aws

AWS CloudHSM

API Version 2017-04-28

AWS CloudHSM: API Reference

Table of Contents

Welcome 1

Actions 2

   CopyBackupToRegion 3

      Request Syntax 3

      Request Parameters 3

      Response Syntax 4

      Response Elements 4

      Errors 5

      See Also 6

   CreateCluster 7

      Request Syntax 7

      Request Parameters 7

      Response Syntax 9

      Response Elements 10

      Errors 11

      See Also 12

   CreateHsm 13

      Request Syntax 13

      Request Parameters 13

      Response Syntax 14

      Response Elements 14

      Errors 15

      See Also 15

   DeleteBackup 17

      Request Syntax 17

      Request Parameters 17

      Response Syntax 17

      Response Elements 18

      Errors 18

      See Also 19

   DeleteCluster 20

      Request Syntax 20

      Request Parameters 20

      Response Syntax 20

Welcome

Welcome to the AWS CloudHSM API Reference.

For more information about AWS CloudHSM, see AWS CloudHSM and the AWS CloudHSM User Guide.

This document was last published on January 3, 2025.

Actions

The following actions are supported:

- [CopyBackupToRegion](#)
- [CreateCluster](#)
- [CreateHsm](#)
- [DeleteBackup](#)
- [DeleteCluster](#)
- [DeleteHsm](#)
- [DeleteResourcePolicy](#)
- [DescribeBackups](#)
- [DescribeClusters](#)
- [GetResourcePolicy](#)
- [InitializeCluster](#)
- [ListTags](#)
- [ModifyBackupAttributes](#)
- [ModifyCluster](#)
- [PutResourcePolicy](#)
- [RestoreBackup](#)
- [TagResource](#)
- [UntagResource](#)

CopyBackupToRegion

Copy an AWS CloudHSM cluster backup to a different region.

Cross-account use: No. You cannot perform this operation on an AWS CloudHSM backup in a different AWS account.

Request Syntax

```
{
   "BackupId": "string",
   "DestinationRegion": "string",
   "TagList": [
      {
         "Key": "string",
         "Value": "string"
      }
   ]
}
```

Request Parameters

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

The request accepts the following data in JSON format.

BackupId

　　The ID of the backup that will be copied to the destination region.

　　Type: String

　　Pattern: `backup-[2-7a-zA-Z]{11,16}`

　　Required: Yes

DestinationRegion

　　The AWS region that will contain your copied AWS CloudHSM cluster backup.

　　Type: String

Pattern: `[a-z]{2}(-(gov))?-(east|west|north|south|central){1,2}-\d`

Required: Yes

TagList

Tags to apply to the destination backup during creation. If you specify tags, only these tags will be applied to the destination backup. If you do not specify tags, the service copies tags from the source backup to the destination backup.

Type: Array of Tag objects

Array Members: Minimum number of 1 item. Maximum number of 50 items.

Required: No

Response Syntax

```
{
    "DestinationBackup": {
        "CreateTimestamp": number,
        "SourceBackup": "string",
        "SourceCluster": "string",
        "SourceRegion": "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.

DestinationBackup

Information on the backup that will be copied to the destination region, including CreateTimestamp, SourceBackup, SourceCluster, and Source Region. CreateTimestamp of the destination backup will be the same as that of the source backup.

You will need to use the `sourceBackupID` returned in this operation to use the DescribeBackups operation on the backup that will be copied to the destination region.

Type: [DestinationBackup](#) object

Errors

For information about the errors that are common to all actions, see [Common Errors](#).

CloudHsmAccessDeniedException

The request was rejected because the requester does not have permission to perform the requested operation.

HTTP Status Code: 400

CloudHsmInternalFailureException

The request was rejected because of an AWS CloudHSM internal failure. The request can be retried.

HTTP Status Code: 500

CloudHsmInvalidRequestException

The request was rejected because it is not a valid request.

HTTP Status Code: 400

CloudHsmResourceNotFoundException

The request was rejected because it refers to a resource that cannot be found.

HTTP Status Code: 400

CloudHsmServiceException

The request was rejected because an error occurred.

HTTP Status Code: 400

CloudHsmTagException

The request was rejected because of a tagging failure. Verify the tag conditions in all applicable policies, and then retry the request.

HTTP Status Code: 400

See Also

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

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

CreateCluster

Creates a new AWS CloudHSM cluster.

Cross-account use: Yes. To perform this operation with an AWS CloudHSM backup in a different AWS account, specify the full backup ARN in the value of the SourceBackupId parameter.

Request Syntax

```
{
   "BackupRetentionPolicy": {
      "Type": "string",
      "Value": "string"
   },
   "HsmType": "string",
   "Mode": "string",
   "NetworkType": "string",
   "SourceBackupId": "string",
   "SubnetIds": [ "string" ],
   "TagList": [
      {
         "Key": "string",
         "Value": "string"
      }
   ]
}
```

Request Parameters

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

The request accepts the following data in JSON format.

BackupRetentionPolicy

   A policy that defines how the service retains backups.

   Type: BackupRetentionPolicy object

   Required: No

HsmType

The type of HSM to use in the cluster. The allowed values are `hsm1.medium` and `hsm2m.medium`.

Type: String

Length Constraints: Maximum length of 32.

Pattern: `((p|)hsm[0-9][a-z.]*\.[a-zA-Z]+)`

Required: Yes

Mode

The mode to use in the cluster. The allowed values are `FIPS` and `NON_FIPS`.

Type: String

Valid Values: `FIPS | NON_FIPS`

Required: No

NetworkType

The NetworkType to create a cluster with. The allowed values are `IPV4` and `DUALSTACK`.

Type: String

Valid Values: `IPV4 | DUALSTACK`

Required: No

SourceBackupId

The identifier (ID) or the Amazon Resource Name (ARN) of the cluster backup to restore. Use this value to restore the cluster from a backup instead of creating a new cluster. To find the backup ID or ARN, use DescribeBackups. *If using a backup in another account, the full ARN must be supplied.*

Type: String

Pattern: `^(arn:aws(-(us-gov))?:cloudhsm:([a-z]{2}(-(gov|isob|iso))?-(east|west|north|south|central){1,2}-[0-9]{1}):[0-9]{12}:backup/)?backup-[2-7a-zA-Z]{11,16}`

Required: No

SubnetIds

The identifiers (IDs) of the subnets where you are creating the cluster. You must specify at least one subnet. If you specify multiple subnets, they must meet the following criteria:

- All subnets must be in the same virtual private cloud (VPC).

- You can specify only one subnet per Availability Zone.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 10 items.

Pattern: subnet-[0-9a-fA-F]{8,17}

Required: Yes

TagList

Tags to apply to the AWS CloudHSM cluster during creation.

Type: Array of Tag objects

Array Members: Minimum number of 1 item. Maximum number of 50 items.

Required: No

Response Syntax

```
{
   "Cluster": {
      "BackupPolicy": "string",
      "BackupRetentionPolicy": {
         "Type": "string",
         "Value": "string"
      },
      "Certificates": {
         "AwsHardwareCertificate": "string",
         "ClusterCertificate": "string",
         "ClusterCsr": "string",
         "HsmCertificate": "string",
```

```
                "ManufacturerHardwareCertificate": "string"
        },
        "ClusterId": "string",
        "CreateTimestamp": number,
        "Hsms": [
            {
                "AvailabilityZone": "string",
                "ClusterId": "string",
                "EniId": "string",
                "EniIp": "string",
                "EniIpV6": "string",
                "HsmId": "string",
                "State": "string",
                "StateMessage": "string",
                "SubnetId": "string"
            }
        ],
        "HsmType": "string",
        "Mode": "string",
        "NetworkType": "string",
        "PreCoPassword": "string",
        "SecurityGroup": "string",
        "SourceBackupId": "string",
        "State": "string",
        "StateMessage": "string",
        "SubnetMapping": {
            "string" : "string"
        },
        "TagList": [
            {
                "Key": "string",
                "Value": "string"
            }
        ],
        "VpcId": "string"
    }
}
```

Response Elements

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

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

Cluster

Information about the cluster that was created.

Type: Cluster object

Errors

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

CloudHsmAccessDeniedException

The request was rejected because the requester does not have permission to perform the requested operation.

HTTP Status Code: 400

CloudHsmInternalFailureException

The request was rejected because of an AWS CloudHSM internal failure. The request can be retried.

HTTP Status Code: 500

CloudHsmInvalidRequestException

The request was rejected because it is not a valid request.

HTTP Status Code: 400

CloudHsmResourceNotFoundException

The request was rejected because it refers to a resource that cannot be found.

HTTP Status Code: 400

CloudHsmServiceException

The request was rejected because an error occurred.

HTTP Status Code: 400

CloudHsmTagException

The request was rejected because of a tagging failure. Verify the tag conditions in all applicable policies, and then retry the request.

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](#)
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- [AWS SDK for C++](#)
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- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

CreateHsm

Creates a new hardware security module (HSM) in the specified AWS CloudHSM cluster.

Cross-account use: No. You cannot perform this operation on an AWS CloudHSM cluster in a different Amazon Web Service account.

Request Syntax

```
{
   "AvailabilityZone": "string",
   "ClusterId": "string",
   "IpAddress": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

AvailabilityZone

   The Availability Zone where you are creating the HSM. To find the cluster's Availability Zones, use DescribeClusters.

   Type: String

   Pattern: `[a-z]{2}(-(gov))?-(east|west|north|south|central){1,2}-\d[a-z]`

   Required: Yes

ClusterId

   The identifier (ID) of the HSM's cluster. To find the cluster ID, use DescribeClusters.

   Type: String

   Pattern: `cluster-[2-7a-zA-Z]{11,16}`

   Required: Yes

IpAddress

The HSM's IP address. If you specify an IP address, use an available address from the subnet that maps to the Availability Zone where you are creating the HSM. If you don't specify an IP address, one is chosen for you from that subnet.

Type: String

Pattern: \d{1,3}\.\d{1,3}\.\d{1,3}\.\d{1,3}

Required: No

Response Syntax

```
{
    "Hsm": {
        "AvailabilityZone": "string",
        "ClusterId": "string",
        "EniId": "string",
        "EniIp": "string",
        "EniIpV6": "string",
        "HsmId": "string",
        "State": "string",
        "StateMessage": "string",
        "SubnetId": "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.

Hsm

Information about the HSM that was created.

Type: Hsm object

Errors

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

CloudHsmAccessDeniedException

The request was rejected because the requester does not have permission to perform the requested operation.

HTTP Status Code: 400

CloudHsmInternalFailureException

The request was rejected because of an AWS CloudHSM internal failure. The request can be retried.

HTTP Status Code: 500

CloudHsmInvalidRequestException

The request was rejected because it is not a valid request.

HTTP Status Code: 400

CloudHsmResourceNotFoundException

The request was rejected because it refers to a resource that cannot be found.

HTTP Status Code: 400

CloudHsmServiceException

The request was rejected because an error occurred.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET

- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DeleteBackup

Deletes a specified AWS CloudHSM backup. A backup can be restored up to 7 days after the DeleteBackup request is made. For more information on restoring a backup, see RestoreBackup.

Cross-account use: No. You cannot perform this operation on an AWS CloudHSM backup in a different AWS account.

Request Syntax

```
{
    "BackupId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

BackupId

The ID of the backup to be deleted. To find the ID of a backup, use the DescribeBackups operation.

Type: String

Pattern: backup-[2-7a-zA-Z]{11,16}

Required: Yes

Response Syntax

```
{
    "Backup": {
        "BackupArn": "string",
        "BackupId": "string",
        "BackupState": "string",
        "ClusterId": "string",
        "CopyTimestamp": number,
        "CreateTimestamp": number,
```

```
      "DeleteTimestamp": number,
      "HsmType": "string",
      "Mode": "string",
      "NeverExpires": boolean,
      "SourceBackup": "string",
      "SourceCluster": "string",
      "SourceRegion": "string",
      "TagList": [
         {
            "Key": "string",
            "Value": "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.

Backup

   Information on the `Backup` object deleted.

   Type: Backup object

Errors

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

CloudHsmAccessDeniedException

   The request was rejected because the requester does not have permission to perform the
   requested operation.

   HTTP Status Code: 400

CloudHsmInternalFailureException

   The request was rejected because of an AWS CloudHSM internal failure. The request can be
   retried.

HTTP Status Code: 500

CloudHsmInvalidRequestException

The request was rejected because it is not a valid request.

HTTP Status Code: 400

CloudHsmResourceNotFoundException

The request was rejected because it refers to a resource that cannot be found.

HTTP Status Code: 400

CloudHsmServiceException

The request was rejected because an error occurred.

HTTP Status Code: 400

See Also

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

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

DeleteCluster

Deletes the specified AWS CloudHSM cluster. Before you can delete a cluster, you must delete all HSMs in the cluster. To see if the cluster contains any HSMs, use DescribeClusters. To delete an HSM, use DeleteHsm.

Cross-account use: No. You cannot perform this operation on an AWS CloudHSM cluster in a different AWS account.

Request Syntax

```
{
    "ClusterId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

ClusterId

The identifier (ID) of the cluster that you are deleting. To find the cluster ID, use DescribeClusters.

Type: String

Pattern: `cluster-[2-7a-zA-Z]{11,16}`

Required: Yes

Response Syntax

```
{
    "Cluster": {
        "BackupPolicy": "string",
        "BackupRetentionPolicy": {
            "Type": "string",
            "Value": "string"
        },
```

```
        "Certificates": {
            "AwsHardwareCertificate": "string",
            "ClusterCertificate": "string",
            "ClusterCsr": "string",
            "HsmCertificate": "string",
            "ManufacturerHardwareCertificate": "string"
        },
        "ClusterId": "string",
        "CreateTimestamp": number,
        "Hsms": [
            {
                "AvailabilityZone": "string",
                "ClusterId": "string",
                "EniId": "string",
                "EniIp": "string",
                "EniIpV6": "string",
                "HsmId": "string",
                "State": "string",
                "StateMessage": "string",
                "SubnetId": "string"
            }
        ],
        "HsmType": "string",
        "Mode": "string",
        "NetworkType": "string",
        "PreCoPassword": "string",
        "SecurityGroup": "string",
        "SourceBackupId": "string",
        "State": "string",
        "StateMessage": "string",
        "SubnetMapping": {
            "string" : "string"
        },
        "TagList": [
            {
                "Key": "string",
                "Value": "string"
            }
        ],
        "VpcId": "string"
    }
}
```

Response Elements

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

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

Cluster

Information about the cluster that was deleted.

Type: Cluster object

Errors

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

CloudHsmAccessDeniedException

The request was rejected because the requester does not have permission to perform the requested operation.

HTTP Status Code: 400

CloudHsmInternalFailureException

The request was rejected because of an AWS CloudHSM internal failure. The request can be retried.

HTTP Status Code: 500

CloudHsmInvalidRequestException

The request was rejected because it is not a valid request.

HTTP Status Code: 400

CloudHsmResourceNotFoundException

The request was rejected because it refers to a resource that cannot be found.

HTTP Status Code: 400

CloudHsmServiceException

The request was rejected because an error occurred.

HTTP Status Code: 400

CloudHsmTagException

The request was rejected because of a tagging failure. Verify the tag conditions in all applicable policies, and then retry the request.

HTTP Status Code: 400

See Also

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

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

DeleteHsm

Deletes the specified HSM. To specify an HSM, you can use its identifier (ID), the IP address of the HSM's elastic network interface (ENI), or the ID of the HSM's ENI. You need to specify only one of these values. To find these values, use DescribeClusters.

Cross-account use: No. You cannot perform this operation on an AWS CloudHSM hsm in a different AWS account.

Request Syntax

```
{
   "ClusterId": "string",
   "EniId": "string",
   "EniIp": "string",
   "HsmId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

ClusterId

The identifier (ID) of the cluster that contains the HSM that you are deleting.

Type: String

Pattern: `cluster-[2-7a-zA-Z]{11,16}`

Required: Yes

EniId

The identifier (ID) of the elastic network interface (ENI) of the HSM that you are deleting.

Type: String

Pattern: `eni-[0-9a-fA-F]{8,17}`

Required: No

EniIp

The IP address of the elastic network interface (ENI) of the HSM that you are deleting.

Type: String

Pattern: `\d{1,3}\.\d{1,3}\.\d{1,3}\.\d{1,3}`

Required: No

HsmId

The identifier (ID) of the HSM that you are deleting.

Type: String

Pattern: `hsm-[2-7a-zA-Z]{11,16}`

Required: No

Response Syntax

```
{
    "HsmId": "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.

HsmId

The identifier (ID) of the HSM that was deleted.

Type: String

Pattern: `hsm-[2-7a-zA-Z]{11,16}`

Errors

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

CloudHsmAccessDeniedException

The request was rejected because the requester does not have permission to perform the requested operation.

HTTP Status Code: 400

CloudHsmInternalFailureException

The request was rejected because of an AWS CloudHSM internal failure. The request can be retried.

HTTP Status Code: 500

CloudHsmInvalidRequestException

The request was rejected because it is not a valid request.

HTTP Status Code: 400

CloudHsmResourceNotFoundException

The request was rejected because it refers to a resource that cannot be found.

HTTP Status Code: 400

CloudHsmServiceException

The request was rejected because an error occurred.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET

- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DeleteResourcePolicy

Deletes an AWS CloudHSM resource policy. Deleting a resource policy will result in the resource being unshared and removed from any AWS RAM resource shares. Deleting the resource policy attached to a backup will not impact any clusters created from that backup.

Cross-account use: No. You cannot perform this operation on an AWS CloudHSM resource in a different AWS account.

Request Syntax

```
{
    "ResourceArn": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

ResourceArn

Amazon Resource Name (ARN) of the resource from which the policy will be removed.

Type: String

Pattern: `arn:aws(-(us-gov))?:cloudhsm:([a-z]{2}(-(gov|isob|iso))?-(east|west|north|south|central){1,2}-[0-9]{1}):[0-9]{12}:(backup/backup|cluster/cluster|hsm/hsm)-[2-7a-zA-Z]{11,16}`

Required: No

Response Syntax

```
{
    "Policy": "string",
    "ResourceArn": "string"
}
```

Response Elements

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

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

Policy

The policy previously attached to the resource.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 20000.

ResourceArn

Amazon Resource Name (ARN) of the resource from which the policy was deleted.

Type: String

Pattern: `arn:aws(-(us-gov))?:cloudhsm:([a-z]{2}(-(gov|isob|iso))?-(east|` `west|north|south|central){1,2}-[0-9]{1}):[0-9]{12}:(backup/backup|` `cluster/cluster|hsm/hsm)-[2-7a-zA-Z]{11,16}`

Errors

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

CloudHsmAccessDeniedException

The request was rejected because the requester does not have permission to perform the requested operation.

HTTP Status Code: 400

CloudHsmInternalFailureException

The request was rejected because of an AWS CloudHSM internal failure. The request can be retried.

HTTP Status Code: 500

CloudHsmInvalidRequestException

The request was rejected because it is not a valid request.

HTTP Status Code: 400

CloudHsmResourceNotFoundException

The request was rejected because it refers to a resource that cannot be found.

HTTP Status Code: 400

CloudHsmServiceException

The request was rejected because an error occurred.

HTTP Status Code: 400

See Also

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

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

DescribeBackups

Gets information about backups of AWS CloudHSM clusters. Lists either the backups you own or the backups shared with you when the Shared parameter is true.

This is a paginated operation, which means that each response might contain only a subset of all the backups. When the response contains only a subset of backups, it includes a `NextToken` value. Use this value in a subsequent `DescribeBackups` request to get more backups. When you receive a response with no `NextToken` (or an empty or null value), that means there are no more backups to get.

Cross-account use: Yes. Customers can describe backups in other AWS accounts that are shared with them.

Request Syntax

```
{
    "Filters": {
        "string" : [ "string" ]
    },
    "MaxResults": number,
    "NextToken": "string",
    "Shared": boolean,
    "SortAscending": boolean
}
```

Request Parameters

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

The request accepts the following data in JSON format.

Filters

One or more filters to limit the items returned in the response.

Use the `backupIds` filter to return only the specified backups. Specify backups by their backup identifier (ID).

Use the `sourceBackupIds` filter to return only the backups created from a source backup. The `sourceBackupID` of a source backup is returned by the CopyBackupToRegion operation.

Use the `clusterIds` filter to return only the backups for the specified clusters. Specify clusters by their cluster identifier (ID).

Use the `states` filter to return only backups that match the specified state.

Use the `neverExpires` filter to return backups filtered by the value in the `neverExpires` parameter. `True` returns all backups exempt from the backup retention policy. `False` returns all backups with a backup retention policy defined at the cluster.

Type: String to array of strings map

Map Entries: Maximum number of 30 items.

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

Required: No

MaxResults

The maximum number of backups to return in the response. When there are more backups than the number you specify, the response contains a `NextToken` value.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 50.

Required: No

NextToken

The `NextToken` value that you received in the previous response. Use this value to get more backups.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `.*`

Required: No

Shared

Describe backups that are shared with you.

> **ⓘ Note**
>
> By default when using this option, the command returns backups that have been shared using a standard AWS Resource Access Manager resource share. In order for a backup that was shared using the PutResourcePolicy command to be returned, the share must be promoted to a standard resource share using the AWS RAM PromoteResourceShareCreatedFromPolicy API operation. For more information about sharing backups, see Working with shared backups in the AWS CloudHSM User Guide.

Type: Boolean

Required: No

SortAscending

Designates whether or not to sort the return backups by ascending chronological order of generation.

Type: Boolean

Required: No

Response Syntax

```
{
   "Backups": [
      {
         "BackupArn": "string",
         "BackupId": "string",
         "BackupState": "string",
         "ClusterId": "string",
         "CopyTimestamp": number,
         "CreateTimestamp": number,
         "DeleteTimestamp": number,
         "HsmType": "string",
         "Mode": "string",
         "NeverExpires": boolean,
         "SourceBackup": "string",
         "SourceCluster": "string",
         "SourceRegion": "string",
```

```
        "TagList": [
          {
              "Key": "string",
              "Value": "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.

Backups

A list of backups.

Type: Array of Backup objects

NextToken

An opaque string that indicates that the response contains only a subset of backups. Use this value in a subsequent `DescribeBackups` request to get more backups.

Type: String

Length Constraints: Maximum length of 256.

Pattern: . *

Errors

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

CloudHsmAccessDeniedException

The request was rejected because the requester does not have permission to perform the requested operation.

HTTP Status Code: 400

CloudHsmInternalFailureException

The request was rejected because of an AWS CloudHSM internal failure. The request can be retried.

HTTP Status Code: 500

CloudHsmInvalidRequestException

The request was rejected because it is not a valid request.

HTTP Status Code: 400

CloudHsmResourceNotFoundException

The request was rejected because it refers to a resource that cannot be found.

HTTP Status Code: 400

CloudHsmServiceException

The request was rejected because an error occurred.

HTTP Status Code: 400

CloudHsmTagException

The request was rejected because of a tagging failure. Verify the tag conditions in all applicable policies, and then retry the request.

HTTP Status Code: 400

See Also

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

- [AWS Command Line Interface](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)

- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

DescribeClusters

Gets information about AWS CloudHSM clusters.

This is a paginated operation, which means that each response might contain only a subset of all the clusters. When the response contains only a subset of clusters, it includes a `NextToken` value. Use this value in a subsequent `DescribeClusters` request to get more clusters. When you receive a response with no `NextToken` (or an empty or null value), that means there are no more clusters to get.

Cross-account use: No. You cannot perform this operation on AWS CloudHSM clusters in a different AWS account.

Request Syntax

```
{
   "Filters": {
      "string" : [ "string" ]
   },
   "MaxResults": number,
   "NextToken": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

Filters

One or more filters to limit the items returned in the response.

Use the `clusterIds` filter to return only the specified clusters. Specify clusters by their cluster identifier (ID).

Use the `vpcIds` filter to return only the clusters in the specified virtual private clouds (VPCs). Specify VPCs by their VPC identifier (ID).

Use the `states` filter to return only clusters that match the specified state.

Type: String to array of strings map

Map Entries: Maximum number of 30 items.

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

Required: No

MaxResults

The maximum number of clusters to return in the response. When there are more clusters than the number you specify, the response contains a `NextToken` value.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 25.

Required: No

NextToken

The `NextToken` value that you received in the previous response. Use this value to get more clusters.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `.*`

Required: No

Response Syntax

```
{
   "Clusters": [
      {
         "BackupPolicy": "string",
         "BackupRetentionPolicy": {
            "Type": "string",
            "Value": "string"
         },
         "Certificates": {
            "AwsHardwareCertificate": "string",
            "ClusterCertificate": "string",
            "ClusterCsr": "string",
            "HsmCertificate": "string",
```

```
            "ManufacturerHardwareCertificate": "string"
        },
        "ClusterId": "string",
        "CreateTimestamp": number,
        "Hsms": [
            {
                "AvailabilityZone": "string",
                "ClusterId": "string",
                "EniId": "string",
                "EniIp": "string",
                "EniIpV6": "string",
                "HsmId": "string",
                "State": "string",
                "StateMessage": "string",
                "SubnetId": "string"
            }
        ],
        "HsmType": "string",
        "Mode": "string",
        "NetworkType": "string",
        "PreCoPassword": "string",
        "SecurityGroup": "string",
        "SourceBackupId": "string",
        "State": "string",
        "StateMessage": "string",
        "SubnetMapping": {
            "string" : "string"
        },
        "TagList": [
            {
                "Key": "string",
                "Value": "string"
            }
        ],
        "VpcId": "string"
    }
],
"NextToken": "string"
}
```

Response Elements

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

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

Clusters

A list of clusters.

Type: Array of Cluster objects

NextToken

An opaque string that indicates that the response contains only a subset of clusters. Use this value in a subsequent `DescribeClusters` request to get more clusters.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `. *`

Errors

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

CloudHsmAccessDeniedException

The request was rejected because the requester does not have permission to perform the requested operation.

HTTP Status Code: 400

CloudHsmInternalFailureException

The request was rejected because of an AWS CloudHSM internal failure. The request can be retried.

HTTP Status Code: 500

CloudHsmInvalidRequestException

The request was rejected because it is not a valid request.

HTTP Status Code: 400

CloudHsmServiceException

The request was rejected because an error occurred.

HTTP Status Code: 400

CloudHsmTagException

The request was rejected because of a tagging failure. Verify the tag conditions in all applicable policies, and then retry the request.

HTTP Status Code: 400

See Also

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

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

GetResourcePolicy

Retrieves the resource policy document attached to a given resource.

Cross-account use: No. You cannot perform this operation on an AWS CloudHSM resource in a different AWS account.

Request Syntax

```
{
    "ResourceArn": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

ResourceArn

Amazon Resource Name (ARN) of the resource to which a policy is attached.

Type: String

Pattern: `arn:aws(-(us-gov))?:cloudhsm:([a-z]{2}(-(gov|isob|iso))?-(east|west|north|south|central){1,2}-[0-9]{1}):[0-9]{12}:(backup/backup|cluster/cluster|hsm/hsm)-[2-7a-zA-Z]{11,16}`

Required: No

Response Syntax

```
{
    "Policy": "string"
}
```

Response Elements

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

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

Policy

   The policy attached to a resource.

   Type: String

   Length Constraints: Minimum length of 1. Maximum length of 20000.

Errors

For information about the errors that are common to all actions, see [Common Errors](#).

CloudHsmAccessDeniedException

   The request was rejected because the requester does not have permission to perform the
   requested operation.

   HTTP Status Code: 400

CloudHsmInternalFailureException

   The request was rejected because of an AWS CloudHSM internal failure. The request can be
   retried.

   HTTP Status Code: 500

CloudHsmInvalidRequestException

   The request was rejected because it is not a valid request.

   HTTP Status Code: 400

CloudHsmResourceNotFoundException

   The request was rejected because it refers to a resource that cannot be found.

   HTTP Status Code: 400

CloudHsmServiceException

   The request was rejected because an error occurred.

   HTTP Status Code: 400

See Also

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

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

InitializeCluster

Claims an AWS CloudHSM cluster by submitting the cluster certificate issued by your issuing certificate authority (CA) and the CA's root certificate. Before you can claim a cluster, you must sign the cluster's certificate signing request (CSR) with your issuing CA. To get the cluster's CSR, use DescribeClusters.

Cross-account use: No. You cannot perform this operation on an AWS CloudHSM cluster in a different AWS account.

Request Syntax

```
{
    "ClusterId": "string",
    "SignedCert": "string",
    "TrustAnchor": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

ClusterId

The identifier (ID) of the cluster that you are claiming. To find the cluster ID, use DescribeClusters.

Type: String

Pattern: `cluster-[2-7a-zA-Z]{11,16}`

Required: Yes

SignedCert

The cluster certificate issued (signed) by your issuing certificate authority (CA). The certificate must be in PEM format and can contain a maximum of 5000 characters.

Type: String

Length Constraints: Maximum length of 20000.

Pattern: `[a-zA-Z0-9+-/=\s]*`

Required: Yes

TrustAnchor

The issuing certificate of the issuing certificate authority (CA) that issued (signed) the cluster certificate. You must use a self-signed certificate. The certificate used to sign the HSM CSR must be directly available, and thus must be the root certificate. The certificate must be in PEM format and can contain a maximum of 5000 characters.

Type: String

Length Constraints: Maximum length of 20000.

Pattern: `[a-zA-Z0-9+-/=\s]*`

Required: Yes

Response Syntax

```
{
    "State": "string",
    "StateMessage": "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.

State

The cluster's state.

Type: String

Valid Values: `CREATE_IN_PROGRESS` | `UNINITIALIZED` | `INITIALIZE_IN_PROGRESS` | `INITIALIZED` | `ACTIVE` | `UPDATE_IN_PROGRESS` | `MODIFY_IN_PROGRESS` | `ROLLBACK_IN_PROGRESS` | `DELETE_IN_PROGRESS` | `DELETED` | `DEGRADED`

StateMessage

A description of the cluster's state.

Type: String

Length Constraints: Maximum length of 300.

Pattern: . *

Errors

For information about the errors that are common to all actions, see [Common Errors](#).

CloudHsmAccessDeniedException

The request was rejected because the requester does not have permission to perform the requested operation.

HTTP Status Code: 400

CloudHsmInternalFailureException

The request was rejected because of an AWS CloudHSM internal failure. The request can be retried.

HTTP Status Code: 500

CloudHsmInvalidRequestException

The request was rejected because it is not a valid request.

HTTP Status Code: 400

CloudHsmResourceNotFoundException

The request was rejected because it refers to a resource that cannot be found.

HTTP Status Code: 400

CloudHsmServiceException

The request was rejected because an error occurred.

HTTP Status Code: 400

See Also

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

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

ListTags

Gets a list of tags for the specified AWS CloudHSM cluster.

This is a paginated operation, which means that each response might contain only a subset of all the tags. When the response contains only a subset of tags, it includes a `NextToken` value. Use this value in a subsequent `ListTags` request to get more tags. When you receive a response with no `NextToken` (or an empty or null value), that means there are no more tags to get.

Cross-account use: No. You cannot perform this operation on an AWS CloudHSM resource in a different AWS account.

Request Syntax

```
{
    "MaxResults": number,
    "NextToken": "string",
    "ResourceId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

MaxResults

The maximum number of tags to return in the response. When there are more tags than the number you specify, the response contains a `NextToken` value.

Type: Integer

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

Required: No

NextToken

The `NextToken` value that you received in the previous response. Use this value to get more tags.

Type: String

Length Constraints: Maximum length of 256.

Pattern: . *

Required: No

ResourceId

The cluster identifier (ID) for the cluster whose tags you are getting. To find the cluster ID, use [DescribeClusters](#).

Type: String

Pattern: `(?:cluster|backup)-[2-7a-zA-Z]{11,16}`

Required: Yes

Response Syntax

```
{
    "NextToken": "string",
    "TagList": [
        {
            "Key": "string",
            "Value": "string"
        }
    ]
}
```

Response Elements

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

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

NextToken

An opaque string that indicates that the response contains only a subset of tags. Use this value in a subsequent `ListTags` request to get more tags.

Type: String

Length Constraints: Maximum length of 256.

Pattern: `. *`

TagList

A list of tags.

Type: Array of Tag objects

Array Members: Minimum number of 1 item. Maximum number of 50 items.

Errors

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

CloudHsmAccessDeniedException

The request was rejected because the requester does not have permission to perform the requested operation.

HTTP Status Code: 400

CloudHsmInternalFailureException

The request was rejected because of an AWS CloudHSM internal failure. The request can be retried.

HTTP Status Code: 500

CloudHsmInvalidRequestException

The request was rejected because it is not a valid request.

HTTP Status Code: 400

CloudHsmResourceNotFoundException

The request was rejected because it refers to a resource that cannot be found.

HTTP Status Code: 400

CloudHsmServiceException

The request was rejected because an error occurred.

HTTP Status Code: 400

CloudHsmTagException

The request was rejected because of a tagging failure. Verify the tag conditions in all applicable policies, and then retry the request.

HTTP Status Code: 400

See Also

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

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

ModifyBackupAttributes

Modifies attributes for AWS CloudHSM backup.

Cross-account use: No. You cannot perform this operation on an AWS CloudHSM backup in a different AWS account.

Request Syntax

```
{
    "BackupId": "string",
    "NeverExpires": boolean
}
```

Request Parameters

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

The request accepts the following data in JSON format.

BackupId

The identifier (ID) of the backup to modify. To find the ID of a backup, use the DescribeBackups operation.

Type: String

Pattern: `backup-[2-7a-zA-Z]{11,16}`

Required: Yes

NeverExpires

Specifies whether the service should exempt a backup from the retention policy for the cluster. `True` exempts a backup from the retention policy. `False` means the service applies the backup retention policy defined at the cluster.

Type: Boolean

Required: Yes

Response Syntax

```
{
    "Backup": {
        "BackupArn": "string",
        "BackupId": "string",
        "BackupState": "string",
        "ClusterId": "string",
        "CopyTimestamp": number,
        "CreateTimestamp": number,
        "DeleteTimestamp": number,
        "HsmType": "string",
        "Mode": "string",
        "NeverExpires": boolean,
        "SourceBackup": "string",
        "SourceCluster": "string",
        "SourceRegion": "string",
        "TagList": [
            {
                "Key": "string",
                "Value": "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.

Backup

Contains information about a backup of an AWS CloudHSM cluster. All backup objects contain the BackupId, BackupState, ClusterId, and CreateTimestamp parameters. Backups that were copied into a destination region additionally contain the CopyTimestamp, SourceBackup, SourceCluster, and SourceRegion parameters. A backup that is pending deletion will include the DeleteTimestamp parameter.

Type: Backup object

Errors

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

CloudHsmAccessDeniedException

The request was rejected because the requester does not have permission to perform the requested operation.

HTTP Status Code: 400

CloudHsmInternalFailureException

The request was rejected because of an AWS CloudHSM internal failure. The request can be retried.

HTTP Status Code: 500

CloudHsmInvalidRequestException

The request was rejected because it is not a valid request.

HTTP Status Code: 400

CloudHsmResourceNotFoundException

The request was rejected because it refers to a resource that cannot be found.

HTTP Status Code: 400

CloudHsmServiceException

The request was rejected because an error occurred.

HTTP Status Code: 400

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET

- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

ModifyCluster

Modifies AWS CloudHSM cluster.

Cross-account use: No. You cannot perform this operation on an AWS CloudHSM cluster in a different AWS account.

Request Syntax

```
{
   "BackupRetentionPolicy": {
      "Type": "string",
      "Value": "string"
   },
   "ClusterId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

BackupRetentionPolicy

A policy that defines how the service retains backups.

Type: BackupRetentionPolicy object

Required: Yes

ClusterId

The identifier (ID) of the cluster that you want to modify. To find the cluster ID, use DescribeClusters.

Type: String

Pattern: `cluster-[2-7a-zA-Z]{11,16}`

Required: Yes

Response Syntax

```
{
    "Cluster": {
        "BackupPolicy": "string",
        "BackupRetentionPolicy": {
            "Type": "string",
            "Value": "string"
        },
        "Certificates": {
            "AwsHardwareCertificate": "string",
            "ClusterCertificate": "string",
            "ClusterCsr": "string",
            "HsmCertificate": "string",
            "ManufacturerHardwareCertificate": "string"
        },
        "ClusterId": "string",
        "CreateTimestamp": number,
        "Hsms": [
            {
                "AvailabilityZone": "string",
                "ClusterId": "string",
                "EniId": "string",
                "EniIp": "string",
                "EniIpV6": "string",
                "HsmId": "string",
                "State": "string",
                "StateMessage": "string",
                "SubnetId": "string"
            }
        ],
        "HsmType": "string",
        "Mode": "string",
        "NetworkType": "string",
        "PreCoPassword": "string",
        "SecurityGroup": "string",
        "SourceBackupId": "string",
        "State": "string",
        "StateMessage": "string",
        "SubnetMapping": {
            "string" : "string"
        },
        "TagList": [
```

```
        {
            "Key": "string",
            "Value": "string"
        }
    ],
    "VpcId": "string"
  }
}
```

Response Elements

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

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

Cluster

Contains information about an AWS CloudHSM cluster.

Type: Cluster object

Errors

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

CloudHsmAccessDeniedException

The request was rejected because the requester does not have permission to perform the requested operation.

HTTP Status Code: 400

CloudHsmInternalFailureException

The request was rejected because of an AWS CloudHSM internal failure. The request can be retried.

HTTP Status Code: 500

CloudHsmInvalidRequestException

The request was rejected because it is not a valid request.

HTTP Status Code: 400

CloudHsmResourceNotFoundException

The request was rejected because it refers to a resource that cannot be found.

HTTP Status Code: 400

CloudHsmServiceException

The request was rejected because an error occurred.

HTTP Status Code: 400

See Also

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

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

PutResourcePolicy

Creates or updates an AWS CloudHSM resource policy. A resource policy helps you to define the IAM entity (for example, an AWS account) that can manage your AWS CloudHSM resources. The following resources support AWS CloudHSM resource policies:

- Backup - The resource policy allows you to describe the backup and restore a cluster from the backup in another AWS account.

In order to share a backup, it must be in a 'READY' state and you must own it.

> ⚠️ **Important**
>
> While you can share a backup using the AWS CloudHSM PutResourcePolicy operation, we recommend using AWS Resource Access Manager (AWS RAM) instead. Using AWS RAM provides multiple benefits as it creates the policy for you, allows multiple resources to be shared at one time, and increases the discoverability of shared resources. If you use PutResourcePolicy and want consumers to be able to describe the backups you share with them, you must promote the backup to a standard AWS RAM Resource Share using the AWS RAM PromoteResourceShareCreatedFromPolicy API operation. For more information, see [Working with shared backups](#) in the AWS CloudHSM User Guide

Cross-account use: No. You cannot perform this operation on an AWS CloudHSM resource in a different AWS account.

Request Syntax

```
{
    "Policy": "string",
    "ResourceArn": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#).

The request accepts the following data in JSON format.

Policy

The policy you want to associate with a resource.

For an example policy, see Working with shared backups in the AWS CloudHSM User Guide

Type: String

Length Constraints: Minimum length of 1. Maximum length of 20000.

Required: No

ResourceArn

Amazon Resource Name (ARN) of the resource to which you want to attach a policy.

Type: String

Pattern: `arn:aws(-(us-gov))?:cloudhsm:([a-z]{2}(-(gov|isob|iso))?-(east|west|north|south|central){1,2}-[0-9]{1}):[0-9]{12}:(backup/backup|cluster/cluster|hsm/hsm)-[2-7a-zA-Z]{11,16}`

Required: No

Response Syntax

```
{
    "Policy": "string",
    "ResourceArn": "string"
}
```

Response Elements

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

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

Policy

The policy attached to a resource.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 20000.

ResourceArn

Amazon Resource Name (ARN) of the resource to which a policy is attached.

Type: String

Pattern: `arn:aws(-(us-gov))?:cloudhsm:([a-z]{2}(-(gov|isob|iso))?-(east|west|north|south|central){1,2}-[0-9]{1}):[0-9]{12}:(backup/backup|cluster/cluster|hsm/hsm)-[2-7a-zA-Z]{11,16}`

Errors

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

CloudHsmAccessDeniedException

The request was rejected because the requester does not have permission to perform the requested operation.

HTTP Status Code: 400

CloudHsmInternalFailureException

The request was rejected because of an AWS CloudHSM internal failure. The request can be retried.

HTTP Status Code: 500

CloudHsmInvalidRequestException

The request was rejected because it is not a valid request.

HTTP Status Code: 400

CloudHsmResourceNotFoundException

The request was rejected because it refers to a resource that cannot be found.

HTTP Status Code: 400

CloudHsmServiceException

The request was rejected because an error occurred.

HTTP Status Code: 400

See Also

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

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

RestoreBackup

Restores a specified AWS CloudHSM backup that is in the PENDING_DELETION state. For more information on deleting a backup, see DeleteBackup.

Cross-account use: No. You cannot perform this operation on an AWS CloudHSM backup in a different AWS account.

Request Syntax

```
{
    "BackupId": "string"
}
```

Request Parameters

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

The request accepts the following data in JSON format.

BackupId

   The ID of the backup to be restored. To find the ID of a backup, use the DescribeBackups operation.

   Type: String

   Pattern: backup-[2-7a-zA-Z]{11,16}

   Required: Yes

Response Syntax

```
{
    "Backup": {
        "BackupArn": "string",
        "BackupId": "string",
        "BackupState": "string",
        "ClusterId": "string",
        "CopyTimestamp": number,
        "CreateTimestamp": number,
```

```
          "DeleteTimestamp": number,
          "HsmType": "string",
          "Mode": "string",
          "NeverExpires": boolean,
          "SourceBackup": "string",
          "SourceCluster": "string",
          "SourceRegion": "string",
          "TagList": [
             {
                "Key": "string",
                "Value": "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.

Backup

Information on the `Backup` object created.

Type: Backup object

Errors

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

CloudHsmAccessDeniedException

The request was rejected because the requester does not have permission to perform the requested operation.

HTTP Status Code: 400

CloudHsmInternalFailureException

The request was rejected because of an AWS CloudHSM internal failure. The request can be retried.

HTTP Status Code: 500

CloudHsmInvalidRequestException

The request was rejected because it is not a valid request.

HTTP Status Code: 400

CloudHsmResourceNotFoundException

The request was rejected because it refers to a resource that cannot be found.

HTTP Status Code: 400

CloudHsmServiceException

The request was rejected because an error occurred.

HTTP Status Code: 400

See Also

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

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

TagResource

Adds or overwrites one or more tags for the specified AWS CloudHSM cluster.

Cross-account use: No. You cannot perform this operation on an AWS CloudHSM resource in a different AWS account.

Request Syntax

```
{
    "ResourceId": "string",
    "TagList": [
        {
            "Key": "string",
            "Value": "string"
        }
    ]
}
```

Request Parameters

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

The request accepts the following data in JSON format.

ResourceId

The cluster identifier (ID) for the cluster that you are tagging. To find the cluster ID, use DescribeClusters.

Type: String

Pattern: `(?:cluster|backup)-[2-7a-zA-Z]{11,16}`

Required: Yes

TagList

A list of one or more tags.

Type: Array of Tag objects

Array Members: Minimum number of 1 item. Maximum number of 50 items.

Required: Yes

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](#).

CloudHsmAccessDeniedException

The request was rejected because the requester does not have permission to perform the requested operation.

HTTP Status Code: 400

CloudHsmInternalFailureException

The request was rejected because of an AWS CloudHSM internal failure. The request can be retried.

HTTP Status Code: 500

CloudHsmInvalidRequestException

The request was rejected because it is not a valid request.

HTTP Status Code: 400

CloudHsmResourceLimitExceededException

The request was rejected because it exceeds an AWS CloudHSM limit.

HTTP Status Code: 400

CloudHsmResourceNotFoundException

The request was rejected because it refers to a resource that cannot be found.

HTTP Status Code: 400

CloudHsmServiceException

The request was rejected because an error occurred.

HTTP Status Code: 400

CloudHsmTagException

The request was rejected because of a tagging failure. Verify the tag conditions in all applicable policies, and then retry the request.

HTTP Status Code: 400

See Also

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

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

UntagResource

Removes the specified tag or tags from the specified AWS CloudHSM cluster.

Cross-account use: No. You cannot perform this operation on an AWS CloudHSM resource in a different AWS account.

Request Syntax

```
{
    "ResourceId": "string",
    "TagKeyList": [ "string" ]
}
```

Request Parameters

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

The request accepts the following data in JSON format.

ResourceId

The cluster identifier (ID) for the cluster whose tags you are removing. To find the cluster ID, use DescribeClusters.

Type: String

Pattern: `(?:cluster|backup)-[2-7a-zA-Z]{11,16}`

Required: Yes

TagKeyList

A list of one or more tag keys for the tags that you are removing. Specify only the tag keys, not the tag values.

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 50 items.

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

Pattern: `^([\p{L}\p{Z}\p{N}_.:/=+\-@]*)$`

Required: Yes

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](#).

CloudHsmAccessDeniedException

The request was rejected because the requester does not have permission to perform the requested operation.

HTTP Status Code: 400

CloudHsmInternalFailureException

The request was rejected because of an AWS CloudHSM internal failure. The request can be retried.

HTTP Status Code: 500

CloudHsmInvalidRequestException

The request was rejected because it is not a valid request.

HTTP Status Code: 400

CloudHsmResourceNotFoundException

The request was rejected because it refers to a resource that cannot be found.

HTTP Status Code: 400

CloudHsmServiceException

The request was rejected because an error occurred.

HTTP Status Code: 400

CloudHsmTagException

The request was rejected because of a tagging failure. Verify the tag conditions in all applicable policies, and then retry the request.

HTTP Status Code: 400

See Also

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

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

Data Types

The AWS CloudHSM V2 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:

- Backup
- BackupRetentionPolicy
- Certificates
- Cluster
- DestinationBackup
- Hsm
- Tag

Backup

Contains information about a backup of an AWS CloudHSM cluster. All backup objects contain the `BackupId`, `BackupState`, `ClusterId`, and `CreateTimestamp` parameters. Backups that were copied into a destination region additionally contain the `CopyTimestamp`, `SourceBackup`, `SourceCluster`, and `SourceRegion` parameters. A backup that is pending deletion will include the `DeleteTimestamp` parameter.

Contents

BackupId

The identifier (ID) of the backup.

Type: String

Pattern: `backup-[2-7a-zA-Z]{11,16}`

Required: Yes

BackupArn

The Amazon Resource Name (ARN) of the backup.

Type: String

Pattern: `^(arn:aws(-(us-gov))?:cloudhsm:([a-z]{2}(-(gov|isob|iso))?-(east|west|north|south|central){1,2}-[0-9]{1}):[0-9]{12}:backup/)?backup-[2-7a-zA-Z]{11,16}`

Required: No

BackupState

The state of the backup.

Type: String

Valid Values: `CREATE_IN_PROGRESS | READY | DELETED | PENDING_DELETION`

Required: No

ClusterId

The identifier (ID) of the cluster that was backed up.

Type: String

Pattern: `cluster-[2-7a-zA-Z]{11,16}`

Required: No

CopyTimestamp

The date and time when the backup was copied from a source backup.

Type: Timestamp

Required: No

CreateTimestamp

The date and time when the backup was created.

Type: Timestamp

Required: No

DeleteTimestamp

The date and time when the backup will be permanently deleted.

Type: Timestamp

Required: No

HsmType

The HSM type used to create the backup.

Type: String

Length Constraints: Maximum length of 32.

Pattern: `((p|)hsm[0-9][a-z.]*\.[a-zA-Z]+)`

Required: No

Mode

The mode of the cluster that was backed up.

Type: String

Valid Values: `FIPS | NON_FIPS`

Required: No

NeverExpires

Specifies whether the service should exempt a backup from the retention policy for the cluster. `True` exempts a backup from the retention policy. `False` means the service applies the backup retention policy defined at the cluster.

Type: Boolean

Required: No

SourceBackup

The identifier (ID) of the source backup from which the new backup was copied.

Type: String

Pattern: `backup-[2-7a-zA-Z]{11,16}`

Required: No

SourceCluster

The identifier (ID) of the cluster containing the source backup from which the new backup was copied.

Type: String

Pattern: `cluster-[2-7a-zA-Z]{11,16}`

Required: No

SourceRegion

The AWS Region that contains the source backup from which the new backup was copied.

Type: String

Pattern: `[a-z]{2}(-(gov))?-(east|west|north|south|central){1,2}-\d`

Required: No

TagList

The list of tags for the backup.

Type: Array of Tag objects

Array Members: Minimum number of 1 item. Maximum number of 50 items.

Required: No

See Also

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

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

BackupRetentionPolicy

A policy that defines the number of days to retain backups.

Contents

Type

The type of backup retention policy. For the DAYS type, the value is the number of days to retain backups.

Type: String

Valid Values: DAYS

Required: No

Value

Use a value between 7 - 379.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 3.

Pattern: `[0-9]+`

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](#)

Certificates

Contains one or more certificates or a certificate signing request (CSR).

Contents

AwsHardwareCertificate

The HSM hardware certificate issued (signed) by AWS CloudHSM.

Type: String

Length Constraints: Maximum length of 20000.

Pattern: `[a-zA-Z0-9+-/=\s]*`

Required: No

ClusterCertificate

The cluster certificate issued (signed) by the issuing certificate authority (CA) of the cluster's owner.

Type: String

Length Constraints: Maximum length of 20000.

Pattern: `[a-zA-Z0-9+-/=\s]*`

Required: No

ClusterCsr

The cluster's certificate signing request (CSR). The CSR exists only when the cluster's state is `UNINITIALIZED`.

Type: String

Length Constraints: Maximum length of 20000.

Pattern: `[a-zA-Z0-9+-/=\s]*`

Required: No

HsmCertificate

The HSM certificate issued (signed) by the HSM hardware.

Type: String

Length Constraints: Maximum length of 20000.

Pattern: [a-zA-Z0-9+-/=\s]*

Required: No

ManufacturerHardwareCertificate

The HSM hardware certificate issued (signed) by the hardware manufacturer.

Type: String

Length Constraints: Maximum length of 20000.

Pattern: [a-zA-Z0-9+-/=\s]*

Required: No

See Also

For more information about using this API in 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

Contains information about an AWS CloudHSM cluster.

Contents

BackupPolicy

The cluster's backup policy.

Type: String

Valid Values: DEFAULT

Required: No

BackupRetentionPolicy

A policy that defines how the service retains backups.

Type: [BackupRetentionPolicy](#) object

Required: No

Certificates

Contains one or more certificates or a certificate signing request (CSR).

Type: [Certificates](#) object

Required: No

ClusterId

The cluster's identifier (ID).

Type: String

Pattern: `cluster-[2-7a-zA-Z]{11,16}`

Required: No

CreateTimestamp

The date and time when the cluster was created.

Type: Timestamp

Required: No

Hsms

Contains information about the HSMs in the cluster.

Type: Array of [Hsm](#) objects

Required: No

HsmType

The type of HSM that the cluster contains.

Type: String

Length Constraints: Maximum length of 32.

Pattern: `((p|)hsm[0-9][a-z.]*\.[a-zA-Z]+)`

Required: No

Mode

The mode of the cluster.

Type: String

Valid Values: `FIPS | NON_FIPS`

Required: No

NetworkType

The cluster's NetworkType can be IPv4 (the default) or DUALSTACK. The IPv4 NetworkType restricts communication between your application and the hardware security modules (HSMs) to the IPv4 protocol only. The DUALSTACK NetworkType enables communication over both IPv4 and IPv6 protocols. To use DUALSTACK, configure your virtual private cloud (VPC) and subnets to support both IPv4 and IPv6. This configuration involves adding IPv6 Classless Inter-Domain Routing (CIDR) blocks to the existing IPv4 CIDR blocks in your subnets. The NetworkType you choose affects the network addressing options for your cluster. DUALSTACK provides more flexibility by supporting both IPv4 and IPv6 communication.

Type: String

Valid Values: `IPV4 | DUALSTACK`

Required: No

PreCoPassword

The default password for the cluster's Pre-Crypto Officer (PRECO) user.

Type: String

Length Constraints: Minimum length of 7. Maximum length of 32.

Required: No

SecurityGroup

The identifier (ID) of the cluster's security group.

Type: String

Pattern: `sg-[0-9a-fA-F]{8,17}`

Required: No

SourceBackupId

The identifier (ID) of the backup used to create the cluster. This value exists only when the cluster was created from a backup.

Type: String

Pattern: `backup-[2-7a-zA-Z]{11,16}`

Required: No

State

The cluster's state.

Type: String

Valid Values: `CREATE_IN_PROGRESS | UNINITIALIZED | INITIALIZE_IN_PROGRESS | INITIALIZED | ACTIVE | UPDATE_IN_PROGRESS | MODIFY_IN_PROGRESS | ROLLBACK_IN_PROGRESS | DELETE_IN_PROGRESS | DELETED | DEGRADED`

Required: No

StateMessage

A description of the cluster's state.

Type: String

Length Constraints: Maximum length of 300.

Pattern: `.*`

Required: No

SubnetMapping

A map from availability zone to the cluster's subnet in that availability zone.

Type: String to string map

Key Pattern: `[a-z]{2}(-(gov))?-(east|west|north|south|central){1,2}-\d[a-z]`

Value Pattern: `subnet-[0-9a-fA-F]{8,17}`

Required: No

TagList

The list of tags for the cluster.

Type: Array of [Tag](#) objects

Array Members: Minimum number of 1 item. Maximum number of 50 items.

Required: No

VpcId

The identifier (ID) of the virtual private cloud (VPC) that contains the cluster.

Type: String

Pattern: `vpc-[0-9a-fA-F]`

Required: No

See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

DestinationBackup

Contains information about the backup that will be copied and created by the
[CopyBackupToRegion](#) operation.

Contents

CreateTimestamp

The date and time when both the source backup was created.

Type: Timestamp

Required: No

SourceBackup

The identifier (ID) of the source backup from which the new backup was copied.

Type: String

Pattern: `backup-[2-7a-zA-Z]{11,16}`

Required: No

SourceCluster

The identifier (ID) of the cluster containing the source backup from which the new backup was
copied.

Type: String

Pattern: `cluster-[2-7a-zA-Z]{11,16}`

Required: No

SourceRegion

The AWS region that contains the source backup from which the new backup was copied.

Type: String

Pattern: `[a-z]{2}(-(gov))?-(east|west|north|south|central){1,2}-\d`

Required: No

See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

Hsm

Contains information about a hardware security module (HSM) in an AWS CloudHSM cluster.

Contents

HsmId

The HSM's identifier (ID).

Type: String

Pattern: `hsm-[2-7a-zA-Z]{11,16}`

Required: Yes

AvailabilityZone

The Availability Zone that contains the HSM.

Type: String

Pattern: `[a-z]{2}(-(gov))?-(east|west|north|south|central){1,2}-\d[a-z]`

Required: No

ClusterId

The identifier (ID) of the cluster that contains the HSM.

Type: String

Pattern: `cluster-[2-7a-zA-Z]{11,16}`

Required: No

EniId

The identifier (ID) of the HSM's elastic network interface (ENI).

Type: String

Pattern: `eni-[0-9a-fA-F]{8,17}`

Required: No

EniIp

The IP address of the HSM's elastic network interface (ENI).

Type: String

Pattern: \d{1,3}\.\d{1,3}\.\d{1,3}\.\d{1,3}

Required: No

EniIpV6

The IPv6 address (if any) of the HSM's elastic network interface (ENI).

Type: String

Length Constraints: Maximum length of 100.

Required: No

State

The HSM's state.

Type: String

Valid Values: CREATE_IN_PROGRESS | ACTIVE | DEGRADED | DELETE_IN_PROGRESS | DELETED

Required: No

StateMessage

A description of the HSM's state.

Type: String

Required: No

SubnetId

The subnet that contains the HSM's elastic network interface (ENI).

Type: String

Pattern: subnet-[0-9a-fA-F]{8,17}

Required: No

See Also

For more information about using this API in 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

Contains a tag. A tag is a key-value pair.

Contents

Key

The key of the tag.

Type: String

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

Pattern: `^([\p{L}\p{Z}\p{N}_.:/=+\-@]*)$`

Required: Yes

Value

The value of the tag.

Type: String

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

Pattern: `^([\p{L}\p{Z}\p{N}_.:/=+\-@]*)$`

Required: Yes

See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

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

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