# AWS CloudHSM V2 API Reference

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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 August 17, 2018.
Actions

The following actions are supported:

- CopyBackupToRegion (p. 3)
- CreateCluster (p. 6)
- CreateHsm (p. 9)
- DeleteBackup (p. 12)
- DeleteCluster (p. 14)
- DeleteHsm (p. 17)
- DescribeBackups (p. 20)
- DescribeClusters (p. 23)
- InitializeCluster (p. 26)
- ListTags (p. 29)
- TagResource (p. 32)
- UntagResource (p. 34)
CopyBackupToRegion

Copy an AWS CloudHSM cluster backup to a different region.

Request Syntax

```
{
    "BackupId": "string",
    "DestinationRegion": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 48).

The request accepts the following data in JSON format.

**BackupId** *(p. 3)*

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** *(p. 3)*

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

Type: String

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

Required: Yes

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 (p. 3)

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 (p. 20) operation on the backup that will be copied to the destination region.

Type: DestinationBackup (p. 44) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 50).

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

Creates a new AWS CloudHSM cluster.

**Request Syntax**

```json
{
  "HsmType": "string",
  "SourceBackupId": "string",
  "SubnetIds": [ "string" ]
}
```

**Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 48).

The request accepts the following data in JSON format.

**HsmType (p. 6)**

The type of HSM to use in the cluster. Currently the only allowed value is `hsm1.medium`.

Type: String

Pattern: (hsm1\.medium)

Required: Yes

**SourceBackupId (p. 6)**

The identifier (ID) 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, use DescribeBackups (p. 20).

Type: String

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

Required: No

**SubnetIds (p. 6)**

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

**Response Syntax**

```json
{
}
```
"Cluster": {
    "BackupPolicy": "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",
            "HsmId": "string",
            "State": "string",
            "StateMessage": "string",
            "SubnetId": "string"
        }
    ],
    "HsmType": "string",
    "PreCoPassword": "string",
    "SecurityGroup": "string",
    "SourceBackupId": "string",
    "State": "string",
    "StateMessage": "string",
    "SubnetMapping": {
        "string": "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 (p. 6)**

Information about the cluster that was created.

Type: Cluster (p. 41) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 50).

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

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

Request Syntax

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 48).

The request accepts the following data in JSON format.

AvailabilityZone (p. 9)

The Availability Zone where you are creating the HSM. To find the cluster's Availability Zones, use DescribeClusters (p. 23).

Type: String

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

Required: Yes

ClusterId (p. 9)

The identifier (ID) of the HSM's cluster. To find the cluster ID, use DescribeClusters (p. 23).

Type: String

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

Required: Yes

IpAddress (p. 9)

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

```json
{
   "Hsm": {
      "AvailabilityZone": "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 (p. 9)

Information about the HSM that was created.

Type: Hsm (p. 45) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 50).

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:
See Also

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

Request Syntax

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 48).

The request accepts the following data in JSON format.

**BackupId (p. 12)**

Type: String

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

Required: No

Response Syntax

```json
{
  "Backup": {
    "BackupId": "string",
    "BackupState": "string",
    "ClusterId": "string",
    "CopyTimestamp": number,
    "CreateTimestamp": number,
    "DeleteTimestamp": 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.

**Backup (p. 12)**

Contains information about a backup of an AWS CloudHSM cluster.

Type: Backup (p. 37) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 50).
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
- AWS SDK for Java
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V2
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 (p. 23). To delete an HSM, use DeleteHsm (p. 17).

Request Syntax

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 48).

The request accepts the following data in JSON format.

**ClusterId (p. 14)**

The identifier (ID) of the cluster that you are deleting. To find the cluster ID, use DescribeClusters (p. 23).

Type: String

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

Required: Yes

Response Syntax

```json
{
   "Cluster": {
      "BackupPolicy": "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",
            "HsmId": "string",
            "State": "string",
            "StateMessage": "string",
            "SubnetId": "string"
         }
      ],
      "HsmType": "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 (p. 14)

Information about the cluster that was deleted.

Type: Cluster (p. 41) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 50).

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
• AWS SDK for Java
• AWS SDK for JavaScript
• AWS SDK for PHP V3
• AWS SDK for Python
• AWS SDK for Ruby V2
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 (p. 23).

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 (p. 48).

The request accepts the following data in JSON format.

**ClusterId (p. 17)**

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 (p. 17)**

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 (p. 17)**

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 (p. 17)**

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

Type: String

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

Required: No
Response Syntax

```json
{
    "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 (p. 18)**

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 (p. 50).

**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:
See Also

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

Gets information about backups of AWS CloudHSM clusters.

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.

Request Syntax

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 48).

The request accepts the following data in JSON format.

Filters (p. 20)

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 (p. 3) 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.

Type: String to array of strings map

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

Required: No

MaxResults (p. 20)

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 100.

Required: No
**NextToken (p. 20)**

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

**SortAscending (p. 20)**

Type: Boolean

Required: No

**Response Syntax**

```
{
  "Backups": [
    {
      "BackupId": "string",
      "BackupState": "string",
      "ClusterId": "string",
      "CopyTimestamp": number,
      "CreateTimestamp": number,
      "DeleteTimestamp": number,
      "SourceBackup": "string",
      "SourceCluster": "string",
      "SourceRegion": "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 (p. 21)**

A list of backups.

Type: Array of Backup (p. 37) objects

**NextToken (p. 21)**

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 (p. 50).

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

Request Syntax

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 48).

The request accepts the following data in JSON format.

**Filters (p. 23)**

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

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

Required: No

**MaxResults (p. 23)**

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 100.

Required: No

**NextToken (p. 23)**

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",
      "Certificates": {
        "AwsHardwareCertificate": "string",
        "ClusterCertificate": "string",
        "ClusterCsr": "string",
        "HsmCertificate": "string",
        "ManufacturerHardwareCertificate": "string"
      },
      "ClusterId": "string",
      "CreateTimeStamp": number,
      "Hsms": [
        {
          "AvailabilityZone": "string",
          "ClusterId": "string",
          "EniId": "string",
          "EniIp": "string",
          "HsmId": "string",
          "State": "string",
          "StateMessage": "string",
          "SubnetId": "string"
        }
      ],
      "HsmType": "string",
      "PreCoPassword": "string",
      "SecurityGroup": "string",
      "SourceBackupId": "string",
      "State": "string",
      "StateMessage": "string",
      "SubnetMapping": {
        "string": "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 (p. 24)**

A list of clusters.

Type: Array of Cluster (p. 41) objects
NextToken (p. 24)

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 (p. 50).

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

See Also

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

- AWS Command Line Interface
- AWS SDK for .NET
- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V2
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 (p. 23).

Request Syntax

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 48).

The request accepts the following data in JSON format.

ClusterId (p. 26)

The identifier (ID) of the cluster that you are claiming. To find the cluster ID, use DescribeClusters (p. 23).

Type: String

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

Required: Yes

SignedCert (p. 26)

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 5000.

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

Required: Yes

TrustAnchor (p. 26)

The issuing certificate of the issuing certificate authority (CA) that issued (signed) the cluster certificate. This can be a root (self-signed) certificate or a certificate chain that begins with the certificate that issued the cluster certificate and ends with a root certificate. The certificate or certificate chain must be in PEM format and can contain a maximum of 5000 characters.

Type: String

Length Constraints: Maximum length of 5000.

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

```json
{
    "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 (p. 27)

The cluster's state.

Type: String

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

StateMessage (p. 27)

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 (p. 50).

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

Request Syntax

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 48).

The request accepts the following data in JSON format.

MaxResults (p. 29)

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 (p. 29)

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 (p. 29)

The cluster identifier (ID) for the cluster whose tags you are getting. To find the cluster ID, use DescribeClusters (p. 23).

Type: String

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

Required: Yes
Response Syntax

```json
{
   "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 (p. 30)**

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 (p. 30)**

A list of tags.

Type: Array of Tag (p. 47) 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 (p. 50).

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

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

Request Syntax

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 48).

The request accepts the following data in JSON format.

ResourceId (p. 32)

The cluster identifier (ID) for the cluster that you are tagging. To find the cluster ID, use DescribeClusters (p. 23).

Type: String

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

Required: Yes

TagList (p. 32)

A list of one or more tags.

Type: Array of Tag (p. 47) 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 (p. 50).

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

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

Request Syntax

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 48).

The request accepts the following data in JSON format.

ResourceId (p. 34)

The cluster identifier (ID) for the cluster whose tags you are removing. To find the cluster ID, use DescribeClusters (p. 23).

Type: String

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

Required: Yes

TagKeyList (p. 34)

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.


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 (p. 50).

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
- AWS SDK for Java
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V2
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 (p. 37)
- Certificates (p. 39)
- Cluster (p. 41)
- DestinationBackup (p. 44)
- Hsm (p. 45)
- Tag (p. 47)
Backup

Contains information about a backup of an AWS CloudHSM cluster.

Contents

BackupId

The identifier (ID) of the backup.

Type: String

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

Required: Yes

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

Type: Timestamp

Required: No

CreateTimestamp

The date and time when the backup was created.

Type: Timestamp

Required: No

DeleteTimestamp

Type: Timestamp

Required: No

SourceBackup

Type: String

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

Required: No
**SourceCluster**

Type: String

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

Required: No

**SourceRegion**

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 Go
- AWS SDK for Java
- AWS SDK for Ruby V2
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 5000.

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 5000.

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 5000.

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 5000.

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 5000.
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 Go
- AWS SDK for Java
- AWS SDK for Ruby V2
Cluster

Contains information about an AWS CloudHSM cluster.

Contents

BackupPolicy

The cluster's backup policy.
Type: String
Valid Values: DEFAULT
Required: No

Certificates

Contains one or more certificates or a certificate signing request (CSR).
Type: Certificates (p. 39) 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 (p. 45) objects
Required: No

HsmType

The type of HSM that the cluster contains.
Type: String
Pattern: (hsm1\..medium)
Required: No

PreCoPassword

The default password for the cluster's Pre-Crypto Officer (PRECO) user.
Type: String
Required: No

**SecurityGroup**

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

Type: String
Pattern: sg-[0-9a-fA-F]
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 | 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 of the cluster's subnets and their corresponding Availability Zones.

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

**VpcId**

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

Pattern: vpc-[0-9a-zA-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 Go
- AWS SDK for Java
- AWS SDK for Ruby V2
DestinationBackup

Contents

CreateTimestamp
Type: Timestamp
Required: No

SourceBackup
Type: String
Pattern: backup-[2-7a-zA-Z]{11,16}
Required: No

SourceCluster
Type: String
Pattern: cluster-[2-7a-zA-Z]{11,16}
Required: No

SourceRegion
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 Go
- AWS SDK for Java
- AWS SDK for Ruby V2
Hsm

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

Contents

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

HsmId
The HSM’s identifier (ID).
Type: String
Pattern: hsm-[2-7a-zA-Z]{11,16}
Required: Yes

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-zA-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 Go
- AWS SDK for Java
- AWS SDK for Ruby V2
Tag

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

Contents

Key

The key of the tag.

Type: String


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 Go
- AWS SDK for Java
- AWS SDK for Ruby V2
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 Signature Version 4 Signing Process in the Amazon Web Services General Reference.

**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 Task 2: Create a String to Sign for Signature Version 4 in the Amazon Web Services General Reference.*

*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 Handling Dates in Signature Version 4 in the Amazon Web Services General Reference.

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 Security Token Service, go to AWS Services That Work with IAM in the IAM User Guide.

Condition: If you're using temporary security credentials from the AWS Security Token Service, 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 Task 1: Create a Canonical Request For Signature Version 4 in the Amazon Web Services General Reference.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string
Required: Conditional
Common Errors

This section lists the errors common to the API actions of all AWS services. For errors specific to an API action for this service, see the topic for that API action.

AccessDeniedException
You do not have sufficient access to perform this action.

HTTP Status Code: 400

IncompleteSignature
The request signature does not conform to AWS standards.

HTTP Status Code: 400

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

HTTP Status Code: 500

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

HTTP Status Code: 400

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

HTTP Status Code: 403

InvalidParameterCombination
Parameters that must not be used together were used together.

HTTP Status Code: 400

InvalidParameterValue
An invalid or out-of-range value was supplied for the input parameter.

HTTP Status Code: 400

InvalidQueryParameter
The AWS query string is malformed or does not adhere to AWS standards.

HTTP Status Code: 400

MalformedQueryString
The query string contains a syntax error.

HTTP Status Code: 404

MissingAction
The request is missing an action or a required parameter.

HTTP Status Code: 400
**MissingAuthenticationToken**

The request must contain either a valid (registered) AWS access key ID or X.509 certificate.

HTTP Status Code: 403

**MissingParameter**

A required parameter for the specified action is not supplied.

HTTP Status Code: 400

**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