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# Amazon Managed Streaming for Apache Kafka

## Amazon MSK API Reference



## Amazon Managed Streaming for Apache Kafka: Amazon MSK API Reference

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# Amazon Managed Streaming for Apache Kafka API Reference

Amazon Managed Streaming for Apache Kafka (Amazon MSK) is a fully managed service that makes it easy for you to build and run applications that use Apache Kafka to process streaming data.

Amazon MSK provides the control-plane operations and lets you use Apache Kafka data-plane operations, such as producing and consuming data. It runs open-source versions of Apache Kafka, so existing applications, tooling, and plugins from partners and the Apache Kafka community are supported without requiring changes to application code.

For more information about Amazon MSK, see the [Amazon MSK Developer Guide](#).

# Resources

The Amazon Managed Streaming for Apache Kafka REST API includes the following resources.

## Topics

- [Clusters \(p. 2\)](#)
- [Cluster \(p. 16\)](#)
- [BootstrapBrokers \(p. 26\)](#)
- [Cluster Configuration \(p. 29\)](#)
- [Brokers \(p. 32\)](#)
- [Broker Count \(p. 39\)](#)
- [Broker Storage \(p. 42\)](#)
- [Cluster Operations \(p. 45\)](#)
- [Configurations \(p. 51\)](#)
- [Configuration \(p. 58\)](#)
- [Configuration Revisions \(p. 62\)](#)
- [Configuration Revision \(p. 65\)](#)
- [Cluster Operation \(p. 68\)](#)
- [Tags \(p. 74\)](#)

## Clusters

Use this resource to create an Amazon MSK cluster and to get a list of existing clusters.

## URI

/v1/clusters

## HTTP Methods

### GET

Operation ID: ListClusters

Returns a list of all the MSK clusters in the current Region.

### Query Parameters

Name	Type	Required	Description
<code>nextToken</code>	String	False	The paginated results marker. When the result of the operation is truncated, the call returns <code>NextToken</code> in the response. To get the next batch, provide this token in your next request.

Name	Type	Required	Description
<code>clusterNameFilter</code>	String	False	Specify a prefix of the name of the clusters that you want to list. The service lists all the clusters whose names start with this prefix.
<code>maxResults</code>	String	False	The maximum number of results to return in the response. If there are more results, the response includes a <code>NextToken</code> parameter.

## Responses

Status Code	Response Model	Description
200	<a href="#">ListClustersResponse (p. 5)</a>	Successful response.
400	<a href="#">Error (p. 6)</a>	The request isn't valid because the input is incorrect. Correct your input and then submit it again.
401	<a href="#">Error (p. 6)</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error (p. 6)</a>	Access forbidden. Check your credentials and then retry your request.
500	<a href="#">Error (p. 6)</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.

## POST

Operation ID: `CreateCluster`

Creates a new MSK cluster.

## Responses

Status Code	Response Model	Description
200	<a href="#">CreateClusterResponse (p. 6)</a>	Successful response.
400	<a href="#">Error (p. 6)</a>	The request isn't valid because the input is incorrect. Correct your input and then submit it again.

Status Code	Response Model	Description
401	<a href="#">Error (p. 6)</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error (p. 6)</a>	Access forbidden. Check your credentials and then retry your request.
409	<a href="#">Error (p. 6)</a>	This cluster name already exists. Retry your request using another name.
429	<a href="#">Error (p. 6)</a>	429 response
500	<a href="#">Error (p. 6)</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error (p. 6)</a>	503 response

## Schemas

### Request Bodies

#### Example POST

```
{
  "encryptionInfo": {
    "encryptionInTransit": {
      "inCluster": boolean,
      "clientBroker": enum
    },
    "encryptionAtRest": {
      "dataVolumeKMSKeyId": "string"
    }
  },
  "numberOfBrokerNodes": integer,
  "configurationInfo": {
    "arn": "string",
    "revision": integer
  },
  "enhancedMonitoring": enum,
  "clusterName": "string",
  "kafkaVersion": "string",
  "clientAuthentication": {
    "tls": {
      "certificateAuthorityArnList": [
        "string"
      ]
    }
  },
  "brokerNodeGroupInfo": {
    "clientSubnets": [
      "string"
    ],
    "instanceType": "string",
    "securityGroups": [
```



```
    "string"  
  ],  
  "brokerAZDistribution": enum,  
  "storageInfo": {  
    "ebsStorageInfo": {  
      "volumeSize": integer  
    }  
  }  
},  
"tags": {  
}  
}
```

## Response Bodies

### Example ListClustersResponse

```
{  
  "nextToken": "string",  
  "clusterInfoList": [  
    {  
      "encryptionInfo": {  
        "encryptionInTransit": {  
          "inCluster": boolean,  
          "clientBroker": enum  
        },  
        "encryptionAtRest": {  
          "dataVolumeKMSKeyId": "string"  
        }  
      },  
      "zookeeperConnectString": "string",  
      "creationTime": "string",  
      "currentVersion": "string",  
      "tags": {  
    },  
      "numberOfBrokerNodes": integer,  
      "clusterArn": "string",  
      "activeOperationArn": "string",  
      "enhancedMonitoring": enum,  
      "clusterName": "string",  
      "clientAuthentication": {  
        "tls": {  
          "certificateAuthorityArnList": [  
            "string"  
          ]  
        }  
      },  
      "state": enum,  
      "brokerNodeGroupInfo": {  
        "clientSubnets": [  
          "string"  
        ],  
        "instanceType": "string",  
        "securityGroups": [  
          "string"  
        ],  
        "brokerAZDistribution": enum,  
        "storageInfo": {  
          "ebsStorageInfo": {  
            "volumeSize": integer  
          }  
        }  
      },  
      "currentBrokerSoftwareInfo": {
```

```
    "configurationRevision": integer,  
    "kafkaVersion": "string",  
    "configurationArn": "string"  
  }  
}  
]  
}
```

### Example CreateClusterResponse

```
{  
  "clusterArn": "string",  
  "clusterName": "string",  
  "state": enum  
}
```

### Example Error

```
{  
  "message": "string",  
  "invalidParameter": "string"  
}
```

## Properties

### BrokerAZDistribution

The distribution of broker nodes across Availability Zones. This is an optional parameter. If you don't specify it, Amazon MSK gives it the value `DEFAULT`. You can also explicitly set this parameter to the value `DEFAULT`. No other values are currently allowed.

Amazon MSK distributes the broker nodes evenly across the Availability Zones that correspond to the subnets that you provide when you create the cluster.

`DEFAULT`

### BrokerNodeGroupInfo

Describes the setup to be used for the broker nodes in the cluster.

#### **clientSubnets**

The list of subnets to connect to in the client virtual private cloud (VPC). AWS creates elastic network interfaces inside these subnets. Client applications use elastic network interfaces to produce and consume data. Client subnets can't be in Availability Zone us-east-1e.

**Type:** Array of type string

**Required:** True

#### **instanceType**

The type of Amazon EC2 instances to use for brokers. The following instance types are allowed: kafka.m5.large, kafka.m5.xlarge, kafka.m5.2xlarge, kafka.m5.4xlarge, kafka.m5.12xlarge, and kafka.m5.24xlarge.

**Type:** string  
**Required:** True  
**MinLength:** 5  
**MaxLength:** 32

### **securityGroups**

The AWS security groups to associate with the elastic network interfaces in order to specify who can connect to and communicate with the Amazon MSK cluster. If you don't specify a security group, Amazon MSK uses the default security group associated with the VPC. If you specify security groups that were shared with you, you must ensure that you have permissions to them. Specifically, you need the `ec2:DescribeSecurityGroups` permission.

**Type:** Array of type string  
**Required:** False

### **brokerAZDistribution**

The distribution of broker nodes across Availability Zones. This is an optional parameter. If you don't specify it, Amazon MSK gives it the value `DEFAULT`. You can also explicitly set this parameter to the value `DEFAULT`. No other values are currently allowed.

Amazon MSK distributes the broker nodes evenly across the Availability Zones that correspond to the subnets that you provide when you create the cluster.

**Type:** [BrokerAZDistribution \(p. 6\)](#)  
**Required:** False

### **storageInfo**

Contains information about storage volumes attached to MSK broker nodes.

**Type:** [StorageInfo \(p. 15\)](#)  
**Required:** False

## **BrokerSoftwareInfo**

Information about the current software installed on the cluster.

### **configurationRevision**

The revision of the configuration to use. This field isn't visible in this preview release.

**Type:** integer  
**Required:** False  
**Format:** int64

### **kafkaVersion**

The version of Apache Kafka.

**Type:** string  
**Required:** False

### **configurationArn**

The Amazon Resource Name (ARN) of the configuration used for the cluster. This field isn't visible in this preview release.

**Type:** string

**Required:** False

## ClientAuthentication

Includes all client authentication information.

### **tls**

Details for ClientAuthentication using TLS.

**Type:** [Tls \(p. 15\)](#)

**Required:** False

## ClientBroker

Client-broker encryption in transit setting.

TLS

TLS\_PLAINTEXT

PLAINTEXT

## ClusterInfo

Returns information about a cluster.

### **encryptionInfo**

Includes all encryption-related information.

**Type:** [EncryptionInfo \(p. 13\)](#)

**Required:** False

### **zookeeperConnectString**

The connection string to use to connect to the Apache ZooKeeper cluster.

**Type:** string

**Required:** False

### **creationTime**

The time when the cluster was created.

**Type:** string

**Required:** False

**Format:** date-time

### **currentVersion**

The current version of the MSK cluster. Cluster versions aren't simple integers. You can obtain the current version by describing the cluster. An example version is `KTVPDKIKX0DER`.

**Type:** string  
**Required:** False

### **tags**

Tags attached to the cluster.

**Type:** object  
**Required:** False

### **numberOfBrokerNodes**

The number of broker nodes in the cluster.

**Type:** integer  
**Required:** False

### **clusterArn**

The Amazon Resource Name (ARN) that uniquely identifies the cluster.

**Type:** string  
**Required:** False

### **activeOperationArn**

Arn of active cluster operation.

**Type:** string  
**Required:** False

### **enhancedMonitoring**

Specifies which metrics are gathered for the MSK cluster. This property has three possible values: `DEFAULT`, `PER_BROKER`, and `PER_TOPIC_PER_BROKER`. For a list of the metrics associated with each of these three levels of monitoring, see [Monitoring](#).

**Type:** [EnhancedMonitoring \(p. 14\)](#)  
**Required:** False

### **clusterName**

The name of the cluster.

**Type:** string  
**Required:** False

### **clientAuthentication**

Includes all client authentication information.

**Type:** [ClientAuthentication \(p. 8\)](#)

**Required:** False

### **state**

The state of the cluster. The possible states are `CREATING`, `ACTIVE`, and `FAILED`.

**Type:** [ClusterState \(p. 10\)](#)

**Required:** False

### **brokerNodeGroupInfo**

Information about the broker nodes.

**Type:** [BrokerNodeGroupInfo \(p. 6\)](#)

**Required:** False

### **currentBrokerSoftwareInfo**

Information about the version of software currently deployed on the brokers in the cluster.

**Type:** [BrokerSoftwareInfo \(p. 7\)](#)

**Required:** False

## ClusterState

The state of the cluster.

ACTIVE  
CREATING  
UPDATING  
DELETING  
FAILED

## ConfigurationInfo

Specifies the configuration to use for the brokers.

### **arn**

ARN of the configuration to use.

**Type:** string

**Required:** True

### **revision**

The revision of the configuration to use.

**Type:** integer

**Required:** True

**Format:** int64

**Minimum:** 1

## CreateClusterRequest

Creates a cluster.

### encryptionInfo

Includes all encryption-related information.

**Type:** [EncryptionInfo](#) (p. 13)

**Required:** False

### numberOfBrokerNodes

The number of broker nodes in the cluster.

**Type:** integer

**Required:** True

### configurationInfo

Represents the configuration that you want MSK to use for the cluster.

**Type:** [ConfigurationInfo](#) (p. 10)

**Required:** False

### enhancedMonitoring

Specifies the level of monitoring for the MSK cluster. The possible values are `DEFAULT`, `PER_BROKER`, and `PER_TOPIC_PER_BROKER`.

**Type:** [EnhancedMonitoring](#) (p. 14)

**Required:** False

### clusterName

The name of the cluster.

**Type:** string

**Required:** True

**MinLength:** 1

**MaxLength:** 64

### kafkaVersion

The version of Apache Kafka.

**Type:** string

**Required:** True

**MinLength:** 1

**MaxLength:** 128

### **clientAuthentication**

Includes all client authentication related information.

**Type:** [ClientAuthentication \(p. 8\)](#)

**Required:** False

### **brokerNodeGroupInfo**

Information about the broker nodes in the cluster.

**Type:** [BrokerNodeGroupInfo \(p. 6\)](#)

**Required:** True

### **tags**

Create tags when creating the cluster.

**Type:** object

**Required:** False

## **CreateClusterResponse**

Returns information about the created cluster.

### **clusterArn**

The Amazon Resource Name (ARN) of the cluster.

**Type:** string

**Required:** False

### **clusterName**

The name of the MSK cluster.

**Type:** string

**Required:** False

### **state**

The state of the cluster. The possible states are `CREATING`, `ACTIVE`, and `FAILED`.

**Type:** [ClusterState \(p. 10\)](#)

**Required:** False

## **EBSStorageInfo**

Contains information about the EBS storage volumes attached to the broker nodes.

### **volumeSize**

The size in GiB of the EBS volume for the data drive on each broker node.



**Type:** integer  
**Required:** False  
**Minimum:** 1  
**Maximum:** 16384

## EncryptionAtRest

The data-volume encryption details.

### **dataVolumeKMSKeyId**

The ARN of the AWS KMS key for encrypting data at rest. If you don't specify a KMS key, MSK creates one for you and uses it.

**Type:** string  
**Required:** True

## EncryptionInTransit

The settings for encrypting data in transit.

### **inCluster**

When set to true, it indicates that data communication among the broker nodes of the cluster is encrypted. When set to false, the communication happens in plaintext.

The default value is true.

**Type:** boolean  
**Required:** False

### **clientBroker**

Indicates the encryption setting for data in transit between clients and brokers. You must set it to one of the following values.

TLS means that client-broker communication is enabled with TLS only.

TLS\_PLAINTEXT means that client-broker communication is enabled for both TLS-encrypted, as well as plaintext data.

PLAINTEXT means that client-broker communication is enabled in plaintext only.

The default value is TLS.

**Type:** [ClientBroker \(p. 8\)](#)  
**Required:** False

## EncryptionInfo

Includes encryption-related information, such as the AWS KMS key used for encrypting data at rest and whether you want MSK to encrypt your data in transit.

### **encryptionInTransit**

The details for encryption in transit.

**Type:** [EncryptionInTransit \(p. 13\)](#)

**Required:** False

### **encryptionAtRest**

The data-volume encryption details.

**Type:** [EncryptionAtRest \(p. 13\)](#)

**Required:** False

## **EnhancedMonitoring**

Specifies which metrics are gathered for the MSK cluster. This property has three possible values: `DEFAULT`, `PER_BROKER`, and `PER_TOPIC_PER_BROKER`. For a list of the metrics associated with each of these three levels of monitoring, see [Monitoring](#).

DEFAULT  
PER\_BROKER  
PER\_TOPIC\_PER\_BROKER

## **Error**

Returns information about an error.

### **message**

The description of the error.

**Type:** string

**Required:** False

### **invalidParameter**

The parameter that caused the error.

**Type:** string

**Required:** False

## **ListClustersResponse**

The response contains an array containing cluster information and a next token if the response is truncated.

### **nextToken**

The paginated results marker. When the result of a `ListClusters` operation is truncated, the call returns `NextToken` in the response. To get another batch of clusters, provide this token in your next request.

**Type:** string

**Required:** False

### **clusterInfoList**

Information on each of the MSK clusters in the response.

**Type:** Array of type [ClusterInfo](#) (p. 8)

**Required:** False

## StorageInfo

Contains information about storage volumes attached to MSK broker nodes.

### **ebsStorageInfo**

EBS volume information.

**Type:** [EBSStorageInfo](#) (p. 12)

**Required:** False

## Tls

Details for client authentication using TLS.

### **certificateAuthorityArnList**

List of ACM Certificate Authority ARNs.

**Type:** Array of type string

**Required:** False

## See Also

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

### ListClusters

- [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

- [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](#)

## Cluster

Represents an Amazon MSK cluster.

### URI

`/v1/clusters/clusterArn`

### HTTP Methods

#### GET

Operation ID: DescribeCluster

Returns a description of the MSK cluster whose Amazon Resource Name (ARN) is specified in the request.

#### Path Parameters

Name	Type	Required	Description
<i>clusterArn</i>	String	True	The Amazon Resource Name (ARN) that uniquely identifies the cluster.

#### Responses

Status Code	Response Model	Description
200	<a href="#">DescribeClusterResponse</a> (p. 19)	Successful response.
400	<a href="#">Error</a> (p. 19)	The request isn't valid because the input is incorrect. Correct your input and then submit it again.
401	<a href="#">Error</a> (p. 19)	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a> (p. 19)	Access forbidden. Check your credentials and then retry your request.

Status Code	Response Model	Description
404	<a href="#">Error (p. 19)</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
500	<a href="#">Error (p. 19)</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.

## DELETE

Operation ID: DeleteCluster

Deletes the MSK cluster specified by the Amazon Resource Name (ARN) in the request.

### Path Parameters

Name	Type	Required	Description
<code>clusterArn</code>	String	True	The Amazon Resource Name (ARN) that uniquely identifies the cluster.

### Query Parameters

Name	Type	Required	Description
<code>currentVersion</code>	String	False	The current version of the MSK cluster.

### Responses

Status Code	Response Model	Description
200	<a href="#">DeleteClusterResponse (p. 19)</a>	Successful response.
400	<a href="#">Error (p. 19)</a>	The request isn't valid because the input is incorrect. Correct your input and then submit it again.
403	<a href="#">Error (p. 19)</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error (p. 19)</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
500	<a href="#">Error (p. 19)</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.

# Schemas

## Response Bodies

### Example DescribeClusterResponse

```
{
  "clusterInfo": {
    "encryptionInfo": {
      "encryptionInTransit": {
        "inCluster": boolean,
        "clientBroker": enum
      },
      "encryptionAtRest": {
        "dataVolumeKMSKeyId": "string"
      }
    },
    "zookeeperConnectString": "string",
    "creationTime": "string",
    "currentVersion": "string",
    "tags": {
    },
    "numberOfBrokerNodes": integer,
    "clusterArn": "string",
    "activeOperationArn": "string",
    "enhancedMonitoring": enum,
    "clusterName": "string",
    "clientAuthentication": {
      "tls": {
        "certificateAuthorityArnList": [
          "string"
        ]
      }
    },
    "state": enum,
    "brokerNodeGroupInfo": {
      "clientSubnets": [
        "string"
      ],
      "instanceType": "string",
      "securityGroups": [
        "string"
      ],
      "brokerAZDistribution": enum,
      "storageInfo": {
        "ebsStorageInfo": {
          "volumeSize": integer
        }
      }
    },
    "currentBrokerSoftwareInfo": {
      "configurationRevision": integer,
      "kafkaVersion": "string",
      "configurationArn": "string"
    }
  }
}
```

### Example DeleteClusterResponse

```
{
```

---

```
"clusterArn": "string",  
"state": enum  
}
```

## Example Error

```
{  
  "message": "string",  
  "invalidParameter": "string"  
}
```

# Properties

## BrokerAZDistribution

The distribution of broker nodes across Availability Zones. This is an optional parameter. If you don't specify it, Amazon MSK gives it the value `DEFAULT`. You can also explicitly set this parameter to the value `DEFAULT`. No other values are currently allowed.

Amazon MSK distributes the broker nodes evenly across the Availability Zones that correspond to the subnets that you provide when you create the cluster.

`DEFAULT`

## BrokerNodeGroupInfo

Describes the setup to be used for the broker nodes in the cluster.

### clientSubnets

The list of subnets to connect to in the client virtual private cloud (VPC). AWS creates elastic network interfaces inside these subnets. Client applications use elastic network interfaces to produce and consume data. Client subnets can't be in Availability Zone `us-east-1e`.

**Type:** Array of type string

**Required:** True

### instanceType

The type of Amazon EC2 instances to use for brokers. The following instance types are allowed: `kafka.m5.large`, `kafka.m5.xlarge`, `kafka.m5.2xlarge`, `kafka.m5.4xlarge`, `kafka.m5.12xlarge`, and `kafka.m5.24xlarge`.

**Type:** string

**Required:** True

**MinLength:** 5

**MaxLength:** 32

### securityGroups

The AWS security groups to associate with the elastic network interfaces in order to specify who can connect to and communicate with the Amazon MSK cluster. If you don't specify a security group, Amazon MSK uses the default security group associated with the VPC. If you specify security groups that

were shared with you, you must ensure that you have permissions to them. Specifically, you need the `ec2:DescribeSecurityGroups` permission.

**Type:** Array of type string  
**Required:** False

### **brokerAZDistribution**

The distribution of broker nodes across Availability Zones. This is an optional parameter. If you don't specify it, Amazon MSK gives it the value `DEFAULT`. You can also explicitly set this parameter to the value `DEFAULT`. No other values are currently allowed.

Amazon MSK distributes the broker nodes evenly across the Availability Zones that correspond to the subnets that you provide when you create the cluster.

**Type:** [BrokerAZDistribution \(p. 19\)](#)  
**Required:** False

### **storageInfo**

Contains information about storage volumes attached to MSK broker nodes.

**Type:** [StorageInfo \(p. 25\)](#)  
**Required:** False

## **BrokerSoftwareInfo**

Information about the current software installed on the cluster.

### **configurationRevision**

The revision of the configuration to use. This field isn't visible in this preview release.

**Type:** integer  
**Required:** False  
**Format:** int64

### **kafkaVersion**

The version of Apache Kafka.

**Type:** string  
**Required:** False

### **configurationArn**

The Amazon Resource Name (ARN) of the configuration used for the cluster. This field isn't visible in this preview release.

**Type:** string  
**Required:** False

## **ClientAuthentication**

Includes all client authentication information.



## tls

Details for ClientAuthentication using TLS.

**Type:** [Tls \(p. 26\)](#)

**Required:** False

## ClientBroker

Client-broker encryption in transit setting.

TLS  
TLS\_PLAINTEXT  
PLAINTEXT

## ClusterInfo

Returns information about a cluster.

### encryptionInfo

Includes all encryption-related information.

**Type:** [EncryptionInfo \(p. 24\)](#)

**Required:** False

### zookeeperConnectionString

The connection string to use to connect to the Apache ZooKeeper cluster.

**Type:** string

**Required:** False

### creationTime

The time when the cluster was created.

**Type:** string

**Required:** False

**Format:** date-time

### currentVersion

The current version of the MSK cluster. Cluster versions aren't simple integers. You can obtain the current version by describing the cluster. An example version is `KTVDPDKIKX0DER`.

**Type:** string

**Required:** False

### tags

Tags attached to the cluster.

**Type:** object

**Required:** False

### **numberOfBrokerNodes**

The number of broker nodes in the cluster.

**Type:** integer  
**Required:** False

### **clusterArn**

The Amazon Resource Name (ARN) that uniquely identifies the cluster.

**Type:** string  
**Required:** False

### **activeOperationArn**

Arn of active cluster operation.

**Type:** string  
**Required:** False

### **enhancedMonitoring**

Specifies which metrics are gathered for the MSK cluster. This property has three possible values: `DEFAULT`, `PER_BROKER`, and `PER_TOPIC_PER_BROKER`. For a list of the metrics associated with each of these three levels of monitoring, see [Monitoring](#).

**Type:** [EnhancedMonitoring \(p. 25\)](#)  
**Required:** False

### **clusterName**

The name of the cluster.

**Type:** string  
**Required:** False

### **clientAuthentication**

Includes all client authentication information.

**Type:** [ClientAuthentication \(p. 20\)](#)  
**Required:** False

### **state**

The state of the cluster. The possible states are `CREATING`, `ACTIVE`, and `FAILED`.

**Type:** [ClusterState \(p. 23\)](#)  
**Required:** False

### **brokerNodeGroupInfo**

Information about the broker nodes.

**Type:** [BrokerNodeGroupInfo](#) (p. 19)  
**Required:** False

### **currentBrokerSoftwareInfo**

Information about the version of software currently deployed on the brokers in the cluster.

**Type:** [BrokerSoftwareInfo](#) (p. 20)  
**Required:** False

## ClusterState

The state of the cluster.

ACTIVE  
CREATING  
UPDATING  
DELETING  
FAILED

## DeleteClusterResponse

Returns information about the deleted cluster.

### **clusterArn**

The Amazon Resource Name (ARN) of the cluster.

**Type:** string  
**Required:** False

### **state**

The state of the cluster. The possible states are `CREATING`, `ACTIVE`, and `FAILED`.

**Type:** [ClusterState](#) (p. 23)  
**Required:** False

## DescribeClusterResponse

Returns information about a cluster.

### **clusterInfo**

The cluster information.

**Type:** [ClusterInfo](#) (p. 21)  
**Required:** False

## EBSStorageInfo

Contains information about the EBS storage volumes attached to the broker nodes.

### **volumeSize**

The size in GiB of the EBS volume for the data drive on each broker node.

**Type:** integer  
**Required:** False  
**Minimum:** 1  
**Maximum:** 16384

## EncryptionAtRest

The data-volume encryption details.

### **dataVolumeKMSKeyId**

The ARN of the AWS KMS key for encrypting data at rest. If you don't specify a KMS key, MSK creates one for you and uses it.

**Type:** string  
**Required:** True

## EncryptionInTransit

The settings for encrypting data in transit.

### **inCluster**

When set to true, it indicates that data communication among the broker nodes of the cluster is encrypted. When set to false, the communication happens in plaintext.

The default value is true.

**Type:** boolean  
**Required:** False

### **clientBroker**

Indicates the encryption setting for data in transit between clients and brokers. You must set it to one of the following values.

`TLS` means that client-broker communication is enabled with TLS only.

`TLS_PLAINTEXT` means that client-broker communication is enabled for both TLS-encrypted, as well as plaintext data.

`PLAINTEXT` means that client-broker communication is enabled in plaintext only.

The default value is `TLS`.

**Type:** [ClientBroker](#) (p. 21)  
**Required:** False

## EncryptionInfo

Includes encryption-related information, such as the AWS KMS key used for encrypting data at rest and whether you want MSK to encrypt your data in transit.

### **encryptionInTransit**

The details for encryption in transit.

**Type:** [EncryptionInTransit \(p. 24\)](#)

**Required:** False

### **encryptionAtRest**

The data-volume encryption details.

**Type:** [EncryptionAtRest \(p. 24\)](#)

**Required:** False

## EnhancedMonitoring

Specifies which metrics are gathered for the MSK cluster. This property has three possible values: `DEFAULT`, `PER_BROKER`, and `PER_TOPIC_PER_BROKER`. For a list of the metrics associated with each of these three levels of monitoring, see [Monitoring](#).

`DEFAULT`

`PER_BROKER`

`PER_TOPIC_PER_BROKER`

## Error

Returns information about an error.

### **message**

The description of the error.

**Type:** string

**Required:** False

### **invalidParameter**

The parameter that caused the error.

**Type:** string

**Required:** False

## StorageInfo

Contains information about storage volumes attached to MSK broker nodes.

### **ebsStorageInfo**

EBS volume information.

**Type:** [EBSStorageInfo \(p. 23\)](#)

**Required:** False

## Tls

Details for client authentication using TLS.

### **certificateAuthorityArnList**

List of ACM Certificate Authority ARNs.

**Type:** Array of type string

**Required:** False

## See Also

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

### DescribeCluster

- [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

- [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](#)

## BootstrapBrokers

A list of brokers that a client application can use to bootstrap.

### URI

`/v1/clusters/clusterArn/bootstrap-brokers`

## HTTP Methods

### GET

Operation ID: GetBootstrapBrokers

A list of brokers that a client application can use to bootstrap.

#### Path Parameters

Name	Type	Required	Description
<code>clusterArn</code>	String	True	The Amazon Resource Name (ARN) that uniquely identifies the cluster.

#### Responses

Status Code	Response Model	Description
200	<a href="#">GetBootstrapBrokersResponse</a> (Successful)	Successful response.
400	<a href="#">Error</a> (p. 28)	The request isn't valid because the input is incorrect. Correct your input and then submit it again.
401	<a href="#">Error</a> (p. 28)	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a> (p. 28)	Access forbidden. Check your credentials and then retry your request.
409	<a href="#">Error</a> (p. 28)	This cluster name already exists. Retry your request using another name.
500	<a href="#">Error</a> (p. 28)	There was an unexpected internal server error. Retrying your request might resolve the issue.

## Schemas

### Response Bodies

#### Example GetBootstrapBrokersResponse

```
{  
  "bootstrapBrokerString": "string",  
  "bootstrapBrokerStringTls": "string"  
}
```

```
}
```

## Example Error

```
{  
  "message": "string",  
  "invalidParameter": "string"  
}
```

# Properties

## Error

Returns information about an error.

### message

The description of the error.

**Type:** string

**Required:** False

### invalidParameter

The parameter that caused the error.

**Type:** string

**Required:** False

## GetBootstrapBrokersResponse

Returns a string containing one or more hostname:port pairs.

### bootstrapBrokerString

A string containing one or more hostname:port pairs.

**Type:** string

**Required:** False

### bootstrapBrokerStringTls

A string containing one or more DNS names (or IP) and TLS port pairs. The following is an example.

```
{  
  "BootstrapBrokerStringTls": "b-3.exampleClusterName.abcde.c2.kafka.us-  
east-1.amazonaws.com:9094,b-1.exampleClusterName.abcde.c2.kafka.us-  
east-1.amazonaws.com:9094,b-2.exampleClusterName.abcde.c2.kafka.us-  
east-1.amazonaws.com:9094"  
}
```

**Type:** string



**Required:** False

## See Also

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

## GetBootstrapBrokers

- [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](#)

# Cluster Configuration

Represents the configuration of a specific cluster.

## URI

`/v1/clusters/clusterArn/configuration`

## HTTP Methods

### PUT

Operation ID: UpdateClusterConfiguration

Updates the cluster with the configuration that is specified in the request body.

#### Path Parameters

Name	Type	Required	Description
<i>clusterArn</i>	String	True	The Amazon Resource Name (ARN) that uniquely identifies the cluster.

#### Responses

Status Code	Response Model	Description
200	<a href="#">UpdateClusterConfigurationResponse</a>	Successful response

Status Code	Response Model	Description
400	<a href="#">Error (p. 30)</a>	The request isn't valid because the input is incorrect. Correct your input and then submit it again.
401	<a href="#">Error (p. 30)</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error (p. 30)</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error (p. 30)</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
500	<a href="#">Error (p. 30)</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error (p. 30)</a>	503 response

## Schemas

### Request Bodies

#### Example PUT

```
{
  "configurationInfo": {
    "arn": "string",
    "revision": integer
  },
  "currentVersion": "string"
}
```

### Response Bodies

#### Example UpdateClusterConfigurationResponse

```
{
  "clusterArn": "string",
  "clusterOperationArn": "string"
}
```

#### Example Error

```
{
  "message": "string",
  "invalidParameter": "string"
}
```

```
}
```

## Properties

### ConfigurationInfo

Specifies the configuration to use for the brokers.

#### **arn**

ARN of the configuration to use.

**Type:** string

**Required:** True

#### **revision**

The revision of the configuration to use.

**Type:** integer

**Required:** True

**Format:** int64

**Minimum:** 1

## Error

Returns information about an error.

#### **message**

The description of the error.

**Type:** string

**Required:** False

#### **invalidParameter**

The parameter that caused the error.

**Type:** string

**Required:** False

## UpdateClusterConfigurationRequest

Request body for UpdateClusterConfiguration.

#### **configurationInfo**

Represents the configuration that you want MSK to use for the cluster.

**Type:** [ConfigurationInfo](#) (p. 31)

**Required:** True

### **currentVersion**

The version of the cluster that you want to update.

**Type:** string

**Required:** True

## UpdateClusterConfigurationResponse

Response body for UpdateClusterConfiguration.

### **clusterArn**

The Amazon Resource Name (ARN) of the cluster.

**Type:** string

**Required:** False

### **clusterOperationArn**

The Amazon Resource Name (ARN) of the cluster operation.

**Type:** string

**Required:** False

## See Also

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

## UpdateClusterConfiguration

- [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](#)

## Brokers

The broker nodes in the cluster.

## URI

/v1/clusters/*clusterArn*/nodes

## HTTP Methods

### GET

Operation ID: ListNodes

Returns a list of the broker nodes in the cluster.

#### Path Parameters

Name	Type	Required	Description
<i>clusterArn</i>	String	True	The Amazon Resource Name (ARN) that uniquely identifies the cluster.

#### Query Parameters

Name	Type	Required	Description
nextToken	String	False	The paginated results marker. When the result of the operation is truncated, the call returns <code>NextToken</code> in the response. To get the next batch, provide this token in your next request.
maxResults	String	False	The maximum number of results to return in the response. If there are more results, the response includes a <code>NextToken</code> parameter.

#### Responses

Status Code	Response Model	Description
200	<a href="#">ListNodesResponse (p. 34)</a>	Successful response.
400	<a href="#">Error (p. 34)</a>	The request isn't valid because the input is incorrect. Correct your input and then submit it again.
403	<a href="#">Error (p. 34)</a>	Access forbidden. Check your credentials and then retry your request.

Status Code	Response Model	Description
404	<a href="#">Error (p. 34)</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
500	<a href="#">Error (p. 34)</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.

## Schemas

### Response Bodies

#### Example ListNodesResponse

```
{
  "nextToken": "string",
  "nodeInfoList": [
    {
      "zookeeperNodeInfo": {
        "zookeeperId": number,
        "clientVpcIpAddress": "string",
        "attachedENIID": "string",
        "endpoints": [
          "string"
        ],
        "zookeeperVersion": "string"
      },
      "instanceType": "string",
      "nodeType": enum,
      "nodeARN": "string",
      "brokerNodeInfo": {
        "clientVpcIpAddress": "string",
        "attachedENIID": "string",
        "brokerId": number,
        "endpoints": [
          "string"
        ],
        "clientSubnet": "string",
        "currentBrokerSoftwareInfo": {
          "configurationRevision": integer,
          "kafkaVersion": "string",
          "configurationArn": "string"
        }
      },
      "addedToClusterTime": "string"
    }
  ]
}
```

#### Example Error

```
{
  "message": "string",
  "invalidParameter": "string"
}
```

## Properties

### BrokerNodeInfo

BrokerNodeInfo

#### **clientVpcIpAddress**

The virtual private cloud (VPC) of the client.

**Type:** string  
**Required:** False

#### **attachedENIID**

The attached elastic network interface of the broker.

**Type:** string  
**Required:** False

#### **brokerId**

The ID of the broker.

**Type:** number  
**Required:** False

#### **endpoints**

Endpoints for accessing the broker.

**Type:** Array of type string  
**Required:** False

#### **clientSubnet**

The client subnet to which this broker node belongs.

**Type:** string  
**Required:** False

#### **currentBrokerSoftwareInfo**

Information about the version of software currently deployed on the brokers in the cluster.

**Type:** [BrokerSoftwareInfo](#) (p. 35)  
**Required:** False

### BrokerSoftwareInfo

Information about the current software installed on the cluster.

#### **configurationRevision**

The revision of the configuration to use. This field isn't visible in this preview release.

**Type:** integer  
**Required:** False  
**Format:** int64

### **kafkaVersion**

The version of Apache Kafka.

**Type:** string  
**Required:** False

### **configurationArn**

The Amazon Resource Name (ARN) of the configuration used for the cluster. This field isn't visible in this preview release.

**Type:** string  
**Required:** False

## Error

Returns information about an error.

### **message**

The description of the error.

**Type:** string  
**Required:** False

### **invalidParameter**

The parameter that caused the error.

**Type:** string  
**Required:** False

## ListNodesResponse

Information about nodes in the cluster.

### **nextToken**

The paginated results marker. When the result of a `ListNodes` operation is truncated, the call returns `NextToken` in the response. To get another batch of nodes, provide this token in your next request.

**Type:** string  
**Required:** False

### **nodeInfoList**

List containing a `NodeInfo` object.

**Type:** Array of type [NodeInfo \(p. 37\)](#)



**Required:** False

## NodeInfo

The node information object.

### **zookeeperNodeInfo**

The ZookeeperNodeInfo.

**Type:** [ZookeeperNodeInfo \(p. 38\)](#)

**Required:** False

### **instanceType**

The instance type.

**Type:** string

**Required:** False

### **nodeType**

The node type.

**Type:** [NodeType \(p. 37\)](#)

**Required:** False

### **nodeARN**

The Amazon Resource Name (ARN) of the node.

**Type:** string

**Required:** False

### **brokerNodeInfo**

The broker node info.

**Type:** [BrokerNodeInfo \(p. 35\)](#)

**Required:** False

### **addedToClusterTime**

The start time.

**Type:** string

**Required:** False

## NodeType

The broker or Apache ZooKeeper node.

BROKER

## ZookeeperNodeInfo

Apache ZooKeeper node information.

### **zookeeperId**

The role-specific ID for Apache ZooKeeper.

**Type:** number  
**Required:** False

### **clientVpcIpAddress**

The virtual private cloud (VPC) IP address of the client.

**Type:** string  
**Required:** False

### **attachedENIID**

The attached elastic network interface of the broker.

**Type:** string  
**Required:** False

### **endpoints**

Endpoints for accessing the Apache ZooKeeper nodes.

**Type:** Array of type string  
**Required:** False

### **zookeeperVersion**

The version of Apache ZooKeeper.

**Type:** string  
**Required:** False

## See Also

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

### ListNodes

- [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](#)

## Broker Count

The number of broker nodes in a cluster.

### URI

`/v1/clusters/clusterArn/nodes/count`

### HTTP Methods

#### PUT

Operation ID: UpdateBrokerCount

Updates the number of broker nodes in the cluster. You can use this operation to increase the number of brokers in an existing cluster. You can't decrease the number of brokers.

#### Path Parameters

Name	Type	Required	Description
<i>clusterArn</i>	String	True	The Amazon Resource Name (ARN) that uniquely identifies the cluster.

#### Responses

Status Code	Response Model	Description
200	<a href="#">UpdateBrokerCountResponse</a> ( <a href="#">Success</a> )	Successful response.
400	<a href="#">Error</a> ( <a href="#">p. 40</a> )	The request isn't valid because the input is incorrect. Correct your input and then submit it again.
401	<a href="#">Error</a> ( <a href="#">p. 40</a> )	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a> ( <a href="#">p. 40</a> )	Access forbidden. Check your credentials and then retry your request.
500	<a href="#">Error</a> ( <a href="#">p. 40</a> )	There was an unexpected internal server error. Retrying your request might resolve the issue.

Status Code	Response Model	Description
503	<a href="#">Error (p. 40)</a>	503 response

## Schemas

### Request Bodies

#### Example PUT

```
{  
  "targetNumberOfBrokerNodes": integer,  
  "currentVersion": "string"  
}
```

### Response Bodies

#### Example UpdateBrokerCountResponse

```
{  
  "clusterArn": "string",  
  "clusterOperationArn": "string"  
}
```

#### Example Error

```
{  
  "message": "string",  
  "invalidParameter": "string"  
}
```

## Properties

### Error

Returns information about an error.

#### **message**

The description of the error.

**Type:** string

**Required:** False

#### **invalidParameter**

The parameter that caused the error.

**Type:** string

**Required:** False

## UpdateBrokerCountRequest

Request body for UpdateBrokerCount.

### **targetNumberOfBrokerNodes**

The number of broker nodes that you want the cluster to have after this operation completes successfully.

**Type:** integer  
**Required:** True

### **currentVersion**

The current version of the cluster.

**Type:** string  
**Required:** True

## UpdateBrokerCountResponse

Response body for UpdateBrokerCount.

### **clusterArn**

The Amazon Resource Name (ARN) of the cluster.

**Type:** string  
**Required:** False

### **clusterOperationArn**

The Amazon Resource Name (ARN) of the cluster operation.

**Type:** string  
**Required:** False

## See Also

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

## UpdateBrokerCount

- [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](#)

## Broker Storage

Represents the EBS storage associated with the brokers.

### URI

`/v1/clusters/clusterArn/nodes/storage`

### HTTP Methods

#### PUT

Operation ID: UpdateBrokerStorage

Updates the EBS storage associated with MSK brokers.

#### Path Parameters

Name	Type	Required	Description
<i>clusterArn</i>	String	True	The Amazon Resource Name (ARN) that uniquely identifies the cluster.

#### Responses

Status Code	Response Model	Description
200	<a href="#">UpdateBrokerStorageResponse</a> (Successful)	Successful response.
400	<a href="#">Error</a> (p. 43)	The request isn't valid because the input is incorrect. Correct your input and then submit it again.
401	<a href="#">Error</a> (p. 43)	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a> (p. 43)	Access forbidden. Check your credentials and then retry your request.
500	<a href="#">Error</a> (p. 43)	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a> (p. 43)	503 response

## Schemas

### Request Bodies

#### Example PUT

```
{
  "targetBrokerEBSVolumeInfo": [
    {
      "volumeSizeGB": integer,
      "kafkaBrokerNodeId": "string"
    }
  ],
  "currentVersion": "string"
}
```

### Response Bodies

#### Example UpdateBrokerStorageResponse

```
{
  "clusterArn": "string",
  "clusterOperationArn": "string"
}
```

#### Example Error

```
{
  "message": "string",
  "invalidParameter": "string"
}
```

## Properties

### BrokerEBSVolumeInfo

Specifies the EBS volume upgrade information. The broker identifier must be set to the keyword `ALL`. This means the changes apply to all the brokers in the cluster.

#### **volumeSizeGB**

Size of the EBS volume to update.

**Type:** integer  
**Required:** True

#### **kafkaBrokerNodeId**

The ID of the broker to update. The only allowed value is `ALL`. This means that Amazon MSK applies the same storage update to all broker nodes.

**Type:** string

**Required:** True

## Error

Returns information about an error.

### message

The description of the error.

**Type:** string

**Required:** False

### invalidParameter

The parameter that caused the error.

**Type:** string

**Required:** False

## UpdateBrokerStorageRequest

Request object for UpdateBrokerStorage.

### targetBrokerEBSVolumeInfo

Describes the target volume size and the ID of the broker to apply the update to.

The value you specify for Target-Volume-in-GiB must be a whole number that is greater than 100 GiB.

The storage per broker after the update operation can't exceed 16384 GiB.

**Type:** Array of type [BrokerEBSVolumeInfo](#) (p. 43)

**Required:** True

### currentVersion

The version of cluster to update from. A successful operation will then generate a new version.

**Type:** string

**Required:** True

## UpdateBrokerStorageResponse

Response body for UpdateBrokerStorage.

### clusterArn

The Amazon Resource Name (ARN) of the cluster.

**Type:** string

**Required:** False



### clusterOperationArn

The Amazon Resource Name (ARN) of the cluster operation.

**Type:** string

**Required:** False

## See Also

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

## UpdateBrokerStorage

- [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](#)

# Cluster Operations

Represents the operations that have been performed on an MSK cluster.

## URI

/v1/clusters/*clusterArn*/operations

## HTTP Methods

### GET

Operation ID: ListClusterOperations

Returns a list of all the operations that have been performed on the specified MSK cluster.

### Path Parameters

Name	Type	Required	Description
<i>clusterArn</i>	String	True	The Amazon Resource Name (ARN) that uniquely identifies the cluster.

## Query Parameters

Name	Type	Required	Description
<code>nextToken</code>	String	False	The paginated results marker. When the result of the operation is truncated, the call returns <code>NextToken</code> in the response. To get the next batch, provide this token in your next request.
<code>maxResults</code>	String	False	The maximum number of results to return in the response. If there are more results, the response includes a <code>NextToken</code> parameter.

## Responses

Status Code	Response Model	Description
200	<a href="#">ListClusterOperationsResponse</a>	Successful response.
400	<a href="#">Error (p. 47)</a>	The request isn't valid because the input is incorrect. Correct your input and then submit it again.
401	<a href="#">Error (p. 47)</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error (p. 47)</a>	Access forbidden. Check your credentials and then retry your request.
500	<a href="#">Error (p. 47)</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.

## Schemas

### Response Bodies

#### Example ListClusterOperationsResponse

```
{
  "nextToken": "string",
  "clusterOperationInfoList": [
    {
      "clusterArn": "string",
```

```
"creationTime": "string",
"clientRequestId": "string",
"operationState": "string",
"sourceClusterInfo": {
  "numberOfBrokerNodes": integer,
  "configurationInfo": {
    "arn": "string",
    "revision": integer
  },
  "brokerEBSVolumeInfo": [
    {
      "volumeSizeGB": integer,
      "kafkaBrokerNodeId": "string"
    }
  ]
},
"errorInfo": {
  "errorString": "string",
  "errorCode": "string"
},
"operationType": "string",
"endTime": "string",
"targetClusterInfo": {
  "numberOfBrokerNodes": integer,
  "configurationInfo": {
    "arn": "string",
    "revision": integer
  },
  "brokerEBSVolumeInfo": [
    {
      "volumeSizeGB": integer,
      "kafkaBrokerNodeId": "string"
    }
  ]
},
"operationArn": "string"
}
]
```

## Example Error

```
{
  "message": "string",
  "invalidParameter": "string"
}
```

## Properties

### BrokerEBSVolumeInfo

Specifies the EBS volume upgrade information. The broker identifier must be set to the keyword `ALL`. This means the changes apply to all the brokers in the cluster.

#### **volumeSizeGB**

Size of the EBS volume to update.

**Type:** integer

**Required:** True

### **kafkaBrokerNodeId**

The ID of the broker to update. The only allowed value is `ALL`. This means that Amazon MSK applies the same storage update to all broker nodes.

**Type:** string

**Required:** True

## ClusterOperationInfo

Returns information about a cluster operation.

### **clusterArn**

ARN of the cluster.

**Type:** string

**Required:** False

### **creationTime**

The time that the operation was created.

**Type:** string

**Required:** False

### **clientRequestId**

The ID of the API request that triggered this operation.

**Type:** string

**Required:** False

### **operationState**

State of the cluster operation.

**Type:** string

**Required:** False

### **sourceClusterInfo**

Information about cluster attributes before a cluster is updated.

**Type:** [MutableClusterInfo](#) (p. 50)

**Required:** False

### **errorInfo**

Describes the error if the operation fails.

**Type:** [ErrorInfo](#) (p. 50)

**Required:** False

### **operationType**

Type of the cluster operation.

**Type:** string  
**Required:** False

### **endTime**

The time at which the operation finished.

**Type:** string  
**Required:** False

### **targetClusterInfo**

Information about cluster attributes after a cluster is updated.

**Type:** [MutableClusterInfo \(p. 50\)](#)  
**Required:** False

### **operationArn**

ARN of the cluster operation.

**Type:** string  
**Required:** False

## **ConfigurationInfo**

Specifies the configuration to use for the brokers.

### **arn**

ARN of the configuration to use.

**Type:** string  
**Required:** True

### **revision**

The revision of the configuration to use.

**Type:** integer  
**Required:** True  
**Format:** int64  
**Minimum:** 1

## **Error**

Returns information about an error.

### **message**

The description of the error.

**Type:** string  
**Required:** False

### **invalidParameter**

The parameter that caused the error.

**Type:** string  
**Required:** False

## ErrorInfo

Returns information about an error state of the cluster.

### **errorString**

An optional field to provide more details about the error.

**Type:** string  
**Required:** False

### **errorCode**

A number describing the error programmatically.

**Type:** string  
**Required:** False

## ListClusterOperationsResponse

The response contains an array containing cluster operation information and a next token if the response is truncated.

### **nextToken**

If the response of ListClusterOperations is truncated, Amazon MSK returns a NextToken in the response. Send this NextToken in your subsequent request to ListClusterOperations.

**Type:** string  
**Required:** False

### **clusterOperationInfoList**

An array of cluster operation information objects.

**Type:** Array of type [ClusterOperationInfo](#) (p. 48)  
**Required:** False

## MutableClusterInfo

Information about cluster attributes that can be updated via update APIs.

### **numberOfBrokerNodes**

The number of broker nodes in the cluster.

**Type:** integer  
**Required:** False

### **configurationInfo**

Information about the changes in the configuration of the brokers.

**Type:** [ConfigurationInfo](#) (p. 49)  
**Required:** False

### **brokerEBSVolumeInfo**

Specifies the size of the EBS volume and the ID of the associated broker.

**Type:** Array of type [BrokerEBSVolumeInfo](#) (p. 47)  
**Required:** False

## See Also

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

### ListClusterOperations

- [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](#)

## Configurations

A collection of MSK configurations.

### URI

/v1/configurations

### HTTP Methods

#### GET

Operation ID: ListConfigurations

Returns a list of all the MSK configurations in this Region.

### Query Parameters

Name	Type	Required	Description
nextToken	String	False	The paginated results marker. When the result of the operation is truncated, the call returns <code>NextToken</code> in the response. To get the next batch, provide this token in your next request.
maxResults	String	False	The maximum number of results to return in the response. If there are more results, the response includes a <code>NextToken</code> parameter.

### Responses

Status Code	Response Model	Description
200	<a href="#">ListConfigurationsResponse</a>	200 response
400	<a href="#">Error</a> (p. 54)	The request isn't valid because the input is incorrect. Correct your input and then submit it again.
401	<a href="#">Error</a> (p. 54)	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a> (p. 54)	Access forbidden. Check your credentials and then retry your request.
500	<a href="#">Error</a> (p. 54)	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a> (p. 54)	503 response

## POST

Operation ID: `CreateConfiguration`

Creates a new MSK configuration.

### Responses

Status Code	Response Model	Description
200	<a href="#">CreateConfigurationResponse</a>	200 response



Status Code	Response Model	Description
400	<a href="#">Error (p. 54)</a>	The request isn't valid because the input is incorrect. Correct your input and then submit it again.
401	<a href="#">Error (p. 54)</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error (p. 54)</a>	Access forbidden. Check your credentials and then retry your request.
409	<a href="#">Error (p. 54)</a>	This cluster name already exists. Retry your request using another name.
429	<a href="#">Error (p. 54)</a>	429 response
500	<a href="#">Error (p. 54)</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error (p. 54)</a>	503 response

## Schemas

### Request Bodies

#### Example POST

```
{
  "name": "string",
  "description": "string",
  "kafkaVersions": [
    "string"
  ],
  "serverProperties": "string"
}
```

### Response Bodies

#### Example ListConfigurationsResponse

```
{
  "nextToken": "string",
  "configurations": [
    {
      "creationTime": "string",
      "name": "string",
      "description": "string",
      "kafkaVersions": [
        "string"
      ],
    }
  ]
}
```

```
"arn": "string",
  "latestRevision": {
    "creationTime": "string",
    "description": "string",
    "revision": integer
  }
}
]
```

### Example CreateConfigurationResponse

```
{
  "creationTime": "string",
  "name": "string",
  "arn": "string",
  "latestRevision": {
    "creationTime": "string",
    "description": "string",
    "revision": integer
  }
}
```

### Example Error

```
{
  "message": "string",
  "invalidParameter": "string"
}
```

## Properties

### Configuration

Represents an MSK Configuration.

#### **creationTime**

The time when the configuration was created.

**Type:** string

**Required:** True

#### **name**

The name of the configuration. Configuration names are strings that match the regex "`^[0-9A-Za-z-]+$`".

**Type:** string

**Required:** True

#### **description**

The description of the configuration.

**Type:** string

**Required:** True

### **kafkaVersions**

An array of the versions of Apache Kafka with which you can use this MSK configuration. You can use this configuration for an MSK cluster only if the Apache Kafka version specified for the cluster appears in this array.

**Type:** Array of type string  
**Required:** True

### **arn**

The Amazon Resource Name (ARN) of the configuration.

**Type:** string  
**Required:** True

### **latestRevision**

Latest revision of the configuration.

**Type:** [ConfigurationRevision](#) (p. 55)  
**Required:** True

## **ConfigurationRevision**

Describes a configuration revision.

### **creationTime**

The time when the configuration revision was created.

**Type:** string  
**Required:** True

### **description**

The description of the configuration revision.

**Type:** string  
**Required:** False

### **revision**

The revision number.

**Type:** integer  
**Required:** True  
**Format:** int64

## **CreateConfigurationRequest**

Request body for CreateConfiguration.

**name**

The name of the configuration. Configuration names are strings that match the regex "[0-9A-Za-z-]+\$".

**Type:** string  
**Required:** True

**description**

The description of the configuration.

**Type:** string  
**Required:** False

**kafkaVersions**

The versions of Apache Kafka with which you can use this MSK configuration.

**Type:** Array of type string  
**Required:** True

**serverProperties**

Contents of the `server.properties` file. When using the API, you must ensure that the contents of the file are base64 encoded. When using the AWS Management Console, the SDK, or the AWS CLI, the contents of `server.properties` can be in plaintext.

**Type:** string  
**Required:** True

## CreateConfigurationResponse

Response body for CreateConfiguration

**creationTime**

The time when the configuration was created.

**Type:** string  
**Required:** False

**name**

The name of the configuration. Configuration names are strings that match the regex "[0-9A-Za-z-]+\$".

**Type:** string  
**Required:** False

**arn**

The Amazon Resource Name (ARN) of the configuration.

**Type:** string  
**Required:** False

### **latestRevision**

Latest revision of the configuration.

**Type:** [ConfigurationRevision](#) (p. 55)

**Required:** False

## Error

Returns information about an error.

### **message**

The description of the error.

**Type:** string

**Required:** False

### **invalidParameter**

The parameter that caused the error.

**Type:** string

**Required:** False

## ListConfigurationsResponse

The response contains an array of [Configuration](#) and a next token if the response is truncated.

### **nextToken**

The paginated results marker. When the result of a `ListConfigurations` operation is truncated, the call returns `NextToken` in the response. To get another batch of configurations, provide this token in your next request.

**Type:** string

**Required:** False

### **configurations**

An array of MSK configurations.

**Type:** Array of type [Configuration](#) (p. 54)

**Required:** False

## See Also

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

### ListConfigurations

- [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](#)

## CreateConfiguration

- [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](#)

# Configuration

Represents an MSK configuration. Use this path to describe the configuration.

## URI

`/v1/configurations/arn`

## HTTP Methods

### GET

Operation ID: DescribeConfiguration

Returns a description of this MSK configuration.

#### Path Parameters

Name	Type	Required	Description
<i>arn</i>	String	True	The Amazon Resource Name (ARN) that uniquely identifies an MSK configuration and all of its revisions.

## Responses

Status Code	Response Model	Description
200	<a href="#">DescribeConfigurationResponse</a>	200 response
400	<a href="#">Error (p. 59)</a>	The request isn't valid because the input is incorrect. Correct your input and then submit it again.
401	<a href="#">Error (p. 59)</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error (p. 59)</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error (p. 59)</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
500	<a href="#">Error (p. 59)</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error (p. 59)</a>	503 response

## Schemas

### Response Bodies

#### Example DescribeConfigurationResponse

```
{
  "creationTime": "string",
  "name": "string",
  "description": "string",
  "kafkaVersions": [
    "string"
  ],
  "arn": "string",
  "latestRevision": {
    "creationTime": "string",
    "description": "string",
    "revision": integer
  }
}
```

#### Example Error

```
{
  "message": "string",
  "invalidParameter": "string"
}
```

## Properties

### ConfigurationRevision

Describes a configuration revision.

#### **creationTime**

The time when the configuration revision was created.

**Type:** string

**Required:** True

#### **description**

The description of the configuration revision.

**Type:** string

**Required:** False

#### **revision**

The revision number.

**Type:** integer

**Required:** True

**Format:** int64

### DescribeConfigurationResponse

Response body for DescribeConfiguration.

#### **creationTime**

The time when the configuration was created.

**Type:** string

**Required:** True

#### **name**

The name of the configuration. Configuration names are strings that match the regex "`^[0-9A-Za-z-]+$`".

**Type:** string

**Required:** True

#### **description**

The description of the configuration.

**Type:** string

**Required:** True



### **kafkaVersions**

The versions of Apache Kafka with which you can use this MSK configuration.

**Type:** Array of type string  
**Required:** True

### **arn**

The Amazon Resource Name (ARN) of the configuration.

**Type:** string  
**Required:** True

### **latestRevision**

Latest revision of the configuration.

**Type:** [ConfigurationRevision](#) (p. 60)  
**Required:** True

## Error

Returns information about an error.

### **message**

The description of the error.

**Type:** string  
**Required:** False

### **invalidParameter**

The parameter that caused the error.

**Type:** string  
**Required:** False

## See Also

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

### DescribeConfiguration

- [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](#)

## Configuration Revisions

Represents the revisions of an MSK configuration.

### URI

`/v1/configurations/arn/revisions`

### HTTP Methods

#### GET

Operation ID: ListConfigurationRevisions

Returns a list of all the revisions of an MSK configuration.

#### Path Parameters

Name	Type	Required	Description
<i>arn</i>	String	True	The Amazon Resource Name (ARN) that uniquely identifies an MSK configuration and all of its revisions.

#### Query Parameters

Name	Type	Required	Description
<code>nextToken</code>	String	False	The paginated results marker. When the result of the operation is truncated, the call returns <code>NextToken</code> in the response. To get the next batch, provide this token in your next request.
<code>maxResults</code>	String	False	The maximum number of results to return in the response. If there are more results, the response includes a <code>NextToken</code> parameter.

## Responses

Status Code	Response Model	Description
200	<a href="#">ListConfigurationRevisionsResponse</a> (p. 63)	200 response
400	<a href="#">Error</a> (p. 63)	The request isn't valid because the input is incorrect. Correct your input and then submit it again.
401	<a href="#">Error</a> (p. 63)	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a> (p. 63)	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a> (p. 63)	The resource could not be found due to incorrect input. Correct the input, then retry the request.
500	<a href="#">Error</a> (p. 63)	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a> (p. 63)	503 response

## Schemas

### Response Bodies

#### Example ListConfigurationRevisionsResponse

```
{
  "nextToken": "string",
  "revisions": [
    {
      "creationTime": "string",
      "description": "string",
      "revision": integer
    }
  ]
}
```

#### Example Error

```
{
  "message": "string",
  "invalidParameter": "string"
}
```

## Properties

### ConfigurationRevision

Describes a configuration revision.

#### **creationTime**

The time when the configuration revision was created.

**Type:** string

**Required:** True

#### **description**

The description of the configuration revision.

**Type:** string

**Required:** False

#### **revision**

The revision number.

**Type:** integer

**Required:** True

**Format:** int64

## Error

Returns information about an error.

#### **message**

The description of the error.

**Type:** string

**Required:** False

#### **invalidParameter**

The parameter that caused the error.

**Type:** string

**Required:** False

## ListConfigurationRevisionsResponse

Information about revisions of an MSK configuration.

#### **nextToken**

Paginated results marker.

**Type:** string  
**Required:** False

### revisions

List of ConfigurationRevision objects.

**Type:** Array of type [ConfigurationRevision](#) (p. 64)  
**Required:** False

## See Also

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

### ListConfigurationRevisions

- [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](#)

## Configuration Revision

Represents a specific revision of an MSK configuration.

### URI

`/v1/configurations/arn/revisions/revision`

### HTTP Methods

#### GET

Operation ID: DescribeConfigurationRevision

Returns a description of this revision of the configuration.

#### Path Parameters

Name	Type	Required	Description
<i>revision</i>	String	True	A string that uniquely identifies a revision of an MSK configuration.

Name	Type	Required	Description
<code>arn</code>	String	True	The Amazon Resource Name (ARN) that uniquely identifies an MSK configuration and all of its revisions.

## Responses

Status Code	Response Model	Description
200	<a href="#">DescribeConfigurationRevisionResponse</a> (p. 66)	
400	<a href="#">Error</a> (p. 66)	The request isn't valid because the input is incorrect. Correct your input and then submit it again.
401	<a href="#">Error</a> (p. 66)	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a> (p. 66)	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a> (p. 66)	The resource could not be found due to incorrect input. Correct the input, then retry the request.
500	<a href="#">Error</a> (p. 66)	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a> (p. 66)	503 response

## Schemas

### Response Bodies

#### Example DescribeConfigurationRevisionResponse

```
{
  "creationTime": "string",
  "description": "string",
  "serverProperties": "string",
  "arn": "string",
  "revision": integer
}
```

#### Example Error

```
{
```

```
"message": "string",  
"invalidParameter": "string"  
}
```

## Properties

### DescribeConfigurationRevisionResponse

Response body for DescribeConfigurationRevision.

#### creationTime

The time when the configuration was created.

**Type:** string  
**Required:** True

#### description

The description of the configuration.

**Type:** string  
**Required:** True

#### serverProperties

Contents of the `server.properties` file. When using the API, you must ensure that the contents of the file are base64 encoded. When using the AWS Management Console, the SDK, or the AWS CLI, the contents of `server.properties` can be in plaintext.

**Type:** string  
**Required:** True

#### arn

The Amazon Resource Name (ARN) of the configuration.

**Type:** string  
**Required:** True

#### revision

The revision number.

**Type:** integer  
**Required:** True  
**Format:** int64

## Error

Returns information about an error.

#### message

The description of the error.

**Type:** string  
**Required:** False

### invalidParameter

The parameter that caused the error.

**Type:** string  
**Required:** False

## See Also

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

### DescribeConfigurationRevision

- [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](#)

## Cluster Operation

Represents an operation that was performed on an MSK cluster.

### URI

`/v1/operations/clusterOperationArn`

### HTTP Methods

#### GET

Operation ID: DescribeClusterOperation

Returns a description of the cluster operation specified by the ARN.

#### Path Parameters

Name	Type	Required	Description
<i>clusterOperationArn</i>	String	True	The Amazon Resource Name (ARN) that uniquely identifies the MSK cluster operation.



## Responses

Status Code	Response Model	Description
200	<a href="#">DescribeClusterOperationResponse</a> (see <a href="#">response 69</a> )	
400	<a href="#">Error</a> (p. 70)	The request isn't valid because the input is incorrect. Correct your input and then submit it again.
401	<a href="#">Error</a> (p. 70)	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a> (p. 70)	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a> (p. 70)	The resource could not be found due to incorrect input. Correct the input, then retry the request.
500	<a href="#">Error</a> (p. 70)	There was an unexpected internal server error. Retrying your request might resolve the issue.

## Schemas

### Response Bodies

#### Example DescribeClusterOperationResponse

```
{
  "clusterOperationInfo": {
    "clusterArn": "string",
    "creationTime": "string",
    "clientRequestId": "string",
    "operationState": "string",
    "sourceClusterInfo": {
      "numberOfBrokerNodes": integer,
      "configurationInfo": {
        "arn": "string",
        "revision": integer
      },
      "brokerEBSVolumeInfo": [
        {
          "volumeSizeGB": integer,
          "kafkaBrokerNodeId": "string"
        }
      ]
    },
    "errorInfo": {
      "errorString": "string",
      "errorCode": "string"
    },
    "operationType": "string",
    "endTime": "string",
```

```
"targetClusterInfo": {
  "numberOfBrokerNodes": integer,
  "configurationInfo": {
    "arn": "string",
    "revision": integer
  },
  "brokerEBSVolumeInfo": [
    {
      "volumeSizeGB": integer,
      "kafkaBrokerNodeId": "string"
    }
  ]
},
"operationArn": "string"
}
```

### Example Error

```
{
  "message": "string",
  "invalidParameter": "string"
}
```

## Properties

### BrokerEBSVolumeInfo

Specifies the EBS volume upgrade information. The broker identifier must be set to the keyword `ALL`. This means the changes apply to all the brokers in the cluster.

#### **volumeSizeGB**

Size of the EBS volume to update.

**Type:** integer

**Required:** True

#### **kafkaBrokerNodeId**

The ID of the broker to update. The only allowed value is `ALL`. This means that Amazon MSK applies the same storage update to all broker nodes.

**Type:** string

**Required:** True

### ClusterOperationInfo

Returns information about a cluster operation.

#### **clusterArn**

ARN of the cluster.

**Type:** string

**Required:** False

### **creationTime**

The time that the operation was created.

**Type:** string

**Required:** False

### **clientRequestId**

The ID of the API request that triggered this operation.

**Type:** string

**Required:** False

### **operationState**

State of the cluster operation.

**Type:** string

**Required:** False

### **sourceClusterInfo**

Information about cluster attributes before a cluster is updated.

**Type:** [MutableClusterInfo \(p. 73\)](#)

**Required:** False

### **errorInfo**

Describes the error if the operation fails.

**Type:** [ErrorInfo \(p. 73\)](#)

**Required:** False

### **operationType**

Type of the cluster operation.

**Type:** string

**Required:** False

### **endTime**

The time at which the operation finished.

**Type:** string

**Required:** False

### **targetClusterInfo**

Information about cluster attributes after a cluster is updated.

**Type:** [MutableClusterInfo](#) (p. 73)

**Required:** False

### **operationArn**

ARN of the cluster operation.

**Type:** string

**Required:** False

## **ConfigurationInfo**

Specifies the configuration to use for the brokers.

### **arn**

ARN of the configuration to use.

**Type:** string

**Required:** True

### **revision**

The revision of the configuration to use.

**Type:** integer

**Required:** True

**Format:** int64

**Minimum:** 1

## **DescribeClusterOperationResponse**

Information about a cluster operation.

### **clusterOperationInfo**

Cluster operation information

**Type:** [ClusterOperationInfo](#) (p. 70)

**Required:** False

## **Error**

Returns information about an error.

### **message**

The description of the error.

**Type:** string

**Required:** False

### **invalidParameter**

The parameter that caused the error.

**Type:** string  
**Required:** False

## ErrorInfo

Returns information about an error state of the cluster.

### **errorString**

An optional field to provide more details about the error.

**Type:** string  
**Required:** False

### **errorCode**

A number describing the error programmatically.

**Type:** string  
**Required:** False

## MutableClusterInfo

Information about cluster attributes that can be updated via update APIs.

### **numberOfBrokerNodes**

The number of broker nodes in the cluster.

**Type:** integer  
**Required:** False

### **configurationInfo**

Information about the changes in the configuration of the brokers.

**Type:** [ConfigurationInfo](#) (p. 72)  
**Required:** False

### **brokerEBSVolumeInfo**

Specifies the size of the EBS volume and the ID of the associated broker.

**Type:** Array of type [BrokerEBSVolumeInfo](#) (p. 70)  
**Required:** False

## See Also

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

## DescribeClusterOperation

- [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](#)

## Tags

Represents the set of tags for an MSK resource. A tag is a key-value pair that you define for the cluster. Using tags is a simple yet powerful way to manage AWS resources and organize data, including billing data.

## URI

`/v1/tags/resourceArn`

## HTTP Methods

### GET

Operation ID: ListTagsForResource

Returns a list of the tags associated with the specified resource.

### Path Parameters

Name	Type	Required	Description
<i>resourceArn</i>	String	True	The Amazon Resource Name (ARN) that uniquely identifies the resource that's associated with the tags.

### Responses

Status Code	Response Model	Description
200	<a href="#">ListTagsForResourceResponse</a>	Successful response.
400	<a href="#">Error (p. 77)</a>	The request isn't valid because the input is incorrect. Correct

Status Code	Response Model	Description
404	<a href="#">Error (p. 77)</a>	your input and then submit it again. The resource could not be found due to incorrect input. Correct the input, then retry the request.
500	<a href="#">Error (p. 77)</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.

## POST

Operation ID: TagResource

Adds tags to the specified MSK resource.

### Path Parameters

Name	Type	Required	Description
<i>resourceArn</i>	String	True	The Amazon Resource Name (ARN) that uniquely identifies the resource that's associated with the tags.

### Responses

Status Code	Response Model	Description
204	None	204 response
400	<a href="#">Error (p. 77)</a>	The request isn't valid because the input is incorrect. Correct your input and then submit it again.
404	<a href="#">Error (p. 77)</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
500	<a href="#">Error (p. 77)</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.

## DELETE

Operation ID: UntagResource

Removes the tags associated with the keys that are provided in the query.

### Path Parameters

Name	Type	Required	Description
<i>resourceArn</i>	String	True	The Amazon Resource Name (ARN) that uniquely identifies the resource that's associated with the tags.

### Query Parameters

Name	Type	Required	Description
tagKeys	String	True	<p>Tag keys must be unique for a given cluster. In addition, the following restrictions apply:</p> <ul style="list-style-type: none"><li>• Each tag key must be unique. If you add a tag with a key that's already in use, your new tag overwrites the existing key-value pair.</li><li>• You can't start a tag key with <code>aws :</code> because this prefix is reserved for use by AWS. AWS creates tags that begin with this prefix on your behalf, but you can't edit or delete them.</li><li>• Tag keys must be between 1 and 128 Unicode characters in length.</li><li>• Tag keys must consist of the following characters: Unicode letters, digits, white space, and the following special characters: <code>_ . / = + - @</code>.</li></ul>

### Responses

Status Code	Response Model	Description
204	None	204 response



Status Code	Response Model	Description
400	<a href="#">Error (p. 77)</a>	The request isn't valid because the input is incorrect. Correct your input and then submit it again.
404	<a href="#">Error (p. 77)</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
500	<a href="#">Error (p. 77)</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.

## Schemas

### Request Bodies

#### Example POST

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

### Response Bodies

#### Example ListTagsForResourceResponse

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

#### Example Error

```
{  
  "message": "string",  
  "invalidParameter": "string"  
}
```

## Properties

### Error

Returns information about an error.

#### **message**

The description of the error.

**Type:** string

**Required:** False

### **invalidParameter**

The parameter that caused the error.

**Type:** string

**Required:** False

## ListTagsForResourceResponse

Response of listing tags for a resource.

### **tags**

The key-value pair for the resource tag.

**Type:** object

**Required:** True

## TagResourceRequest

Tag a resource.

### **tags**

The key-value pair for the resource tag.

**Type:** object

**Required:** True

## See Also

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

### ListTagsForResource

- [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

- [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

- [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](#)

# Operations

The Amazon Managed Streaming for Apache Kafka REST API includes the following operations.

- [CreateCluster \(p. 3\)](#)  
Creates a new MSK cluster.
- [CreateConfiguration \(p. 52\)](#)  
Creates a new MSK configuration.
- [DeleteCluster \(p. 17\)](#)  
Deletes the MSK cluster specified by the Amazon Resource Name (ARN) in the request.
- [DescribeCluster \(p. 16\)](#)  
Returns a description of the MSK cluster whose Amazon Resource Name (ARN) is specified in the request.
- [DescribeClusterOperation \(p. 68\)](#)  
Returns a description of the cluster operation specified by the ARN.
- [DescribeConfiguration \(p. 58\)](#)  
Returns a description of this MSK configuration.
- [DescribeConfigurationRevision \(p. 65\)](#)  
Returns a description of this revision of the configuration.
- [GetBootstrapBrokers \(p. 27\)](#)  
A list of brokers that a client application can use to bootstrap.
- [ListClusterOperations \(p. 45\)](#)  
Returns a list of all the operations that have been performed on the specified MSK cluster.
- [ListClusters \(p. 2\)](#)  
Returns a list of all the MSK clusters in the current Region.
- [ListConfigurationRevisions \(p. 62\)](#)  
Returns a list of all the revisions of an MSK configuration.
- [ListConfigurations \(p. 51\)](#)  
Returns a list of all the MSK configurations in this Region.
- [ListNodes \(p. 33\)](#)  
Returns a list of the broker nodes in the cluster.
- [ListTagsForResource \(p. 74\)](#)  
Returns a list of the tags associated with the specified resource.
- [TagResource \(p. 75\)](#)  
Adds tags to the specified MSK resource.
- [UntagResource \(p. 75\)](#)  
Removes the tags associated with the keys that are provided in the query.

- [UpdateBrokerCount \(p. 39\)](#)

Updates the number of broker nodes in the cluster. You can use this operation to increase the number of brokers in an existing cluster. You can't decrease the number of brokers.

- [UpdateBrokerStorage \(p. 42\)](#)

Updates the EBS storage associated with MSK brokers.

- [UpdateClusterConfiguration \(p. 29\)](#)

Updates the cluster with the configuration that is specified in the request body.

# Document History for Amazon Managed Streaming for Apache Kafka API Reference

The following table describes the documentation for this release of the *Amazon Managed Streaming for Apache Kafka API Reference*.

- **API version:** 2019-05-30
- **Latest documentation update:** May 30, 2019.

Change	Description	Date
Amazon MSK GA release	This is the general-availability release of the Amazon MSK API Reference.	May 30, 2019
Amazon MSK preview release	This is the preview release of the Amazon MSK API Reference.	November 29, 2018

# AWS Glossary

For the latest AWS terminology, see the [AWS Glossary](#) in the *AWS General Reference*.