aws

Welcome

Amazon Aurora DSQL

API Version 2018-05-10

Amazon Aurora DSQL: Welcome

Table of Contents

Welcome **1**
Actions **2**
CreateCluster 3
Request Syntax 4
URI Request Parameters 4
Request Body 4
Response Syntax 6
Response Elements 6
Errors 8
See Also 9
DeleteCluster 10
Request Syntax 10
URI Request Parameters 10
Request Body 10
Response Syntax 10
Response Elements 11
Errors 12
See Also 12
GetCluster 14
Request Syntax 14
URI Request Parameters 14
Request Body 14
Response Syntax 14
Response Elements 15
Errors 16
See Also 17
GetVpcEndpointServiceName 18
Request Syntax 18
URI Request Parameters 18
Request Body 18
Response Syntax 18
Response Elements 18
Errors 19
See Also 20

ListClusters 21
Request Syntax 21
URI Request Parameters 21
Request Body 21
Response Syntax 21
Response Elements 22
Errors 22
See Also 23
ListTagsForResource 24
Request Syntax 24
URI Request Parameters 24
Request Body 24
Response Syntax 24
Response Elements 24
Errors 25
See Also 26
TagResource 27
Request Syntax 27
URI Request Parameters 27
Request Body 27
Response Syntax 28
Response Elements 28
Errors 28
See Also 29
UntagResource 30
Request Syntax 30
URI Request Parameters 30
Request Body 30
Response Syntax 30
Response Elements 31
Errors 31
See Also 31
UpdateCluster 33
Request Syntax 34
URI Request Parameters 35
Request Body 35

Response Syntax 36
Response Elements 36
Errors 37
Examples 38
See Also 39
Data Types 40
ClusterSummary 41
Contents 41
See Also 41
EncryptionDetails 42
Contents 42
See Also 42
MultiRegionProperties 44
Contents 44
See Also 44
ValidationExceptionField 45
Contents 45
See Also 45
Common Parameters 46
Common Errors 49

Welcome

This is an interface reference for Amazon Aurora DSQL. It contains documentation for one of the programming or command line interfaces you can use to manage Amazon Aurora DSQL.

Amazon Aurora DSQL is a serverless, distributed SQL database suitable for workloads of any size. is available in both single-Region and multi-Region configurations, so your clusters and databases are always available even if an Availability Zone or an AWS Region are unavailable. lets you focus on using your data to acquire new insights for your business and customers.

This document was last published on July 24, 2025.

Actions

The following actions are supported:

- CreateCluster
- DeleteCluster
- GetCluster
- GetVpcEndpointServiceName
- ListClusters
- ListTagsForResource
- TagResource
- UntagResource
- UpdateCluster

CreateCluster

The CreateCluster API allows you to create both single-Region clusters and multi-Region clusters. With the addition of the *multiRegionProperties* parameter, you can create a cluster with witness Region support and establish peer relationships with clusters in other Regions during creation.

> **Note**
>
> Creating multi-Region clusters requires additional IAM permissions beyond those needed for single-Region clusters, as detailed in the **Required permissions** section below.

Required permissions

dsql:CreateCluster

Required to create a cluster.

Resources: `arn:aws:dsql:region:account-id:cluster/*`

dsql:TagResource

Permission to add tags to a resource.

Resources: `arn:aws:dsql:region:account-id:cluster/*`

dsql:PutMultiRegionProperties

Permission to configure multi-Region properties for a cluster.

Resources: `arn:aws:dsql:region:account-id:cluster/*`

dsql:AddPeerCluster

When specifying `multiRegionProperties.clusters`, permission to add peer clusters.

Resources:

- Local cluster: `arn:aws:dsql:region:account-id:cluster/*`
- Each peer cluster: exact ARN of each specified peer cluster

dsql:PutWitnessRegion

When specifying `multiRegionProperties.witnessRegion`, permission to set a witness Region. This permission is checked both in the cluster Region and in the witness Region.

Resources: `arn:aws:dsql:region:account-id:cluster/*`

Condition Keys: `dsql:WitnessRegion` (matching the specified witness region)

Important

- The witness Region specified in `multiRegionProperties.witnessRegion` cannot be the same as the cluster's Region.

Request Syntax

```
POST /cluster HTTP/1.1
Content-type: application/json

{
   "clientToken": "string",
   "deletionProtectionEnabled": boolean,
   "kmsEncryptionKey": "string",
   "multiRegionProperties": {
      "clusters": [ "string" ],
      "witnessRegion": "string"
   },
   "tags": {
      "string" : "string"
   }
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

clientToken

A unique, case-sensitive identifier that you provide to ensure the idempotency of the request. Idempotency ensures that an API request completes only once. With an idempotent request, if

the original request completes successfully, the subsequent retries with the same client token return the result from the original successful request and they have no additional effect.

If you don't specify a client token, the AWS SDK automatically generates one.

Type: String

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

Pattern: `[!-~]+`

Required: No

deletionProtectionEnabled

If enabled, you can't delete your cluster. You must first disable this property before you can delete your cluster.

Type: Boolean

Required: No

kmsEncryptionKey

The AWS KMS key that encrypts and protects the data on your cluster. You can specify the ARN, ID, or alias of an existing key or have AWS create a default key for you.

Type: String

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

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

Required: No

multiRegionProperties

The configuration settings when creating a multi-Region cluster, including the witness region and linked cluster properties.

Type: MultiRegionProperties object

Required: No

tags

A map of key and value pairs to use to tag your cluster.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 200 items.

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

Key Pattern: `[a-zA-Z0-9_.:/=+\-@ ]*`

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

Value Pattern: `[a-zA-Z0-9_.:/=+\-@ ]*`

Required: No

Response Syntax

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

{
   "arn": "string",
   "creationTime": number,
   "deletionProtectionEnabled": boolean,
   "encryptionDetails": {
      "encryptionStatus": "string",
      "encryptionType": "string",
      "kmsKeyArn": "string"
   },
   "identifier": "string",
   "multiRegionProperties": {
      "clusters": [ "string" ],
      "witnessRegion": "string"
   },
   "status": "string"
}
```

Response Elements

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

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

arn

The ARN of the created cluster.

Type: String

Pattern: `arn:aws(-[^:]+)?:dsql:[a-z0-9-]{1,20}:[0-9]{12}:cluster/[a-z0-9]{26}`

creationTime

The time of when created the cluster.

Type: Timestamp

deletionProtectionEnabled

Whether deletion protection is enabled on this cluster.

Type: Boolean

encryptionDetails

The encryption configuration for the cluster that was specified during the creation process, including the AWS KMS key identifier and encryption state.

Type: EncryptionDetails object

identifier

The ID of the created cluster.

Type: String

Pattern: `[a-z0-9]{26}`

multiRegionProperties

The multi-Region cluster configuration details that were set during cluster creation

Type: MultiRegionProperties object

status

The status of the created cluster.

Type: String

Valid Values: `CREATING | ACTIVE | IDLE | INACTIVE | UPDATING | DELETING | DELETED | FAILED | PENDING_SETUP | PENDING_DELETE`

Errors

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

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 403

ConflictException

The submitted action has conflicts.

HTTP Status Code: 409

InternalServerException

The request processing has failed because of an unknown error, exception or failure.

HTTP Status Code: 500

ServiceQuotaExceededException

The service limit was exceeded.

HTTP Status Code: 402

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 429

ValidationException

The input failed to satisfy the constraints specified by an AWS service.

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 cluster in Amazon Aurora DSQL.

Request Syntax

```
DELETE /cluster/identifier?client-token=clientToken HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

clientToken

A unique, case-sensitive identifier that you provide to ensure the idempotency of the request. Idempotency ensures that an API request completes only once. With an idempotent request, if the original request completes successfully. The subsequent retries with the same client token return the result from the original successful request and they have no additional effect.

If you don't specify a client token, the AWS SDK automatically generates one.

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

Pattern: `[!-~]+`

identifier

The ID of the cluster to delete.

Pattern: `[a-z0-9]{26}`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

```
{
   "arn": "string",
   "creationTime": number,
   "identifier": "string",
   "status": "string"
}
```

Response Elements

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

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

arn

The ARN of the deleted cluster.

Type: String

Pattern: `arn:aws(-[^:]+)?:dsql:[a-z0-9-]{1,20}:[0-9]{12}:cluster/[a-z0-9]{26}`

creationTime

The time of when the cluster was created.

Type: Timestamp

identifier

The ID of the deleted cluster.

Type: String

Pattern: `[a-z0-9]{26}`

status

The status of the cluster.

Type: String

Valid Values: `CREATING | ACTIVE | IDLE | INACTIVE | UPDATING | DELETING | DELETED | FAILED | PENDING_SETUP | PENDING_DELETE`

Errors

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

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 403

ConflictException

The submitted action has conflicts.

HTTP Status Code: 409

InternalServerException

The request processing has failed because of an unknown error, exception or failure.

HTTP Status Code: 500

ResourceNotFoundException

The resource could not be found.

HTTP Status Code: 404

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 429

ValidationException

The input failed to satisfy the constraints specified by an AWS service.

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

GetCluster

Retrieves information about a cluster.

Request Syntax

```
GET /cluster/identifier HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

identifier

The ID of the cluster to retrieve.

Pattern: `[a-z0-9]{26}`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

{
   "arn": "string",
   "creationTime": number,
   "deletionProtectionEnabled": boolean,
   "encryptionDetails": {
      "encryptionStatus": "string",
      "encryptionType": "string",
      "kmsKeyArn": "string"
   },
   "identifier": "string",
   "multiRegionProperties": {
```

```
      "clusters": [ "string" ],
      "witnessRegion": "string"
   },
   "status": "string",
   "tags": {
      "string" : "string"
   }
}
```

Response Elements

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

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

arn

The ARN of the retrieved cluster.

Type: String

Pattern: `arn:aws(-[^:]+)?:dsql:[a-z0-9-]{1,20}:[0-9]{12}:cluster/[a-z0-9]{26}`

creationTime

The time of when the cluster was created.

Type: Timestamp

deletionProtectionEnabled

Whether deletion protection is enabled in this cluster.

Type: Boolean

encryptionDetails

The current encryption configuration details for the cluster.

Type: EncryptionDetails object

identifier

The ID of the retrieved cluster.

Type: String

Pattern: `[a-z0-9]{26}`

multiRegionProperties

Returns the current multi-Region cluster configuration, including witness region and linked cluster information.

Type: MultiRegionProperties object

status

The status of the retrieved cluster.

Type: String

Valid Values: `CREATING | ACTIVE | IDLE | INACTIVE | UPDATING | DELETING | DELETED | FAILED | PENDING_SETUP | PENDING_DELETE`

tags

Map of tags.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 200 items.

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

Key Pattern: `[a-zA-Z0-9_.:/=+\-@ ]*`

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

Value Pattern: `[a-zA-Z0-9_.:/=+\-@ ]*`

Errors

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

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 403

InternalServerException

The request processing has failed because of an unknown error, exception or failure.

HTTP Status Code: 500

ResourceNotFoundException

The resource could not be found.

HTTP Status Code: 404

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 429

ValidationException

The input failed to satisfy the constraints specified by an AWS service.

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

GetVpcEndpointServiceName

Retrieves the VPC endpoint service name.

Request Syntax

```
GET /clusters/identifier/vpc-endpoint-service-name HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

identifier

The ID of the cluster to retrieve.

Pattern: `[a-z0-9]{26}`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

{
   "serviceName": "string"
}
```

Response Elements

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

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

serviceName

The VPC endpoint service name.

Type: String

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

Pattern: `com\.amazonaws\.[a-z0-9-]+\.dsql-[a-f0-9]{6}`

Errors

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

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 403

InternalServerException

The request processing has failed because of an unknown error, exception or failure.

HTTP Status Code: 500

ResourceNotFoundException

The resource could not be found.

HTTP Status Code: 404

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 429

ValidationException

The input failed to satisfy the constraints specified by an AWS service.

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

ListClusters

Retrieves information about a list of clusters.

Request Syntax

```
GET /cluster?max-results=maxResults&next-token=nextToken HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

maxResults

An optional parameter that specifies the maximum number of results to return. You can use nextToken to display the next page of results.

Valid Range: Minimum value of 1. Maximum value of 100.

nextToken

If your initial ListClusters operation returns a nextToken, you can include the returned nextToken in following ListClusters operations, which returns results in the next page.

Request Body

The request does not have a request body.

Response Syntax

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

{
   "clusters": [
      {
         "arn": "string",
         "identifier": "string"
      }
   ],
```

```
    "nextToken": "string"
}
```

Response Elements

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

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

clusters

An array of the returned clusters.

Type: Array of ClusterSummary objects

nextToken

If nextToken is returned, there are more results available. The value of nextToken is a unique pagination token for each page. To retrieve the next page, make the call again using the returned token.

Type: String

Errors

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

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 403

InternalServerException

The request processing has failed because of an unknown error, exception or failure.

HTTP Status Code: 500

ResourceNotFoundException

The resource could not be found.

HTTP Status Code: 404

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 429

ValidationException

The input failed to satisfy the constraints specified by an AWS service.

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

ListTagsForResource

Lists all of the tags for a resource.

Request Syntax

```
GET /tags/resourceArn HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

resourceArn

The ARN of the resource for which you want to list the tags.

Length Constraints: Minimum length of 1. Maximum length of 1011.

Pattern: `arn:.+`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

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

{
   "tags": {
      "string" : "string"
   }
}
```

Response Elements

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

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

tags

A map of key and value pairs that you used to tag your resource.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 200 items.

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

Key Pattern: `[a-zA-Z0-9_.:/=+\-@ ]*`

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

Value Pattern: `[a-zA-Z0-9_.:/=+\-@ ]*`

Errors

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

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 403

InternalServerException

The request processing has failed because of an unknown error, exception or failure.

HTTP Status Code: 500

ResourceNotFoundException

The resource could not be found.

HTTP Status Code: 404

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 429

ValidationException

The input failed to satisfy the constraints specified by an AWS service.

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

TagResource

Tags a resource with a map of key and value pairs.

Request Syntax

```
POST /tags/resourceArn HTTP/1.1
Content-type: application/json

{
   "tags": {
      "string" : "string"
   }
}
```

URI Request Parameters

The request uses the following URI parameters.

resourceArn

The ARN of the resource that you want to tag.

Length Constraints: Minimum length of 1. Maximum length of 1011.

Pattern: `arn:.+`

Required: Yes

Request Body

The request accepts the following data in JSON format.

tags

A map of key and value pairs to use to tag your resource.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 200 items.

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

Key Pattern: `[a-zA-Z0-9_.:/=+\-@ ]*`

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

Value Pattern: `[a-zA-Z0-9_.:/=+\-@ ]*`

Required: Yes

Response Syntax

```
HTTP/1.1 200
```

Response Elements

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

Errors

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

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 403

InternalServerException

The request processing has failed because of an unknown error, exception or failure.

HTTP Status Code: 500

ResourceNotFoundException

The resource could not be found.

HTTP Status Code: 404

ServiceQuotaExceededException

The service limit was exceeded.

HTTP Status Code: 402

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 429

ValidationException

The input failed to satisfy the constraints specified by an AWS service.

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

UntagResource

Removes a tag from a resource.

Request Syntax

```
DELETE /tags/resourceArn?tagKeys=tagKeys HTTP/1.1
```

URI Request Parameters

The request uses the following URI parameters.

resourceArn

The ARN of the resource from which to remove tags.

Length Constraints: Minimum length of 1. Maximum length of 1011.

Pattern: `arn:.+`

Required: Yes

tagKeys

The array of keys of the tags that you want to remove.

Array Members: Minimum number of 0 items. Maximum number of 200 items.

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

Pattern: `[a-zA-Z0-9_.:/=+\-@ ]*`

Required: Yes

Request Body

The request does not have a request body.

Response Syntax

```
HTTP/1.1 200
```

Response Elements

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

Errors

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

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 403

InternalServerException

The request processing has failed because of an unknown error, exception or failure.

HTTP Status Code: 500

ResourceNotFoundException

The resource could not be found.

HTTP Status Code: 404

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 429

ValidationException

The input failed to satisfy the constraints specified by an AWS service.

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

UpdateCluster

The *UpdateCluster* API allows you to modify both single-Region and multi-Region cluster configurations. With the *multiRegionProperties* parameter, you can add or modify witness Region support and manage peer relationships with clusters in other Regions.

> **Note**
>
> Note that updating multi-Region clusters requires additional IAM permissions beyond those needed for standard cluster updates, as detailed in the Permissions section.

Required permissions

dsql:UpdateCluster

Permission to update a DSQL cluster.

Resources: `arn:aws:dsql:`*`region`*`:`*`account-id`*`:cluster/`*`cluster-id`*

dsql:PutMultiRegionProperties

Permission to configure multi-Region properties for a cluster.

Resources: `arn:aws:dsql:`*`region`*`:`*`account-id`*`:cluster/`*`cluster-id`*

dsql:GetCluster

Permission to retrieve cluster information.

Resources: `arn:aws:dsql:`*`region`*`:`*`account-id`*`:cluster/`*`cluster-id`*

dsql:AddPeerCluster

Permission to add peer clusters.

Resources:

- Local cluster: `arn:aws:dsql:`*`region`*`:`*`account-id`*`:cluster/`*`cluster-id`*
- Each peer cluster: exact ARN of each specified peer cluster

dsql:RemovePeerCluster

Permission to remove peer clusters. The *dsql:RemovePeerCluster* permission uses a wildcard ARN pattern to simplify permission management during updates.

Resources: `arn:aws:dsql:*:account-id:cluster/*`

dsql:PutWitnessRegion

Permission to set a witness Region.

Resources: `arn:aws:dsql:region:account-id:cluster/cluster-id`

Condition Keys: dsql:WitnessRegion (matching the specified witness Region)

This permission is checked both in the cluster Region and in the witness Region.

Important

- The witness region specified in `multiRegionProperties.witnessRegion` cannot be the same as the cluster's Region.
- When updating clusters with peer relationships, permissions are checked for both adding and removing peers.
- The `dsql:RemovePeerCluster` permission uses a wildcard ARN pattern to simplify permission management during updates.

Request Syntax

```
POST /cluster/identifier HTTP/1.1
Content-type: application/json

{
   "clientToken": "string",
   "deletionProtectionEnabled": boolean,
   "kmsEncryptionKey": "string",
   "multiRegionProperties": {
      "clusters": [ "string" ],
      "witnessRegion": "string"
```

```
    }
}
```

URI Request Parameters

The request uses the following URI parameters.

identifier

The ID of the cluster you want to update.

Pattern: `[a-z0-9]{26}`

Required: Yes

Request Body

The request accepts the following data in JSON format.

clientToken

A unique, case-sensitive identifier that you provide to ensure the idempotency of the request. Idempotency ensures that an API request completes only once. With an idempotent request, if the original request completes successfully. The subsequent retries with the same client token return the result from the original successful request and they have no additional effect.

If you don't specify a client token, the AWS SDK automatically generates one.

Type: String

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

Pattern: `[!-~]+`

Required: No

deletionProtectionEnabled

Specifies whether to enable deletion protection in your cluster.

Type: Boolean

Required: No

kmsEncryptionKey

The AWS KMS key that encrypts and protects the data on your cluster. You can specify the ARN, ID, or alias of an existing key or have AWS create a default key for you.

Type: String

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

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

Required: No

multiRegionProperties

The new multi-Region cluster configuration settings to be applied during an update operation.

Type: MultiRegionProperties object

Required: No

Response Syntax

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

{
   "arn": "string",
   "creationTime": number,
   "identifier": "string",
   "status": "string"
}
```

Response Elements

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

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

arn

The ARN of the updated cluster.

Type: String

Pattern: `arn:aws(-[^:]+)?:dsql:[a-z0-9-]{1,20}:[0-9]{12}:cluster/[a-z0-9]{26}`

creationTime

The time of when the cluster was created.

Type: Timestamp

identifier

The ID of the cluster to update.

Type: String

Pattern: `[a-z0-9]{26}`

status

The status of the updated cluster.

Type: String

Valid Values: `CREATING | ACTIVE | IDLE | INACTIVE | UPDATING | DELETING | DELETED | FAILED | PENDING_SETUP | PENDING_DELETE`

Errors

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

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 403

ConflictException

The submitted action has conflicts.

HTTP Status Code: 409

InternalServerException

The request processing has failed because of an unknown error, exception or failure.

HTTP Status Code: 500

ResourceNotFoundException

The resource could not be found.

HTTP Status Code: 404

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 429

ValidationException

The input failed to satisfy the constraints specified by an AWS service.

HTTP Status Code: 400

Examples

Example

The following IAM policy grants permissions for multi-Region operations.

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Effect": "Allow",
      "Action": [
        "dsql:CreateCluster",
        "dsql:UpdateCluster",
        "dsql:TagResource",
        "dsql:PutMultiRegionProperties",
        "dsql:AddPeerCluster",
        "dsql:RemovePeerCluster",
        "dsql:GetCluster"
      ],
```

```
      "Resource": "arn:aws:dsql:*:123456789012:cluster/*"
    },
    {
      "Effect": "Allow",
      "Action": "dsql:PutWitnessRegion",
      "Resource": "arn:aws:dsql:*:123456789012:cluster/*",
      "Condition": {
        "StringEquals": {
          "dsql:WitnessRegion": [
            "us-west-2"
          ]
        }
      }
    }
  ]
}
```

See Also

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

- AWS Command Line Interface
- AWS SDK 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 Aurora DSQL 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:

- ClusterSummary
- EncryptionDetails
- MultiRegionProperties
- ValidationExceptionField

ClusterSummary

A summary of the properties of a cluster.

Contents

arn

The ARN of the cluster.

Type: String

Pattern: `arn:aws(-[^:]+)?:dsql:[a-z0-9-]{1,20}:[0-9]{12}:cluster/[a-z0-9]{26}`

Required: Yes

identifier

The ID of the cluster.

Type: String

Pattern: `[a-z0-9]{26}`

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

EncryptionDetails

Configuration details about encryption for the cluster including the AWS KMS key ARN, encryption type, and encryption status.

Contents

encryptionStatus

The status of encryption for the cluster.

Type: String

Valid Values: `ENABLED | UPDATING | KMS_KEY_INACCESSIBLE | ENABLING`

Required: Yes

encryptionType

The type of encryption that protects the data on your cluster.

Type: String

Valid Values: `AWS_OWNED_KMS_KEY | CUSTOMER_MANAGED_KMS_KEY`

Required: Yes

kmsKeyArn

The ARN of the AWS KMS key that encrypts data in the cluster.

Type: String

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2

- AWS SDK for Ruby V3

MultiRegionProperties

Defines the structure for multi-Region cluster configurations, containing the witness region and linked cluster settings.

Contents

clusters

The set of peered clusters that form the multi-Region cluster configuration. Each peered cluster represents a database instance in a different Region.

Type: Array of strings

Pattern: `arn:aws(-[^:]+)?:dsql:[a-z0-9-]{1,20}:[0-9]{12}:cluster/[a-z0-9]{26}`

Required: No

witnessRegion

The Region that serves as the witness region for a multi-Region cluster. The witness Region helps maintain cluster consistency and quorum.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 50.

Required: No

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

ValidationExceptionField

Stores information about a field passed inside a request that resulted in an validation error.

Contents

message

A message describing why this field failed validation.

Type: String

Required: Yes

name

The name of the field.

Type: String

Required: Yes

See Also

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

- AWS SDK for C++
- AWS SDK for Java V2
- AWS SDK for Ruby V3

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: 403

ExpiredTokenException

The security token included in the request is expired

HTTP Status Code: 403

IncompleteSignature

The request signature does not conform to AWS standards.

HTTP Status Code: 403

InternalFailure

The request processing has failed because of an unknown error, exception or failure.

HTTP Status Code: 500

MalformedHttpRequestException

Problems with the request at the HTTP level, e.g. we can't decompress the body according to the decompression algorithm specified by the content-encoding.

HTTP Status Code: 400

NotAuthorized

You do not have permission to perform this action.

HTTP Status Code: 401

OptInRequired

The AWS access key ID needs a subscription for the service.

HTTP Status Code: 403

RequestAbortedException

Convenient exception that can be used when a request is aborted before a reply is sent back (e.g. client closed connection).

HTTP Status Code: 400

RequestEntityTooLargeException

Problems with the request at the HTTP level. The request entity is too large.

HTTP Status Code: 413

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

RequestTimeoutException

Problems with the request at the HTTP level. Reading the Request timed out.

HTTP Status Code: 408

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

UnrecognizedClientException

The X.509 certificate or AWS access key ID provided does not exist in our records.

HTTP Status Code: 403

UnknownOperationException

The action or operation requested is invalid. Verify that the action is typed correctly.

HTTP Status Code: 404

ValidationError

The input fails to satisfy the constraints specified by an AWS service.

HTTP Status Code: 400