier of the manual snapshot to be deleted.

Constraints: Must be the name of an existing snapshot that is in the `available`, `failed`, or `cancelled` state.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

SnapshotClusterIdentifier

The unique identifier of the cluster the snapshot was created from. This parameter is required if your IAM user has a policy containing a snapshot resource element that specifies anything other than * for the cluster name.

Constraints: Must be the name of valid cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

DescribeIntegrationsFilter

A set of elements to filter the returned integrations.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

Name

Specifies the type of integration filter.

Type: String

Valid Values: `integration-arn | source-arn | source-types | status`

Required: Yes

Values.Value.N

Specifies the values to filter on.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

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

EC2SecurityGroup

Describes an Amazon EC2 security group.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

EC2SecurityGroupName

The name of the EC2 Security Group.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

EC2SecurityGroupOwnerId

The AWS account ID of the owner of the EC2 security group specified in the `EC2SecurityGroupName` field.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Status

The status of the EC2 security group.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Tags.Tag.N

The list of tags for the EC2 security group.

Type: Array of Tag 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

ElasticIpStatus

Describes the status of the elastic IP (EIP) address.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

ElasticIp

The elastic IP (EIP) address for the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Status

The status of the elastic IP (EIP) address.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Endpoint

Describes a connection endpoint.

Contents

> **Note**
> In the following list, the required parameters are described first.

Address

The DNS address of the Cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Port

The port that the database engine is listening on.

Type: Integer

Required: No

VpcEndpoints.VpcEndpoint.N

Describes a connection endpoint.

Type: Array of VpcEndpoint 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

EndpointAccess

Describes a Redshift-managed VPC endpoint.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

Address

The DNS address of the endpoint.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ClusterIdentifier

The cluster identifier of the cluster associated with the endpoint.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

EndpointCreateTime

The time (UTC) that the endpoint was created.

Type: Timestamp

Required: No

EndpointName

The name of the endpoint.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

EndpointStatus

The status of the endpoint.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Port

The port number on which the cluster accepts incoming connections.

Type: Integer

Required: No

ResourceOwner

The AWS account ID of the owner of the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SubnetGroupName

The subnet group name where Amazon Redshift chooses to deploy the endpoint.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

VpcEndpoint

The connection endpoint for connecting to an Amazon Redshift cluster through the proxy.

Type: VpcEndpoint object

Required: No

VpcSecurityGroups.VpcSecurityGroup.N

The security groups associated with the endpoint.

Type: Array of VpcSecurityGroupMembership 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

EndpointAuthorization

Describes an endpoint authorization for authorizing Redshift-managed VPC endpoint access to a cluster across AWS accounts.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

AllowedAllVPCs

Indicates whether all VPCs in the grantee account are allowed access to the cluster.

Type: Boolean

Required: No

AllowedVPCs.VpcIdentifier.N

The VPCs allowed access to the cluster.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

AuthorizeTime

The time (UTC) when the authorization was created.

Type: Timestamp

Required: No

ClusterIdentifier

The cluster identifier.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ClusterStatus

The status of the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

EndpointCount

The number of Redshift-managed VPC endpoints created for the authorization.

Type: Integer

Required: No

Grantee

The AWS account ID of the grantee of the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Grantor

The AWS account ID of the cluster owner.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Status

The status of the authorization action.

Type: String

Valid Values: `Authorized` | `Revoking`

Required: No

See Also

For more information about using this API in 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

Describes an event.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

Date

The date and time of the event.

Type: Timestamp

Required: No

EventCategories.EventCategory.N

A list of the event categories.

Values: Configuration, Management, Monitoring, Security, Pending

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

EventId

The identifier of the event.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Message

The text of this event.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Severity

The severity of the event.

Values: ERROR, INFO

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SourceIdentifier

The identifier for the source of the event.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SourceType

The source type for this event.

Type: String

Valid Values: `cluster | cluster-parameter-group | cluster-security-group | cluster-snapshot | scheduled-action`

Required: No

See Also

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

- AWS SDK for C++

- AWS SDK for Java V2
- AWS SDK for Ruby V3

EventCategoriesMap

Describes event categories.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

Events.EventInfoMap.N

The events in the event category.

Type: Array of EventInfoMap objects

Required: No

SourceType

The source type, such as cluster or cluster-snapshot, that the returned categories belong to.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

EventInfoMap

Describes event information.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

EventCategories.EventCategory.N

The category of an Amazon Redshift event.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

EventDescription

The description of an Amazon Redshift event.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

EventId

The identifier of an Amazon Redshift event.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Severity

The severity of the event.

Values: ERROR, INFO

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

EventSubscription

Describes event subscriptions.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

CustomerAwsId

The AWS account associated with the Amazon Redshift event notification subscription.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

CustSubscriptionId

The name of the Amazon Redshift event notification subscription.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Enabled

A boolean value indicating whether the subscription is enabled; `true` indicates that the subscription is enabled.

Type: Boolean

Required: No

EventCategoriesList.EventCategory.N

The list of Amazon Redshift event categories specified in the event notification subscription.

Values: Configuration, Management, Monitoring, Security, Pending

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

Severity

The event severity specified in the Amazon Redshift event notification subscription.

Values: ERROR, INFO

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SnsTopicArn

The Amazon Resource Name (ARN) of the Amazon SNS topic used by the event notification subscription.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SourceIdsList.SourceId.N

A list of the sources that publish events to the Amazon Redshift event notification subscription.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

SourceType

The source type of the events returned by the Amazon Redshift event notification, such as cluster, cluster-snapshot, cluster-parameter-group, cluster-security-group, or scheduled-action.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Status

The status of the Amazon Redshift event notification subscription.

Constraints:

- Can be one of the following: active | no-permission | topic-not-exist
- The status "no-permission" indicates that Amazon Redshift no longer has permission to post to the Amazon SNS topic. The status "topic-not-exist" indicates that the topic was deleted after the subscription was created.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SubscriptionCreationTime

The date and time the Amazon Redshift event notification subscription was created.

Type: Timestamp

Required: No

Tags.Tag.N

The list of tags for the event subscription.

Type: Array of Tag 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

HsmClientCertificate

Returns information about an HSM client certificate. The certificate is stored in a secure Hardware Storage Module (HSM), and used by the Amazon Redshift cluster to encrypt data files.

Contents

> **Note**
> In the following list, the required parameters are described first.

HsmClientCertificateIdentifier

The identifier of the HSM client certificate.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

HsmClientCertificatePublicKey

The public key that the Amazon Redshift cluster will use to connect to the HSM. You must register the public key in the HSM.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Tags.Tag.N

The list of tags for the HSM client certificate.

Type: Array of Tag 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

HsmConfiguration

Returns information about an HSM configuration, which is an object that describes to Amazon Redshift clusters the information they require to connect to an HSM where they can store database encryption keys.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

Description

A text description of the HSM configuration.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

HsmConfigurationIdentifier

The name of the Amazon Redshift HSM configuration.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

HsmIpAddress

The IP address that the Amazon Redshift cluster must use to access the HSM.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

HsmPartitionName

The name of the partition in the HSM where the Amazon Redshift clusters will store their database encryption keys.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Tags.Tag.N

The list of tags for the HSM configuration.

Type: Array of Tag 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

HsmStatus

Describes the status of changes to HSM settings.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

HsmClientCertificateIdentifier

Specifies the name of the HSM client certificate the Amazon Redshift cluster uses to retrieve the data encryption keys stored in an HSM.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

HsmConfigurationIdentifier

Specifies the name of the HSM configuration that contains the information the Amazon Redshift cluster can use to retrieve and store keys in an HSM.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Status

Reports whether the Amazon Redshift cluster has finished applying any HSM settings changes specified in a modify cluster command.

Values: active, applying

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

InboundIntegration

The content of an inbound integration.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

CreateTime

The creation time of an inbound integration.

Type: Timestamp

Required: No

Errors.IntegrationError.N

The outstanding errors of an inbound integration. Each item is an "IntegrationError". This is null if there is no error.

Type: Array of IntegrationError objects

Required: No

IntegrationArn

The Amazon Resource Name (ARN) of an inbound integration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `^arn:aws[a-z\-]*:.+:[a-z0-9\-]*:[0-9]*:integration:[0-9a-f]{8}-[0-9a-f]{4}-[0-9a-f]{4}-[0-9a-f]{4}-[0-9a-f]{12}$`

Required: No

SourceArn

The Amazon Resource Name (ARN) of the source of an inbound integration.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Status

The status of an inbound integration.

Type: String

Valid Values: `creating | active | modifying | failed | deleting | syncing | needs_attention`

Required: No

TargetArn

The Amazon Resource Name (ARN) of the target of an inbound integration.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `^arn:aws[a-z\-]*:redshift(-serverless)?:[a-z0-9\-]+:[0-9]{12}:(namespace\/|namespace:)[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

Integration

Contents

> **Note**
>
> In the following list, the required parameters are described first.

AdditionalEncryptionContext , AdditionalEncryptionContext.entry.N.key (key) , AdditionalEncryptionContext.entry.N.value (value)

The encryption context for the integration. For more information, see Encryption context in the *AWS Key Management Service Developer Guide*.

Type: String to string map

Key Length Constraints: Maximum length of 2147483647.

Value Length Constraints: Maximum length of 2147483647.

Required: No

CreateTime

The time (UTC) when the integration was created.

Type: Timestamp

Required: No

Description

The description of the integration.

Type: String

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

Pattern: `^.*$`

Required: No

Errors.IntegrationError.N

Any errors associated with the integration.

Type: Array of IntegrationError objects

Required: No

IntegrationArn

The Amazon Resource Name (ARN) of the integration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `^arn:aws[a-z\-]*:redshift:[a-z0-9\-]*:[0-9]*:integration:[0-9a-f]{8}-[0-9a-f]{4}-[0-9a-f]{4}-[0-9a-f]{4}-[0-9a-f]{12}$`

Required: No

IntegrationName

The name of the integration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 63.

Pattern: `^[a-zA-Z][a-zA-Z0-9]*(-[a-zA-Z0-9]+)*$`

Required: No

KMSKeyId

The AWS Key Management Service (AWS KMS) key identifier for the key used to encrypt the integration.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SourceArn

The Amazon Resource Name (ARN) of the database used as the source for replication.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `^arn:aws[a-z\-]*:(s3|dynamodb):.*:.*:[a-zA-Z0-9._\-\/]+$`

Required: No

Status

The current status of the integration.

Type: String

Valid Values: `creating | active | modifying | failed | deleting | syncing | needs_attention`

Required: No

Tags.Tag.N

The list of tags associated with the integration.

Type: Array of Tag objects

Required: No

TargetArn

The Amazon Resource Name (ARN) of the Amazon Redshift data warehouse to use as the target for replication.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `^arn:aws[a-z\-]*:redshift(-serverless)?:[a-z0-9\-]+:[0-9]{12}:(namespace\/|namespace:)[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

IntegrationError

The error of an inbound integration.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

ErrorCode

The error code of an inbound integration error.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

ErrorMessage

The error message of an inbound integration error.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

IPRange

Describes an IP range used in a security group.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

CIDRIP

The IP range in Classless Inter-Domain Routing (CIDR) notation.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Status

The status of the IP range, for example, "authorized".

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Tags.Tag.N

The list of tags for the IP range.

Type: Array of Tag 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

LakeFormationQuery

The Lake Formation scope.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

Authorization

Determines whether the query scope is enabled or disabled.

Type: String

Valid Values: `Enabled | Disabled`

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

LakeFormationScopeUnion

A list of scopes set up for Lake Formation integration.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

> **Important**
>
> This data type is a UNION, so only one of the following members can be specified when used or returned.

LakeFormationQuery

The Lake Formation scope.

Type: LakeFormationQuery 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

MaintenanceTrack

Defines a maintenance track that determines which Amazon Redshift version to apply during a maintenance window. If the value for `MaintenanceTrack` is `current`, the cluster is updated to the most recently certified maintenance release. If the value is `trailing`, the cluster is updated to the previously certified maintenance release.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

DatabaseVersion

The version number for the cluster release.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaintenanceTrackName

The name of the maintenance track. Possible values are `current` and `trailing`.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

UpdateTargets.UpdateTarget.N

An array of UpdateTarget objects to update with the maintenance track.

Type: Array of UpdateTarget 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

NamespaceIdentifierUnion

Object to store union of values for a provisioned cluster or serverless namespace's identifier.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

> **Important**
>
> This data type is a UNION, so only one of the following members can be specified when used or returned.

ProvisionedIdentifier

The identifier for a provisioned cluster.

Type: ProvisionedIdentifier object

Required: No

ServerlessIdentifier

The identifier for a serverless namespace.

Type: ServerlessIdentifier 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

NetworkInterface

Describes a network interface.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

AvailabilityZone

The Availability Zone.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Ipv6Address

The IPv6 address of the network interface within the subnet.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

NetworkInterfaceId

The network interface identifier.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

PrivateIpAddress

The IPv4 address of the network interface within the subnet.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SubnetId

The subnet identifier.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

NodeConfigurationOption

A list of node configurations.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

EstimatedDiskUtilizationPercent

The estimated disk utilizaton percentage.

Type: Double

Required: No

Mode

The category of the node configuration recommendation.

Type: String

Valid Values: `standard | high-performance`

Required: No

NodeType

The node type, such as, "ra3.4xlarge".

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

NumberOfNodes

The number of nodes.

Type: Integer

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

NodeConfigurationOptionsFilter

A set of elements to filter the returned node configurations.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

Name

The name of the element to filter.

Type: String

Valid Values: `NodeType | NumberOfNodes | EstimatedDiskUtilizationPercent | Mode`

Required: No

Operator

The filter operator. If filter Name is NodeType only the 'in' operator is supported. Provide one value to evaluate for 'eq', 'lt', 'le', 'gt', and 'ge'. Provide two values to evaluate for 'between'. Provide a list of values for 'in'.

Type: String

Valid Values: `eq | lt | gt | le | ge | in | between`

Required: No

Value.item.N

List of values. Compare Name using Operator to Values. If filter Name is NumberOfNodes, then values can range from 0 to 200. If filter Name is EstimatedDiskUtilizationPercent, then values can range from 0 to 100. For example, filter NumberOfNodes (name) GT (operator) 3 (values).

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

OrderableClusterOption

Describes an orderable cluster option.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

AvailabilityZones.AvailabilityZone.N

A list of availability zones for the orderable cluster.

Type: Array of AvailabilityZone objects

Required: No

ClusterType

The cluster type, for example `multi-node`.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ClusterVersion

The version of the orderable cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

NodeType

The node type for the orderable cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Parameter

Describes a parameter in a cluster parameter group.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

AllowedValues

The valid range of values for the parameter.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ApplyType

Specifies how to apply the WLM configuration parameter. Some properties can be applied dynamically, while other properties require that any associated clusters be rebooted for the configuration changes to be applied. For more information about parameters and parameter groups, go to Amazon Redshift Parameter Groups in the *Amazon Redshift Cluster Management Guide*.

Type: String

Valid Values: `static | dynamic`

Required: No

DataType

The data type of the parameter.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Description

A description of the parameter.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

IsModifiable

If `true`, the parameter can be modified. Some parameters have security or operational implications that prevent them from being changed.

Type: Boolean

Required: No

MinimumEngineVersion

The earliest engine version to which the parameter can apply.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ParameterName

The name of the parameter.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ParameterValue

The value of the parameter. If `ParameterName` is `wlm_json_configuration`, then the maximum size of `ParameterValue` is 8000 characters.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Source

The source of the parameter value, such as "engine-default" or "user".

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

PartnerIntegrationInfo

Describes a partner integration.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

CreatedAt

The date (UTC) that the partner integration was created.

Type: Timestamp

Required: No

DatabaseName

The name of the database that receives data from a partner.

Type: String

Length Constraints: Maximum length of 127.

Pattern: `^[\p{L}_][\p{L}\p{N}@$#_]+$`

Required: No

PartnerName

The name of the partner.

Type: String

Length Constraints: Maximum length of 255.

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

Required: No

Status

The partner integration status.

Type: String

Valid Values: `Active | Inactive | RuntimeFailure | ConnectionFailure`

Required: No

StatusMessage

The status message provided by the partner.

Type: String

Length Constraints: Maximum length of 262144.

Pattern: `^[\x20-\x7E]+$`

Required: No

UpdatedAt

The date (UTC) that the partner integration status was last updated by the partner.

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

PauseClusterMessage

Describes a pause cluster operation. For example, a scheduled action to run the `PauseCluster` API operation.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

ClusterIdentifier

The identifier of the cluster to be paused.

Type: String

Length Constraints: Maximum length of 2147483647.

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

PendingModifiedValues

Describes cluster attributes that are in a pending state. A change to one or more the attributes was requested and is in progress or will be applied.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

AutomatedSnapshotRetentionPeriod

The pending or in-progress change of the automated snapshot retention period.

Type: Integer

Required: No

ClusterIdentifier

The pending or in-progress change of the new identifier for the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ClusterType

The pending or in-progress change of the cluster type.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ClusterVersion

The pending or in-progress change of the service version.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

EncryptionType

The encryption type for a cluster. Possible values are: KMS and None.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

EnhancedVpcRouting

An option that specifies whether to create the cluster with enhanced VPC routing enabled. To create a cluster that uses enhanced VPC routing, the cluster must be in a VPC. For more information, see Enhanced VPC Routing in the Amazon Redshift Cluster Management Guide.

If this option is `true`, enhanced VPC routing is enabled.

Default: false

Type: Boolean

Required: No

MaintenanceTrackName

The name of the maintenance track that the cluster will change to during the next maintenance window.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MasterUserPassword

The pending or in-progress change of the admin user password for the cluster.

Type: String

Required: No

NodeType

The pending or in-progress change of the cluster's node type.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

NumberOfNodes

The pending or in-progress change of the number of nodes in the cluster.

Type: Integer

Required: No

PubliclyAccessible

The pending or in-progress change of the ability to connect to the cluster from the public network.

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

ProvisionedIdentifier

The identifier for a provisioned cluster.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

ClusterIdentifier

The unique identifier for the provisioned cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

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

ReadWriteAccess

The S3 Access Grants scope.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

Authorization

Determines whether the read/write scope is enabled or disabled.

Type: String

Valid Values: `Enabled | Disabled`

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Recommendation

An Amazon Redshift Advisor recommended action on the Amazon Redshift cluster.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

ClusterIdentifier

The unique identifier of the cluster for which the recommendation is returned.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

CreatedAt

The date and time (UTC) that the recommendation was created.

Type: Timestamp

Required: No

Description

The description of the recommendation.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Id

A unique identifier of the Advisor recommendation.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ImpactRanking

The scale of the impact that the Advisor recommendation has to the performance and cost of the cluster.

Type: String

Valid Values: `HIGH | MEDIUM | LOW`

Required: No

NamespaceArn

The Amazon Redshift cluster namespace ARN for which the recommendations is returned.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Observation

The description of what was observed about your cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

RecommendationText

The description of the recommendation.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

RecommendationType

The type of Advisor recommendation.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

RecommendedActions.RecommendedAction.N

List of Amazon Redshift recommended actions.

Type: Array of RecommendedAction objects

Required: No

ReferenceLinks.ReferenceLink.N

List of helpful links for more information about the Advisor recommendation.

Type: Array of ReferenceLink objects

Required: No

Title

The title of the recommendation.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RecommendedAction

The recommended action from the Amazon Redshift Advisor recommendation.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

Command

The command to run.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Database

The database name to perform the action on. Only applicable if the type of command is SQL.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Text

The specific instruction about the command.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Type

The type of command.

Type: String

Valid Values: `SQL` | `CLI`

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RecurringCharge

Describes a recurring charge.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

RecurringChargeAmount

The amount charged per the period of time specified by the recurring charge frequency.

Type: Double

Required: No

RecurringChargeFrequency

The frequency at which the recurring charge amount is applied.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RedshiftIdcApplication

Contains properties for the Redshift IDC application.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

AuthorizedTokenIssuerList.member.N

The authorized token issuer list for the Amazon Redshift IAM Identity Center application.

Type: Array of AuthorizedTokenIssuer objects

Required: No

IamRoleArn

The ARN for the Amazon Redshift IAM Identity Center application. It has the required permissions to be assumed and invoke the IDC Identity Center API.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

IdcDisplayName

The display name for the Amazon Redshift IAM Identity Center application. It appears on the console.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 127.

Pattern: `[\w+=,.@-]+`

Required: No

IdcInstanceArn

The ARN for the IAM Identity Center instance that Redshift integrates with.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

IdcManagedApplicationArn

The ARN for the Amazon Redshift IAM Identity Center application.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

IdcOnboardStatus

The onboarding status for the Amazon Redshift IAM Identity Center application.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

IdentityNamespace

The identity namespace for the Amazon Redshift IAM Identity Center application. It determines which managed application verifies the connection token.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 127.

Pattern: `^[a-zA-Z0-9_+.#@$-]+$`

Required: No

RedshiftIdcApplicationArn

The ARN for the Redshift application that integrates with IAM Identity Center.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

RedshiftIdcApplicationName

The name of the Redshift application in IAM Identity Center.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 63.

Pattern: `[a-z][a-z0-9]*(-[a-z0-9]+)*`

Required: No

ServiceIntegrations.member.N

A list of service integrations for the Redshift IAM Identity Center application.

Type: Array of ServiceIntegrationsUnion 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

ReferenceLink

A link to an Amazon Redshift Advisor reference for more information about a recommendation.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

Link

The URL address to find more information.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Text

The hyperlink text that describes the link to more information.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ReservedNode

Describes a reserved node. You can call the DescribeReservedNodeOfferings API to obtain the available reserved node offerings.

Contents

> **Note**
> In the following list, the required parameters are described first.

CurrencyCode

The currency code for the reserved cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Duration

The duration of the node reservation in seconds.

Type: Integer

Required: No

FixedPrice

The fixed cost Amazon Redshift charges you for this reserved node.

Type: Double

Required: No

NodeCount

The number of reserved compute nodes.

Type: Integer

Required: No

NodeType

The node type of the reserved node.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

OfferingType

The anticipated utilization of the reserved node, as defined in the reserved node offering.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

RecurringCharges.RecurringCharge.N

The recurring charges for the reserved node.

Type: Array of RecurringCharge objects

Required: No

ReservedNodeId

The unique identifier for the reservation.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ReservedNodeOfferingId

The identifier for the reserved node offering.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ReservedNodeOfferingType

Type: String

Valid Values: `Regular | Upgradable`

Required: No

StartTime

The time the reservation started. You purchase a reserved node offering for a duration. This is the start time of that duration.

Type: Timestamp

Required: No

State

The state of the reserved compute node.

Possible Values:

- pending-payment-This reserved node has recently been purchased, and the sale has been approved, but payment has not yet been confirmed.
- active-This reserved node is owned by the caller and is available for use.
- payment-failed-Payment failed for the purchase attempt.
- retired-The reserved node is no longer available.
- exchanging-The owner is exchanging the reserved node for another reserved node.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

UsagePrice

The hourly rate Amazon Redshift charges you for this reserved node.

Type: Double

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ReservedNodeConfigurationOption

Details for a reserved-node exchange. Examples include the node type for a reserved node, the price for a node, the node's state, and other details.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

SourceReservedNode

Describes a reserved node. You can call the DescribeReservedNodeOfferings API to obtain the available reserved node offerings.

Type: ReservedNode object

Required: No

TargetReservedNodeCount

The target reserved-node count.

Type: Integer

Required: No

TargetReservedNodeOffering

Describes a reserved node offering.

Type: ReservedNodeOffering 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

ReservedNodeExchangeStatus

Reserved-node status details, such as the source reserved-node identifier, the target reserved-node identifier, the node type, the node count, and other details.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

RequestTime

A date and time that indicate when the reserved-node exchange was requested.

Type: Timestamp

Required: No

ReservedNodeExchangeRequestId

The identifier of the reserved-node exchange request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SourceReservedNodeCount

The source reserved-node count in the cluster.

Type: Integer

Required: No

SourceReservedNodeId

The identifier of the source reserved node.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SourceReservedNodeType

The source reserved-node type, for example ra3.4xlarge.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Status

The status of the reserved-node exchange request. Statuses include in-progress and requested.

Type: String

Valid Values: `REQUESTED | PENDING | IN_PROGRESS | RETRYING | SUCCEEDED | FAILED`

Required: No

TargetReservedNodeCount

The count of target reserved nodes in the cluster.

Type: Integer

Required: No

TargetReservedNodeOfferingId

The identifier of the target reserved node offering.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

TargetReservedNodeType

The node type of the target reserved node, for example ra3.4xlarge.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ReservedNodeOffering

Describes a reserved node offering.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

CurrencyCode

The currency code for the compute nodes offering.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Duration

The duration, in seconds, for which the offering will reserve the node.

Type: Integer

Required: No

FixedPrice

The upfront fixed charge you will pay to purchase the specific reserved node offering.

Type: Double

Required: No

NodeType

The node type offered by the reserved node offering.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

OfferingType

The anticipated utilization of the reserved node, as defined in the reserved node offering.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

RecurringCharges.RecurringCharge.N

The charge to your account regardless of whether you are creating any clusters using the node offering. Recurring charges are only in effect for heavy-utilization reserved nodes.

Type: Array of RecurringCharge objects

Required: No

ReservedNodeOfferingId

The offering identifier.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ReservedNodeOfferingType

Type: String

Valid Values: `Regular | Upgradable`

Required: No

UsagePrice

The rate you are charged for each hour the cluster that is using the offering is running.

Type: Double

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ResizeClusterMessage

Describes a resize cluster operation. For example, a scheduled action to run the `ResizeCluster` API operation.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

ClusterIdentifier

The unique identifier for the cluster to resize.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

Classic

A boolean value indicating whether the resize operation is using the classic resize process. If you don't provide this parameter or set the value to `false`, the resize type is elastic.

Type: Boolean

Required: No

ClusterType

The new cluster type for the specified cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

NodeType

The new node type for the nodes you are adding. If not specified, the cluster's current node type is used.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

NumberOfNodes

The new number of nodes for the cluster. If not specified, the cluster's current number of nodes is used.

Type: Integer

Required: No

ReservedNodeId

The identifier of the reserved node.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

TargetReservedNodeOfferingId

The identifier of the target reserved node offering.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ResizeInfo

Describes a resize operation.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

AllowCancelResize

A boolean value indicating if the resize operation can be cancelled.

Type: Boolean

Required: No

ResizeType

Returns the value `ClassicResize`.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ResourcePolicy

The policy that is attached to a resource.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

Policy

The content of a resource policy.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ResourceArn

The resources that a policy is attached to.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

RestoreStatus

Describes the status of a cluster restore action. Returns null if the cluster was not created by restoring a snapshot.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

CurrentRestoreRateInMegaBytesPerSecond

The number of megabytes per second being transferred from the backup storage. Returns the average rate for a completed backup. This field is only updated when you restore to DC2 node types.

Type: Double

Required: No

ElapsedTimeInSeconds

The amount of time an in-progress restore has been running, or the amount of time it took a completed restore to finish. This field is only updated when you restore to DC2 node types.

Type: Long

Required: No

EstimatedTimeToCompletionInSeconds

The estimate of the time remaining before the restore will complete. Returns 0 for a completed restore. This field is only updated when you restore to DC2 node types.

Type: Long

Required: No

ProgressInMegaBytes

The number of megabytes that have been transferred from snapshot storage. This field is only updated when you restore to DC2 node types.

Type: Long

Required: No

SnapshotSizeInMegaBytes

The size of the set of snapshot data used to restore the cluster. This field is only updated when you restore to DC2 node types.

Type: Long

Required: No

Status

The status of the restore action. Returns starting, restoring, completed, or failed.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ResumeClusterMessage

Describes a resume cluster operation. For example, a scheduled action to run the `ResumeCluster` API operation.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

ClusterIdentifier

The identifier of the cluster to be resumed.

Type: String

Length Constraints: Maximum length of 2147483647.

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

RevisionTarget

Describes a `RevisionTarget`.

Contents

> **Note**
> In the following list, the required parameters are described first.

DatabaseRevision

A unique string that identifies the version to update the cluster to. You can use this value in ModifyClusterDbRevision.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

DatabaseRevisionReleaseDate

The date on which the database revision was released.

Type: Timestamp

Required: No

Description

A string that describes the changes and features that will be applied to the cluster when it is updated to the corresponding ClusterDbRevision.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

S3AccessGrantsScopeUnion

A list of scopes set up for S3 Access Grants integration.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

> **Important**
>
> This data type is a UNION, so only one of the following members can be specified when used or returned.

ReadWriteAccess

The S3 Access Grants scope.

Type: ReadWriteAccess 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

ScheduledAction

Describes a scheduled action. You can use a scheduled action to trigger some Amazon Redshift API operations on a schedule. For information about which API operations can be scheduled, see ScheduledActionType.

Contents

> **Note**
> In the following list, the required parameters are described first.

EndTime

The end time in UTC when the schedule is no longer active. After this time, the scheduled action does not trigger.

Type: Timestamp

Required: No

IamRole

The IAM role to assume to run the scheduled action. This IAM role must have permission to run the Amazon Redshift API operation in the scheduled action. This IAM role must allow the Amazon Redshift scheduler (Principal scheduler.redshift.amazonaws.com) to assume permissions on your behalf. For more information about the IAM role to use with the Amazon Redshift scheduler, see Using Identity-Based Policies for Amazon Redshift in the *Amazon Redshift Cluster Management Guide*.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

NextInvocations.ScheduledActionTime.N

List of times when the scheduled action will run.

Type: Array of timestamps

Required: No

Schedule

The schedule for a one-time (at format) or recurring (cron format) scheduled action. Schedule invocations must be separated by at least one hour.

Format of at expressions is "`at(yyyy-mm-ddThh:mm:ss)`". For example, "`at(2016-03-04T17:27:00)`".

Format of cron expressions is "`cron(Minutes Hours Day-of-month Month Day-of-week Year)`". For example, "`cron(0 10 ? * MON *)`". For more information, see Cron Expressions in the *Amazon CloudWatch Events User Guide*.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ScheduledActionDescription

The description of the scheduled action.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ScheduledActionName

The name of the scheduled action.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

StartTime

The start time in UTC when the schedule is active. Before this time, the scheduled action does not trigger.

Type: Timestamp

Required: No

State

The state of the scheduled action. For example, `DISABLED`.

Type: String

Valid Values: `ACTIVE | DISABLED`

Required: No

TargetAction

A JSON format string of the Amazon Redshift API operation with input parameters.

`"{\"ResizeCluster\":{\"NodeType\":\"ra3.4xlarge\",\"ClusterIdentifier\":\"my-test-cluster\",\"NumberOfNodes\":3}}"`.

Type: ScheduledActionType 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

ScheduledActionFilter

A set of elements to filter the returned scheduled actions.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

Name

The type of element to filter.

Type: String

Valid Values: `cluster-identifier | iam-role`

Required: Yes

Values.item.N

List of values. Compare if the value (of type defined by `Name`) equals an item in the list of scheduled actions.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

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

ScheduledActionType

The action type that specifies an Amazon Redshift API operation that is supported by the Amazon Redshift scheduler.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

PauseCluster

An action that runs a `PauseCluster` API operation.

Type: PauseClusterMessage object

Required: No

ResizeCluster

An action that runs a `ResizeCluster` API operation.

Type: ResizeClusterMessage object

Required: No

ResumeCluster

An action that runs a `ResumeCluster` API operation.

Type: ResumeClusterMessage 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

SecondaryClusterInfo

The AvailabilityZone and ClusterNodes information of the secondary compute unit.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

AvailabilityZone

The name of the Availability Zone in which the secondary compute unit of the cluster is located.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ClusterNodes.member.N

The nodes in the secondary compute unit.

Type: Array of ClusterNode 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

ServerlessIdentifier

The identifier for a serverless namespace.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

NamespaceIdentifier

The unique identifier for the serverless namespace.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: Yes

WorkgroupIdentifier

The unique identifier for the workgroup associated with the serverless namespace.

Type: String

Length Constraints: Maximum length of 2147483647.

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

ServiceIntegrationsUnion

A list of service integrations.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

> **Important**
>
> This data type is a UNION, so only one of the following members can be specified when used or returned.

LakeFormation.member.N

A list of scopes set up for Lake Formation integration.

Type: Array of LakeFormationScopeUnion objects

Required: No

S3AccessGrants.member.N

A list of scopes set up for S3 Access Grants integration.

Type: Array of S3AccessGrantsScopeUnion 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

Snapshot

Describes a snapshot.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

AccountsWithRestoreAccess.AccountWithRestoreAccess.N

A list of the AWS accounts authorized to restore the snapshot. Returns `null` if no accounts are authorized. Visible only to the snapshot owner.

Type: Array of AccountWithRestoreAccess objects

Required: No

ActualIncrementalBackupSizeInMegaBytes

The size of the incremental backup.

Type: Double

Required: No

AvailabilityZone

The Availability Zone in which the cluster was created.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

BackupProgressInMegaBytes

The number of megabytes that have been transferred to the snapshot backup.

Type: Double

Required: No

ClusterCreateTime

The time (UTC) when the cluster was originally created.

Type: Timestamp

Required: No

ClusterIdentifier

The identifier of the cluster for which the snapshot was taken.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ClusterVersion

The version ID of the Amazon Redshift engine that is running on the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

CurrentBackupRateInMegaBytesPerSecond

The number of megabytes per second being transferred to the snapshot backup. Returns `0` for a completed backup.

Type: Double

Required: No

DBName

The name of the database that was created when the cluster was created.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ElapsedTimeInSeconds

The amount of time an in-progress snapshot backup has been running, or the amount of time it took a completed backup to finish.

Type: Long

Required: No

Encrypted

If `true`, the data in the snapshot is encrypted at rest.

Type: Boolean

Required: No

EncryptedWithHSM

A boolean that indicates whether the snapshot data is encrypted using the HSM keys of the source cluster. `true` indicates that the data is encrypted using HSM keys.

Type: Boolean

Required: No

EngineFullVersion

The cluster version of the cluster used to create the snapshot. For example, 1.0.15503.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

EnhancedVpcRouting

An option that specifies whether to create the cluster with enhanced VPC routing enabled. To create a cluster that uses enhanced VPC routing, the cluster must be in a VPC. For more information, see Enhanced VPC Routing in the Amazon Redshift Cluster Management Guide.

If this option is `true`, enhanced VPC routing is enabled.

Default: false

Type: Boolean

Required: No

EstimatedSecondsToCompletion

The estimate of the time remaining before the snapshot backup will complete. Returns `0` for a completed backup.

Type: Long

Required: No

KmsKeyId

The AWS Key Management Service (KMS) key ID of the encryption key that was used to encrypt data in the cluster from which the snapshot was taken.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaintenanceTrackName

The name of the maintenance track for the snapshot.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ManualSnapshotRemainingDays

The number of days until a manual snapshot will pass its retention period.

Type: Integer

Required: No

ManualSnapshotRetentionPeriod

The number of days that a manual snapshot is retained. If the value is -1, the manual snapshot is retained indefinitely.

The value must be either -1 or an integer between 1 and 3,653.

Type: Integer

Required: No

MasterPasswordSecretArn

The Amazon Resource Name (ARN) for the cluster's admin user credentials secret.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MasterPasswordSecretKmsKeyId

The ID of the AWS Key Management Service (KMS) key used to encrypt and store the cluster's admin credentials secret.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MasterUsername

The admin user name for the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

NodeType

The node type of the nodes in the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

NumberOfNodes

The number of nodes in the cluster.

Type: Integer

Required: No

OwnerAccount

For manual snapshots, the AWS account used to create or copy the snapshot. For automatic snapshots, the owner of the cluster. The owner can perform all snapshot actions, such as sharing a manual snapshot.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Port

The port that the cluster is listening on.

Type: Integer

Required: No

RestorableNodeTypes.NodeType.N

The list of node types that this cluster snapshot is able to restore into.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

SnapshotArn

The Amazon Resource Name (ARN) of the snapshot.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SnapshotCreateTime

The time (in UTC format) when Amazon Redshift began the snapshot. A snapshot contains a copy of the cluster data as of this exact time.

Type: Timestamp

Required: No

SnapshotIdentifier

The snapshot identifier that is provided in the request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SnapshotRetentionStartTime

A timestamp representing the start of the retention period for the snapshot.

Type: Timestamp

Required: No

SnapshotType

The snapshot type. Snapshots created using CreateClusterSnapshot and CopyClusterSnapshot are of type "manual".

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SourceRegion

The source region from which the snapshot was copied.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Status

The snapshot status. The value of the status depends on the API operation used:

- CreateClusterSnapshot and CopyClusterSnapshot returns status as "creating".
- DescribeClusterSnapshots returns status as "creating", "available", "final snapshot", or "failed".
- DeleteClusterSnapshot returns status as "deleted".

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Tags.Tag.N

The list of tags for the cluster snapshot.

Type: Array of Tag objects

Required: No

TotalBackupSizeInMegaBytes

The size of the complete set of backup data that would be used to restore the cluster.

Type: Double

Required: No

VpcId

The VPC identifier of the cluster if the snapshot is from a cluster in a VPC. Otherwise, this field is not in the output.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SnapshotCopyGrant

The snapshot copy grant that grants Amazon Redshift permission to encrypt copied snapshots with the specified encrypted symmetric key from AWS KMS in the destination region.

For more information about managing snapshot copy grants, go to Amazon Redshift Database Encryption in the *Amazon Redshift Cluster Management Guide*.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

KmsKeyId

The unique identifier of the encrypted symmetric key in AWS KMS to which Amazon Redshift is granted permission.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SnapshotCopyGrantName

The name of the snapshot copy grant.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Tags.Tag.N

A list of tag instances.

Type: Array of Tag 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

SnapshotErrorMessage

Describes the errors returned by a snapshot.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

FailureCode

The failure code for the error.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

FailureReason

The text message describing the error.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SnapshotClusterIdentifier

A unique identifier for the cluster.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SnapshotIdentifier

A unique identifier for the snapshot returning the error.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SnapshotSchedule

Describes a snapshot schedule. You can set a regular interval for creating snapshots of a cluster. You can also schedule snapshots for specific dates.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

AssociatedClusterCount

The number of clusters associated with the schedule.

Type: Integer

Required: No

AssociatedClusters.ClusterAssociatedToSchedule.N

A list of clusters associated with the schedule. A maximum of 100 clusters is returned.

Type: Array of ClusterAssociatedToSchedule objects

Required: No

NextInvocations.SnapshotTime.N

Type: Array of timestamps

Required: No

ScheduleDefinitions.ScheduleDefinition.N

A list of ScheduleDefinitions.

Type: Array of strings

Length Constraints: Maximum length of 2147483647.

Required: No

ScheduleDescription

The description of the schedule.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ScheduleIdentifier

A unique identifier for the schedule.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Tags.Tag.N

An optional set of tags describing the schedule.

Type: Array of Tag 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

SnapshotSortingEntity

Describes a sorting entity

Contents

> **Note**
> In the following list, the required parameters are described first.

Attribute

The category for sorting the snapshots.

Type: String

Valid Values: `SOURCE_TYPE | TOTAL_SIZE | CREATE_TIME`

Required: Yes

SortOrder

The order for listing the attributes.

Type: String

Valid Values: `ASC | DESC`

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

Subnet

Describes a subnet.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

SubnetAvailabilityZone

Type: AvailabilityZone object

Required: No

SubnetIdentifier

The identifier of the subnet.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SubnetStatus

The status of the subnet.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SupportedOperation

Describes the operations that are allowed on a maintenance track.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

OperationName

A list of the supported operations.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

SupportedPlatform

A list of supported platforms for orderable clusters.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

Name

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

TableRestoreStatus

Describes the status of a RestoreTableFromClusterSnapshot operation.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

ClusterIdentifier

The identifier of the Amazon Redshift cluster that the table is being restored to.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Message

A description of the status of the table restore request. Status values include `SUCCEEDED`, `FAILED`, `CANCELED`, `PENDING`, `IN_PROGRESS`.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

NewTableName

The name of the table to create as a result of the table restore request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ProgressInMegaBytes

The amount of data restored to the new table so far, in megabytes (MB).

Type: Long

Required: No

RequestTime

The time that the table restore request was made, in Universal Coordinated Time (UTC).

Type: Timestamp

Required: No

SnapshotIdentifier

The identifier of the snapshot that the table is being restored from.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SourceDatabaseName

The name of the source database that contains the table being restored.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SourceSchemaName

The name of the source schema that contains the table being restored.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SourceTableName

The name of the source table being restored.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Status

A value that describes the current state of the table restore request.

Valid Values: `SUCCEEDED`, `FAILED`, `CANCELED`, `PENDING`, `IN_PROGRESS`

Type: String

Valid Values: `PENDING | IN_PROGRESS | SUCCEEDED | FAILED | CANCELED`

Required: No

TableRestoreRequestId

The unique identifier for the table restore request.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

TargetDatabaseName

The name of the database to restore the table to.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

TargetSchemaName

The name of the schema to restore the table to.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

TotalDataInMegaBytes

The total amount of data to restore to the new table, in megabytes (MB).

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

Tag

A tag consisting of a name/value pair for a resource.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

Key

The key, or name, for the resource tag.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Value

The value for the resource tag.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

TaggedResource

A tag and its associated resource.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

ResourceName

The Amazon Resource Name (ARN) with which the tag is associated, for example: `arn:aws:redshift:us-east-2:123456789:cluster:t1`.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

ResourceType

The type of resource with which the tag is associated. Valid resource types are:

- Cluster
- CIDR/IP
- EC2 security group
- Snapshot
- Cluster security group
- Subnet group
- HSM connection
- HSM certificate
- Parameter group

For more information about Amazon Redshift resource types and constructing ARNs, go to Constructing an Amazon Redshift Amazon Resource Name (ARN) in the Amazon Redshift Cluster Management Guide.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

Tag

The tag for the resource.

Type: Tag 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

UpdateTarget

A maintenance track that you can switch the current track to.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

DatabaseVersion

The cluster version for the new maintenance track.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

MaintenanceTrackName

The name of the new maintenance track.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

SupportedOperations.SupportedOperation.N

A list of operations supported by the maintenance track.

Type: Array of SupportedOperation 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

UsageLimit

Describes a usage limit object for a cluster.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

Amount

The limit amount. If time-based, this amount is in minutes. If data-based, this amount is in terabytes (TB).

Type: Long

Required: No

BreachAction

The action that Amazon Redshift takes when the limit is reached. Possible values are:

- **log** - To log an event in a system table. The default is log.
- **emit-metric** - To emit CloudWatch metrics.
- **disable** - To disable the feature until the next usage period begins.

Type: String

Valid Values: `log | emit-metric | disable`

Required: No

ClusterIdentifier

The identifier of the cluster with a usage limit.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

FeatureType

The Amazon Redshift feature to which the limit applies.

Type: String

Valid Values: `spectrum | concurrency-scaling | cross-region-datasharing`

Required: No

LimitType

The type of limit. Depending on the feature type, this can be based on a time duration or data size.

Type: String

Valid Values: `time | data-scanned`

Required: No

Period

The time period that the amount applies to. A `weekly` period begins on Sunday. The default is `monthly`.

Type: String

Valid Values: `daily | weekly | monthly`

Required: No

Tags.Tag.N

A list of tag instances.

Type: Array of Tag objects

Required: No

UsageLimitId

The identifier of the usage limit.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VpcEndpoint

The connection endpoint for connecting to an Amazon Redshift cluster through the proxy.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

NetworkInterfaces.NetworkInterface.N

One or more network interfaces of the endpoint. Also known as an interface endpoint.

Type: Array of NetworkInterface objects

Required: No

VpcEndpointId

The connection endpoint ID for connecting an Amazon Redshift cluster through the proxy.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

VpcId

The VPC identifier that the endpoint is associated.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

VpcSecurityGroupMembership

Describes the members of a VPC security group.

Contents

> **Note**
>
> In the following list, the required parameters are described first.

Status

The status of the VPC security group.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

VpcSecurityGroupId

The identifier of the VPC security group.

Type: String

Length Constraints: Maximum length of 2147483647.

Required: No

See Also

For more information about using this API in 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*.

Action

The action to be performed.

Type: string

Required: Yes

Version

The API version that the request is written for, expressed in the format YYYY-MM-DD.

Type: string

Required: Yes

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 Errors

This section lists the errors common to the API actions of all AWS services. For errors specific to an API action for this service, see the topic for that API action.

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 400

IncompleteSignature

The request signature does not conform to AWS standards.

HTTP Status Code: 400

InternalFailure

The request processing has failed because of an unknown error, exception or failure.

HTTP Status Code: 500

InvalidAction

The action or operation requested is invalid. Verify that the action is typed correctly.

HTTP Status Code: 400

InvalidClientTokenId

The X.509 certificate or AWS access key ID provided does not exist in our records.

HTTP Status Code: 403

InvalidParameterCombination

Parameters that must not be used together were used together.

HTTP Status Code: 400

InvalidParameterValue

An invalid or out-of-range value was supplied for the input parameter.

HTTP Status Code: 400

InvalidQueryParameter

The AWS query string is malformed or does not adhere to AWS standards.

HTTP Status Code: 400

MalformedQueryString

The query string contains a syntax error.

HTTP Status Code: 404

MissingAction

The request is missing an action or a required parameter.

HTTP Status Code: 400

MissingAuthenticationToken

The request must contain either a valid (registered) AWS access key ID or X.509 certificate.

HTTP Status Code: 403

MissingParameter

A required parameter for the specified action is not supplied.

HTTP Status Code: 400

NotAuthorized

You do not have permission to perform this action.

HTTP Status Code: 400

OptInRequired

The AWS access key ID needs a subscription for the service.

HTTP Status Code: 403

RequestExpired

The request reached the service more than 15 minutes after the date stamp on the request or more than 15 minutes after the request expiration date (such as for pre-signed URLs), or the date stamp on the request is more than 15 minutes in the future.

HTTP Status Code: 400

ServiceUnavailable

The request has failed due to a temporary failure of the server.

HTTP Status Code: 503

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 400

ValidationError

The input fails to satisfy the constraints specified by an AWS service.

HTTP Status Code: 400