



Amazon MSK API Reference

# Amazon Managed Streaming for Apache Kafka



# 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](#).

## MSK Replicator API

For information about MSK Replicator APIs, see the [Amazon MSK Replicator API Reference](#).

# Operations

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

- [BatchAssociateScramSecret](#)

Associates a list of SCRAM secrets with a cluster. SCRAM secrets are stored in the Amazon Secrets Manager service, and are used to authenticate clients using sign-in credentials. You can associate up to 10 secrets with a cluster at a time.

- [BatchDisassociateScramSecret](#)

Disassociates a list of SCRAM secrets from a cluster. SCRAM secrets are stored in the Amazon Secrets Manager service, and are used to authenticate clients using sign-in credentials. You can disassociate up to 10 secrets from a cluster at a time.

- [CreateCluster](#)

Creates a new MSK cluster. The following Python 3.6 example shows how you can create a cluster that's distributed over two Availability Zones. Before you run this Python script, replace the example subnet and security-group IDs with the IDs of your subnets and security group. When you create an MSK cluster, its brokers get evenly distributed over a number of Availability Zones that's equal to the number of subnets that you specify in the `BrokerNodeGroupInfo` parameter. In this example, you can add a third subnet to get a cluster that's distributed over three Availability Zones.

```
import boto3

client = boto3.client('kafka')

response = client.create_cluster(
    BrokerNodeGroupInfo={
        'BrokerAZDistribution': 'DEFAULT',
        'ClientSubnets': [
            'subnet-012345678901fedcba',
            'subnet-9876543210abcdef01'
        ],
        'InstanceType': 'kafka.m5.large',
        'SecurityGroups': [
            'sg-012345abcdef789789'
        ]
    }
```

```
    },
    ClusterName='SalesCluster',
    EncryptionInfo={
        'EncryptionInTransit': {
            'ClientBroker': 'TLS_PLAINTEXT',
            'InCluster': True
        }
    },
    EnhancedMonitoring='PER_TOPIC_PER_BROKER',
    KafkaVersion='2.2.1',
    NumberOfBrokerNodes=2
)

print(response)
```

- [CreateConfiguration](#)

Creates a new MSK configuration. To see an example of how to use this operation, first save the following text to a file and name the file `config-file.txt`.

```
auto.create.topics.enable = true

zookeeper.connection.timeout.ms = 1000

log.roll.ms = 604800000
```

Now run the following Python 3.6 script in the folder where you saved `config-file.txt`. This script uses the properties specified in `config-file.txt` to create a configuration named `SalesClusterConfiguration`. This configuration can work with Apache Kafka versions 1.1.1 and 2.1.0.

```
import boto3

client = boto3.client('kafka')

config_file = open('config-file.txt', 'r')

server_properties = config_file.read()

response = client.create_configuration(
    Name='SalesClusterConfiguration',
    Description='The configuration to use on all sales clusters.',
```

```
KafkaVersions=['1.1.1', '2.1.0'],
ServerProperties=server_properties
)

print(response)
```

- [CreateTopic](#)

Creates a topic using the specified properties in the request on the cluster specified by the Amazon Resource Name (ARN) in the request.

- [CreateVpcConnection](#)

Create remote VPC connection.

- [DeleteCluster](#)

Deletes the MSK cluster specified by the Amazon Resource Name (ARN) in the request, and all its revisions.

- [DeleteClusterPolicy](#)

Delete cluster policy.

- [DeleteConfiguration](#)

Deletes a cluster configuration and all its revisions.

- [DeleteTopic](#)

Deletes the topic specified by the topicName in the request from the cluster specified by the Amazon Resource Name (ARN) in the request.

- [DeleteVpcConnection](#)

Delete remote VPC connection.

- [DescribeCluster](#)

Returns a description of the MSK cluster whose Amazon Resource Name (ARN) is specified in the request. The following is a Python 3.6 example of how to use this operation. Before you run this Python script, replace the example cluster Amazon Resource Name (ARN) with the ARN of the cluster you want to describe. If you don't know the ARN of the cluster, you can use the `ListClusters` operation to list all the clusters and see their ARNs and full descriptions.

```
import boto3
```

```
client = boto3.client('kafka')

response = client.describe_cluster(
    ClusterArn='arn:aws:kafka:us-east-1:0123456789019:cluster/SalesCluster/abcd1234-
abcd-cafe-abab-9876543210ab-4'
)

print(response)
```

Note that the response to this operation only includes the `ZookeeperConnectStringTls` node in clusters created with Apache Kafka version 2.5.1 and later.

- [DescribeClusterOperation](#)

Returns a description of the cluster operation specified by the Amazon Resource Name (ARN).

- [DescribeConfiguration](#)

Returns a description of this MSK configuration.

- [DescribeConfigurationRevision](#)

Returns a description of this revision of the configuration.

- [DescribeTopic](#)

Returns details for a topic on a cluster.

This API response reflects data that updates approximately every minute. For the most current topic state after making changes, allow approximately one minute before querying.

- [DescribeTopicPartitions](#)

Returns all partition information for a topic on a cluster.

This API response reflects data that updates approximately every minute. For the most current topic state after making changes, allow approximately one minute before querying.

- [DescribeVpcConnection](#)

Describes Remote VPC Connection.

- [GetBootstrapBrokers](#)

A list of brokers that a client can use to bootstrap. This list doesn't necessarily include all of the brokers in the cluster. The following Python 3.6 example shows how you can use the Amazon Resource Name (ARN) of a cluster to get its bootstrap brokers. If you don't know the ARN of your cluster, you can use the `ListClusters` operation to get the ARNs of all the clusters in this account and Region.

```
import boto3

client = boto3.client('kafka')

response = client.get_bootstrap_brokers(
    ClusterArn='arn:aws:kafka:us-east-1:0123456789019:cluster/SalesCluster/abcd1234-
abcd-cafe-abab-9876543210ab-4',
)

print(response['BootstrapBrokerString'])
```

- [GetClusterPolicy](#)

Get cluster policy.

- [GetCompatibleKafkaVersions](#)

Returns a list of the Apache Kafka versions to which you can update this cluster.

- [ListClientVpcConnections](#)

List client VPC connections.

- [ListClusterOperations](#)

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

- [ListClusters](#)

Returns a list of all the MSK clusters.

- [ListConfigurationRevisions](#)

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

- [ListConfigurations](#)

Returns a list of all the MSK configurations.

- [ListKafkaVersions](#)

Returns the Apache Kafka version objects.

- [ListNodes](#)

Returns a list of the broker nodes in the cluster. The following Python 3.6 example first lists one node of a cluster. Because the cluster has more nodes, the response contains a token that the script then uses to list the remaining nodes.

```
import boto3

client = boto3.client('kafka')

list_nodes_response = client.list_nodes(
    ClusterArn='arn:aws:kafka:us-east-1:0123456789019:cluster/SalesCluster/abcd1234-
abcd-cafe-abab-9876543210ab-4',
    MaxResults=1
)

print('\n')
print('Here is the first node in the list:')
print('\n')
print(list_nodes_response['NodeInfoList'])

next_token = list_nodes_response['NextToken']

list_nodes_response = client.list_nodes(
    ClusterArn='arn:aws:kafka:us-east-1:0123456789019:cluster/SalesCluster/abcd1234-
abcd-cafe-abab-9876543210ab-4',
    NextToken=next_token
)

print('\n')
print('Here are the remaining nodes in the list:')
print('\n')
print(list_nodes_response['NodeInfoList'])
```

- [ListScramSecrets](#)

Returns a list of SCRAM secrets associated with the cluster. SCRAM secrets are stored in the Amazon Secrets Manager service, and are used to authenticate clients using sign-in credentials.

- [ListTagsForResource](#)

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

- [ListTopics](#)

Returns all topics in a cluster.

This API response reflects data that updates approximately every minute. For the most current topic state after making changes, allow approximately one minute before querying.

- [ListVpcConnections](#)

Lists all VPC connections.

- [PutClusterPolicy](#)

Create or update cluster policy.

- [RebootBroker](#)

Reboots a broker. In a given cluster, you can reboot one broker at a time.

To reboot a broker, wait for the cluster status to be ACTIVE. This operation returns an error if you invoke it while the cluster status is HEALING. You must wait for the status to change from HEALING to ACTIVE before you reboot the broker.

- [RejectClientVpcConnection](#)

Reject client VPC connection.

- [TagResource](#)

Adds tags to the specified MSK resource.

- [UntagResource](#)

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

- [UpdateBrokerCount](#)

Updates the number of broker nodes in the cluster. You can use this operation to increase or decrease the number of brokers in an existing cluster.

The following Python 3.6 example shows how you can increase the number of brokers in a cluster to 6 brokers. The update operation returns immediately, with a response that includes the Amazon Resource Name (ARN) that Amazon MSK assigns to this cluster operation. You can

use that ARN to check the state of the operation. When the state changes from PENDING to UPDATE\_COMPLETE, the operation is complete.

```
import boto3
import time

client = boto3.client('kafka')

update_broker_count_response = client.update_broker_count(
    ClusterArn='arn:aws:kafka:us-east-1:0123456789019:cluster/SalesCluster/abcd1234-
abcd-cafe-abab-9876543210ab-4',
    CurrentVersion='K12V3IB1VIZHHY',
    TargetNumberOfBrokerNodes=6
)

operation_arn = update_broker_count_response['ClusterOperationArn']

print(operation_arn)

describe_cluster_operation_response =
    client.describe_cluster_operation(ClusterOperationArn=operation_arn)
operation_state = describe_cluster_operation_response['ClusterOperationInfo']
['OperationState']
print(operation_state)

expanded = False

while not expanded:
    print('Sleeping for 15 seconds before checking to see if the cluster update is
done...')
    time.sleep(15)
    describe_cluster_operation_response =
        client.describe_cluster_operation(ClusterOperationArn=operation_arn)
    operation_state = describe_cluster_operation_response['ClusterOperationInfo']
['OperationState']
    if 'UPDATE_COMPLETE' == operation_state:
        expanded = True
        print('The cluster has 6 brokers now.')
```

- [UpdateBrokerStorage](#)

Updates the EBS storage associated with Amazon MSK brokers. You can increase the amount of EBS storage per broker. You can't decrease the storage. To increase storage, wait for the cluster to be in the ACTIVE state. Storage volumes remain available during this scaling-up operation.

- [UpdateBrokerType](#)

For information about this operation, see [Updating the broker type](#) in the developer guide.

- [UpdateClusterConfiguration](#)

Updates the cluster with the configuration that is specified in the request body. Before you invoke this operation, ensure that the number of partitions per broker on your MSK cluster is under the limits described in [Number of partitions per broker](#). You can't update the configuration of an MSK cluster that exceeds these limits.

- [UpdateClusterKafkaVersion](#)

Updates the cluster to the specified Apache Kafka version. Before you invoke this operation, ensure that the number of partitions per broker on your MSK cluster is under the limits described in [Number of partitions per broker](#). You can't update the Apache Kafka version for an MSK cluster that exceeds these limits.

- [UpdateConfiguration](#)

Creates a new revision of the cluster configuration. The configuration must be in the ACTIVE state.

- [UpdateConnectivity](#)

Updates the connectivity setting for the cluster.

- [UpdateMonitoring](#)

Updates the monitoring settings for the cluster. You can use this operation to specify which Apache Kafka metrics you want Amazon MSK to send to Amazon CloudWatch. You can also specify settings for open monitoring with Prometheus. The following Python 3.6 example enables open monitoring with the Node Exporter. It also sets enhanced monitoring to PER\_BROKER. For more information about monitoring, see [Monitoring](#).

```
import boto3
import time

client = boto3.client('kafka')
```

```
update_monitoring_response = client.update_monitoring(
    ClusterArn='arn:aws:kafka:us-east-1:0123456789019:cluster/SalesCluster/abcd1234-
abcd-cafe-abab-9876543210ab-4',
    CurrentVersion='K12V3IB1VIZHHY',
    EnhancedMonitoring='PER_BROKER',
    OpenMonitoring={"Prometheus":{"JmxExporter":
{"EnabledInBroker":False},"NodeExporter":{"EnabledInBroker":True}}}
)

operation_arn = update_monitoring_response['ClusterOperationArn']
print('The ARN of the update operation is ' + operation_arn)

describe_cluster_operation_response =
    client.describe_cluster_operation(ClusterOperationArn=operation_arn)

operation_state = describe_cluster_operation_response['ClusterOperationInfo']
['OperationState']
print('The status of the update operation is ' + operation_state)

updated = False

while not updated:
    print('Sleeping for 15 seconds before checking to see if the monitoring update is
done...')
    time.sleep(15)
    describe_cluster_operation_response =
    client.describe_cluster_operation(ClusterOperationArn=operation_arn)
    operation_state = describe_cluster_operation_response['ClusterOperationInfo']
    ['OperationState']
    if 'UPDATE_COMPLETE' == operation_state:
        updated = True
        print('You have successfully updated the monitoring settings.')
```

- [UpdateRebalancing](#)

Use this resource to update the intelligent rebalancing status of an Amazon MSK Provisioned cluster with Express brokers.

- [UpdateSecurity](#)
- [UpdateStorage](#)
- [UpdateTopic](#)

Updates topic partition or topic configs.

# Resources

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

## Topics

- [Apache Kafka Versions](#)
- [BootstrapBrokers](#)
- [Broker Count](#)
- [Broker Storage](#)
- [Broker Type](#)
- [Brokers](#)
- [Cluster](#)
- [Cluster Apache Kafka Version](#)
- [Cluster Configuration](#)
- [Cluster Connectivity](#)
- [Cluster Operation](#)
- [Cluster Operations](#)
- [Cluster Security](#)
- [Clusters](#)
- [Clusters clusterArn Client-vpc-connection](#)
- [Clusters clusterArn Client-vpc-connections](#)
- [Clusters clusterArn Policy](#)
- [Clusters clusterArn Rebalancing](#)
- [Compatible Apache Kafka Versions](#)
- [Configuration](#)
- [Configuration Revision](#)
- [Configuration Revisions](#)
- [Configurations](#)
- [Monitoring Properties](#)
- [Reboot Broker](#)
- [Scram Secrets](#)

- [Tags](#)
- [Topic](#)
- [Topic Partitions](#)
- [Topics](#)
- [UpdateStorage](#)
- [Vpc-connection](#)
- [Vpc-connection arn](#)
- [Vpc-connections](#)

## Apache Kafka Versions

Objects that represent Apache Kafka versions.

### URI

/v1/kafka-versions

### HTTP methods

#### GET

**Operation ID:** ListKafkaVersions

Returns the Apache Kafka version objects.

#### Query parameters

Name	Type	Required	Description
nextToken	String	False	The paginated results marker. When the result of the operation is truncated, the call returns NextToken in the response. To get the next batch,

Name	Type	Required	Description
			provide this token in your next request.
maxResults	String	False	The maximum number of results to return in the response (default maximum 100 results per API call). If there are more results, the response includes a NextToken parameter.

## Responses

Status code	Response model	Description
200	<a href="#">ListKafkaVersionsResponse</a>	200 response
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input.

Status code	Response model	Description
		Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## OPTIONS

Enable CORS by returning the correct headers.

### Responses

Status code	Response model	Description
200	None	Default response for CORS method

## Schemas

### Response bodies

#### ListKafkaVersionsResponse schema

```
{
  "nextToken": "string",
  "kafkaVersions": [
    {
      "version": "string",
      "status": enum
    }
  ]
}
```

```
}
```

## Error schema

```
{  
  "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

### KafkaVersion

Information about an Apache Kafka version.

#### version

The Apache Kafka version.

**Type:** string

**Required:** False

## status

The status of the Apache Kafka version.

**Type:** [KafkaVersionStatus](#)

**Required:** False

## KafkaVersionStatus

The status of an Apache Kafka version.

ACTIVE

DEPRECATED

## ListKafkaVersionsResponse

Response for ListKafkaVersions.

### nextToken

Paginated results marker.

**Type:** string

**Required:** False

### kafkaVersions

An array of Apache Kafka version objects.

**Type:** Array of type [KafkaVersion](#)

**Required:** False

## See also

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

### ListKafkaVersions

- [AWS Command Line Interface V2](#)

- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## 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 can use to bootstrap. This list doesn't necessarily include all of the brokers in the cluster. The following Python 3.6 example shows how you can use the Amazon Resource Name (ARN) of a cluster to get its bootstrap brokers. If you don't know the ARN of your cluster, you can use the `ListClusters` operation to get the ARNs of all the clusters in this account and Region.

```
import boto3

client = boto3.client('kafka')

response = client.get_bootstrap_brokers(
    ClusterArn='arn:aws:kafka:us-east-1:0123456789019:cluster/SalesCluster/abcd1234-
abcd-cafe-abab-9876543210ab-4',
```

```
)
print(response['BootstrapBrokerString'])
```

## 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="#">GetBootstrapBrokersResponse</a>	Successful response.
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response

Status code	Response model	Description
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## OPTIONS

Enable CORS by returning the correct headers.

### 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	None	Default response for CORS method

## Schemas

### Response bodies

#### GetBootstrapBrokersResponse schema

```
{
  "bootstrapBrokerStringPublicSaslIam": "string",
  "bootstrapBrokerStringPublicSaslScram": "string",
```

```
"bootstrapBrokerString": "string",
"bootstrapBrokerStringTls": "string",
"bootstrapBrokerStringVpcConnectivitySaslIam": "string",
"bootstrapBrokerStringPublicTls": "string",
"bootstrapBrokerStringVpcConnectivityTls": "string",
"bootstrapBrokerStringVpcConnectivitySaslScram": "string",
"bootstrapBrokerStringSaslIam": "string",
"bootstrapBrokerStringSaslScram": "string"
}
```

## Error schema

```
{
  "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.

### **bootstrapBrokerStringPublicSaslIam**

A string that is one or more pairs of DNS names (or IP addresses) and SASL IAM ports for public access.

**Type:** string

**Required:** False

### **bootstrapBrokerStringPublicSaslScram**

A string that is one or more pairs of DNS names (or IP addresses) and SASL IAM ports for public access.

**Type:** string

**Required:** False

### **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

**bootstrapBrokerStringVpcConnectivitySaslIam**

A string containing one or more dns name (or IP) and SASL IAM port pairs for VPC connectivity.

**Type:** string

**Required:** False

**bootstrapBrokerStringPublicTls**

A string that is one or more pairs of DNS names (or IP addresses) and SASL IAM ports for public access.

**Type:** string

**Required:** False

**bootstrapBrokerStringVpcConnectivityTls**

A string containing one or more dns name (or IP) and Tls port pairs for VPC connectivity.

**Type:** string

**Required:** False

**bootstrapBrokerStringVpcConnectivitySaslScram**

A string containing one or more dns name (or IP) and SASL SCRAM port pairs for VPC connectivity.

**Type:** string

**Required:** False

**bootstrapBrokerStringSaslIam**

A string containing one or more dns name (or IP) and SASL IAM port pairs.

**Type:** string

**Required:** False

**bootstrapBrokerStringSaslScram**

A string containing one or more dns name (or IP) and SASL SCRAM port pairs.

**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 V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## 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 or decrease the number of brokers in an existing cluster.

The following Python 3.6 example shows how you can increase the number of brokers in a cluster to 6 brokers. The update operation returns immediately, with a response that includes the Amazon Resource Name (ARN) that Amazon MSK assigns to this cluster operation. You can use that ARN to check the state of the operation. When the state changes from PENDING to UPDATE\_COMPLETE, the operation is complete.

```
import boto3
import time

client = boto3.client('kafka')

update_broker_count_response = client.update_broker_count(
    ClusterArn='arn:aws:kafka:us-east-1:0123456789019:cluster/SalesCluster/abcd1234-
abcd-cafe-abab-9876543210ab-4',
    CurrentVersion='K12V3IB1VIZHHY',
    TargetNumberOfBrokerNodes=6
)

operation_arn = update_broker_count_response['ClusterOperationArn']

print(operation_arn)

describe_cluster_operation_response =
    client.describe_cluster_operation(ClusterOperationArn=operation_arn)
operation_state = describe_cluster_operation_response['ClusterOperationInfo']
['OperationState']
print(operation_state)

expanded = False

while not expanded:
    print('Sleeping for 15 seconds before checking to see if the cluster update is
done...')
    time.sleep(15)
    describe_cluster_operation_response =
        client.describe_cluster_operation(ClusterOperationArn=operation_arn)
    operation_state = describe_cluster_operation_response['ClusterOperationInfo']
['OperationState']
    if 'UPDATE_COMPLETE' == operation_state:
        expanded = True
```

```
print('The cluster has 6 brokers now.')
```

## 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>	Successful response.
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect. Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response

Status code	Response model	Description
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## OPTIONS

Enable CORS by returning the correct headers.

### 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	None	Default response for CORS method

## Schemas

### Request bodies

#### PUT schema

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

```
"currentVersion": "string"  
}
```

## Response bodies

### UpdateBrokerCountResponse schema

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

### Error schema

```
{  
  "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. Accepts a targetNumberOfBrokerNodes value that is 2 or 3 less than the current broker node count for the cluster (for 2 and 3 AZ clusters respectively).

### 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 V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## 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 Amazon MSK brokers. You can increase the amount of EBS storage per broker. You can't decrease the storage. To increase storage, wait for the cluster to be in the ACTIVE state. Storage volumes remain available during this scaling-up operation.

## 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 response.
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying

Status code	Response model	Description
503	<a href="#">Error</a>	your request might resolve the issue. 503 response

## OPTIONS

Enable CORS by returning the correct headers.

### 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	None	Default response for CORS method

## Schemas

### Request bodies

#### PUT schema

```
{
  "targetBrokerEBSVolumeInfo": [
    {
      "volumeSizeGB": integer,
      "provisionedThroughput": {
        "volumeThroughput": integer,

```

```
    "enabled": boolean
  },
  "kafkaBrokerNodeId": "string"
}
],
"currentVersion": "string"
}
```

## Response bodies

### UpdateBrokerStorageResponse schema

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

### Error schema

```
{
  "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:** False

#### provisionedThroughput

EBS volume provisioned throughput information.

**Type:** [ProvisionedThroughput](#)

**Required:** False

### **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

### **ProvisionedThroughput**

Contains information about provisioned throughput for EBS storage volumes attached to kafka broker nodes.

#### **volumeThroughput**

Throughput value of the EBS volumes for the data drive on each kafka broker node in MiB per second.

**Type:** integer

**Required:** False

## enabled

Provisioned throughput is enabled or not.

**Type:** boolean

**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](#)

**Required:** True

### currentVersion

The version of the MSK cluster to update. Cluster versions aren't simple numbers. You can describe an MSK cluster to find its version. When this update operation is successful, it generates a new cluster 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 V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## Broker Type

The type of brokers in the cluster. All of the brokers in a cluster are the same type.

## URI

/v1/clusters/*clusterArn*/nodes/type

## HTTP methods

### PUT

**Operation ID:** UpdateBrokerType

For information about this operation, see [Updating the broker type](#) in the developer guide.

### 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="#">UpdateBrokerTypeResponse</a>	Successful response.
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect. Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.

Status code	Response model	Description
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## OPTIONS

Enable CORS by returning the correct headers.

### 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	None	Default response for CORS method

# Schemas

## Request bodies

### PUT schema

```
{  
  "targetInstanceType": "string",  
  "currentVersion": "string"  
}
```

## Response bodies

### UpdateBrokerTypeResponse schema

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

### Error schema

```
{  
  "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

## **UpdateBrokerTypeRequest**

Request body for UpdateBrokerType.

### **targetInstanceType**

The type of Amazon EC2 instances to use for Kafka brokers.

**Type:** string

**Required:** True

### **currentVersion**

Current cluster version.

**Type:** string

**Required:** True

## **UpdateBrokerTypeResponse**

Response body for UpdateBrokerType.

### **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:

### UpdateBrokerType

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## 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. The following Python 3.6 example first lists one node of a cluster. Because the cluster has more nodes, the response contains a token that the script then uses to list the remaining nodes.

```
import boto3

client = boto3.client('kafka')

list_nodes_response = client.list_nodes(
    ClusterArn='arn:aws:kafka:us-east-1:0123456789019:cluster/SalesCluster/abcd1234-
abcd-cafe-abab-9876543210ab-4',
    MaxResults=1
)

print('\n')
print('Here is the first node in the list:')
print('\n')
print(list_nodes_response['NodeInfoList'])

next_token = list_nodes_response['NextToken']

list_nodes_response = client.list_nodes(
    ClusterArn='arn:aws:kafka:us-east-1:0123456789019:cluster/SalesCluster/abcd1234-
abcd-cafe-abab-9876543210ab-4',
    NextToken=next_token
)

print('\n')
print('Here are the remaining nodes in the list:')
print('\n')
print(list_nodes_response['NodeInfoList'])
```

## 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 NextToken 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 (default maximum 100 results per API call). If there are more results, the response includes a NextToken parameter.

## Responses

Status code	Response model	Description
200	<a href="#">ListNodesResponse</a>	Successful response.
400	<a href="#">Error</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</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## OPTIONS

Enable CORS by returning the correct headers.

### 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	None	Default response for CORS method

## Schemas

### Response bodies

#### ListNodesResponse schema

```
{
  "nextToken": "string",
  "nodeInfoList": [
    {
      "zookeeperNodeInfo": {
        "zookeeperId": number,
        "clientVpcIpAddress": "string",
        "attachedENIID": "string",
        "endpoints": [
          "string"
        ],
        "zookeeperVersion": "string"
      },
      "instanceType": "string",
      "controllerNodeInfo": {
        "endpoints": [
          "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"
}
]
```

## Error schema

```
{
  "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](#)

**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. You can use Amazon MSK to create clusters that use Apache Kafka versions 1.1.1 and 2.2.1. See [Apache Kafka Versions](#).

**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

## **ControllerNodeInfo**

Controller Node Information.

## **endpoints**

Endpoints for accessing the controller.

**Type:** Array of 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. Doesn't contain entries for brokers that have been deleted.

**Type:** Array of type [NodeInfo](#)

**Required:** False

## NodeInfo

The node information object.

### zookeeperNodeInfo

The ZookeeperNodeInfo.

**Type:** [ZookeeperNodeInfo](#)

**Required:** False

**instanceType**

The instance type.

**Type:** string

**Required:** False

**controllerNodeInfo**

The controller node information.

**Type:** [ControllerNodeInfo](#)

**Required:** False

**nodeType**

The node type.

**Type:** [NodeType](#)

**Required:** False

**nodeARN**

The Amazon Resource Name (ARN) of the node.

**Type:** string

**Required:** False

**brokerNodeInfo**

The broker node info.

**Type:** [BrokerNodeInfo](#)

**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 V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## 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. The following is a Python 3.6 example of how to use this operation. Before you run this Python script, replace the example cluster Amazon Resource Name (ARN) with the ARN of the cluster you want to describe. If you don't know the ARN of the cluster, you can use the `ListClusters` operation to list all the clusters and see their ARNs and full descriptions.

```
import boto3

client = boto3.client('kafka')

response = client.describe_cluster(
    ClusterArn='arn:aws:kafka:us-east-1:0123456789019:cluster/SalesCluster/abcd1234-
abcd-cafe-abab-9876543210ab-4'
)

print(response)
```

Note that the response to this operation only includes the `ZookeeperConnectStringTls` node in clusters created with Apache Kafka version 2.5.1 and later.

#### 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>	Successful response.
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## DELETE

### Operation ID: DeleteCluster

Deletes the MSK cluster specified by the Amazon Resource Name (ARN) in the request, and all its revisions.

## 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
currentVersion	String	False	The current version of the MSK cluster.

## Responses

Status code	Response model	Description
200	<a href="#">DeleteClusterResponse</a>	Successful response.
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input.

Status code	Response model	Description
		Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## OPTIONS

Enable CORS by returning the correct headers.

### 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	None	Default response for CORS method

# Schemas

## Response bodies

### DescribeClusterResponse schema

```
{
  "clusterInfo": {
    "encryptionInfo": {
      "encryptionInTransit": {
        "inCluster": boolean,
        "clientBroker": enum
      },
      "encryptionAtRest": {
        "dataVolumeKMSKeyId": "string"
      }
    },
    "zookeeperConnectString": "string",
    "customerActionStatus": enum,
    "creationTime": "string",
    "zookeeperConnectStringTls": "string",
    "loggingInfo": {
      "brokerLogs": {
        "s3": {
          "bucket": "string",
          "prefix": "string",
          "enabled": boolean
        },
        "firehose": {
          "deliveryStream": "string",
          "enabled": boolean
        },
        "cloudWatchLogs": {
          "logGroup": "string",
          "enabled": boolean
        }
      }
    },
    "currentVersion": "string",
    "tags": {
    },
    "numberOfBrokerNodes": integer,
    "clusterArn": "string",
  }
}
```

```

"activeOperationArn": "string",
"enhancedMonitoring": enum,
"clusterName": "string",
"storageMode": enum,
"stateInfo": {
  "code": "string",
  "message": "string"
},
"clientAuthentication": {
  "sasl": {
    "iam": {
      "enabled": boolean
    },
    "scram": {
      "enabled": boolean
    }
  },
  "unauthenticated": {
    "enabled": boolean
  },
  "tls": {
    "certificateAuthorityArnList": [
      "string"
    ],
    "enabled": boolean
  }
},
"state": enum,
"brokerNodeGroupInfo": {
  "clientSubnets": [
    "string"
  ],
  "zoneIds": [
    "string"
  ],
  "instanceType": "string",
  "connectivityInfo": {
    "vpcConnectivity": {
      "clientAuthentication": {
        "sasl": {
          "iam": {
            "enabled": boolean
          },
          "scram": {

```

```

        "enabled": boolean
      }
    },
    "tls": {
      "enabled": boolean
    }
  },
  "publicAccess": {
    "type": "string"
  },
  "networkType": "string"
},
"securityGroups": [
  "string"
],
"brokerAZDistribution": enum,
"storageInfo": {
  "ebsStorageInfo": {
    "provisionedThroughput": {
      "volumeThroughput": integer,
      "enabled": boolean
    },
    "volumeSize": integer
  }
}
},
"openMonitoring": {
  "prometheus": {
    "nodeExporter": {
      "enabledInBroker": boolean
    },
    "jmxExporter": {
      "enabledInBroker": boolean
    }
  }
},
"rebalancing": {
  "status": enum
},
"currentBrokerSoftwareInfo": {
  "configurationRevision": integer,
  "kafkaVersion": "string",
  "configurationArn": "string"
}

```

```
    }  
  }  
}
```

## DeleteClusterResponse schema

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

## Error schema

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

## Properties

### BrokerAZDistribution

This parameter is currently not in use.

DEFAULT

### BrokerLogs

The broker logs configuration for this MSK cluster.

#### s3

Details of the Amazon S3 destination for broker logs.

**Type:** [S3](#)

**Required:** False

#### firehose

Details of the Kinesis Data Firehose delivery stream that is the destination for broker logs.

**Type:** [Firehose](#)

**Required:** False

## cloudWatchLogs

Details of the CloudWatch Logs destination for broker logs.

**Type:** [CloudWatchLogs](#)

**Required:** False

## 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). Amazon creates elastic network interfaces inside these subnets. Client applications use elastic network interfaces to produce and consume data.

If you use the US West (N. California) Region, specify exactly two subnets. For other Regions where Amazon MSK is available, you can specify either two or three subnets. The subnets that you specify must be in distinct Availability Zones. When you create a cluster, Amazon MSK distributes the broker nodes evenly across the subnets that you specify.

Client subnets can't occupy the Availability Zone with ID use1-az3.

**Type:** Array of type string

**Required:** True

### zonelds

The zonelds for brokers in customer account.

**Type:** Array of type string

**Required:** False

## 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.m5.8xlarge, kafka.m5.12xlarge, kafka.m5.16xlarge, and kafka.m5.24xlarge.

**Type:** string

**Required:** True

**MinLength:** 5

**MaxLength:** 32

## connectivityInfo

Information about the cluster's connectivity setting.

**Type:** [ConnectivityInfo](#)

**Required:** False

## securityGroups

The 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

This parameter is currently not in use.

**Type:** [BrokerAZDistribution](#)

**Required:** False

## storageInfo

Contains information about storage volumes attached to Amazon MSK broker nodes.

**Type:** [StorageInfo](#)

**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. You can use Amazon MSK to create clusters that use Apache Kafka versions 1.1.1 and 2.2.1. See [Apache Kafka Versions](#).

**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.

### sasl

Details for client authentication using SASL. To turn on SASL, you must also turn on `EncryptionInTransit` by setting `inCluster` to true. You must set `clientBroker` to

either `TLS` or `TLS_PLAINTEXT`. If you choose `TLS_PLAINTEXT`, then you must also set `unauthenticated` to `true`.

**Type:** [Sasl](#)

**Required:** False

### **unauthenticated**

Details for ClientAuthentication using no authentication.

**Type:** [Unauthenticated](#)

**Required:** False

### **tls**

Details for ClientAuthentication using TLS. To turn on TLS access control, you must also turn on `EncryptionInTransit` by setting `inCluster` to `true` and `clientBroker` to `TLS`.

**Type:** [Tls](#)

**Required:** False

## **ClientBroker**

Client-broker encryption in transit setting.

TLS

TLS\_PLAINTEXT

PLAINTEXT

## **CloudWatchLogs**

Details of the CloudWatch Logs destination for broker logs.

### **logGroup**

The CloudWatch log group that is the destination for broker logs.

**Type:** string

**Required:** False

## **enabled**

Specifies whether broker logs get sent to the specified CloudWatch Logs destination.

**Type:** boolean

**Required:** True

## **ClusterInfo**

Returns information about a cluster.

### **encryptionInfo**

Includes all encryption-related information.

**Type:** [EncryptionInfo](#)

**Required:** False

### **zookeeperConnectString**

The connection string to use to connect to zookeeper cluster on plaintext port.

**Type:** string

**Required:** False

### **customerActionStatus**

Determines if there is an action required from the customer.

**Type:** [CustomerActionStatus](#)

**Required:** False

### **creationTime**

The time when the cluster was created.

**Type:** string

**Required:** False

### **zookeeperConnectStringTls**

The connection string to use to connect to the Apache ZooKeeper cluster on a TLS port.

**Type:** string

**Required:** False

### **loggingInfo**

You can configure your MSK cluster to send broker logs to different destination types. This is a container for the configuration details related to broker logs.

**Type:** [LoggingInfo](#)

**Required:** False

### **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 KTVDPKIKX0DER.

**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 Apache Kafka metrics Amazon MSK gathers and sends to Amazon CloudWatch for this 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](#)

**Required:** False

**clusterName**

The name of the cluster.

**Type:** string

**Required:** False

**storageMode**

This controls storage mode for supported storage tiers.

**Type:** [StorageMode](#)

**Required:** False

## stateInfo

Includes information of the cluster state.

**Type:** [StateInfo](#)

**Required:** False

## clientAuthentication

Includes all client authentication information.

**Type:** [ClientAuthentication](#)

**Required:** False

## state

The state of the cluster. Amazon MSK automatically renews certificates on clusters every 13 months. It sets the state of the cluster to MAINTENANCE when it starts the certificate-update operation. It sets it back to ACTIVE when the update is done. While a cluster is in the MAINTENANCE state, you can continue to produce and consume data, but you can't perform any update operations on it. You can perform update operations on a cluster when it is in the ACTIVE state.

**Type:** [ClusterState](#)

**Required:** False

## brokerNodeGroupInfo

Information about the broker nodes.

**Type:** [BrokerNodeGroupInfo](#)

**Required:** False

## openMonitoring

Settings for open monitoring using Prometheus.

**Type:** [OpenMonitoring](#)

**Required:** False

## rebalancing

Specifies if intelligent rebalancing is turned on for your MSK Provisioned cluster with Express brokers. For all new Express-based clusters that you create, intelligent rebalancing is turned on by default.

**Type:** [Rebalancing](#)

**Required:** False

## currentBrokerSoftwareInfo

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

**Type:** [BrokerSoftwareInfo](#)

**Required:** False

## ClusterState

The state of the cluster. Amazon MSK automatically renews certificates on clusters every 13 months. It sets the state of the cluster to MAINTENANCE when it starts the certificate-update operation. It sets it back to ACTIVE when the update is done. While a cluster is in the MAINTENANCE state, you can continue to produce and consume data, but you can't perform any update operations on it. You can perform update operations on a cluster when it is in the ACTIVE state.

ACTIVE

CREATING

UPDATING

DELETING

FAILED

MAINTENANCE

REBOOTING\_BROKER

HEALING

## ConnectivityInfo

Broker access controls.

## **vpcConnectivity**

VPC connection control settings for brokers

**Type:** [VpcConnectivity](#)

**Required:** False

## **publicAccess**

Access control settings for the cluster's brokers.

**Type:** [PublicAccess](#)

**Required:** False

## **networkType**

The network type of the cluster, which is IPv4 or DUAL. The DUAL network type uses both IPv4 and IPv6 addresses for your cluster and its resources. By default, a cluster uses the IPv4 network type.

**Type:** string

**Required:** False

**MinLength:** 4

**MaxLength:** 4

## **CustomerActionStatus**

A type of an action required from the customer.

CRITICAL\_ACTION\_REQUIRED

ACTION\_RECOMMENDED

NONE

## **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. Amazon MSK automatically renews certificates on clusters every 13 months. It sets the state of the cluster to MAINTENANCE when it starts the certificate-update operation. It sets it back to ACTIVE when the update is done. While a cluster is in the MAINTENANCE state, you can continue to produce and consume data, but you can't perform any update operations on it. You can perform update operations on a cluster when it is in the ACTIVE state.

**Type:** [ClusterState](#)

**Required:** False

## DescribeClusterResponse

Returns information about a cluster.

### clusterInfo

The cluster information.

**Type:** [ClusterInfo](#)

**Required:** False

## EBSStorageInfo

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

### provisionedThroughput

EBS volume provisioned throughput information.

**Type:** [ProvisionedThroughput](#)

**Required:** False

## **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. You can't update encryption at rest settings for existing clusters.

### **dataVolumeKMSKeyId**

The Amazon Resource Name (ARN) of the Amazon 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](#)

**Required:** False

## EncryptionInfo

Includes encryption-related information, such as the Amazon 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](#)

**Required:** False

### encryptionAtRest

The data-volume encryption details.

**Type:** [EncryptionAtRest](#)

**Required:** False

## EnhancedMonitoring

Specifies which Apache Kafka metrics Amazon MSK gathers and sends to Amazon CloudWatch for this 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  
PER\_TOPIC\_PER\_PARTITION

## 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

## Firehose

Firehose details for BrokerLogs.

### deliveryStream

The Kinesis Data Firehose delivery stream that is the destination for broker logs.

**Type:** string

**Required:** False

### enabled

Specifies whether broker logs get sent to the specified Kinesis Data Firehose delivery stream.

**Type:** boolean

**Required:** True

## IAM

Details for SASL/IAM client authentication.

### enabled

SASL/IAM authentication is enabled or not.

**Type:** boolean

**Required:** False

## JmxExporter

Indicates whether you want to enable or disable the JMX Exporter.

### enabledInBroker

Indicates whether you want to enable or disable the JMX Exporter.

**Type:** boolean

**Required:** True

## LoggingInfo

You can configure your MSK cluster to send broker logs to different destination types. This is a container for the configuration details related to broker logs.

### brokerLogs

You can configure your MSK cluster to send broker logs to different destination types. This configuration specifies the details of these destinations.

**Type:** [BrokerLogs](#)

**Required:** True

## NodeExporter

Indicates whether you want to enable or disable the Node Exporter.

## **enabledInBroker**

Indicates whether you want to enable or disable the Node Exporter.

**Type:** boolean

**Required:** True

## **OpenMonitoring**

JMX and Node monitoring for the MSK cluster.

### **prometheus**

Prometheus exporter settings.

**Type:** [Prometheus](#)

**Required:** True

## **Prometheus**

Prometheus settings for open monitoring.

### **nodeExporter**

Indicates whether you want to enable or disable the Node Exporter.

**Type:** [NodeExporter](#)

**Required:** False

### **jmxExporter**

Indicates whether you want to enable or disable the JMX Exporter.

**Type:** [JmxExporter](#)

**Required:** False

## **ProvisionedThroughput**

Contains information about provisioned throughput for EBS storage volumes attached to kafka broker nodes.

## volumeThroughput

Throughput value of the EBS volumes for the data drive on each kafka broker node in MiB per second.

**Type:** integer

**Required:** False

## enabled

Provisioned throughput is enabled or not.

**Type:** boolean

**Required:** False

## PublicAccess

Broker access controls

### type

DISABLED means that public access is turned off. SERVICE\_PROVIDED\_EIPS means that public access is turned on.

**Type:** string

**Required:** False

## Rebalancing

Specifies whether or not intelligent rebalancing is turned on for a newly created MSK Provisioned cluster with Express brokers. Intelligent rebalancing performs automatic partition balancing operations when you scale your clusters up or down.

By default, intelligent rebalancing is ACTIVE for all new Express-based clusters.

### status

Intelligent rebalancing status. The default intelligent rebalancing status is ACTIVE for all new Express-based clusters.

**Type:** [RebalancingStatus](#)

**Required:** True

## RebalancingStatus

Intelligent rebalancing status. The default intelligent rebalancing status is ACTIVE for all new Express-based clusters.

PAUSED

ACTIVE

## S3

The details of the Amazon S3 destination for broker logs.

### bucket

The name of the S3 bucket that is the destination for broker logs.

**Type:** string

**Required:** False

### prefix

The S3 prefix that is the destination for broker logs.

**Type:** string

**Required:** False

### enabled

Specifies whether broker logs get sent to the specified Amazon S3 destination.

**Type:** boolean

**Required:** True

## Sasl

Details for client authentication using SASL. To turn on SASL, you must also turn on EncryptionInTransit by setting `inCluster` to true. You must set `clientBroker` to

either TLS or TLS\_PLAINTEXT. If you choose TLS\_PLAINTEXT, then you must also set unauthenticated to true.

## iam

Details for ClientAuthentication using IAM.

**Type:** [IAM](#)

**Required:** False

## scram

Details for SASL/SCRAM client authentication.

**Type:** [Scram](#)

**Required:** False

## Scram

Details for SASL/SCRAM client authentication.

## enabled

SASL/SCRAM authentication is enabled or not.

**Type:** boolean

**Required:** False

## StateInfo

Includes information about the state of the cluster.

## code

If the cluster is in an unusable state, this field contains the code that describes the issue.

**Type:** string

**Required:** False

## message

If the cluster is in an unusable state, this field contains a message that describes the issue.

**Type:** string

**Required:** False

## StorageInfo

Contains information about storage volumes attached to Amazon MSK broker nodes.

### ebsStorageInfo

EBS volume information.

**Type:** [EBSStorageInfo](#)

**Required:** False

## StorageMode

Controls storage mode for various supported storage tiers.

LOCAL

TIERED

## Tls

Details for client authentication using TLS.

### certificateAuthorityArnList

List of AWS Private CA Amazon Resource Name (ARN)s.

**Type:** Array of type string

**Required:** False

### enabled

TLS authentication is enabled or not.

**Type:** boolean

**Required:** False

## Unauthenticated

Details for allowing no client authentication.

### enabled

Unauthenticated is enabled or not.

**Type:** boolean

**Required:** False

## VpcConnectivity

VPC connection control settings for brokers.

### clientAuthentication

VPC connection control settings for brokers.

**Type:** [VpcConnectivityClientAuthentication](#)

**Required:** False

## VpcConnectivityClientAuthentication

Includes all client authentication information for VpcConnectivity.

### sasl

Details for VpcConnectivity ClientAuthentication using SASL.

**Type:** [VpcConnectivitySasl](#)

**Required:** False

### tls

Details for VpcConnectivity ClientAuthentication using TLS.

**Type:** [VpcConnectivityTls](#)

**Required:** False

## VpcConnectivityIAM

Details for SASL/IAM client authentication for VpcConnectivity.

### enabled

SASL/IAM authentication is enabled or not.

**Type:** boolean

**Required:** False

## VpcConnectivitySasl

Details for client authentication using SASL for VpcConnectivity.

### iam

Details for ClientAuthentication using IAM for VpcConnectivity.

**Type:** [VpcConnectivityIAM](#)

**Required:** False

### scram

Details for SASL/SCRAM client authentication for VpcConnectivity.

**Type:** [VpcConnectivityScram](#)

**Required:** False

## VpcConnectivityScram

Details for SASL/SCRAM client authentication for vpcConnectivity.

### enabled

SASL/SCRAM authentication is enabled or not.

**Type:** boolean

**Required:** False

## VpcConnectivityTls

Details for client authentication using TLS for vpcConnectivity.

**enabled**

TLS authentication is enabled or not.

**Type:** boolean

**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 V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

### DeleteCluster

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)

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

## Cluster Apache Kafka Version

The Apache Kafka version that is on the cluster.

### URI

`/v1/clusters/clusterArn/version`

### HTTP methods

#### PUT

**Operation ID:** UpdateClusterKafkaVersion

Updates the cluster to the specified Apache Kafka version. Before you invoke this operation, ensure that the number of partitions per broker on your MSK cluster is under the limits described in [Number of partitions per broker](#). You can't update the Apache Kafka version for an MSK cluster that exceeds these limits.

#### 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="#">UpdateClusterKafkaVersionResponse</a>	Successful response.
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## OPTIONS

Enable CORS by returning the correct headers.

## 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	None	Default response for CORS method

## Schemas

### Request bodies

#### PUT schema

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

### Response bodies

#### UpdateClusterKafkaVersionResponse schema

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

## Error schema

```
{  
  "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

## **UpdateClusterKafkaVersionRequest**

Request body for UpdateClusterKafkaVersion.

### **targetKafkaVersion**

Target Apache Kafka version.

**Type:** string

**Required:** True

### **configurationInfo**

The custom configuration that should be applied on the new version of cluster.

**Type:** [ConfigurationInfo](#)

**Required:** False

### **currentVersion**

Current cluster version.

**Type:** string

**Required:** True

## **UpdateClusterKafkaVersionResponse**

Response body for UpdateClusterKafkaVersion.

### **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:

### **UpdateClusterKafkaVersion**

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## **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. Before you invoke this operation, ensure that the number of partitions per broker on your MSK cluster is under the limits described in [Number of partitions per broker](#). You can't update the configuration of an MSK cluster that exceeds these limits.

#### 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.
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect. Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.

Status code	Response model	Description
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## OPTIONS

Enable CORS by returning the correct headers.

### 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	None	Default response for CORS method

# Schemas

## Request bodies

### PUT schema

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

## Response bodies

### UpdateClusterConfigurationResponse schema

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

### Error schema

```
{
  "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](#)

**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 V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)

- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## Cluster Connectivity

Use this resource to update the connectivity setting for an MSK cluster.

### URI

`/v1/clusters/clusterArn/connectivity`

### HTTP methods

#### PUT

**Operation ID:** UpdateConnectivity

Updates the connectivity setting for the cluster.

#### 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="#">UpdateConnectivityResponse</a>	Successful response.
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect

Status code	Response model	Description
		. Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## OPTIONS

Enable CORS by returning the correct headers.

### 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	None	Default response for CORS method

## Schemas

### Request bodies

#### PUT schema

```
{
  "connectivityInfo": {
    "vpcConnectivity": {
      "clientAuthentication": {
        "sasl": {
          "iam": {
            "enabled": boolean
          },
          "scram": {
            "enabled": boolean
          }
        },
        "tls": {
          "enabled": boolean
        }
      }
    },
    "publicAccess": {
      "type": "string"
    },
    "networkType": "string"
  },
  "currentVersion": "string"
}
```

## Response bodies

### UpdateConnectivityResponse schema

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

### Error schema

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

## Properties

### ConnectivityInfo

Broker access controls.

### vpcConnectivity

VPC connection control settings for brokers

**Type:** [VpcConnectivity](#)

**Required:** False

### publicAccess

Access control settings for the cluster's brokers.

**Type:** [PublicAccess](#)

**Required:** False

### networkType

The network type of the cluster, which is IPv4 or DUAL. The DUAL network type uses both IPv4 and IPv6 addresses for your cluster and its resources. By default, a cluster uses the IPv4 network type.

**Type:** string

**Required:** False

**MinLength:** 4

**MaxLength:** 4

## 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

## PublicAccess

Broker access controls

### type

DISABLED means that public access is turned off. SERVICE\_PROVIDED\_EIPS means that public access is turned on.

**Type:** string

**Required:** False

## UpdateConnectivityRequest

Request body for UpdateConnectivity.

## connectivityInfo

The target connectivity setting for the cluster.

**Type:** [ConnectivityInfo](#)

**Required:** True

## currentVersion

The current version of the cluster.

**Type:** string

**Required:** True

## UpdateConnectivityResponse

Response body for UpdateConnectivity.

### 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

## VpcConnectivity

VPC connection control settings for brokers.

### clientAuthentication

VPC connection control settings for brokers.

**Type:** [VpcConnectivityClientAuthentication](#)

**Required:** False

## VpcConnectivityClientAuthentication

Includes all client authentication information for VpcConnectivity.

### sasl

Details for VpcConnectivity ClientAuthentication using SASL.

**Type:** [VpcConnectivitySasl](#)

**Required:** False

### tls

Details for VpcConnectivity ClientAuthentication using TLS.

**Type:** [VpcConnectivityTls](#)

**Required:** False

## VpcConnectivityIAM

Details for SASL/IAM client authentication for VpcConnectivity.

### enabled

SASL/IAM authentication is enabled or not.

**Type:** boolean

**Required:** False

## VpcConnectivitySasl

Details for client authentication using SASL for VpcConnectivity.

### iam

Details for ClientAuthentication using IAM for VpcConnectivity.

**Type:** [VpcConnectivityIAM](#)

**Required:** False

## scram

Details for SASL/SCRAM client authentication for VpcConnectivity.

**Type:** [VpcConnectivityScram](#)

**Required:** False

## VpcConnectivityScram

Details for SASL/SCRAM client authentication for vpcConnectivity.

### enabled

SASL/SCRAM authentication is enabled or not.

**Type:** boolean

**Required:** False

## VpcConnectivityTls

Details for client authentication using TLS for vpcConnectivity.

### enabled

TLS authentication is enabled or not.

**Type:** boolean

**Required:** False

## See also

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

## UpdateConnectivity

- [AWS Command Line Interface V2](#)

- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## 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 Amazon Resource Name (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>	200 response
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## OPTIONS

Enable CORS by returning the correct headers.

## 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	None	Default response for CORS method

## Schemas

### Response bodies

#### DescribeClusterOperationResponse schema

```
{
  "clusterOperationInfo": {
    "clusterArn": "string",
    "creationTime": "string",
    "clientRequestId": "string",
    "operationState": "string",
    "sourceClusterInfo": {
      "encryptionInfo": {
        "encryptionInTransit": {
          "inCluster": boolean,
          "clientBroker": enum
        },
        "encryptionAtRest": {
          "dataVolumeKMSKeyId": "string"
        }
      },
      "configurationInfo": {
```

```

    "arn": "string",
    "revision": integer
  },
  "brokerCountUpdateInfo": {
    "createdBrokerIds": [
      number
    ],
    "deletedBrokerIds": [
      number
    ]
  },
  "instanceType": "string",
  "loggingInfo": {
    "brokerLogs": {
      "s3": {
        "bucket": "string",
        "prefix": "string",
        "enabled": boolean
      },
      "firehose": {
        "deliveryStream": "string",
        "enabled": boolean
      },
      "cloudWatchLogs": {
        "logGroup": "string",
        "enabled": boolean
      }
    }
  },
  "brokerEBSVolumeInfo": [
    {
      "volumeSizeGB": integer,
      "provisionedThroughput": {
        "volumeThroughput": integer,
        "enabled": boolean
      },
      "kafkaBrokerNodeId": "string"
    }
  ],
  "numberOfBrokerNodes": integer,
  "enhancedMonitoring": enum,
  "storageMode": enum,
  "kafkaVersion": "string",
  "connectivityInfo": {

```

```

    "vpcConnectivity": {
      "clientAuthentication": {
        "sasl": {
          "iam": {
            "enabled": boolean
          },
          "scram": {
            "enabled": boolean
          }
        },
        "tls": {
          "enabled": boolean
        }
      }
    },
    "publicAccess": {
      "type": "string"
    },
    "networkType": "string"
  },
  "clientAuthentication": {
    "sasl": {
      "iam": {
        "enabled": boolean
      },
      "scram": {
        "enabled": boolean
      }
    },
    "unauthenticated": {
      "enabled": boolean
    },
    "tls": {
      "certificateAuthorityArnList": [
        "string"
      ],
      "enabled": boolean
    }
  },
  "openMonitoring": {
    "prometheus": {
      "nodeExporter": {
        "enabledInBroker": boolean
      }
    },

```

```
    "jmxExporter": {
      "enabledInBroker": boolean
    }
  },
  "rebalancing": {
    "status": enum
  }
},
"errorInfo": {
  "errorString": "string",
  "errorCode": "string"
},
"vpcConnectionInfo": {
  "owner": "string",
  "vpcConnectionArn": "string",
  "creationTime": "string",
  "userIdentity": {
    "principalId": "string",
    "type": enum
  }
},
"operationType": "string",
"endTime": "string",
"operationSteps": [
  {
    "stepName": "string",
    "stepInfo": {
      "stepStatus": "string"
    }
  }
],
"operationArn": "string",
"targetClusterInfo": {
  "encryptionInfo": {
    "encryptionInTransit": {
      "inCluster": boolean,
      "clientBroker": enum
    },
    "encryptionAtRest": {
      "dataVolumeKMSKeyId": "string"
    }
  },
  "configurationInfo": {
```

```
    "arn": "string",
    "revision": integer
  },
  "brokerCountUpdateInfo": {
    "createdBrokerIds": [
      number
    ],
    "deletedBrokerIds": [
      number
    ]
  },
  "instanceType": "string",
  "loggingInfo": {
    "brokerLogs": {
      "s3": {
        "bucket": "string",
        "prefix": "string",
        "enabled": boolean
      },
      "firehose": {
        "deliveryStream": "string",
        "enabled": boolean
      },
      "cloudWatchLogs": {
        "logGroup": "string",
        "enabled": boolean
      }
    }
  },
  "brokerEBSVolumeInfo": [
    {
      "volumeSizeGB": integer,
      "provisionedThroughput": {
        "volumeThroughput": integer,
        "enabled": boolean
      },
      "kafkaBrokerNodeId": "string"
    }
  ],
  "numberOfBrokerNodes": integer,
  "enhancedMonitoring": enum,
  "storageMode": enum,
  "kafkaVersion": "string",
  "connectivityInfo": {
```

```

    "vpcConnectivity": {
      "clientAuthentication": {
        "sasl": {
          "iam": {
            "enabled": boolean
          },
          "scram": {
            "enabled": boolean
          }
        },
        "tls": {
          "enabled": boolean
        }
      }
    },
    "publicAccess": {
      "type": "string"
    },
    "networkType": "string"
  },
  "clientAuthentication": {
    "sasl": {
      "iam": {
        "enabled": boolean
      },
      "scram": {
        "enabled": boolean
      }
    },
    "unauthenticated": {
      "enabled": boolean
    },
    "tls": {
      "certificateAuthorityArnList": [
        "string"
      ],
      "enabled": boolean
    }
  },
  "openMonitoring": {
    "prometheus": {
      "nodeExporter": {
        "enabledInBroker": boolean
      }
    },

```

```
    "jmxExporter": {
      "enabledInBroker": boolean
    }
  },
  "rebalancing": {
    "status": enum
  }
}
```

## Error schema

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

## Properties

### BrokerCountUpdateInfo

Contains the list of broker ids being changed during a broker count update.

#### createdBrokerIds

List of Kafka Broker IDs being created. If operation is INCREASE\_BROKER\_COUNT, the list contains numeric ids of brokers added by the operation.

**Type:** Array of type number

**Required:** False

#### deletedBrokerIds

List of Kafka Broker IDs being deleted. If operation is DECREASE\_BROKER\_COUNT, the list contains numeric ids of brokers removed by the operation.

**Type:** Array of type number

**Required:** False

## 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:** False

### provisionedThroughput

EBS volume provisioned throughput information.

**Type:** [ProvisionedThroughput](#)

**Required:** False

### 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

## BrokerLogs

The broker logs configuration for this MSK cluster.

### s3

Details of the Amazon S3 destination for broker logs.

**Type:** [S3](#)

**Required:** False

## firehose

Details of the Kinesis Data Firehose delivery stream that is the destination for broker logs.

**Type:** [Firehose](#)

**Required:** False

## cloudWatchLogs

Details of the CloudWatch Logs destination for broker logs.

**Type:** [CloudWatchLogs](#)

**Required:** False

## ClientAuthentication

Includes all client authentication information.

### sasl

Details for client authentication using SASL. To turn on SASL, you must also turn on `EncryptionInTransit` by setting `inCluster` to true. You must set `clientBroker` to either `TLS` or `TLS_PLAINTEXT`. If you choose `TLS_PLAINTEXT`, then you must also set `unauthenticated` to true.

**Type:** [Sasl](#)

**Required:** False

### unauthenticated

Details for ClientAuthentication using no authentication.

**Type:** [Unauthenticated](#)

**Required:** False

### tls

Details for ClientAuthentication using TLS. To turn on TLS access control, you must also turn on `EncryptionInTransit` by setting `inCluster` to true and `clientBroker` to `TLS`.

**Type:** [Tls](#)

**Required:** False

## ClientBroker

Client-broker encryption in transit setting.

TLS

TLS\_PLAINTEXT

PLAINTEXT

## CloudWatchLogs

Details of the CloudWatch Logs destination for broker logs.

### logGroup

The CloudWatch log group that is the destination for broker logs.

**Type:** string

**Required:** False

### enabled

Specifies whether broker logs get sent to the specified CloudWatch Logs destination.

**Type:** boolean

**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](#)

**Required:** False

**errorInfo**

Describes the error if the operation fails.

**Type:** [ErrorInfo](#)

**Required:** False

**vpcConnectionInfo**

Description of the VPC connection for CreateVpcConnection and DeleteVpcConnection operations.

**Type:** [VpcConnectionInfo](#)

**Required:** False

### **operationType**

Type of the cluster operation.

**Type:** string

**Required:** False

### **endTime**

The time at which the operation finished.

**Type:** string

**Required:** False

### **operationSteps**

Steps completed during the operation.

**Type:** Array of type [ClusterOperationStep](#)

**Required:** False

### **operationArn**

ARN of the cluster operation.

**Type:** string

**Required:** False

### **targetClusterInfo**

Information about cluster attributes after a cluster is updated.

**Type:** [MutableClusterInfo](#)

**Required:** False

## ClusterOperationStep

Step taken during a cluster operation.

### stepName

The name of the step.

**Type:** string

**Required:** False

### stepInfo

Information about the step and its status.

**Type:** [ClusterOperationStepInfo](#)

**Required:** False

## ClusterOperationStepInfo

Information about a step in an operation.

### stepStatus

The step's current status.

**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

## ConnectivityInfo

Broker access controls.

### vpcConnectivity

VPC connection control settings for brokers

**Type:** [VpcConnectivity](#)

**Required:** False

### publicAccess

Access control settings for the cluster's brokers.

**Type:** [PublicAccess](#)

**Required:** False

### networkType

The network type of the cluster, which is IPv4 or DUAL. The DUAL network type uses both IPv4 and IPv6 addresses for your cluster and its resources. By default, a cluster uses the IPv4 network type.

**Type:** string

**Required:** False

**MinLength:** 4

**MaxLength:** 4

## DescribeClusterOperationResponse

Information about a cluster operation.

### clusterOperationInfo

Cluster operation information

**Type:** [ClusterOperationInfo](#)

**Required:** False

## EncryptionAtRest

The data-volume encryption details. You can't update encryption at rest settings for existing clusters.

### dataVolumeKMSKeyId

The Amazon Resource Name (ARN) of the Amazon 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](#)

**Required:** False

## **EncryptionInfo**

Includes encryption-related information, such as the Amazon 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](#)

**Required:** False

### **encryptionAtRest**

The data-volume encryption details.

**Type:** [EncryptionAtRest](#)

**Required:** False

## **EnhancedMonitoring**

Specifies which Apache Kafka metrics Amazon MSK gathers and sends to Amazon CloudWatch for this 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  
PER\_TOPIC\_PER\_PARTITION

## 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

## Firehose

Firehose details for BrokerLogs.

### **deliveryStream**

The Kinesis Data Firehose delivery stream that is the destination for broker logs.

**Type:** string

**Required:** False

### **enabled**

Specifies whether broker logs get sent to the specified Kinesis Data Firehose delivery stream.

**Type:** boolean

**Required:** True

## IAM

Details for SASL/IAM client authentication.

### **enabled**

SASL/IAM authentication is enabled or not.

**Type:** boolean

**Required:** False

## JmxExporter

Indicates whether you want to enable or disable the JMX Exporter.

### **enabledInBroker**

Indicates whether you want to enable or disable the JMX Exporter.

**Type:** boolean

**Required:** True

## LoggingInfo

You can configure your MSK cluster to send broker logs to different destination types. This is a container for the configuration details related to broker logs.

### brokerLogs

You can configure your MSK cluster to send broker logs to different destination types. This configuration specifies the details of these destinations.

**Type:** [BrokerLogs](#)

**Required:** True

## MutableClusterInfo

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

### encryptionInfo

Encryption details.

**Type:** [EncryptionInfo](#)

**Required:** False

### configurationInfo

Information about the changes in the configuration of the brokers.

**Type:** [ConfigurationInfo](#)

**Required:** False

### brokerCountUpdateInfo

Describes brokers being changed during a broker count update.

**Type:** [BrokerCountUpdateInfo](#)

**Required:** False

## instanceType

The broker type.

**Type:** string

**Required:** False

## loggingInfo

LoggingInfo details.

**Type:** [LoggingInfo](#)

**Required:** False

## brokerEBSVolumeInfo

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

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

**Required:** False

## numberOfBrokerNodes

The number of broker nodes in the cluster.

**Type:** integer

**Required:** False

## enhancedMonitoring

The monitoring level.

**Type:** [EnhancedMonitoring](#)

**Required:** False

## storageMode

This controls storage mode for supported storage tiers.

**Type:** [StorageMode](#)

**Required:** False

### **kafkaVersion**

The Apache Kafka version.

**Type:** string

**Required:** False

### **connectivityInfo**

Defines the connectivity setting of the cluster.

**Type:** [ConnectivityInfo](#)

**Required:** False

### **clientAuthentication**

Client Authentication details.

**Type:** [ClientAuthentication](#)

**Required:** False

### **openMonitoring**

Open monitoring details.

**Type:** [OpenMonitoring](#)

**Required:** False

### **rebalancing**

Specifies if intelligent rebalancing is turned on for your cluster. The default intelligent rebalancing status is ACTIVE for all new MSK Provisioned clusters that you create with Express brokers.

**Type:** [Rebalancing](#)

**Required:** False

## NodeExporter

Indicates whether you want to enable or disable the Node Exporter.

### enabledInBroker

Indicates whether you want to enable or disable the Node Exporter.

**Type:** boolean

**Required:** True

## OpenMonitoring

JMX and Node monitoring for the MSK cluster.

### prometheus

Prometheus exporter settings.

**Type:** [Prometheus](#)

**Required:** True

## Prometheus

Prometheus settings for open monitoring.

### nodeExporter

Indicates whether you want to enable or disable the Node Exporter.

**Type:** [NodeExporter](#)

**Required:** False

### jmxExporter

Indicates whether you want to enable or disable the JMX Exporter.

**Type:** [JmxExporter](#)

**Required:** False

## ProvisionedThroughput

Contains information about provisioned throughput for EBS storage volumes attached to kafka broker nodes.

### volumeThroughput

Throughput value of the EBS volumes for the data drive on each kafka broker node in MiB per second.

**Type:** integer

**Required:** False

### enabled

Provisioned throughput is enabled or not.

**Type:** boolean

**Required:** False

## PublicAccess

Broker access controls

### type

DISABLED means that public access is turned off. SERVICE\_PROVIDED\_EIPS means that public access is turned on.

**Type:** string

**Required:** False

## Rebalancing

Specifies whether or not intelligent rebalancing is turned on for a newly created MSK Provisioned cluster with Express brokers. Intelligent rebalancing performs automatic partition balancing operations when you scale your clusters up or down.

By default, intelligent rebalancing is ACTIVE for all new Express-based clusters.

**status**

Intelligent rebalancing status. The default intelligent rebalancing status is ACTIVE for all new Express-based clusters.

**Type:** [RebalancingStatus](#)

**Required:** True

**RebalancingStatus**

Intelligent rebalancing status. The default intelligent rebalancing status is ACTIVE for all new Express-based clusters.

PAUSED

ACTIVE

**S3**

The details of the Amazon S3 destination for broker logs.

**bucket**

The name of the S3 bucket that is the destination for broker logs.

**Type:** string

**Required:** False

**prefix**

The S3 prefix that is the destination for broker logs.

**Type:** string

**Required:** False

**enabled**

Specifies whether broker logs get sent to the specified Amazon S3 destination.

**Type:** boolean

**Required:** True

## Sasl

Details for client authentication using SASL. To turn on SASL, you must also turn on `EncryptionInTransit` by setting `inCluster` to true. You must set `clientBroker` to either `TLS` or `TLS_PLAINTEXT`. If you choose `TLS_PLAINTEXT`, then you must also set `unauthenticated` to true.

### iam

Details for ClientAuthentication using IAM.

**Type:** [IAM](#)

**Required:** False

### scram

Details for SASL/SCRAM client authentication.

**Type:** [Scram](#)

**Required:** False

## Scram

Details for SASL/SCRAM client authentication.

### enabled

SASL/SCRAM authentication is enabled or not.

**Type:** boolean

**Required:** False

## StorageMode

Controls storage mode for various supported storage tiers.

LOCAL

TIERED

## Tls

Details for client authentication using TLS.

### **certificateAuthorityArnList**

List of AWS Private CA Amazon Resource Name (ARN)s.

**Type:** Array of type string

**Required:** False

### **enabled**

TLS authentication is enabled or not.

**Type:** boolean

**Required:** False

## Unauthenticated

Details for allowing no client authentication.

### **enabled**

Unauthenticated is enabled or not.

**Type:** boolean

**Required:** False

## UserIdentity

Description of the requester that calls the API operation.

### **principalId**

A unique identifier for the requester that calls the API operation.

**Type:** string

**Required:** False

## type

The identity type of the requester that calls the API operation.

**Type:** [UserIdentityType](#)

**Required:** False

## UserIdentityType

The identity type of the requester that calls the API operation.

AWSAccount

AWSService

## VpcConnectionInfo

Description of the VPC connection.

### owner

The owner of the VPC Connection.

**Type:** string

**Required:** False

### vpcConnectionArn

The Amazon Resource Name (ARN) of the VPC connection.

**Type:** string

**Required:** False

### creationTime

The time when Amazon MSK creates the VPC Connection.

**Type:** string

**Required:** False

## **userIdentity**

Description of the requester that calls the API operation.

**Type:** [UserIdentity](#)

**Required:** False

## **VpcConnectivity**

VPC connection control settings for brokers.

## **clientAuthentication**

VPC connection control settings for brokers.

**Type:** [VpcConnectivityClientAuthentication](#)

**Required:** False

## **VpcConnectivityClientAuthentication**

Includes all client authentication information for VpcConnectivity.

## **sasl**

Details for VpcConnectivity ClientAuthentication using SASL.

**Type:** [VpcConnectivitySasl](#)

**Required:** False

## **tls**

Details for VpcConnectivity ClientAuthentication using TLS.

**Type:** [VpcConnectivityTls](#)

**Required:** False

## VpcConnectivityIAM

Details for SASL/IAM client authentication for VpcConnectivity.

### enabled

SASL/IAM authentication is enabled or not.

**Type:** boolean

**Required:** False

## VpcConnectivitySasl

Details for client authentication using SASL for VpcConnectivity.

### iam

Details for ClientAuthentication using IAM for VpcConnectivity.

**Type:** [VpcConnectivityIAM](#)

**Required:** False

### scram

Details for SASL/SCRAM client authentication for VpcConnectivity.

**Type:** [VpcConnectivityScram](#)

**Required:** False

## VpcConnectivityScram

Details for SASL/SCRAM client authentication for vpcConnectivity.

### enabled

SASL/SCRAM authentication is enabled or not.

**Type:** boolean

**Required:** False

## VpcConnectivityTls

Details for client authentication using TLS for vpcConnectivity.

### enabled

TLS authentication is enabled or not.

**Type:** boolean

**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 V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## 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
nextToken	String	False	The paginated results marker. When the result of the operation is truncated, the call returns NextToken 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 (default maximum 100 results per API call). If there are more results, the

Name	Type	Required	Description
			response includes a NextToken parameter.

## Responses

Status code	Response model	Description
200	<a href="#">ListClusterOperationsResponse</a>	Successful response.
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect. Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## OPTIONS

Enable CORS by returning the correct headers.

### 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	None	Default response for CORS method

## Schemas

### Response bodies

#### ListClusterOperationsResponse schema

```
{
  "nextToken": "string",
  "clusterOperationInfoList": [
    {
      "clusterArn": "string",
      "creationTime": "string",
      "clientRequestId": "string",
      "operationState": "string",
      "sourceClusterInfo": {
        "encryptionInfo": {
          "encryptionInTransit": {
            "inCluster": boolean,
            "clientBroker": enum
          }
        }
      }
    }
  ],
}
```

```
    "encryptionAtRest": {
      "dataVolumeKMSKeyId": "string"
    },
  },
  "configurationInfo": {
    "arn": "string",
    "revision": integer
  },
  "brokerCountUpdateInfo": {
    "createdBrokerIds": [
      number
    ],
    "deletedBrokerIds": [
      number
    ]
  },
  "instanceType": "string",
  "loggingInfo": {
    "brokerLogs": {
      "s3": {
        "bucket": "string",
        "prefix": "string",
        "enabled": boolean
      },
      "firehose": {
        "deliveryStream": "string",
        "enabled": boolean
      },
      "cloudWatchLogs": {
        "logGroup": "string",
        "enabled": boolean
      }
    }
  },
  "brokerEBSVolumeInfo": [
    {
      "volumeSizeGB": integer,
      "provisionedThroughput": {
        "volumeThroughput": integer,
        "enabled": boolean
      },
      "kafkaBrokerNodeId": "string"
    }
  ],
```

```
"numberOfBrokerNodes": integer,
"enhancedMonitoring": enum,
"storageMode": enum,
"kafkaVersion": "string",
"connectivityInfo": {
  "vpcConnectivity": {
    "clientAuthentication": {
      "sasl": {
        "iam": {
          "enabled": boolean
        },
        "scram": {
          "enabled": boolean
        }
      },
      "tls": {
        "enabled": boolean
      }
    }
  },
  "publicAccess": {
    "type": "string"
  },
  "networkType": "string"
},
"clientAuthentication": {
  "sasl": {
    "iam": {
      "enabled": boolean
    },
    "scram": {
      "enabled": boolean
    }
  },
  "unauthenticated": {
    "enabled": boolean
  },
  "tls": {
    "certificateAuthorityArnList": [
      "string"
    ],
    "enabled": boolean
  }
},
```

```
"openMonitoring": {
  "prometheus": {
    "nodeExporter": {
      "enabledInBroker": boolean
    },
    "jmxExporter": {
      "enabledInBroker": boolean
    }
  },
  "rebalancing": {
    "status": enum
  }
},
"errorInfo": {
  "errorString": "string",
  "errorCode": "string"
},
"vpcConnectionInfo": {
  "owner": "string",
  "vpcConnectionArn": "string",
  "creationTime": "string",
  "userIdentity": {
    "principalId": "string",
    "type": enum
  }
},
"operationType": "string",
"endTime": "string",
"operationSteps": [
  {
    "stepName": "string",
    "stepInfo": {
      "stepStatus": "string"
    }
  }
],
"operationArn": "string",
"targetClusterInfo": {
  "encryptionInfo": {
    "encryptionInTransit": {
      "inCluster": boolean,
      "clientBroker": enum
    }
  }
},
```

```
    "encryptionAtRest": {
      "dataVolumeKMSKeyId": "string"
    },
  },
  "configurationInfo": {
    "arn": "string",
    "revision": integer
  },
  "brokerCountUpdateInfo": {
    "createdBrokerIds": [
      number
    ],
    "deletedBrokerIds": [
      number
    ]
  },
  "instanceType": "string",
  "loggingInfo": {
    "brokerLogs": {
      "s3": {
        "bucket": "string",
        "prefix": "string",
        "enabled": boolean
      },
      "firehose": {
        "deliveryStream": "string",
        "enabled": boolean
      },
      "cloudWatchLogs": {
        "logGroup": "string",
        "enabled": boolean
      }
    }
  },
  "brokerEBSVolumeInfo": [
    {
      "volumeSizeGB": integer,
      "provisionedThroughput": {
        "volumeThroughput": integer,
        "enabled": boolean
      },
      "kafkaBrokerNodeId": "string"
    }
  ],
```

```
"numberOfBrokerNodes": integer,
"enhancedMonitoring": enum,
"storageMode": enum,
"kafkaVersion": "string",
"connectivityInfo": {
  "vpcConnectivity": {
    "clientAuthentication": {
      "sasl": {
        "iam": {
          "enabled": boolean
        },
        "scram": {
          "enabled": boolean
        }
      },
      "tls": {
        "enabled": boolean
      }
    }
  },
  "publicAccess": {
    "type": "string"
  },
  "networkType": "string"
},
"clientAuthentication": {
  "sasl": {
    "iam": {
      "enabled": boolean
    },
    "scram": {
      "enabled": boolean
    }
  },
  "unauthenticated": {
    "enabled": boolean
  },
  "tls": {
    "certificateAuthorityArnList": [
      "string"
    ],
    "enabled": boolean
  }
},
```

```
    "openMonitoring": {
      "prometheus": {
        "nodeExporter": {
          "enabledInBroker": boolean
        },
        "jmxExporter": {
          "enabledInBroker": boolean
        }
      }
    },
    "rebalancing": {
      "status": enum
    }
  }
}
```

## Error schema

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

## Properties

### BrokerCountUpdateInfo

Contains the list of broker ids being changed during a broker count update.

#### createdBrokerIds

List of Kafka Broker IDs being created. If operation is INCREASE\_BROKER\_COUNT, the list contains numeric ids of brokers added by the operation.

**Type:** Array of type number

**Required:** False

## **deletedBrokerIds**

List of Kafka Broker IDs being deleted. If operation is DECREASE\_BROKER\_COUNT, the list contains numeric ids of brokers removed by the operation.

**Type:** Array of type number

**Required:** False

## **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:** False

### **provisionedThroughput**

EBS volume provisioned throughput information.

**Type:** [ProvisionedThroughput](#)

**Required:** False

### **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

## **BrokerLogs**

The broker logs configuration for this MSK cluster.

## s3

Details of the Amazon S3 destination for broker logs.

**Type:** [S3](#)

**Required:** False

## firehose

Details of the Kinesis Data Firehose delivery stream that is the destination for broker logs.

**Type:** [Firehose](#)

**Required:** False

## cloudWatchLogs

Details of the CloudWatch Logs destination for broker logs.

**Type:** [CloudWatchLogs](#)

**Required:** False

## ClientAuthentication

Includes all client authentication information.

### sasl

Details for client authentication using SASL. To turn on SASL, you must also turn on `EncryptionInTransit` by setting `inCluster` to true. You must set `clientBroker` to either `TLS` or `TLS_PLAINTEXT`. If you choose `TLS_PLAINTEXT`, then you must also set `unauthenticated` to true.

**Type:** [Sasl](#)

**Required:** False

### unauthenticated

Details for ClientAuthentication using no authentication.

**Type:** [Unauthenticated](#)

**Required:** False

## tls

Details for ClientAuthentication using TLS. To turn on TLS access control, you must also turn on EncryptionInTransit by setting `inCluster` to true and `clientBroker` to TLS.

**Type:** [Tls](#)

**Required:** False

## ClientBroker

Client-broker encryption in transit setting.

TLS

TLS\_PLAINTEXT

PLAINTEXT

## CloudWatchLogs

Details of the CloudWatch Logs destination for broker logs.

### logGroup

The CloudWatch log group that is the destination for broker logs.

**Type:** string

**Required:** False

### enabled

Specifies whether broker logs get sent to the specified CloudWatch Logs destination.

**Type:** boolean

**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](#)

**Required:** False

**errorInfo**

Describes the error if the operation fails.

**Type:** [ErrorInfo](#)

**Required:** False

### **vpcConnectionInfo**

Description of the VPC connection for CreateVpcConnection and DeleteVpcConnection operations.

**Type:** [VpcConnectionInfo](#)

**Required:** False

### **operationType**

Type of the cluster operation.

**Type:** string

**Required:** False

### **endTime**

The time at which the operation finished.

**Type:** string

**Required:** False

### **operationSteps**

Steps completed during the operation.

**Type:** Array of type [ClusterOperationStep](#)

**Required:** False

### **operationArn**

ARN of the cluster operation.

**Type:** string

**Required:** False

## targetClusterInfo

Information about cluster attributes after a cluster is updated.

**Type:** [MutableClusterInfo](#)

**Required:** False

## ClusterOperationStep

Step taken during a cluster operation.

### stepName

The name of the step.

**Type:** string

**Required:** False

### stepInfo

Information about the step and its status.

**Type:** [ClusterOperationStepInfo](#)

**Required:** False

## ClusterOperationStepInfo

Information about a step in an operation.

### stepStatus

The step's current status.

**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

**ConnectivityInfo**

Broker access controls.

**vpcConnectivity**

VPC connection control settings for brokers

**Type:** [VpcConnectivity](#)

**Required:** False

**publicAccess**

Access control settings for the cluster's brokers.

**Type:** [PublicAccess](#)

**Required:** False

**networkType**

The network type of the cluster, which is IPv4 or DUAL. The DUAL network type uses both IPv4 and IPv6 addresses for your cluster and its resources. By default, a cluster uses the IPv4 network type.

**Type:** string

**Required:** False

**MinLength:** 4

**MaxLength:** 4

## EncryptionAtRest

The data-volume encryption details. You can't update encryption at rest settings for existing clusters.

### dataVolumeKMSKeyId

The Amazon Resource Name (ARN) of the Amazon 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](#)

**Required:** False

## EncryptionInfo

Includes encryption-related information, such as the Amazon 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](#)

**Required:** False

### encryptionAtRest

The data-volume encryption details.

**Type:** [EncryptionAtRest](#)

**Required:** False

## EnhancedMonitoring

Specifies which Apache Kafka metrics Amazon MSK gathers and sends to Amazon CloudWatch for this 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  
PER\_TOPIC\_PER\_PARTITION

## 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

## Firehose

Firehose details for BrokerLogs.

### **deliveryStream**

The Kinesis Data Firehose delivery stream that is the destination for broker logs.

**Type:** string

**Required:** False

### **enabled**

Specifies whether broker logs get sent to the specified Kinesis Data Firehose delivery stream.

**Type:** boolean

**Required:** True

## IAM

Details for SASL/IAM client authentication.

### **enabled**

SASL/IAM authentication is enabled or not.

**Type:** boolean

**Required:** False

## JmxExporter

Indicates whether you want to enable or disable the JMX Exporter.

### **enabledInBroker**

Indicates whether you want to enable or disable the JMX Exporter.

**Type:** boolean

**Required:** True

## ListClusterOperationsResponse

The response contains an array containing cluster operation information and a next token if the response is truncated. Displays operations of the type `DECREASE_BROKER_COUNT` in results list (after a successful broker removal operation).

### 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](#)

**Required:** False

## LoggingInfo

You can configure your MSK cluster to send broker logs to different destination types. This is a container for the configuration details related to broker logs.

### brokerLogs

You can configure your MSK cluster to send broker logs to different destination types. This configuration specifies the details of these destinations.

**Type:** [BrokerLogs](#)

**Required:** True

## MutableClusterInfo

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

### encryptionInfo

Encryption details.

**Type:** [EncryptionInfo](#)

**Required:** False

### **configurationInfo**

Information about the changes in the configuration of the brokers.

**Type:** [ConfigurationInfo](#)

**Required:** False

### **brokerCountUpdateInfo**

Describes brokers being changed during a broker count update.

**Type:** [BrokerCountUpdateInfo](#)

**Required:** False

### **instanceType**

The broker type.

**Type:** string

**Required:** False

### **loggingInfo**

LoggingInfo details.

**Type:** [LoggingInfo](#)

**Required:** False

### **brokerEBSVolumeInfo**

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

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

**Required:** False

## **numberOfBrokerNodes**

The number of broker nodes in the cluster.

**Type:** integer

**Required:** False

## **enhancedMonitoring**

The monitoring level.

**Type:** [EnhancedMonitoring](#)

**Required:** False

## **storageMode**

This controls storage mode for supported storage tiers.

**Type:** [StorageMode](#)

**Required:** False

## **kafkaVersion**

The Apache Kafka version.

**Type:** string

**Required:** False

## **connectivityInfo**

Defines the connectivity setting of the cluster.

**Type:** [ConnectivityInfo](#)

**Required:** False

## **clientAuthentication**

Client Authentication details.

**Type:** [ClientAuthentication](#)

**Required:** False

## **openMonitoring**

Open monitoring details.

**Type:** [OpenMonitoring](#)

**Required:** False

## **rebalancing**

Specifies if intelligent rebalancing is turned on for your cluster. The default intelligent rebalancing status is ACTIVE for all new MSK Provisioned clusters that you create with Express brokers.

**Type:** [Rebalancing](#)

**Required:** False

## **NodeExporter**

Indicates whether you want to enable or disable the Node Exporter.

### **enabledInBroker**

Indicates whether you want to enable or disable the Node Exporter.

**Type:** boolean

**Required:** True

## **OpenMonitoring**

JMX and Node monitoring for the MSK cluster.

### **prometheus**

Prometheus exporter settings.

**Type:** [Prometheus](#)

**Required:** True

## Prometheus

Prometheus settings for open monitoring.

### nodeExporter

Indicates whether you want to enable or disable the Node Exporter.

**Type:** [NodeExporter](#)

**Required:** False

### jmxExporter

Indicates whether you want to enable or disable the JMX Exporter.

**Type:** [JmxExporter](#)

**Required:** False

## ProvisionedThroughput

Contains information about provisioned throughput for EBS storage volumes attached to kafka broker nodes.

### volumeThroughput

Throughput value of the EBS volumes for the data drive on each kafka broker node in MiB per second.

**Type:** integer

**Required:** False

### enabled

Provisioned throughput is enabled or not.

**Type:** boolean

**Required:** False

## PublicAccess

Broker access controls

### type

DISABLED means that public access is turned off. SERVICE\_PROVIDED\_EIPS means that public access is turned on.

**Type:** string

**Required:** False

## Rebalancing

Specifies whether or not intelligent rebalancing is turned on for a newly created MSK Provisioned cluster with Express brokers. Intelligent rebalancing performs automatic partition balancing operations when you scale your clusters up or down.

By default, intelligent rebalancing is ACTIVE for all new Express-based clusters.

### status

Intelligent rebalancing status. The default intelligent rebalancing status is ACTIVE for all new Express-based clusters.

**Type:** [RebalancingStatus](#)

**Required:** True

## RebalancingStatus

Intelligent rebalancing status. The default intelligent rebalancing status is ACTIVE for all new Express-based clusters.

PAUSED

ACTIVE

## S3

The details of the Amazon S3 destination for broker logs.

## bucket

The name of the S3 bucket that is the destination for broker logs.

**Type:** string

**Required:** False

## prefix

The S3 prefix that is the destination for broker logs.

**Type:** string

**Required:** False

## enabled

Specifies whether broker logs get sent to the specified Amazon S3 destination.

**Type:** boolean

**Required:** True

## Sasl

Details for client authentication using SASL. To turn on SASL, you must also turn on `EncryptionInTransit` by setting `inCluster` to true. You must set `clientBroker` to either `TLS` or `TLS_PLAINTEXT`. If you choose `TLS_PLAINTEXT`, then you must also set `unauthenticated` to true.

## iam

Details for ClientAuthentication using IAM.

**Type:** [IAM](#)

**Required:** False

## scram

Details for SASL/SCRAM client authentication.

**Type:** [Scram](#)

**Required:** False

## Scram

Details for SASL/SCRAM client authentication.

### enabled

SASL/SCRAM authentication is enabled or not.

**Type:** boolean

**Required:** False

## StorageMode

Controls storage mode for various supported storage tiers.

LOCAL

TIERED

## Tls

Details for client authentication using TLS.

### certificateAuthorityArnList

List of AWS Private CA Amazon Resource Name (ARN)s.

**Type:** Array of type string

**Required:** False

### enabled

TLS authentication is enabled or not.

**Type:** boolean

**Required:** False

## Unauthenticated

Details for allowing no client authentication.

### enabled

Unauthenticated is enabled or not.

**Type:** boolean

**Required:** False

## UserIdentity

Description of the requester that calls the API operation.

### principalId

A unique identifier for the requester that calls the API operation.

**Type:** string

**Required:** False

### type

The identity type of the requester that calls the API operation.

**Type:** [UserIdentityType](#)

**Required:** False

## UserIdentityType

The identity type of the requester that calls the API operation.

AWSAccount

AWSService

## VpcConnectionInfo

Description of the VPC connection.

**owner**

The owner of the VPC Connection.

**Type:** string

**Required:** False

**vpcConnectionArn**

The Amazon Resource Name (ARN) of the VPC connection.

**Type:** string

**Required:** False

**creationTime**

The time when Amazon MSK creates the VPC Connection.

**Type:** string

**Required:** False

**userIdentity**

Description of the requester that calls the API operation.

**Type:** [UserIdentity](#)

**Required:** False

**VpcConnectivity**

VPC connection control settings for brokers.

**clientAuthentication**

VPC connection control settings for brokers.

**Type:** [VpcConnectivityClientAuthentication](#)

**Required:** False

## VpcConnectivityClientAuthentication

Includes all client authentication information for VpcConnectivity.

### sasl

Details for VpcConnectivity ClientAuthentication using SASL.

**Type:** [VpcConnectivitySasl](#)

**Required:** False

### tls

Details for VpcConnectivity ClientAuthentication using TLS.

**Type:** [VpcConnectivityTls](#)

**Required:** False

## VpcConnectivityIAM

Details for SASL/IAM client authentication for VpcConnectivity.

### enabled

SASL/IAM authentication is enabled or not.

**Type:** boolean

**Required:** False

## VpcConnectivitySasl

Details for client authentication using SASL for VpcConnectivity.

### iam

Details for ClientAuthentication using IAM for VpcConnectivity.

**Type:** [VpcConnectivityIAM](#)

**Required:** False

## scram

Details for SASL/SCRAM client authentication for VpcConnectivity.

**Type:** [VpcConnectivityScram](#)

**Required:** False

## VpcConnectivityScram

Details for SASL/SCRAM client authentication for vpcConnectivity.

### enabled

SASL/SCRAM authentication is enabled or not.

**Type:** boolean

**Required:** False

## VpcConnectivityTls

Details for client authentication using TLS for vpcConnectivity.

### enabled

TLS authentication is enabled or not.

**Type:** boolean

**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 V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)

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

## Cluster Security

Use this resource to update the security settings of a cluster.

### URI

`/v1/clusters/clusterArn/security`

### HTTP methods

### OPTIONS

Enable CORS by returning the correct headers.

### 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	None	Default response for CORS method

## PATCH

### Operation ID: UpdateSecurity

Updates security settings of the specified cluster.

#### 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="#">UpdateSecurityResponse</a>	200 response
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.

Status code	Response model	Description
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## Schemas

### Request bodies

#### PATCH schema

```
{
  "encryptionInfo": {
    "encryptionInTransit": {
      "inCluster": boolean,
      "clientBroker": enum
    },
    "encryptionAtRest": {
      "dataVolumeKMSKeyId": "string"
    }
  },
  "clientAuthentication": {
    "sasl": {
      "iam": {
        "enabled": boolean
      },
      "scram": {
        "enabled": boolean
      }
    },
    "unauthenticated": {
      "enabled": boolean
    },
    "tls": {
      "certificateAuthorityArnList": [
```

```
    "string"
  ],
  "enabled": boolean
}
},
"currentVersion": "string"
}
```

## Response bodies

### UpdateSecurityResponse schema

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

### Error schema

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

## Properties

### ClientAuthentication

Includes all client authentication information.

#### sasl

Details for client authentication using SASL. To turn on SASL, you must also turn on EncryptionInTransit by setting `inCluster` to true. You must set `clientBroker` to either TLS or TLS\_PLAINTEXT. If you choose TLS\_PLAINTEXT, then you must also set `unauthenticated` to true.

**Type:** [Sasl](#)

**Required:** False

## unauthenticated

Details for ClientAuthentication using no authentication.

**Type:** [Unauthenticated](#)

**Required:** False

## tls

Details for ClientAuthentication using TLS. To turn on TLS access control, you must also turn on EncryptionInTransit by setting `inCluster` to true and `clientBroker` to TLS.

**Type:** [Tls](#)

**Required:** False

## ClientBroker

Client-broker encryption in transit setting.

TLS

TLS\_PLAINTEXT

PLAINTEXT

## EncryptionAtRest

The data-volume encryption details. You can't update encryption at rest settings for existing clusters.

### dataVolumeKMSKeyId

The Amazon Resource Name (ARN) of the Amazon 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](#)

**Required:** False

## **EncryptionInfo**

Includes encryption-related information, such as the Amazon 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](#)

**Required:** False

## encryptionAtRest

The data-volume encryption details.

**Type:** [EncryptionAtRest](#)

**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

## IAM

Details for SASL/IAM client authentication.

### enabled

SASL/IAM authentication is enabled or not.

**Type:** boolean

**Required:** False

## Sasl

Details for client authentication using SASL. To turn on SASL, you must also turn on `EncryptionInTransit` by setting `inCluster` to true. You must set `clientBroker` to

either TLS or TLS\_PLAINTEXT. If you choose TLS\_PLAINTEXT, then you must also set unauthenticated to true.

## iam

Details for ClientAuthentication using IAM.

**Type:** [IAM](#)

**Required:** False

## scram

Details for SASL/SCRAM client authentication.

**Type:** [Scram](#)

**Required:** False

## Scram

Details for SASL/SCRAM client authentication.

## enabled

SASL/SCRAM authentication is enabled or not.

**Type:** boolean

**Required:** False

## Tls

Details for client authentication using TLS.

## certificateAuthorityArnList

List of AWS Private CA Amazon Resource Name (ARN)s.

**Type:** Array of type string

**Required:** False

**enabled**

TLS authentication is enabled or not.

**Type:** boolean

**Required:** False

**Unauthenticated**

Details for allowing no client authentication.

**enabled**

Unauthenticated is enabled or not.

**Type:** boolean

**Required:** False

**UpdateSecurityRequest**

Request body for UpdateSecurity.

**encryptionInfo**

The encryption info details.

**Type:** [EncryptionInfo](#)

**Required:** False

**clientAuthentication**

The client authentication info details.

**Type:** [ClientAuthentication](#)

**Required:** False

**currentVersion**

Current cluster version.

**Type:** string

**Required:** True

## UpdateSecurityResponse

Response body for UpdateSecurity.

### 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:

### UpdateSecurity

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# 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.

### 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>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.

Name	Type	Required	Description
maxResults	String	False	The maximum number of results to return in the response (default maximum 100 results per API call). If there are more results, the response includes a NextToken parameter.

## Responses

Status code	Response model	Description
200	<a href="#">ListClustersResponse</a>	Successful response.
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect. Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.

Status code	Response model	Description
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## POST

### Operation ID: CreateCluster

Creates a new MSK cluster. The following Python 3.6 examples shows how you can create a cluster that's distributed over two Availability Zones. Before you run this Python script, replace the example subnet and security-group IDs with the IDs of your subnets and security group. When you create an MSK cluster, its brokers get evenly distributed over a number of Availability Zones that's equal to the number of subnets that you specify in the `BrokerNodeGroupInfo` parameter. In this example, you can add a third subnet to get a cluster that's distributed over three Availability Zones.

```
import boto3

client = boto3.client('kafka')

response = client.create_cluster(
    BrokerNodeGroupInfo={
        'BrokerAZDistribution': 'DEFAULT',
        'ClientSubnets': [
            'subnet-012345678901fedcba',
            'subnet-9876543210abcdef01'
        ],
        'InstanceType': 'kafka.m5.large',
        'SecurityGroups': [
            'sg-012345abcdef789789'
        ]
    },
    ClusterName='SalesCluster',
    EncryptionInfo={
```

```
        'EncryptionInTransit': {
            'ClientBroker': 'TLS_PLAINTEXT',
            'InCluster': True
        }
    },
    EnhancedMonitoring='PER_TOPIC_PER_BROKER',
    KafkaVersion='2.2.1',
    NumberOfBrokerNodes=2
)

print(response)
```

## Responses

Status code	Response model	Description
200	<a href="#">CreateClusterResponse</a>	Successful response.
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
409	<a href="#">Error</a>	This cluster name already exists. Retry your request using another name.

Status code	Response model	Description
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## OPTIONS

Enable CORS by returning the correct headers.

### Responses

Status code	Response model	Description
200	None	The default response for a CORS method.

## Schemas

### Request bodies

#### POST schema

```
{
  "encryptionInfo": {
    "encryptionInTransit": {
      "inCluster": boolean,
      "clientBroker": enum
    },
    "encryptionAtRest": {
      "dataVolumeKMSKeyId": "string"
    }
  },
  "configurationInfo": {
    "arn": "string",
```

```

    "revision": integer
  },
  "loggingInfo": {
    "brokerLogs": {
      "s3": {
        "bucket": "string",
        "prefix": "string",
        "enabled": boolean
      },
      "firehose": {
        "deliveryStream": "string",
        "enabled": boolean
      },
      "cloudWatchLogs": {
        "logGroup": "string",
        "enabled": boolean
      }
    }
  },
  "tags": {
  },
  "numberOfBrokerNodes": integer,
  "enhancedMonitoring": enum,
  "storageMode": enum,
  "clusterName": "string",
  "kafkaVersion": "string",
  "clientAuthentication": {
    "sasl": {
      "iam": {
        "enabled": boolean
      },
      "scram": {
        "enabled": boolean
      }
    },
    "unauthenticated": {
      "enabled": boolean
    },
    "tls": {
      "certificateAuthorityArnList": [
        "string"
      ],
      "enabled": boolean
    }
  }
}

```

```
},
"brokerNodeGroupInfo": {
  "clientSubnets": [
    "string"
  ],
  "zoneIds": [
    "string"
  ],
  "instanceType": "string",
  "connectivityInfo": {
    "vpcConnectivity": {
      "clientAuthentication": {
        "sasl": {
          "iam": {
            "enabled": boolean
          },
          "scram": {
            "enabled": boolean
          }
        },
        "tls": {
          "enabled": boolean
        }
      }
    },
    "publicAccess": {
      "type": "string"
    },
    "networkType": "string"
  },
  "securityGroups": [
    "string"
  ],
  "brokerAZDistribution": enum,
  "storageInfo": {
    "ebsStorageInfo": {
      "provisionedThroughput": {
        "volumeThroughput": integer,
        "enabled": boolean
      },
      "volumeSize": integer
    }
  }
},
```

```

"openMonitoring": {
  "prometheus": {
    "nodeExporter": {
      "enabledInBroker": boolean
    },
    "jmxExporter": {
      "enabledInBroker": boolean
    }
  }
},
"rebalancing": {
  "status": enum
}
}

```

## Response bodies

### ListClustersResponse schema

```

{
  "nextToken": "string",
  "clusterInfoList": [
    {
      "encryptionInfo": {
        "encryptionInTransit": {
          "inCluster": boolean,
          "clientBroker": enum
        },
        "encryptionAtRest": {
          "dataVolumeKMSKeyId": "string"
        }
      },
      "zookeeperConnectString": "string",
      "customerActionStatus": enum,
      "creationTime": "string",
      "zookeeperConnectStringTls": "string",
      "loggingInfo": {
        "brokerLogs": {
          "s3": {
            "bucket": "string",
            "prefix": "string",
            "enabled": boolean
          }
        },

```

```
    "firehose": {
      "deliveryStream": "string",
      "enabled": boolean
    },
    "cloudWatchLogs": {
      "logGroup": "string",
      "enabled": boolean
    }
  }
},
"currentVersion": "string",
"tags": {
},
"numberOfBrokerNodes": integer,
"clusterArn": "string",
"activeOperationArn": "string",
"enhancedMonitoring": enum,
"clusterName": "string",
"storageMode": enum,
"stateInfo": {
  "code": "string",
  "message": "string"
},
"clientAuthentication": {
  "sasl": {
    "iam": {
      "enabled": boolean
    },
    "scram": {
      "enabled": boolean
    }
  },
  "unauthenticated": {
    "enabled": boolean
  },
  "tls": {
    "certificateAuthorityArnList": [
      "string"
    ],
    "enabled": boolean
  }
},
"state": enum,
"brokerNodeGroupInfo": {
```

```
"clientSubnets": [
  "string"
],
"zoneIds": [
  "string"
],
"instanceType": "string",
"connectivityInfo": {
  "vpcConnectivity": {
    "clientAuthentication": {
      "sasl": {
        "iam": {
          "enabled": boolean
        },
        "scram": {
          "enabled": boolean
        }
      },
      "tls": {
        "enabled": boolean
      }
    }
  },
  "publicAccess": {
    "type": "string"
  },
  "networkType": "string"
},
"securityGroups": [
  "string"
],
"brokerAZDistribution": enum,
"storageInfo": {
  "ebsStorageInfo": {
    "provisionedThroughput": {
      "volumeThroughput": integer,
      "enabled": boolean
    },
    "volumeSize": integer
  }
}
},
"openMonitoring": {
  "prometheus": {
```

```
    "nodeExporter": {
      "enabledInBroker": boolean
    },
    "jmxExporter": {
      "enabledInBroker": boolean
    }
  },
  "rebalancing": {
    "status": enum
  },
  "currentBrokerSoftwareInfo": {
    "configurationRevision": integer,
    "kafkaVersion": "string",
    "configurationArn": "string"
  }
}
]
```

## CreateClusterResponse schema

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

## Error schema

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

## Properties

### BrokerAZDistribution

This parameter is currently not in use.

DEFAULT

## BrokerLogs

The broker logs configuration for this MSK cluster.

### s3

Details of the Amazon S3 destination for broker logs.

**Type:** [S3](#)

**Required:** False

### firehose

Details of the Kinesis Data Firehose delivery stream that is the destination for broker logs.

**Type:** [Firehose](#)

**Required:** False

### cloudWatchLogs

Details of the CloudWatch Logs destination for broker logs.

**Type:** [CloudWatchLogs](#)

**Required:** False

## 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). Amazon creates elastic network interfaces inside these subnets. Client applications use elastic network interfaces to produce and consume data.

If you use the US West (N. California) Region, specify exactly two subnets. For other Regions where Amazon MSK is available, you can specify either two or three subnets. The subnets that you specify must be in distinct Availability Zones. When you create a cluster, Amazon MSK distributes the broker nodes evenly across the subnets that you specify.

Client subnets can't occupy the Availability Zone with ID use1-az3.

**Type:** Array of type string

**Required:** True

### zonelds

The zonelds for brokers in customer account.

**Type:** Array of type string

**Required:** False

### 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.m5.8xlarge, kafka.m5.12xlarge, kafka.m5.16xlarge, and kafka.m5.24xlarge.

**Type:** string

**Required:** True

**MinLength:** 5

**MaxLength:** 32

### connectivityInfo

Information about the cluster's connectivity setting.

**Type:** [ConnectivityInfo](#)

**Required:** False

### securityGroups

The 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

This parameter is currently not in use.

**Type:** [BrokerAZDistribution](#)

**Required:** False

## storageInfo

Contains information about storage volumes attached to Amazon MSK broker nodes.

**Type:** [StorageInfo](#)

**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. You can use Amazon MSK to create clusters that use Apache Kafka versions 1.1.1 and 2.2.1. See [Apache Kafka Versions](#).

**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.

### sasl

Details for client authentication using SASL. To turn on SASL, you must also turn on `EncryptionInTransit` by setting `inCluster` to true. You must set `clientBroker` to either `TLS` or `TLS_PLAINTEXT`. If you choose `TLS_PLAINTEXT`, then you must also set `unauthenticated` to true.

**Type:** [Sasl](#)

**Required:** False

### unauthenticated

Details for ClientAuthentication using no authentication.

**Type:** [Unauthenticated](#)

**Required:** False

### tls

Details for ClientAuthentication using TLS. To turn on TLS access control, you must also turn on `EncryptionInTransit` by setting `inCluster` to true and `clientBroker` to `TLS`.

**Type:** [Tls](#)

**Required:** False

## ClientBroker

Client-broker encryption in transit setting.

TLS

TLS\_PLAINTEXT

PLAINTEXT

## CloudWatchLogs

Details of the CloudWatch Logs destination for broker logs.

### logGroup

The CloudWatch log group that is the destination for broker logs.

**Type:** string

**Required:** False

### enabled

Specifies whether broker logs get sent to the specified CloudWatch Logs destination.

**Type:** boolean

**Required:** True

## ClusterInfo

Returns information about a cluster.

### encryptionInfo

Includes all encryption-related information.

**Type:** [EncryptionInfo](#)

**Required:** False

### zookeeperConnectString

The connection string to use to connect to zookeeper cluster on plaintext port.

**Type:** string

**Required:** False

### customerActionStatus

Determines if there is an action required from the customer.

**Type:** [CustomerActionStatus](#)

**Required:** False

### creationTime

The time when the cluster was created.

**Type:** string

**Required:** False

### zookeeperConnectStringTls

The connection string to use to connect to the Apache ZooKeeper cluster on a TLS port.

**Type:** string

**Required:** False

### loggingInfo

You can configure your MSK cluster to send broker logs to different destination types. This is a container for the configuration details related to broker logs.

**Type:** [LoggingInfo](#)

**Required:** False

### 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 Apache Kafka metrics Amazon MSK gathers and sends to Amazon CloudWatch for this 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](#)

**Required:** False

### **clusterName**

The name of the cluster.

**Type:** string

**Required:** False

### **storageMode**

This controls storage mode for supported storage tiers.

**Type:** [StorageMode](#)

**Required:** False

### **stateInfo**

Includes information of the cluster state.

**Type:** [StateInfo](#)

**Required:** False

### **clientAuthentication**

Includes all client authentication information.

**Type:** [ClientAuthentication](#)

**Required:** False

### **state**

The state of the cluster. Amazon MSK automatically renews certificates on clusters every 13 months. It sets the state of the cluster to MAINTENANCE when it starts the certificate-update operation. It sets it back to ACTIVE when the update is done. While a cluster is in the MAINTENANCE state, you can continue to produce and consume data, but you can't perform any update operations on it. You can perform update operations on a cluster when it is in the ACTIVE state.

**Type:** [ClusterState](#)

**Required:** False

### **brokerNodeGroupInfo**

Information about the broker nodes.

**Type:** [BrokerNodeGroupInfo](#)

**Required:** False

## openMonitoring

Settings for open monitoring using Prometheus.

**Type:** [OpenMonitoring](#)

**Required:** False

## rebalancing

Specifies if intelligent rebalancing is turned on for your MSK Provisioned cluster with Express brokers. For all new Express-based clusters that you create, intelligent rebalancing is turned on by default.

**Type:** [Rebalancing](#)

**Required:** False

## currentBrokerSoftwareInfo

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

**Type:** [BrokerSoftwareInfo](#)

**Required:** False

## ClusterState

The state of the cluster. Amazon MSK automatically renews certificates on clusters every 13 months. It sets the state of the cluster to MAINTENANCE when it starts the certificate-update operation. It sets it back to ACTIVE when the update is done. While a cluster is in the MAINTENANCE state, you can continue to produce and consume data, but you can't perform any update operations on it. You can perform update operations on a cluster when it is in the ACTIVE state.

ACTIVE

CREATING

UPDATING  
DELETING  
FAILED  
MAINTENANCE  
REBOOTING\_BROKER  
HEALING

## 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

## ConnectivityInfo

Broker access controls.

### vpcConnectivity

VPC connection control settings for brokers

**Type:** [VpcConnectivity](#)

**Required:** False

## publicAccess

Access control settings for the cluster's brokers.

**Type:** [PublicAccess](#)

**Required:** False

## networkType

The network type of the cluster, which is IPv4 or DUAL. The DUAL network type uses both IPv4 and IPv6 addresses for your cluster and its resources. By default, a cluster uses the IPv4 network type.

**Type:** string

**Required:** False

**MinLength:** 4

**MaxLength:** 4

## CreateClusterRequest

Creates a cluster.

## encryptionInfo

Includes all encryption-related information.

**Type:** [EncryptionInfo](#)

**Required:** False

## configurationInfo

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

**Type:** [ConfigurationInfo](#)

**Required:** False

## loggingInfo

Logging Info details.

**Type:** [LoggingInfo](#)

**Required:** False

## tags

Create tags when creating the cluster.

**Type:** object

**Required:** False

## numberOfBrokerNodes

The number of broker nodes in the cluster.

**Type:** integer

**Required:** True

## enhancedMonitoring

Specifies the level of monitoring for the MSK cluster. The possible values are DEFAULT, PER\_BROKER, and PER\_TOPIC\_PER\_BROKER.

**Type:** [EnhancedMonitoring](#)

**Required:** False

## storageMode

This controls storage mode for supported storage tiers.

**Type:** [StorageMode](#)

**Required:** False

## clusterName

The name of the cluster.

**Type:** string

**Required:** True

**MinLength:** 1

**MaxLength:** 64

## kafkaVersion

The version of Apache Kafka. You can use Amazon MSK to create clusters that use Apache Kafka versions 1.1.1 and 2.2.1. See [Apache Kafka Versions](#).

**Type:** string

**Required:** True

**MinLength:** 1

**MaxLength:** 128

## clientAuthentication

Includes all client authentication related information.

**Type:** [ClientAuthentication](#)

**Required:** False

## brokerNodeGroupInfo

Information about the broker nodes in the cluster.

**Type:** [BrokerNodeGroupInfo](#)

**Required:** True

## openMonitoring

The settings for open monitoring.

**Type:** [OpenMonitoringInfo](#)

**Required:** False

## rebalancing

Specifies if intelligent rebalancing should be turned on for a new MSK Provisioned cluster with Express brokers. For all new Express-based clusters that you create, intelligent rebalancing is turned on by default.

**Type:** [Rebalancing](#)

**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. Amazon MSK automatically renews certificates on clusters every 13 months. It sets the state of the cluster to MAINTENANCE when it starts the certificate-update operation. It sets it back to ACTIVE when the update is done. While a cluster is in the MAINTENANCE state, you can continue to produce and consume data, but you can't perform any update operations on it. You can perform update operations on a cluster when it is in the ACTIVE state.

**Type:** [ClusterState](#)

**Required:** False

## CustomerActionStatus

A type of an action required from the customer.

CRITICAL\_ACTION\_REQUIRED

ACTION\_RECOMMENDED

NONE

## EBSStorageInfo

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

### provisionedThroughput

EBS volume provisioned throughput information.

**Type:** [ProvisionedThroughput](#)

**Required:** False

### 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. You can't update encryption at rest settings for existing clusters.

### dataVolumeKMSKeyId

The Amazon Resource Name (ARN) of the Amazon 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](#)

**Required:** False

## **EncryptionInfo**

Includes encryption-related information, such as the Amazon 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](#)

**Required:** False

### **encryptionAtRest**

The data-volume encryption details.

**Type:** [EncryptionAtRest](#)

**Required:** False

## EnhancedMonitoring

Specifies which Apache Kafka metrics Amazon MSK gathers and sends to Amazon CloudWatch for this 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

PER\_TOPIC\_PER\_PARTITION

## 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

## Firehose

Firehose details for BrokerLogs.

### deliveryStream

The Kinesis Data Firehose delivery stream that is the destination for broker logs.

**Type:** string

**Required:** False

### **enabled**

Specifies whether broker logs get sent to the specified Kinesis Data Firehose delivery stream.

**Type:** boolean

**Required:** True

## **IAM**

Details for SASL/IAM client authentication.

### **enabled**

SASL/IAM authentication is enabled or not.

**Type:** boolean

**Required:** False

## **JmxExporter**

Indicates whether you want to enable or disable the JMX Exporter.

### **enabledInBroker**

Indicates whether you want to enable or disable the JMX Exporter.

**Type:** boolean

**Required:** True

## **JmxExporterInfo**

JMX Exporter details.

### **enabledInBroker**

JMX Exporter being enabled in broker.

**Type:** boolean

**Required:** True

## 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](#)

**Required:** False

## LoggingInfo

You can configure your MSK cluster to send broker logs to different destination types. This is a container for the configuration details related to broker logs.

### brokerLogs

You can configure your MSK cluster to send broker logs to different destination types. This configuration specifies the details of these destinations.

**Type:** [BrokerLogs](#)

**Required:** True

## NodeExporter

Indicates whether you want to enable or disable the Node Exporter.

## **enabledInBroker**

Indicates whether you want to enable or disable the Node Exporter.

**Type:** boolean

**Required:** True

## **NodeExporterInfo**

Node Exporter details.

### **enabledInBroker**

Node Exporter being enabled in broker.

**Type:** boolean

**Required:** True

## **OpenMonitoring**

JMX and Node monitoring for the MSK cluster.

### **prometheus**

Prometheus exporter settings.

**Type:** [Prometheus](#)

**Required:** True

## **OpenMonitoringInfo**

JMX and Node monitoring for cluster.

### **prometheus**

Prometheus details.

**Type:** [PrometheusInfo](#)

**Required:** True

## Prometheus

Prometheus settings for open monitoring.

### nodeExporter

Indicates whether you want to enable or disable the Node Exporter.

**Type:** [NodeExporter](#)

**Required:** False

### jmxExporter

Indicates whether you want to enable or disable the JMX Exporter.

**Type:** [JmxExporter](#)

**Required:** False

## PrometheusInfo

Prometheus details.

### nodeExporter

Node Exporter details.

**Type:** [NodeExporterInfo](#)

**Required:** False

### jmxExporter

JMX Exporter details.

**Type:** [JmxExporterInfo](#)

**Required:** False

## ProvisionedThroughput

Contains information about provisioned throughput for EBS storage volumes attached to kafka broker nodes.

## volumeThroughput

Throughput value of the EBS volumes for the data drive on each kafka broker node in MiB per second.

**Type:** integer

**Required:** False

## enabled

Provisioned throughput is enabled or not.

**Type:** boolean

**Required:** False

## PublicAccess

Broker access controls

### type

DISABLED means that public access is turned off. SERVICE\_PROVIDED\_EIPS means that public access is turned on.

**Type:** string

**Required:** False

## Rebalancing

Specifies whether or not intelligent rebalancing is turned on for a newly created MSK Provisioned cluster with Express brokers. Intelligent rebalancing performs automatic partition balancing operations when you scale your clusters up or down.

By default, intelligent rebalancing is ACTIVE for all new Express-based clusters.

### status

Intelligent rebalancing status. The default intelligent rebalancing status is ACTIVE for all new Express-based clusters.

**Type:** [RebalancingStatus](#)

**Required:** True

## RebalancingStatus

Intelligent rebalancing status. The default intelligent rebalancing status is ACTIVE for all new Express-based clusters.

PAUSED

ACTIVE

## S3

The details of the Amazon S3 destination for broker logs.

### bucket

The name of the S3 bucket that is the destination for broker logs.

**Type:** string

**Required:** False

### prefix

The S3 prefix that is the destination for broker logs.

**Type:** string

**Required:** False

### enabled

Specifies whether broker logs get sent to the specified Amazon S3 destination.

**Type:** boolean

**Required:** True

## Sasl

Details for client authentication using SASL. To turn on SASL, you must also turn on EncryptionInTransit by setting `inCluster` to true. You must set `clientBroker` to

either TLS or TLS\_PLAINTEXT. If you choose TLS\_PLAINTEXT, then you must also set unauthenticated to true.

## iam

Details for ClientAuthentication using IAM.

**Type:** [IAM](#)

**Required:** False

## scram

Details for SASL/SCRAM client authentication.

**Type:** [Scram](#)

**Required:** False

## Scram

Details for SASL/SCRAM client authentication.

## enabled

SASL/SCRAM authentication is enabled or not.

**Type:** boolean

**Required:** False

## StateInfo

Includes information about the state of the cluster.

## code

If the cluster is in an unusable state, this field contains the code that describes the issue.

**Type:** string

**Required:** False

## message

If the cluster is in an unusable state, this field contains a message that describes the issue.

**Type:** string

**Required:** False

## StorageInfo

Contains information about storage volumes attached to Amazon MSK broker nodes.

### ebsStorageInfo

EBS volume information.

**Type:** [EBSStorageInfo](#)

**Required:** False

## StorageMode

Controls storage mode for various supported storage tiers.

LOCAL

TIERED

## Tls

Details for client authentication using TLS.

### certificateAuthorityArnList

List of AWS Private CA Amazon Resource Name (ARN)s.

**Type:** Array of type string

**Required:** False

### enabled

TLS authentication is enabled or not.

**Type:** boolean

**Required:** False

## Unauthenticated

Details for allowing no client authentication.

### enabled

Unauthenticated is enabled or not.

**Type:** boolean

**Required:** False

## VpcConnectivity

VPC connection control settings for brokers.

### clientAuthentication

VPC connection control settings for brokers.

**Type:** [VpcConnectivityClientAuthentication](#)

**Required:** False

## VpcConnectivityClientAuthentication

Includes all client authentication information for VpcConnectivity.

### sasl

Details for VpcConnectivity ClientAuthentication using SASL.

**Type:** [VpcConnectivitySasl](#)

**Required:** False

### tls

Details for VpcConnectivity ClientAuthentication using TLS.

**Type:** [VpcConnectivityTls](#)

**Required:** False

## VpcConnectivityIAM

Details for SASL/IAM client authentication for VpcConnectivity.

**enabled**

SASL/IAM authentication is enabled or not.

**Type:** boolean

**Required:** False

## VpcConnectivitySasl

Details for client authentication using SASL for VpcConnectivity.

**iam**

Details for ClientAuthentication using IAM for VpcConnectivity.

**Type:** [VpcConnectivityIAM](#)

**Required:** False

**scram**

Details for SASL/SCRAM client authentication for VpcConnectivity.

**Type:** [VpcConnectivityScram](#)

**Required:** False

## VpcConnectivityScram

Details for SASL/SCRAM client authentication for vpcConnectivity.

**enabled**

SASL/SCRAM authentication is enabled or not.

**Type:** boolean

**Required:** False

## VpcConnectivityTls

Details for client authentication using TLS for vpcConnectivity.

### enabled

TLS authentication is enabled or not.

**Type:** boolean

**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 V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

### CreateCluster

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)

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

## Clusters clusterArn Client-vpc-connection

### URI

/v1/clusters/*clusterArn*/client-vpc-connection

### HTTP methods

#### PUT

**Operation ID:** RejectClientVpcConnection

Reject client VPC connection.

#### 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="#">RejectClientVpcConnectionResponse</a>	Successful response.
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect

Status code	Response model	Description
401	<a href="#">Error</a>	. Correct your input and then submit it again.
403	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
404	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
429	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
500	<a href="#">Error</a>	429 response
503	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
		503 response

## OPTIONS

Enable CORS by returning correct headers.

### 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	None	Default response for CORS method

## Schemas

### Request bodies

#### PUT schema

```
{  
  "vpcConnectionArn": "string"  
}
```

### Response bodies

#### RejectClientVpcConnectionResponse schema

```
{  
}
```

#### Error schema

```
{  
  "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

## **RejectClientVpcConnectionRequest**

Reject VPC Connection

### **vpcConnectionArn**

VPC Connection Amazon Resource Name (ARN).

**Type:** string

**Required:** True

**MinLength:** 1

## **RejectClientVpcConnectionResponse**

Blocks client connections connecting to the cluster

## **See also**

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

### **RejectClientVpcConnection**

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)

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

## Clusters clusterArn Client-vpc-connections

### URI

/v1/clusters/*clusterArn*/client-vpc-connections

### HTTP methods

#### GET

**Operation ID:** ListClientVpcConnections

List client VPC connections.

#### 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

Name	Type	Required	Description
			returns NextToken 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 (default maximum 100 results per API call). If there are more results, the response includes a NextToken parameter.

## Responses

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

Status code	Response model	Description
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## OPTIONS

Enable CORS by returning correct headers.

### 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	None	Default response for CORS method

# Schemas

## Response bodies

### ListClientVpcConnectionsResponse schema

```
{
  "clientVpcConnections": [
    {
      "owner": "string",
      "vpcConnectionArn": "string",
      "creationTime": "string",
      "state": enum,
      "authentication": "string"
    }
  ],
  "nextToken": "string"
}
```

### Error schema

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

## Properties

### ClientVpcConnection

VPC Connection description

#### owner

The Owner of the VPC Connection.

**Type:** string

**Required:** False

#### vpcConnectionArn

The Amazon Resource Name (ARN) of the Remote VPC.

**Type:** string

**Required:** True

### **creationTime**

The time which the VPC Connection is created.

**Type:** string

**Required:** False

### **state**

State of the Remote VPC Connection.

**Type:** [VpcConnectionState](#)

**Required:** False

### **authentication**

The type of private link authentication.

**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

## ListClientVpcConnectionsResponse

The response contains an array vpc connections.

### clientVpcConnections

An array of client vpc connections information objects.

**Type:** Array of type [ClientVpcConnection](#)

**Required:** False

### nextToken

If the response of ListClientVpcConnections is truncated, it returns a NextToken in the response. This Nexttoken should be sent in the subsequent request to ListClientVpcConnections.

**Type:** string

**Required:** False

## VpcConnectionState

State of the vpc connection

CREATING

AVAILABLE

INACTIVE

UPDATING

DEACTIVATING

DELETING

FAILED

REJECTED

REJECTING

## See also

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

### ListClientVpcConnections

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## Clusters clusterArn Policy

### URI

/v1/clusters/*clusterArn*/policy

### HTTP methods

#### GET

**Operation ID:** GetClusterPolicy

Get cluster policy.

#### Path parameters

Name	Type	Required	Description
<i>clusterArn</i>	String	True	The Amazon Resource Name (ARN) that

Name	Type	Required	Description
			uniquely identifies the cluster.

## Responses

Status code	Response model	Description
200	<a href="#">GetClusterPolicyResponse</a>	Successful response.
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## PUT

### Operation ID: PutClusterPolicy

Create or update cluster policy.

#### 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="#">PutClusterPolicyResponse</a>	Successful response.
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.

Status code	Response model	Description
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## DELETE

**Operation ID:** DeleteClusterPolicy

Delete cluster policy.

### 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="#">DeleteClusterPolicyResponse</a>	Successful response.
400	<a href="#">Error</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</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## OPTIONS

Enable CORS by returning correct headers.

### 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	None	Default response for CORS method

## Schemas

### Request bodies

#### PUT schema

```
{
  "currentVersion": "string",
  "policy": "string"
}
```

### Response bodies

#### GetClusterPolicyResponse schema

```
{
  "currentVersion": "string",
  "policy": "string"
}
```

#### PutClusterPolicyResponse schema

```
{
  "currentVersion": "string"
}
```

#### DeleteClusterPolicyResponse schema

```
{
}
```

## Error schema

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

## Properties

### DeleteClusterPolicyResponse

Delete resource policy for MSK cluster

#### 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

### GetClusterPolicyResponse

Returns resource policy for MSK cluster

##### currentVersion

Resource policy version

**Type:** string

**Required:** False

## **policy**

Resource policy attached to the MSK cluster

**Type:** string

**Required:** False

## **PutClusterPolicyRequest**

Create or update resource policy for cluster

### **currentVersion**

Current cluster policy version.

**Type:** string

**Required:** False

**MinLength:** 1

## **policy**

Resource policy for cluster

**Type:** string

**Required:** True

**MinLength:** 1

**MaxLength:** 20480

## **PutClusterPolicyResponse**

Create or update cluster policy

### **currentVersion**

Resource policy version

**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:

### GetClusterPolicy

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

### PutClusterPolicy

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## DeleteClusterPolicy

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## Clusters clusterArn Rebalancing

### URI

/v1/clusters/*clusterArn*/rebalancing

### HTTP methods

#### PUT

**Operation ID:** UpdateRebalancing

Use this resource to update the intelligent rebalancing status of an Amazon MSK Provisioned cluster with Express 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="#">UpdateRebalancingResponse</a>	Successful response.
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## OPTIONS

Use this resource to update the intelligent rebalancing status of an Amazon MSK Provisioned cluster with Express 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	None	Default response for CORS method

## Schemas

### Request bodies

#### PUT schema

```
{
  "currentVersion": "string",
  "rebalancing": {
    "status": enum
  }
}
```

### Response bodies

#### UpdateRebalancingResponse schema

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

## Error schema

```
{  
  "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

## Rebalancing

Specifies whether or not intelligent rebalancing is turned on for a newly created MSK Provisioned cluster with Express brokers. Intelligent rebalancing performs automatic partition balancing operations when you scale your clusters up or down.

By default, intelligent rebalancing is ACTIVE for all new Express-based clusters.

### status

Intelligent rebalancing status. The default intelligent rebalancing status is ACTIVE for all new Express-based clusters.

**Type:** [RebalancingStatus](#)

**Required:** True

## RebalancingStatus

Intelligent rebalancing status. The default intelligent rebalancing status is ACTIVE for all new Express-based clusters.

PAUSED

ACTIVE

## UpdateRebalancingRequest

Updates the intelligent rebalancing status for a new MSK Provisioned cluster with Express brokers.

### currentVersion

The current version of the cluster.

**Type:** string

**Required:** True

### rebalancing

Specifies if intelligent rebalancing should be turned on for your cluster. The default intelligent rebalancing status is ACTIVE for all new MSK Provisioned clusters that you create with Express brokers.

**Type:** [Rebalancing](#)

**Required:** True

## UpdateRebalancingResponse

Provides information about the intelligent rebalancing update for a cluster.

### clusterArn

The Amazon Resource Name (ARN) of the cluster whose intelligent rebalancing status you've updated.

**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:

### **UpdateRebalancing**

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## **Compatible Apache Kafka Versions**

The Apache Kafka versions to which you can update the cluster.

### **URI**

/v1/compatible-kafka-versions

## HTTP methods

### GET

**Operation ID:** GetCompatibleKafkaVersions

Returns a list of the Apache Kafka versions to which you can update this cluster.

#### Query parameters

Name	Type	Required	Description
clusterArn	String	False	The Amazon Resource Name (ARN) of the cluster check.

#### Responses

Status code	Response model	Description
200	<a href="#">GetCompatibleKafkaVersionsResponse</a>	200 response
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.

Status code	Response model	Description
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## OPTIONS

Enable CORS by returning the correct headers.

### Responses

Status code	Response model	Description
200	None	Default response for CORS method

## Schemas

### Response bodies

#### GetCompatibleKafkaVersionsResponse schema

```
{
  "compatibleKafkaVersions": [
    {
      "sourceVersion": "string",
      "targetVersions": [
        "string"
      ]
    }
  ]
}
```

## Error schema

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

## Properties

### CompatibleKafkaVersion

Contains source Apache Kafka versions and compatible target Apache Kafka versions.

#### sourceVersion

An Apache Kafka version.

**Type:** string

**Required:** False

#### targetVersions

A list of Apache Kafka versions.

**Type:** Array of 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

## GetCompatibleKafkaVersionsResponse

Response body for GetCompatibleKafkaVersions.

### compatibleKafkaVersions

A list of CompatibleKafkaVersion objects.

**Type:** Array of type [CompatibleKafkaVersion](#)

**Required:** False

## See also

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

## GetCompatibleKafkaVersions

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## 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</a>	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.

Status code	Response model	Description
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## PUT

### Operation ID: UpdateConfiguration

Creates a new revision of the cluster configuration. The configuration must be in the ACTIVE state.

### 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="#">UpdateConfigurationResponse</a>	200 response
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
409	<a href="#">Error</a>	This cluster name already exists. Retry your request using another name.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## DELETE

### Operation ID: DeleteConfiguration

Deletes a cluster configuration and all its revisions.

#### 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="#">DeleteConfigurationResponse</a>	200 response
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect. Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input.

Status code	Response model	Description
		Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## OPTIONS

Enable CORS by returning the correct headers.

### 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	None	Default response for CORS method

# Schemas

## Request bodies

### PUT schema

```
{
  "description": "string",
  "serverProperties": "string"
}
```

## Response bodies

### DescribeConfigurationResponse schema

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

### UpdateConfigurationResponse schema

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

## DeleteConfigurationResponse schema

```
{  
  "state": enum,  
  "Arn": "string"  
}
```

## Error schema

```
{  
  "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

## ConfigurationState

State of a kafka configuration

ACTIVE

DELETING

DELETE\_FAILED

## DeleteConfigurationResponse

Returns information about the deleted configuration.

### state

State of the configuration.

**Type:** [ConfigurationState](#)

**Required:** False

### Arn

The Amazon Resource Name (ARN) of the configuration.

**Type:** string

**Required:** False

## 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][0-9A-Za-z-]{0,}\$".

**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

**state**

State of the configuration.

**Type:** [ConfigurationState](#)

**Required:** False

**arn**

The Amazon Resource Name (ARN) of the configuration.

**Type:** string

**Required:** True

**latestRevision**

Latest revision of the configuration.

**Type:** [ConfigurationRevision](#)

**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

## UpdateConfigurationRequest

Update an MSK configuration.

### description

The description of the configuration.

**Type:** string

**Required:** False

### 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 console, the SDK, or the CLI, the contents of `server.properties` can be in plaintext.

**Type:** string

**Required:** True

## UpdateConfigurationResponse

Response body for UpdateConfiguration

### arn

The Amazon Resource Name (ARN) of the configuration.

**Type:** string

**Required:** False

### latestRevision

Latest revision of the configuration.

**Type:** [ConfigurationRevision](#)

**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 V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## UpdateConfiguration

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## DeleteConfiguration

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## 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.
<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="#">DescribeConfigurationRevisionResponse</a>	200 response
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect. Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.

Status code	Response model	Description
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## OPTIONS

Enable CORS by returning the correct headers.

### Path parameters

Name	Type	Required	Description
<i>revision</i>	String	True	A string that uniquely identifies a revision of an MSK configuration.
<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	None	Default response for CORS method

## Schemas

### Response bodies

#### DescribeConfigurationRevisionResponse schema

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

#### Error schema

```
{
  "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 console, the SDK, or the 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 V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## 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
nextToken	String	False	The paginated results marker. When the result of the operation is truncated, the call returns NextToken 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 (default

Name	Type	Required	Description
			maximum 100 results per API call). If there are more results, the response includes a NextToken parameter.

## Responses

Status code	Response model	Description
200	<a href="#">ListConfigurationRevisionsResponse</a>	200 response
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying

Status code	Response model	Description
503	<a href="#">Error</a>	your request might resolve the issue. 503 response

## OPTIONS

Enable CORS by returning the correct headers.

### 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	None	Default response for CORS method

## Schemas

### Response bodies

#### ListConfigurationRevisionsResponse schema

```
{
  "nextToken": "string",
```

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

## Error schema

```
{  
  "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](#)

**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 V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## Configurations

A collection of MSK configurations.

### URI

/v1/configurations

### HTTP methods

#### GET

**Operation ID:** ListConfigurations

Returns a list of all the MSK configurations.

## Query parameters

Name	Type	Required	Description
nextToken	String	False	The paginated results marker. When the result of the operation is truncated, the call returns NextToken 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 (default maximum 100 results per API call). If there are more results, the response includes a NextToken parameter.

## Responses

Status code	Response model	Description
200	<a href="#">ListConfigurationsResponse</a>	200 response
400	<a href="#">Error</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</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## POST

### Operation ID: CreateConfiguration

Creates a new MSK configuration. To see an example of how to use this operation, first save the following text to a file and name the file `config-file.txt`.

```
auto.create.topics.enable = true

zookeeper.connection.timeout.ms = 1000

log.roll.ms = 604800000
```

Now run the following Python 3.6 script in the folder where you saved `config-file.txt`. This script uses the properties specified in `config-file.txt` to create a configuration named

`SalesClusterConfiguration`. This configuration can work with Apache Kafka versions 1.1.1 and 2.1.0.

```
import boto3

client = boto3.client('kafka')

config_file = open('config-file.txt', 'r')

server_properties = config_file.read()

response = client.create_configuration(
    Name='SalesClusterConfiguration',
    Description='The configuration to use on all sales clusters.',
    KafkaVersions=['1.1.1', '2.1.0'],
    ServerProperties=server_properties
)

print(response)
```

## Responses

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

Status code	Response model	Description
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
409	<a href="#">Error</a>	This cluster name already exists. Retry your request using another name.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## OPTIONS

Enable CORS by returning the correct headers.

### Responses

Status code	Response model	Description
200	None	Default response for CORS method

## Schemas

### Request bodies

#### POST schema

```
{
```

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

## Response bodies

### ListConfigurationsResponse schema

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

### CreateConfigurationResponse schema

```
{
  "creationTime": "string",
  "name": "string",
  "state": enum,
  "arn": "string",
  "latestRevision": {
    "creationTime": "string",
```

```
"description": "string",  
"revision": integer  
}  
}
```

## Error schema

```
{  
  "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][0-9A-Za-z-]{0,}$`".

**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:** False

## **state**

State of the configuration.

**Type:** [ConfigurationState](#)

**Required:** False

## **arn**

The Amazon Resource Name (ARN) of the configuration.

**Type:** string

**Required:** True

## **latestRevision**

Latest revision of the configuration.

**Type:** [ConfigurationRevision](#)

**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

**ConfigurationState**

State of a kafka configuration

ACTIVE

DELETING

DELETE\_FAILED

**CreateConfigurationRequest**

Request body for CreateConfiguration.

**name**

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

**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:** False

## **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 console, the SDK, or the 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][0-9A-Za-z-]{0,}$`.

**Type:** string

**Required:** False

**state**

State of the configuration.

**Type:** [ConfigurationState](#)

**Required:** False

**arn**

The Amazon Resource Name (ARN) of the configuration.

**Type:** string

**Required:** False

**latestRevision**

Latest revision of the configuration.

**Type:** [ConfigurationRevision](#)

**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](#)

**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 V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## CreateConfiguration

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## Monitoring Properties

The options for monitoring an Amazon MSK cluster. You can specify which Apache Kafka metrics you want Amazon MSK to gather and send to Amazon CloudWatch. You can also configure open monitoring to gather metrics with Prometheus or Prometheus-compatible tools.

### URI

`/v1/clusters/clusterArn/monitoring`

### HTTP methods

#### PUT

**Operation ID:** UpdateMonitoring

Updates the monitoring settings for the cluster. You can use this operation to specify which Apache Kafka metrics you want Amazon MSK to send to Amazon CloudWatch. You can also specify settings for open monitoring with Prometheus. The following Python 3.6 example enables open monitoring with the Node Exporter. It also sets enhanced monitoring to PER\_BROKER. For more information about monitoring, see [Monitoring](#).

```
import boto3
```

```
import time

client = boto3.client('kafka')

update_monitoring_response = client.update_monitoring(
    ClusterArn='arn:aws:kafka:us-east-1:0123456789019:cluster/SalesCluster/abcd1234-
abcd-cafe-abab-9876543210ab-4',
    CurrentVersion='K12V3IB1VIZHHY',
    EnhancedMonitoring='PER_BROKER',
    OpenMonitoring={"Prometheus":{"JmxExporter":
{"EnabledInBroker":False},"NodeExporter":{"EnabledInBroker":True}}}
)

operation_arn = update_monitoring_response['ClusterOperationArn']
print('The ARN of the update operation is ' + operation_arn)

describe_cluster_operation_response =
    client.describe_cluster_operation(ClusterOperationArn=operation_arn)

operation_state = describe_cluster_operation_response['ClusterOperationInfo']
['OperationState']
print('The status of the update operation is ' + operation_state)

updated = False

while not updated:
    print('Sleeping for 15 seconds before checking to see if the monitoring update is
done...')
    time.sleep(15)
    describe_cluster_operation_response =
client.describe_cluster_operation(ClusterOperationArn=operation_arn)
    operation_state = describe_cluster_operation_response['ClusterOperationInfo']
['OperationState']
    if 'UPDATE_COMPLETE' == operation_state:
        updated = True
        print('You have successfully updated the monitoring settings.')
```

## Path parameters

Name	Type	Required	Description
<i>clusterArn</i>	String	True	The Amazon Resource Name (ARN) that

Name	Type	Required	Description
			uniquely identifies the cluster.

## Responses

Status code	Response model	Description
200	<a href="#">UpdateMonitoringRequest</a>	Successful response.
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## OPTIONS

Enable CORS by returning the correct headers.

### 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	None	Default response for CORS method

## Schemas

### Request bodies

#### PUT schema

```
{
  "enhancedMonitoring": enum,
  "loggingInfo": {
    "brokerLogs": {
      "s3": {
        "bucket": "string",
        "prefix": "string",
        "enabled": boolean
      },
      "firehose": {
        "deliveryStream": "string",
        "enabled": boolean
      },
      "cloudWatchLogs": {
```

```
    "logGroup": "string",
    "enabled": boolean
  }
},
"openMonitoring": {
  "prometheus": {
    "nodeExporter": {
      "enabledInBroker": boolean
    },
    "jmxExporter": {
      "enabledInBroker": boolean
    }
  }
},
"currentVersion": "string"
}
```

## Response bodies

### UpdateMonitoringRequest schema

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

### Error schema

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

## Properties

### BrokerLogs

The broker logs configuration for this MSK cluster.

#### s3

Details of the Amazon S3 destination for broker logs.

**Type:** [S3](#)

**Required:** False

## firehose

Details of the Kinesis Data Firehose delivery stream that is the destination for broker logs.

**Type:** [Firehose](#)

**Required:** False

## cloudWatchLogs

Details of the CloudWatch Logs destination for broker logs.

**Type:** [CloudWatchLogs](#)

**Required:** False

## CloudWatchLogs

Details of the CloudWatch Logs destination for broker logs.

## logGroup

The CloudWatch log group that is the destination for broker logs.

**Type:** string

**Required:** False

## enabled

Specifies whether broker logs get sent to the specified CloudWatch Logs destination.

**Type:** boolean

**Required:** True

## EnhancedMonitoring

Specifies which Apache Kafka metrics Amazon MSK gathers and sends to Amazon CloudWatch for this 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  
PER\_TOPIC\_PER\_PARTITION

## 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

## Firehose

Firehose details for BrokerLogs.

### deliveryStream

The Kinesis Data Firehose delivery stream that is the destination for broker logs.

**Type:** string

**Required:** False

### enabled

Specifies whether broker logs get sent to the specified Kinesis Data Firehose delivery stream.

**Type:** boolean

**Required:** True

## JmxExporterInfo

JMX Exporter details.

### enabledInBroker

JMX Exporter being enabled in broker.

**Type:** boolean

**Required:** True

## LoggingInfo

You can configure your MSK cluster to send broker logs to different destination types. This is a container for the configuration details related to broker logs.

### brokerLogs

You can configure your MSK cluster to send broker logs to different destination types. This configuration specifies the details of these destinations.

**Type:** [BrokerLogs](#)

**Required:** True

## NodeExporterInfo

Node Exporter details.

### enabledInBroker

Node Exporter being enabled in broker.

**Type:** boolean

**Required:** True

## OpenMonitoringInfo

JMX and Node monitoring for cluster.

### prometheus

Prometheus details.

**Type:** [PrometheusInfo](#)

**Required:** True

## PrometheusInfo

Prometheus details.

### nodeExporter

Node Exporter details.

**Type:** [NodeExporterInfo](#)

**Required:** False

### jmxExporter

JMX Exporter details.

**Type:** [JmxExporterInfo](#)

**Required:** False

## S3

The details of the Amazon S3 destination for broker logs.

### bucket

The name of the S3 bucket that is the destination for broker logs.

**Type:** string

**Required:** False

**prefix**

The S3 prefix that is the destination for broker logs.

**Type:** string

**Required:** False

**enabled**

Specifies whether broker logs get sent to the specified Amazon S3 destination.

**Type:** boolean

**Required:** True

**UpdateMonitoringRequest**

Request body for UpdateMonitoring.

**enhancedMonitoring**

Specifies which Apache Kafka metrics Amazon MSK gathers and sends to Amazon CloudWatch for this cluster.

**Type:** [EnhancedMonitoring](#)

**Required:** False

**loggingInfo**

LoggingInfo details.

**Type:** [LoggingInfo](#)

**Required:** False

**openMonitoring**

The settings for open monitoring.

**Type:** [OpenMonitoringInfo](#)

**Required:** False

### **currentVersion**

The version of the MSK cluster to update. Cluster versions aren't simple numbers. You can describe an MSK cluster to find its version. When this update operation is successful, it generates a new cluster version.

**Type:** string

**Required:** True

## **UpdateMonitoringResponse**

Request body for UpdateMonitoring.

### **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:

### **UpdateMonitoring**

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)

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

## Reboot Broker

### URI

`/v1/clusters/clusterArn/reboot-broker`

### HTTP methods

#### PUT

**Operation ID:** RebootBroker

Reboots a broker. In a given cluster, you can reboot one broker at a time.

To reboot a broker, wait for the cluster status to be ACTIVE. This operation returns an error if you invoke it while the cluster status is HEALING. You must wait for the status to change from HEALING to ACTIVE before you reboot the broker.

#### 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="#">RebootBrokerResponse</a>	Successful response.
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## OPTIONS

Enable CORS by returning the correct headers.

## 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	None	Default response for CORS method

## Schemas

### Request bodies

#### PUT schema

```
{
  "brokerIds": [
    "string"
  ]
}
```

### Response bodies

#### RebootBrokerResponse schema

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

## Error schema

```
{  
  "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

### RebootBrokerRequest

The request body for the RebootBroker action.

#### brokerIds

The list of broker IDs to be rebooted. Specify only one broker ID.

**Type:** Array of type string

**Required:** True

### RebootBrokerResponse

The response body for RebootBroker.

## 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:

### RebootBroker

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## Scram Secrets

Represents a secret stored in the Amazon Secrets Manager that can be used to authenticate with a cluster using your sign-in credentials.

## URI

/v1/clusters/*clusterArn*/scram-secrets

## HTTP methods

### GET

**Operation ID:** ListScramSecrets

Returns a list of SCRAM secrets associated with the cluster. SCRAM secrets are stored in the Amazon Secrets Manager service, and are used to authenticate clients using sign-in credentials.

### 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 NextToken in the response. To get the next batch, provide this token in your next request.
maxResults	String	False	The maximum number of results

Name	Type	Required	Description
			to return in the response (default maximum 100 results per API call). If there are more results, the response includes a NextToken parameter.

## Responses

Status code	Response model	Description
200	<a href="#">ListScramSecretsResponse</a>	Successful response.
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response

Status code	Response model	Description
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## POST

### Operation ID: BatchAssociateScramSecret

Associates a list of SCRAM secrets with a cluster. SCRAM secrets are stored in the Amazon Secrets Manager service, and are used to authenticate clients using sign-in credentials. You can associate up to 10 secrets with a cluster at a time.

### 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="#">BatchAssociateScramSecretResponse</a>	Successful response.
400	<a href="#">Error</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</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## OPTIONS

Enable CORS by returning the correct headers.

### 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	None	Default response for CORS method

## PATCH

**Operation ID:** BatchDisassociateScramSecret

Disassociates a list of SCRAM secrets from a cluster. SCRAM secrets are stored in the Amazon Secrets Manager service, and are used to authenticate clients using sign-in credentials. You can disassociate up to 10 secrets from a cluster at a time.

### 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="#">BatchDisassociateScramSecretResponse</a>	200 response
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.

Status code	Response model	Description
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## Schemas

### Request bodies

#### POST schema

```
{
  "secretArnList": [
    "string"
  ]
}
```

#### PATCH schema

```
{
  "secretArnList": [
    "string"
  ]
}
```

## Response bodies

### ListScramSecretsResponse schema

```
{
  "secretArnList": [
    "string"
  ],
  "nextToken": "string"
}
```

### BatchAssociateScramSecretResponse schema

```
{
  "clusterArn": "string",
  "unprocessedScramSecrets": [
    {
      "secretArn": "string",
      "errorMessage": "string",
      "errorCode": "string"
    }
  ]
}
```

### BatchDisassociateScramSecretResponse schema

```
{
  "clusterArn": "string",
  "unprocessedScramSecrets": [
    {
      "secretArn": "string",
      "errorMessage": "string",
      "errorCode": "string"
    }
  ]
}
```

### Error schema

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

```
}
```

## Properties

### BatchAssociateScramSecretRequest

Request body for BatchAssociateScramSecret.

#### secretArnList

List of Amazon Secrets Manager secret Amazon Resource Name (ARN)s.

**Type:** Array of type string

**Required:** True

### BatchAssociateScramSecretResponse

Response body for BatchAssociateScramSecret.

#### clusterArn

The Amazon Resource Name (ARN) of the cluster.

**Type:** string

**Required:** False

#### unprocessedScramSecrets

List of errors when associating secrets to cluster.

**Type:** Array of type [UnprocessedScramSecret](#)

**Required:** False

### BatchDisassociateScramSecretRequest

Request body for BatchDisassociateScramSecret.

#### secretArnList

List of Amazon Secrets Manager secret Amazon Resource Name (ARN)s.

**Type:** Array of type string

**Required:** True

## BatchDisassociateScramSecretResponse

Response body for BatchDisassociateScramSecret.

### clusterArn

The Amazon Resource Name (ARN) of the cluster.

**Type:** string

**Required:** False

### unprocessedScramSecrets

List of errors when disassociating secrets to cluster.

**Type:** Array of type [UnprocessedScramSecret](#)

**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

## ListScramSecretsResponse

Information about scram secrets associated to the cluster.

### secretArnList

The list of scram secrets associated with the cluster.

**Type:** Array of type string

**Required:** False

### nextToken

Paginated results marker.

**Type:** string

**Required:** False

## UnprocessedScramSecret

Error info for scram secret associate/disassociate failure.

### secretArn

Amazon Secrets Manager secret Amazon Resource Name (ARN).

**Type:** string

**Required:** False

### errorMessage

Error message for associate/disassociate failure.

**Type:** string

**Required:** False

### errorCode

Error code for associate/disassociate failure.

**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:

### ListScramSecrets

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

### BatchAssociateScramSecret

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## BatchDisassociateScramSecret

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## 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 Amazon 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

Name	Type	Required	Description
			the resource that's associated with the tags.

## Responses

Status code	Response model	Description
200	<a href="#">ListTagsForResourceResponse</a>	Success response.
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## 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</a>	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input.

Status code	Response model	Description
		Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## 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	Tag keys must be unique for a given cluster. In addition,

Name	Type	Required	Description
			<p>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 Amazon. Amazon 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
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## OPTIONS

Enable CORS by returning the correct headers.

## 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	None	Default response for CORS method

## Schemas

### Request bodies

#### POST schema

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

### Response bodies

#### ListTagsForResourceResponse schema

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

## Error schema

```
{  
  "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 V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

### TagResource

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)

- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## UntagResource

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## Topic

### URI

`/v1/clusters/clusterArn/topics/topicName`

### HTTP methods

#### GET

**Operation ID:** DescribeTopic

Returns details for a topic on a cluster.

This API response reflects data that updates approximately every minute. For the most current topic state after making changes, allow approximately one minute before querying.

## Path parameters

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

## Responses

Status code	Response model	Description
200	<a href="#">DescribeTopicResponse</a>	Successful response.
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect. Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response

Status code	Response model	Description
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## PUT

**Operation ID:** UpdateTopic

Updates topic partition or topic configs.

### Path parameters

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

### Responses

Status code	Response model	Description
200	<a href="#">UpdateTopicResponse</a>	Successful response.
400	<a href="#">Error</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</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## DELETE

**Operation ID:** DeleteTopic

Deletes the topic specified by the `topicName` in the request from the cluster specified by the Amazon Resource Name (ARN) in the request.

### Path parameters

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

Name	Type	Required	Description
<i>topicName</i>	String	True	The name of the topic.

## Responses

Status code	Response model	Description
200	<a href="#">DeleteTopicResponse</a>	Successful response.
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorize d. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## OPTIONS

Enable CORS by returning correct headers

### Path parameters

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

### Responses

Status code	Response model	Description
200	None	Default response for CORS method

## Schemas

### Request bodies

#### PUT schema

```
{
  "partitionCount": integer,
  "configs": "string"
}
```

### Response bodies

#### DescribeTopicResponse schema

```
{
```

```
"replicationFactor": number,  
"partitionCount": number,  
"configs": "string",  
"topicName": "string",  
"topicArn": "string",  
"status": enum  
}
```

### UpdateTopicResponse schema

```
{  
  "topicName": "string",  
  "topicArn": "string",  
  "status": enum  
}
```

### DeleteTopicResponse schema

```
{  
  "topicName": "string",  
  "topicArn": "string",  
  "status": enum  
}
```

### Error schema

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

## Properties

### DeleteTopicResponse

Returns information about the deleted topic.

#### topicName

Name of the topic.

**Type:** string

**Required:** False

### **topicArn**

ARN of the topic.

**Type:** string

**Required:** False

### **status**

Status of the topic.

**Type:** [TopicStatus](#)

**Required:** False

## **DescribeTopicResponse**

The response contains metadata for a topic on a cluster.

### **replicationFactor**

Replication factor for a topic

**Type:** number

**Required:** False

### **partitionCount**

Partition count for a topic

**Type:** number

**Required:** False

### **configs**

Kafka configs for a topic.

**Type:** string

**Required:** False

### **topicName**

Name for a topic.

**Type:** string

**Required:** False

### **topicArn**

ARN of the topic.

**Type:** string

**Required:** False

### **status**

Status of the topic.

**Type:** [TopicStatus](#)

**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

## TopicStatus

Status of a kafka topic

CREATING

UPDATING

DELETING

ACTIVE

## UpdateTopicRequest

Request body for UpdateTopic.

### partitionCount

How many partitions in the topic to be created.

**Type:** integer

**Required:** False

### configs

Base64 encoded kafka configs.

**Type:** string

**Required:** False

## UpdateTopicResponse

Returns information about the updated topic.

### topicName

Name of the topic.

**Type:** string

**Required:** False

## topicArn

ARN of the topic.

**Type:** string

**Required:** False

## status

Status of the topic.

**Type:** [TopicStatus](#)

**Required:** False

## See also

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

## DescribeTopic

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## UpdateTopic

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)

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

## DeleteTopic

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## Topic Partitions

### URI

`/v1/clusters/clusterArn/topics/topicName/partitions`

### HTTP methods

#### GET

**Operation ID:** DescribeTopicPartitions

Returns all partition information for a topic on a cluster.

This API response reflects data that updates approximately every minute. For the most current topic state after making changes, allow approximately one minute before querying.

### Path parameters

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

### Query parameters

Name	Type	Required	Description
nextToken	String	False	The paginated results marker. When the result of the operation is truncated, the call returns NextToken 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 (default maximum 100 results per API call). If there are more results, the

Name	Type	Required	Description
			response includes a NextToken parameter.

## Responses

Status code	Response model	Description
200	<a href="#">DescribeTopicPartitionsResponse</a>	Successful response.
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

# Schemas

## Response bodies

### DescribeTopicPartitionsResponse schema

```
{
  "partitions": [
    {
      "leader": number,
      "partition": number,
      "replicas": [
        number
      ],
      "isr": [
        number
      ]
    }
  ],
  "nextToken": "string"
}
```

### Error schema

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

## Properties

### DescribeTopicPartitionsResponse

The response contains information about partitions for a topic on a cluster.

#### partitions

List containing partition info.

**Type:** Array of type [TopicPartitionInfo](#)

**Required:** False

**nextToken**

If the response of DescribeTopicPartitions is truncated, it returns a NextToken in the response. This NextToken should be sent in the subsequent request to DescribeTopicPartitions.

**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

**TopicPartitionInfo**

Includes information about a partition.

**leader**

The broker ID of the leader for this partition.

**Type:** number

**Required:** False

**partition**

The partition number.

**Type:** number

**Required:** False

## replicas

The list of broker IDs that are replicas for this partition.

**Type:** Array of type number

**Required:** False

## isr

The list of in-sync replica broker IDs for this partition.

**Type:** Array of type number

**Required:** False

## See also

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

### DescribeTopicPartitions

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# Topics

## URI

/v1/clusters/*clusterArn*/topics

## HTTP methods

### GET

**Operation ID:** ListTopics

Returns all topics in a cluster.

This API response reflects data that updates approximately every minute. For the most current topic state after making changes, allow approximately one minute before querying.

### 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
topicNameFilter	String	False	Returns topics starting with given name.
nextToken	String	False	The paginated results marker. When the result of the operation is

Name	Type	Required	Description
			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 (default maximum 100 results per API call). If there are more results, the response includes a <code>NextToken</code> parameter.

## Responses

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

Status code	Response model	Description
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## POST

### Operation ID: CreateTopic

Creates a topic using the specified properties in the request on the cluster specified by the Amazon Resource Name (ARN) 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="#">CreateTopicResponse</a>	Successful response.

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

# Schemas

## Request bodies

### POST schema

```
{
  "partitionCount": integer,
  "configs": "string",
  "replicationFactor": integer,
  "topicName": "string"
}
```

## Response bodies

### ListTopicsResponse schema

```
{
  "topics": [
    {
      "partitionCount": number,
      "replicationFactor": number,
      "topicName": "string",
      "outOfSyncReplicaCount": number,
      "topicArn": "string"
    }
  ],
  "nextToken": "string"
}
```

### CreateTopicResponse schema

```
{
  "topicName": "string",
  "topicArn": "string",
  "status": enum
}
```

### Error schema

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

```
"invalidParameter": "string"  
}
```

## Properties

### CreateTopicRequest

Request body for CreateTopic.

#### partitionCount

How many partitions in the topic to be created.

**Type:** integer

**Required:** True

#### configs

Base64 encoded Kafka configs.

**Type:** string

**Required:** False

#### replicationFactor

The replication factor of the topic.

**Type:** integer

**Required:** True

#### topicName

Name of the topic.

**Type:** string

**Required:** True

### CreateTopicResponse

Returns information about the created topic.

**topicName**

Name of the topic.

**Type:** string

**Required:** False

**topicArn**

ARN of the topic.

**Type:** string

**Required:** False

**status**

Status of the topic.

**Type:** [TopicStatus](#)

**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

## ListTopicsResponse

The response contains an array of topics in a cluster.

### topics

List containing topics info.

**Type:** Array of type [TopicInfo](#)

**Required:** False

### nextToken

If the response of ListTopics is truncated, it returns a NextToken in the response. This NextToken should be sent in the subsequent request to ListTopics.

**Type:** string

**Required:** False

## TopicInfo

Includes identification info about the topic.

### partitionCount

Partition count for a topic

**Type:** number

**Required:** False

### replicationFactor

Replication factor for a topic

**Type:** number

**Required:** False

### topicName

Name for a topic.

**Type:** string

**Required:** False

## outOfSyncReplicaCount

Number of out of sync replica for topic

**Type:** number

**Required:** False

## topicArn

ARN of the topic.

**Type:** string

**Required:** False

## TopicStatus

Status of a kafka topic

CREATING

UPDATING

DELETING

ACTIVE

## See also

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

## ListTopics

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)

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

## CreateTopic

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## UpdateStorage

Updates cluster broker volume size (or) sets cluster storage mode to TIERED.

### URI

/v1/clusters/*clusterArn*/storage

### HTTP methods

#### PUT

**Operation ID:** UpdateStorage

Updates cluster broker volume size (or) sets cluster storage mode to TIERED.

### 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="#">UpdateStorageResponse</a>	Successful response.
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying

Status code	Response model	Description
503	<a href="#">Error</a>	your request might resolve the issue. 503 response

## OPTIONS

Enable CORS by returning the correct headers.

### 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	None	Default response for CORS method

## Schemas

### Request bodies

#### PUT schema

```
{
  "volumeSizeGB": integer,
  "storageMode": enum,
  "provisionedThroughput": {
    "volumeThroughput": integer,
```

```
"enabled": boolean
},
"currentVersion": "string"
}
```

## Response bodies

### UpdateStorageResponse schema

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

### Error schema

```
{
  "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

## ProvisionedThroughput

Contains information about provisioned throughput for EBS storage volumes attached to kafka broker nodes.

### volumeThroughput

Throughput value of the EBS volumes for the data drive on each kafka broker node in MiB per second.

**Type:** integer

**Required:** False

### enabled

Provisioned throughput is enabled or not.

**Type:** boolean

**Required:** False

## StorageMode

Controls storage mode for various supported storage tiers.

LOCAL

TIERED

## UpdateStorageRequest

Request object for UpdateStorageApi.

### volumeSizeGB

size of the EBS volume to update.

**Type:** integer

**Required:** False

## storageMode

Controls storage mode for supported storage tiers.

**Type:** [StorageMode](#)

**Required:** False

## provisionedThroughput

EBS volume provisioned throughput information.

**Type:** [ProvisionedThroughput](#)

**Required:** False

## currentVersion

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

**Type:** string

**Required:** True

## UpdateStorageResponse

Response body for UpdateStorageResponse Api.

### 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:

### UpdateStorage

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## Vpc-connection

### URI

/v1/vpc-connection

### HTTP methods

#### POST

**Operation ID:** CreateVpcConnection

Create remote VPC connection.

## Responses

Status code	Response model	Description
200	<a href="#">CreateVpcConnectionResponse</a>	HTTP Status Code 200: OK.
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## OPTIONS

Enable CORS by returning correct headers.

## Responses

Status code	Response model	Description
200	None	Default response for CORS method.

## Schemas

### Request bodies

#### POST schema

```
{
  "clientSubnets": [
    "string"
  ],
  "targetClusterArn": "string",
  "vpcId": "string",
  "securityGroups": [
    "string"
  ],
  "tags": {
  },
  "authentication": "string"
}
```

### Response bodies

#### CreateVpcConnectionResponse schema

```
{
  "vpcConnectionArn": "string",
  "clientSubnets": [
    "string"
  ],
  "creationTime": "string",
  "vpcId": "string",
  "securityGroups": [
    "string"
  ],
}
```

```
"state": enum,  
"tags": {  
},  
"authentication": "string"  
}
```

## Error schema

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

## Properties

### CreateVpcConnectionRequest

Creates a remote VPC connection for account client.

#### clientSubnets

The list of subnets in the client VPC to connect to.

**Type:** Array of type string

**Required:** True

#### targetClusterArn

The Amazon Resource Name (ARN) of the cluster.

**Type:** string

**Required:** True

#### vpclId

The VPC id of the remote client.

**Type:** string

**Required:** True

## **securityGroups**

The security groups to attach to the ENIs for the broker nodes.

**Type:** Array of type string

**Required:** False

## **tags**

Create tags when creating the VPC connection.

**Type:** object

**Required:** False

## **authentication**

The authentication type for the client VPC connection. Specify one of these auth type strings: SASL\_IAM, SASL\_SCRAM, or TLS.

**Type:** string

**Required:** True

**MinLength:** 3

**MaxLength:** 10

## **CreateVpcConnectionResponse**

Returns information about the created VPC connection.

### **vpcConnectionArn**

The Amazon Resource Name (ARN) of the remote VPC connection.

**Type:** string

**Required:** False

### **clientSubnets**

The list of subnets in the client VPC to connect to.

**Type:** Array of type string

**Required:** False

### creationTime

The time when the VPC connection was created.

**Type:** string

**Required:** False

### vpcId

The VPC id of the remote client.

**Type:** string

**Required:** False

### securityGroups

The security groups to attach to the ENIs for the broker nodes.

**Type:** Array of type string

**Required:** False

### state

State of the VPC connection.

**Type:** [VpcConnectionState](#)

**Required:** False

### tags

Tags attached to the VPC connection.

**Type:** object

**Required:** False

## authentication

The type of authentication to be used by remote clients.

**Type:** string

**Required:** False

**MinLength:** 3

**MaxLength:** 10

## 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

## VpcConnectionState

State of the vpc connection

CREATING

AVAILABLE

INACTIVE

UPDATING

DEACTIVATING

DELETING

FAILED  
REJECTED  
REJECTING

## See also

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

### CreateVpcConnection

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

## Vpc-connection arn

### URI

/v1/vpc-connection/*arn*

### HTTP methods

#### GET

**Operation ID:** DescribeVpcConnection

Describes Remote VPC Connection.

### 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="#">DescribeVpcConnectionResponse</a>	HTTP Status Code 200: OK.
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response

Status code	Response model	Description
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## DELETE

**Operation ID:** DeleteVpcConnection

Delete remote VPC connection.

### 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="#">DeleteVpcConnectionResponse</a>	HTTP Status Code 200: OK.
400	<a href="#">Error</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</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## OPTIONS

Enable CORS by returning correct headers.

### 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	None	Default response for CORS method.

## Schemas

### Response bodies

#### DescribeVpcConnectionResponse schema

```
{
  "vpcConnectionArn": "string",
  "creationTime": "string",
  "targetClusterArn": "string",
  "vpcId": "string",
  "subnets": [
    "string"
  ],
  "securityGroups": [
    "string"
  ],
  "state": enum,
  "tags": {
  },
  "authentication": "string"
}
```

#### DeleteVpcConnectionResponse schema

```
{
  "vpcConnectionArn": "string",
  "state": enum
}
```

#### Error schema

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

```
"invalidParameter": "string"  
}
```

## Properties

### DeleteVpcConnectionResponse

Returns information about the deleted VPC connection.

#### vpcConnectionArn

The Amazon Resource Name (ARN) of the Remote VPC.

**Type:** string

**Required:** False

#### state

State of the Remote VPC Connection.

**Type:** [VpcConnectionState](#)

**Required:** False

### DescribeVpcConnectionResponse

Response body for DescribeVpcConnection.

#### vpcConnectionArn

The Amazon Resource Name (ARN) of the Remote VPC.

**Type:** string

**Required:** True

#### creationTime

The time when the configuration was created.

**Type:** string

**Required:** True

**targetClusterArn**

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

**Type:** string

**Required:** True

**vpclId**

The description of the vpclId.

**Type:** string

**Required:** False

**subnets**

The list of subnets in Remote VPC Connection.

**Type:** Array of type string

**Required:** False

**securityGroups**

The list of security groups in Remote VPC Connection.

**Type:** Array of type string

**Required:** False

**state**

State of the Remote VPC Connection.

**Type:** [VpcConnectionState](#)

**Required:** False

**tags**

Tags attached to the vpc connection.

**Type:** object

**Required:** False

### **authentication**

The type of private link authentication.

**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

### **VpcConnectionState**

State of the vpc connection

CREATING

AVAILABLE

INACTIVE

UPDATING

DEACTIVATING

DELETING

FAILED  
REJECTED  
REJECTING

## See also

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

### DescribeVpcConnection

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

### DeleteVpcConnection

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)

- [AWS SDK for Ruby V3](#)

## Vpc-connections

### URI

/v1/vpc-connections

### HTTP methods

#### GET

**Operation ID:** ListVpcConnections

Lists all VPC connections.

#### Query parameters

Name	Type	Required	Description
nextToken	String	False	The paginated results marker. When the result of the operation is truncated, the call returns NextToken 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 (default maximum 100 results per API call). If there are more results, the

Name	Type	Required	Description
			response includes a NextToken parameter.

## Responses

Status code	Response model	Description
200	<a href="#">ListVpcConnectionsResponse</a>	HTTP Status Code 200: OK.
400	<a href="#">Error</a>	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	<a href="#">Error</a>	The request is not authorized. The provided credentials couldn't be validated.
403	<a href="#">Error</a>	Access forbidden. Check your credentials and then retry your request.
404	<a href="#">Error</a>	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	<a href="#">Error</a>	429 response
500	<a href="#">Error</a>	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	<a href="#">Error</a>	503 response

## OPTIONS

Enable CORS by returning correct headers.

### Responses

Status code	Response model	Description
200	None	Default response for CORS method.

## Schemas

### Response bodies

#### ListVpcConnectionsResponse schema

```
{
  "nextToken": "string",
  "vpcConnections": [
    {
      "vpcConnectionArn": "string",
      "creationTime": "string",
      "targetClusterArn": "string",
      "vpcId": "string",
      "state": enum,
      "authentication": "string"
    }
  ]
}
```

#### Error schema

```
{
  "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

## ListVpcConnectionsResponse

The response contains an array of vpcConnections and a next token if the response is truncated.

### nextToken

If the response of ListVpcConnections is truncated, it returns a NextToken in the response. This NextToken should be sent in the subsequent request to ListVpcConnections.

**Type:** string

**Required:** False

### vpcConnections

An array of VPC Connection.

**Type:** Array of type [VpcConnection](#)

**Required:** False

## VpcConnection

Vpc Connection description

### vpcConnectionArn

The Amazon Resource Name (ARN) of the Remote Vpc.

**Type:** string

**Required:** True

### creationTime

The time which the VPC Connection is created.

**Type:** string

**Required:** False

### targetClusterArn

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

**Type:** string

**Required:** True

### vpclId

The description of the vpclId.

**Type:** string

**Required:** False

### state

State of the Remote VPC Connection.

**Type:** [VpcConnectionState](#)

**Required:** False

## authentication

The type of private link authentication.

**Type:** string

**Required:** False

## VpcConnectionState

State of the vpc connection

CREATING

AVAILABLE

INACTIVE

UPDATING

DEACTIVATING

DELETING

FAILED

REJECTED

REJECTING

## See also

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

### ListVpcConnections

- [AWS Command Line Interface V2](#)
- [AWS SDK for .NET V4](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [AWS SDK for Kotlin](#)
- [AWS SDK for PHP V3](#)

- [AWS SDK for Python](#)
- [AWS SDK for Ruby V3](#)

# 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:** October 26, 2022.

Change	Description	Date
Amazon MSK GA release	This is the general-availability release of the Amazon MSK API Reference to support Amazon MSK Replicator.	October 17, 2023
Amazon MSK GA release	This is the general-availability release of the Amazon MSK API Reference to support tiered storage.	October 26, 2022
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 Glossary Reference*.