

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 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 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)
```

- [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)
```

- [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.

- [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.

- [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.

- [ListClusterHealthAlertsResources](#)

- [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.

- [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.')
```

- [UpdateSecurity](#)

- [UpdateStorage](#)

Resources

The 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 Notifications](#)
- [Clusters clusterArn Policy](#)
- [Compatible Apache Kafka Versions](#)
- [Configuration](#)
- [Configuration Revision](#)
- [Configuration Revisions](#)
- [Configurations](#)
- [Monitoring Properties](#)
- [Reboot Broker](#)

- [Scram Secrets](#)
- [Tags](#)
- [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, provide this token in your next request.

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

Status code	Response model	Description
429	Error	429 response
500	Error	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	Error	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

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

Error schema

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

Properties

Error

Returns information about an error.

invalidParameter

The parameter that caused the error.

Type: string

Required: False

message

The description of the error.

Type: string

Required: False

KafkaVersion

Information about an Apache Kafka version.

status

The status of the Apache Kafka version.

Type: [KafkaVersionStatus](#)

Required: False

version

The Apache Kafka version.

Type: string

Required: False

KafkaVersionStatus

The status of an Apache Kafka version.

ACTIVE

DEPRECATED

ListKafkaVersionsResponse

Response for ListKafkaVersions.

kafkaVersions

An array of Apache Kafka version objects.

Type: Array of type [KafkaVersion](#)

Required: False

nextToken

Paginated results marker.

Type: string

Required: False

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	GetBootstrapBrokersResponse	Successful response.

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

Name	Type	Required	Description
			uniquely identifies the cluster.

Responses

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

Schemas

Response bodies

GetBootstrapBrokersResponse schema

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

Error schema

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

Properties

Error

Returns information about an error.

invalidParameter

The parameter that caused the error.

Type: string

Required: False

message

The description of the error.

Type: string

Required: False

GetBootstrapBrokersResponse

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

bootstrapBrokerString

A string containing one or more hostname:port pairs.

Type: string

Required: False

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

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

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

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

bootstrapBrokerStringVpcConnectivitySaslScram

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

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

Broker Count

The number of broker nodes in a cluster.

URI

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

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

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	UpdateBrokerCountResponse	Successful response.

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

Schemas

Request bodies

PUT schema

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

```
}
```

Response bodies

UpdateBrokerCountResponse schema

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

Error schema

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

Properties

Error

Returns information about an error.

invalidParameter

The parameter that caused the error.

Type: string

Required: False

message

The description of 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).

currentVersion

The current version of the cluster.

Type: string

Required: True

targetNumberOfBrokerNodes

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

Type: integer

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

Broker Storage

Represents the EBS storage associated with the brokers.

URI

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

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

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

Status code	Response model	Description
503	Error	your request might resolve the issue. 503 response

Schemas

Request bodies

PUT schema

```
{
  "currentVersion": "string",
  "targetBrokerEBSVolumeInfo": [
    {
      "kafkaBrokerNodeId": "string",
      "provisionedThroughput": {
        "enabled": boolean,
        "volumeThroughput": integer
      },
      "volumeSizeGB": integer
    }
  ]
}
```

Response bodies

UpdateBrokerStorageResponse schema

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

Error schema

```
{
```

```
"invalidParameter": "string",  
"message": "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.

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

provisionedThroughput

EBS volume provisioned throughput information.

Type: [ProvisionedThroughput](#)

Required: False

volumeSizeGB

Size of the EBS volume to update.

Type: integer

Required: False

Error

Returns information about an error.

invalidParameter

The parameter that caused the error.

Type: string

Required: False

message

The description of the error.

Type: string

Required: False

ProvisionedThroughput

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

enabled

Provisioned throughput is enabled or not.

Type: boolean

Required: False

volumeThroughput

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

Type: integer

Required: False

UpdateBrokerStorageRequest

Request object for UpdateBrokerStorage.

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

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

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

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

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

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

Schemas

Request bodies

PUT schema

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

Response bodies

UpdateBrokerTypeResponse schema

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

Error schema

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

Properties

Error

Returns information about an error.

invalidParameter

The parameter that caused the error.

Type: string

Required: False

message

The description of the error.

Type: string

Required: False

UpdateBrokerTypeRequest

Request body for UpdateBrokerType.

currentVersion

Current cluster version.

Type: string

Required: True

targetInstanceType

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

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

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 <code>NextToken</code> in the response. To get the next batch, provide this token in your next request.
maxResults	String	False	The maximum number of results to return in the response (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	ListNodesResponse	Successful response.
400	Error	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	Error	The request is not authorized. The provided credentials couldn't be validated.
403	Error	Access forbidden. Check your credentials and then retry your request.
404	Error	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	Error	429 response
500	Error	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	Error	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": [
    {
      "addedToClusterTime": "string",
      "brokerNodeInfo": {
        "attachedENIID": "string",
        "brokerId": number,
        "clientSubnet": "string",
        "clientVpcIpAddress": "string",
        "currentBrokerSoftwareInfo": {
          "configurationArn": "string",
          "configurationRevision": integer,
          "kafkaVersion": "string"
        },
        "endpoints": [
          "string"
        ]
      }
    }
  ]
}
```

```
    },
    "instanceType": "string",
    "nodeARN": "string",
    "nodeType": enum,
    "zookeeperNodeInfo": {
      "attachedENIID": "string",
      "clientVpcIpAddress": "string",
      "endpoints": [
        "string"
      ],
      "zookeeperId": number,
      "zookeeperVersion": "string"
    }
  }
]
```

Error schema

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

Properties

BrokerNodeInfo

BrokerNodeInfo

attachedENIID

The attached elastic network interface of the broker.

Type: string

Required: False

brokerId

The ID of the broker.

Type: number

Required: False

clientSubnet

The client subnet to which this broker node belongs.

Type: string

Required: False

clientVpcIpAddress

The virtual private cloud (VPC) of the client.

Type: string

Required: False

currentBrokerSoftwareInfo

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

Type: [BrokerSoftwareInfo](#)

Required: False

endpoints

Endpoints for accessing the broker.

Type: Array of type string

Required: False

BrokerSoftwareInfo

Information about the current software installed on the cluster.

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

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

Error

Returns information about an error.

invalidParameter

The parameter that caused the error.

Type: string

Required: False

message

The description of 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.

addedToClusterTime

The start time.

Type: string

Required: False

brokerNodeInfo

The broker node info.

Type: [BrokerNodeInfo](#)

Required: False

instanceType

The instance type.

Type: string

Required: False

nodeARN

The Amazon Resource Name (ARN) of the node.

Type: string

Required: False

nodeType

The node type.

Type: [NodeType](#)

Required: False

zookeeperNodeInfo

The ZookeeperNodeInfo.

Type: [ZookeeperNodeInfo](#)

Required: False

NodeType

The broker or Apache ZooKeeper node.

BROKER

ZookeeperNodeInfo

Apache ZooKeeper node information.

attachedENIID

The attached elastic network interface of the broker.

Type: string

Required: False

clientVpcIpAddress

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

Type: string

Required: False

endpoints

Endpoints for accessing the Apache ZooKeeper nodes.

Type: Array of type string

Required: False

zookeeperId

The role-specific ID for Apache ZooKeeper.

Type: number

Required: False

zookeeperVersion

The version of Apache ZooKeeper.

Type: string

Required: False

Cluster

Represents an Amazon MSK cluster.

URI

`/v1/clusters/clusterArn`

HTTP methods

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	DeleteClusterResponse	Successful response.
400	Error	The request isn't valid because the input is incorrect . Correct your input and then submit it again.

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

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	DescribeClusterResponse	Successful response.
400	Error	The request isn't valid because the input is incorrect. Correct your input and then submit it again.
401	Error	The request is not authorized. The provided credentials couldn't be validated.
403	Error	Access forbidden. Check your credentials and then retry your request.
404	Error	The resource could not be found due to incorrect input.

Status code	Response model	Description
		Correct the input, then retry the request.
429	Error	429 response
500	Error	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	Error	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

DeleteClusterResponse schema

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

DescribeClusterResponse schema

```
{
  "clusterInfo": {
    "activeOperationArn": "string",
    "brokerNodeGroupInfo": {
      "brokerAZDistribution": enum,
      "clientSubnets": [
        "string"
      ],
      "connectivityInfo": {
        "publicAccess": {
          "type": "string"
        },
        "vpcConnectivity": {
          "clientAuthentication": {
            "sasl": {
              "iam": {
                "enabled": boolean
              },
              "scram": {
                "enabled": boolean
              }
            },
            "tls": {
              "enabled": boolean
            }
          }
        }
      },
      "instanceType": "string",
      "securityGroups": [
        "string"
      ],
      "storageInfo": {
        "ebsStorageInfo": {
```

```
    "provisionedThroughput": {
      "enabled": boolean,
      "volumeThroughput": integer
    },
    "volumeSize": integer
  }
},
"zoneIds": [
  "string"
]
},
"clientAuthentication": {
  "sasl": {
    "iam": {
      "enabled": boolean
    },
    "scram": {
      "enabled": boolean
    }
  },
  "tls": {
    "certificateAuthorityArnList": [
      "string"
    ],
    "enabled": boolean
  },
  "unauthenticated": {
    "enabled": boolean
  }
},
"clusterArn": "string",
"clusterName": "string",
"creationTime": "string",
"currentBrokerSoftwareInfo": {
  "configurationArn": "string",
  "configurationRevision": integer,
  "kafkaVersion": "string"
},
"currentVersion": "string",
"customerActionStatus": enum,
"encryptionInfo": {
  "encryptionAtRest": {
    "dataVolumeKMSKeyId": "string"
  }
},
```

```
"encryptionInTransit": {
  "clientBroker": enum,
  "inCluster": boolean
},
"enhancedMonitoring": enum,
"loggingInfo": {
  "brokerLogs": {
    "cloudWatchLogs": {
      "enabled": boolean,
      "logGroup": "string"
    },
    "firehose": {
      "deliveryStream": "string",
      "enabled": boolean
    },
    "s3": {
      "bucket": "string",
      "enabled": boolean,
      "prefix": "string"
    }
  }
},
"numberOfBrokerNodes": integer,
"openMonitoring": {
  "prometheus": {
    "jmxExporter": {
      "enabledInBroker": boolean
    },
    "nodeExporter": {
      "enabledInBroker": boolean
    }
  }
},
"state": enum,
"stateInfo": {
  "code": "string",
  "message": "string"
},
"storageMode": enum,
"tags": {
},
"zookeeperConnectString": "string",
"zookeeperConnectStringTls": "string"
```

```
}  
}
```

Error schema

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

Properties

BrokerAZDistribution

This parameter is currently not in use.

DEFAULT

BrokerLogs

The broker logs configuration for this MSK cluster.

cloudWatchLogs

Details of the CloudWatch Logs destination for broker logs.

Type: [CloudWatchLogs](#)

Required: False

firehose

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

Type: [Firehose](#)

Required: False

s3

Details of the Amazon S3 destination for broker logs.

Type: [S3](#)

Required: False

BrokerNodeGroupInfo

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

brokerAZDistribution

This parameter is currently not in use.

Type: [BrokerAZDistribution](#)

Required: False

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

connectivityInfo

Information about the cluster's connectivity setting.

Type: [ConnectivityInfo](#)

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

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

storageInfo

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

Type: [StorageInfo](#)

Required: False

zonelds

The zonelds for brokers in customer account.

Type: Array of type string

Required: False

BrokerSoftwareInfo

Information about the current software installed on the cluster.

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

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

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

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

unauthenticated

Details for ClientAuthentication using no authentication.

Type: [Unauthenticated](#)

Required: False

ClientBroker

Client-broker encryption in transit setting.

TLS

TLS_PLAINTEXT

PLAINTEXT

CloudWatchLogs

Details of the CloudWatch Logs destination for broker logs.

enabled

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

Type: boolean

Required: True

logGroup

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

Type: string

Required: False

ClusterInfo

Returns information about a cluster.

activeOperationArn

Arn of active cluster operation.

Type: string

Required: False

brokerNodeGroupInfo

Information about the broker nodes.

Type: [BrokerNodeGroupInfo](#)

Required: False

clientAuthentication

Includes all client authentication information.

Type: [ClientAuthentication](#)

Required: False

clusterArn

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

Type: string

Required: False

clusterName

The name of the cluster.

Type: string

Required: False

creationTime

The time when the cluster was created.

Type: string

Required: False

currentBrokerSoftwareInfo

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

Type: [BrokerSoftwareInfo](#)

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

customerActionStatus

Determines if there is an action required from the customer.

Type: [CustomerActionStatus](#)

Required: False

encryptionInfo

Includes all encryption-related information.

Type: [EncryptionInfo](#)

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

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

numberOfBrokerNodes

The number of broker nodes in the cluster.

Type: integer

Required: False

openMonitoring

Settings for open monitoring using Prometheus.

Type: [OpenMonitoring](#)

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

stateInfo

Includes information of the cluster state.

Type: [StateInfo](#)

Required: False

storageMode

This controls storage mode for supported storage tiers.

Type: [StorageMode](#)

Required: False

tags

Tags attached to the cluster.

Type: object

Required: False

zookeeperConnectString

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

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

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.

publicAccess

Access control settings for the cluster's brokers.

Type: [PublicAccess](#)

Required: False

vpcConnectivity

VPC connection control settings for brokers

Type: [VpcConnectivity](#)

Required: False

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.

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

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

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.

encryptionAtRest

The data-volume encryption details.

Type: [EncryptionAtRest](#)

Required: False

encryptionInTransit

The details for encryption in transit.

Type: [EncryptionInTransit](#)

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.

invalidParameter

The parameter that caused the error.

Type: string

Required: False

message

The description of 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.

jmxExporter

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

Type: [JmxExporter](#)

Required: False

nodeExporter

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

Type: [NodeExporter](#)

Required: False

ProvisionedThroughput

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

enabled

Provisioned throughput is enabled or not.

Type: boolean

Required: False

volumeThroughput

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

Type: integer

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

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

enabled

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

Type: boolean

Required: True

prefix

The S3 prefix that is the destination for broker logs.

Type: string

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

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 Amazon 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

Cluster Apache Kafka Version

The Apache Kafka version that is on the cluster.

URI

/v1/clusters/*clusterArn*/version

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

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	UpdateClusterKafkaVersionResponse	Successful response.
400	Error	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	Error	The request is not authorized. The provided credentials couldn't be validated.
403	Error	Access forbidden. Check your credentials and then retry your request.
404	Error	The resource could not be found due to incorrect input.

Status code	Response model	Description
		Correct the input, then retry the request.
429	Error	429 response
500	Error	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	Error	503 response

Schemas

Request bodies

PUT schema

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

Response bodies

UpdateClusterKafkaVersionResponse schema

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

Error schema

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

invalidParameter

The parameter that caused the error.

Type: string

Required: False

message

The description of the error.

Type: string

Required: False

UpdateClusterKafkaVersionRequest

Request body for UpdateClusterKafkaVersion.

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

targetKafkaVersion

Target Apache Kafka 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

Cluster Configuration

Represents the configuration of a specific cluster.

URI

`/v1/clusters/clusterArn/configuration`

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

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	UpdateClusterConfigurationResponse	Successful response.
400	Error	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	Error	The request is not authorized. The provided credentials couldn't be validated.
403	Error	Access forbidden. Check your credentials and then retry your request.
404	Error	The resource could not be found due to incorrect input.

Status code	Response model	Description
429	Error	Correct the input, then retry the request.
500	Error	429 response
503	Error	There was an unexpected internal server error. Retrying your request might resolve the issue.
		503 response

Schemas

Request bodies

PUT schema

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

Response bodies

UpdateClusterConfigurationResponse schema

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

Error schema

```
{
```

```
"invalidParameter": "string",  
"message": "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.

invalidParameter

The parameter that caused the error.

Type: string

Required: False

message

The description of 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

Cluster Connectivity

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

URI

`/v1/clusters/clusterArn/connectivity`

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

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

Status code	Response model	Description
503	Error	your request might resolve the issue. 503 response

Schemas

Request bodies

PUT schema

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

Response bodies

UpdateConnectivityResponse schema

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

Error schema

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

Properties

ConnectivityInfo

Broker access controls.

publicAccess

Access control settings for the cluster's brokers.

Type: [PublicAccess](#)

Required: False

vpcConnectivity

VPC connection control settings for brokers

Type: [VpcConnectivity](#)

Required: False

Error

Returns information about an error.

invalidParameter

The parameter that caused the error.

Type: string

Required: False

message

The description of 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

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

Name	Type	Required	Description
			uniquely identifies the MSK cluster operation.
Responses			
Status code	Response model		Description
200	DescribeClusterOperationResponse		200 response
400	Error		The request isn't valid because the input is incorrect. Correct your input and then submit it again.
401	Error		The request is not authorized. The provided credentials couldn't be validated.
403	Error		Access forbidden. Check your credentials and then retry your request.
404	Error		The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	Error		429 response
500	Error		There was an unexpected internal server error. Retrying your request might resolve the issue.
503	Error		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": {
    "clientRequestId": "string",
    "clusterArn": "string",
    "creationTime": "string",
    "endTime": "string",
    "errorInfo": {
      "errorCode": "string",
      "errorString": "string"
    },
    "operationArn": "string",
    "operationState": "string",
    "operationSteps": [
```



```
{
  "stepInfo": {
    "stepStatus": "string"
  },
  "stepName": "string"
},
"operationType": "string",
"sourceClusterInfo": {
  "brokerCountUpdateInfo": {
    "createdBrokerIds": [
      number
    ],
    "deletedBrokerIds": [
      number
    ]
  },
  "brokerEBSVolumeInfo": [
    {
      "kafkaBrokerNodeId": "string",
      "provisionedThroughput": {
        "enabled": boolean,
        "volumeThroughput": integer
      },
      "volumeSizeGB": integer
    }
  ],
  "clientAuthentication": {
    "sasl": {
      "iam": {
        "enabled": boolean
      },
      "scram": {
        "enabled": boolean
      }
    },
    "tls": {
      "certificateAuthorityArnList": [
        "string"
      ],
      "enabled": boolean
    },
    "unauthenticated": {
      "enabled": boolean
    }
  }
}
```

```
    }
  },
  "configurationInfo": {
    "arn": "string",
    "revision": integer
  },
  "connectivityInfo": {
    "publicAccess": {
      "type": "string"
    },
    "vpcConnectivity": {
      "clientAuthentication": {
        "sasl": {
          "iam": {
            "enabled": boolean
          },
          "scram": {
            "enabled": boolean
          }
        },
        "tls": {
          "enabled": boolean
        }
      }
    }
  },
  "encryptionInfo": {
    "encryptionAtRest": {
      "dataVolumeKMSKeyId": "string"
    },
    "encryptionInTransit": {
      "clientBroker": enum,
      "inCluster": boolean
    }
  },
  "enhancedMonitoring": enum,
  "instanceType": "string",
  "kafkaVersion": "string",
  "loggingInfo": {
    "brokerLogs": {
      "cloudWatchLogs": {
        "enabled": boolean,
        "logGroup": "string"
      }
    }
  },
```

```
    "firehose": {
      "deliveryStream": "string",
      "enabled": boolean
    },
    "s3": {
      "bucket": "string",
      "enabled": boolean,
      "prefix": "string"
    }
  },
  "numberOfBrokerNodes": integer,
  "openMonitoring": {
    "prometheus": {
      "jmxExporter": {
        "enabledInBroker": boolean
      },
      "nodeExporter": {
        "enabledInBroker": boolean
      }
    }
  },
  "storageMode": enum
},
"targetClusterInfo": {
  "brokerCountUpdateInfo": {
    "createdBrokerIds": [
      number
    ],
    "deletedBrokerIds": [
      number
    ]
  },
  "brokerEBSVolumeInfo": [
    {
      "kafkaBrokerNodeId": "string",
      "provisionedThroughput": {
        "enabled": boolean,
        "volumeThroughput": integer
      },
      "volumeSizeGB": integer
    }
  ],
  "clientAuthentication": {
```

```
"sasl": {
  "iam": {
    "enabled": boolean
  },
  "scram": {
    "enabled": boolean
  }
},
"tls": {
  "certificateAuthorityArnList": [
    "string"
  ],
  "enabled": boolean
},
"unauthenticated": {
  "enabled": boolean
}
},
"configurationInfo": {
  "arn": "string",
  "revision": integer
},
"connectivityInfo": {
  "publicAccess": {
    "type": "string"
  },
  "vpcConnectivity": {
    "clientAuthentication": {
      "sasl": {
        "iam": {
          "enabled": boolean
        },
        "scram": {
          "enabled": boolean
        }
      },
      "tls": {
        "enabled": boolean
      }
    }
  }
}
},
"encryptionInfo": {
  "encryptionAtRest": {
```

```
    "dataVolumeKMSKeyId": "string"
  },
  "encryptionInTransit": {
    "clientBroker": enum,
    "inCluster": boolean
  }
},
"enhancedMonitoring": enum,
"instanceType": "string",
"kafkaVersion": "string",
"loggingInfo": {
  "brokerLogs": {
    "cloudWatchLogs": {
      "enabled": boolean,
      "logGroup": "string"
    },
    "firehose": {
      "deliveryStream": "string",
      "enabled": boolean
    },
    "s3": {
      "bucket": "string",
      "enabled": boolean,
      "prefix": "string"
    }
  }
},
"numberOfBrokerNodes": integer,
"openMonitoring": {
  "prometheus": {
    "jmxExporter": {
      "enabledInBroker": boolean
    },
    "nodeExporter": {
      "enabledInBroker": boolean
    }
  }
},
"storageMode": enum
},
"vpcConnectionInfo": {
  "creationTime": "string",
  "owner": "string",
  "userIdentity": {
```

```
    "principalId": "string",
    "type": enum
  },
  "vpcConnectionArn": "string"
}
}
```

Error schema

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

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

provisionedThroughput

EBS volume provisioned throughput information.

Type: [ProvisionedThroughput](#)

Required: False

volumeSizeGB

Size of the EBS volume to update.

Type: integer

Required: False

BrokerLogs

The broker logs configuration for this MSK cluster.

cloudWatchLogs

Details of the CloudWatch Logs destination for broker logs.

Type: [CloudWatchLogs](#)

Required: False

firehose

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

Type: [Firehose](#)

Required: False

s3

Details of the Amazon S3 destination for broker logs.

Type: [S3](#)

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

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

unauthenticated

Details for ClientAuthentication using no authentication.

Type: [Unauthenticated](#)

Required: False

ClientBroker

Client-broker encryption in transit setting.

TLS

TLS_PLAINTEXT

PLAINTEXT

CloudWatchLogs

Details of the CloudWatch Logs destination for broker logs.

enabled

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

Type: boolean

Required: True

logGroup

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

Type: string

Required: False

ClusterOperationInfo

Returns information about a cluster operation.

clientRequestId

The ID of the API request that triggered this operation.

Type: string

Required: False

clusterArn

ARN of the cluster.

Type: string

Required: False

creationTime

The time that the operation was created.

Type: string

Required: False

endTime

The time at which the operation finished.

Type: string

Required: False

errorInfo

Describes the error if the operation fails.

Type: [ErrorInfo](#)

Required: False

operationArn

ARN of the cluster operation.

Type: string

Required: False

operationState

State of the cluster operation.

Type: string

Required: False

operationSteps

Steps completed during the operation.

Type: Array of type [ClusterOperationStep](#)

Required: False

operationType

Type of the cluster operation.

Type: string

Required: False

sourceClusterInfo

Information about cluster attributes before a cluster is updated.

Type: [MutableClusterInfo](#)

Required: False

targetClusterInfo

Information about cluster attributes after a cluster is updated.

Type: [MutableClusterInfo](#)

Required: False

vpcConnectionInfo

Description of the VPC connection for CreateVpcConnection and DeleteVpcConnection operations.

Type: [VpcConnectionInfo](#)

Required: False

ClusterOperationStep

Step taken during a cluster operation.

stepInfo

Information about the step and its status.

Type: [ClusterOperationStepInfo](#)

Required: False

stepName

The name of the step.

Type: string

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.

publicAccess

Access control settings for the cluster's brokers.

Type: [PublicAccess](#)

Required: False

vpcConnectivity

VPC connection control settings for brokers

Type: [VpcConnectivity](#)

Required: False

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.

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

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

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.

encryptionAtRest

The data-volume encryption details.

Type: [EncryptionAtRest](#)

Required: False

encryptionInTransit

The details for encryption in transit.

Type: [EncryptionInTransit](#)

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.

invalidParameter

The parameter that caused the error.

Type: string

Required: False

message

The description of the error.

Type: string

Required: False

ErrorInfo

Returns information about an error state of the cluster.

errorCode

A number describing the error programmatically.

Type: string

Required: False

errorString

An optional field to provide more details about 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

MutableClusterInfo

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

brokerCountUpdateInfo

Describes brokers being changed during a broker count update.

Type: [BrokerCountUpdateInfo](#)

Required: False

brokerEBSVolumeInfo

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

Type: Array of type [BrokerEBSVolumeInfo](#)

Required: False

clientAuthentication

Client Authentication details.

Type: [ClientAuthentication](#)

Required: False

configurationInfo

Information about the changes in the configuration of the brokers.

Type: [ConfigurationInfo](#)

Required: False

connectivityInfo

Defines the connectivity setting of the cluster.

Type: [ConnectivityInfo](#)

Required: False

encryptionInfo

Encryption details.

Type: [EncryptionInfo](#)

Required: False

enhancedMonitoring

The monitoring level.

Type: [EnhancedMonitoring](#)

Required: False

instanceType

The broker type.

Type: string

Required: False

kafkaVersion

The Apache Kafka version.

Type: string

Required: False

loggingInfo

LoggingInfo details.

Type: [LoggingInfo](#)

Required: False

numberOfBrokerNodes

The number of broker nodes in the cluster.

Type: integer

Required: False

openMonitoring

Open monitoring details.

Type: [OpenMonitoring](#)

Required: False

storageMode

This controls storage mode for supported storage tiers.

Type: [StorageMode](#)

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.

jmxExporter

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

Type: [JmxExporter](#)

Required: False

nodeExporter

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

Type: [NodeExporter](#)

Required: False

ProvisionedThroughput

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

enabled

Provisioned throughput is enabled or not.

Type: boolean

Required: False

volumeThroughput

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

Type: integer

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

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

enabled

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

Type: boolean

Required: True

prefix

The S3 prefix that is the destination for broker logs.

Type: string

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

StorageMode

Controls storage mode for various supported storage tiers.

LOCAL

TIERED

Tls

Details for client authentication using TLS.

certificateAuthorityArnList

List of Amazon 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.

creationTime

The time when Amazon MSK creates the VPC Connection.

Type: string

Required: False

owner

The owner of the VPC Connection.

Type: string

Required: False

userIdentity

Description of the requester that calls the API operation.

Type: [UserIdentity](#)

Required: False

vpcConnectionArn

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

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

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.

Name	Type	Required	Description
			When the result of the operation is truncated, the call returns <code>NextToken</code> in the response. To get the next batch, provide this token in your next request.
<code>maxResults</code>	String	False	The maximum number of results to return in the response (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	ListClusterOperationsResponse	Successful response.
400	Error	The request isn't valid because the input is incorrect. Correct your input and then submit it again.
401	Error	The request is not authorized. The provided credentials couldn't be validated.

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

```
{
  "clusterOperationInfoList": [
    {
      "clientRequestId": "string",
      "clusterArn": "string",
      "creationTime": "string",
      "endTime": "string",
      "errorInfo": {
        "errorCode": "string",
        "errorString": "string"
      },
      "operationArn": "string",
      "operationState": "string",
      "operationSteps": [
        {
          "stepInfo": {
            "stepStatus": "string"
          },
          "stepName": "string"
        }
      ],
      "operationType": "string",
      "sourceClusterInfo": {
        "brokerCountUpdateInfo": {
          "createdBrokerIds": [
            number
          ],
          "deletedBrokerIds": [
            number
          ]
        }
      }
    }
  ]
}
```

```
]
},
"brokerEBSVolumeInfo": [
  {
    "kafkaBrokerNodeId": "string",
    "provisionedThroughput": {
      "enabled": boolean,
      "volumeThroughput": integer
    },
    "volumeSizeGB": integer
  }
],
"clientAuthentication": {
  "sasl": {
    "iam": {
      "enabled": boolean
    },
    "scram": {
      "enabled": boolean
    }
  },
  "tls": {
    "certificateAuthorityArnList": [
      "string"
    ],
    "enabled": boolean
  },
  "unauthenticated": {
    "enabled": boolean
  }
},
"configurationInfo": {
  "arn": "string",
  "revision": integer
},
"connectivityInfo": {
  "publicAccess": {
    "type": "string"
  },
  "vpcConnectivity": {
    "clientAuthentication": {
      "sasl": {
        "iam": {
          "enabled": boolean
        }
      }
    }
  }
}
```



```

    },
    "scram": {
      "enabled": boolean
    }
  },
  "tls": {
    "enabled": boolean
  }
}
},
"encryptionInfo": {
  "encryptionAtRest": {
    "dataVolumeKMSKeyId": "string"
  },
  "encryptionInTransit": {
    "clientBroker": enum,
    "inCluster": boolean
  }
},
"enhancedMonitoring": enum,
"instanceType": "string",
"kafkaVersion": "string",
"loggingInfo": {
  "brokerLogs": {
    "cloudWatchLogs": {
      "enabled": boolean,
      "logGroup": "string"
    },
    "firehose": {
      "deliveryStream": "string",
      "enabled": boolean
    },
    "s3": {
      "bucket": "string",
      "enabled": boolean,
      "prefix": "string"
    }
  }
},
"numberOfBrokerNodes": integer,
"openMonitoring": {
  "prometheus": {
    "jmxExporter": {

```

```

        "enabledInBroker": boolean
    },
    "nodeExporter": {
        "enabledInBroker": boolean
    }
},
"storageMode": enum
},
"targetClusterInfo": {
    "brokerCountUpdateInfo": {
        "createdBrokerIds": [
            number
        ],
        "deletedBrokerIds": [
            number
        ]
    },
    "brokerEBSVolumeInfo": [
        {
            "kafkaBrokerNodeId": "string",
            "provisionedThroughput": {
                "enabled": boolean,
                "volumeThroughput": integer
            },
            "volumeSizeGB": integer
        }
    ],
    "clientAuthentication": {
        "sasl": {
            "iam": {
                "enabled": boolean
            },
            "scram": {
                "enabled": boolean
            }
        },
        "tls": {
            "certificateAuthorityArnList": [
                "string"
            ],
            "enabled": boolean
        },
        "unauthenticated": {

```

```
    "enabled": boolean
  }
},
"configurationInfo": {
  "arn": "string",
  "revision": integer
},
"connectivityInfo": {
  "publicAccess": {
    "type": "string"
  },
  "vpcConnectivity": {
    "clientAuthentication": {
      "sasl": {
        "iam": {
          "enabled": boolean
        },
        "scram": {
          "enabled": boolean
        }
      },
      "tls": {
        "enabled": boolean
      }
    }
  }
},
"encryptionInfo": {
  "encryptionAtRest": {
    "dataVolumeKMSKeyId": "string"
  },
  "encryptionInTransit": {
    "clientBroker": enum,
    "inCluster": boolean
  }
},
"enhancedMonitoring": enum,
"instanceType": "string",
"kafkaVersion": "string",
"loggingInfo": {
  "brokerLogs": {
    "cloudWatchLogs": {
      "enabled": boolean,
      "logGroup": "string"
    }
  }
}
```

```

    },
    "firehose": {
      "deliveryStream": "string",
      "enabled": boolean
    },
    "s3": {
      "bucket": "string",
      "enabled": boolean,
      "prefix": "string"
    }
  }
},
"numberOfBrokerNodes": integer,
"openMonitoring": {
  "prometheus": {
    "jmxExporter": {
      "enabledInBroker": boolean
    },
    "nodeExporter": {
      "enabledInBroker": boolean
    }
  }
},
"storageMode": enum
},
"vpcConnectionInfo": {
  "creationTime": "string",
  "owner": "string",
  "userIdentity": {
    "principalId": "string",
    "type": enum
  },
  "vpcConnectionArn": "string"
}
}
],
"nextToken": "string"
}

```

Error schema

```

{
  "invalidParameter": "string",

```

```
"message": "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.

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

provisionedThroughput

EBS volume provisioned throughput information.

Type: [ProvisionedThroughput](#)

Required: False

volumeSizeGB

Size of the EBS volume to update.

Type: integer

Required: False

BrokerLogs

The broker logs configuration for this MSK cluster.

cloudWatchLogs

Details of the CloudWatch Logs destination for broker logs.

Type: [CloudWatchLogs](#)

Required: False

firehose

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

Type: [Firehose](#)

Required: False

s3

Details of the Amazon S3 destination for broker logs.

Type: [S3](#)

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

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

unauthenticated

Details for ClientAuthentication using no authentication.

Type: [Unauthenticated](#)

Required: False

ClientBroker

Client-broker encryption in transit setting.

TLS

TLS_PLAINTEXT

PLAINTEXT

CloudWatchLogs

Details of the CloudWatch Logs destination for broker logs.

enabled

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

Type: boolean

Required: True

logGroup

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

Type: string

Required: False

ClusterOperationInfo

Returns information about a cluster operation.

clientRequestId

The ID of the API request that triggered this operation.

Type: string

Required: False

clusterArn

ARN of the cluster.

Type: string

Required: False

creationTime

The time that the operation was created.

Type: string

Required: False

endTime

The time at which the operation finished.

Type: string

Required: False

errorInfo

Describes the error if the operation fails.

Type: [ErrorInfo](#)

Required: False

operationArn

ARN of the cluster operation.

Type: string

Required: False

operationState

State of the cluster operation.

Type: string

Required: False

operationSteps

Steps completed during the operation.

Type: Array of type [ClusterOperationStep](#)

Required: False

operationType

Type of the cluster operation.

Type: string

Required: False

sourceClusterInfo

Information about cluster attributes before a cluster is updated.

Type: [MutableClusterInfo](#)

Required: False

targetClusterInfo

Information about cluster attributes after a cluster is updated.

Type: [MutableClusterInfo](#)

Required: False

vpcConnectionInfo

Description of the VPC connection for CreateVpcConnection and DeleteVpcConnection operations.

Type: [VpcConnectionInfo](#)

Required: False

ClusterOperationStep

Step taken during a cluster operation.

stepInfo

Information about the step and its status.

Type: [ClusterOperationStepInfo](#)

Required: False

stepName

The name of the step.

Type: string

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.

publicAccess

Access control settings for the cluster's brokers.

Type: [PublicAccess](#)

Required: False

vpcConnectivity

VPC connection control settings for brokers

Type: [VpcConnectivity](#)

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.

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

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

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.

encryptionAtRest

The data-volume encryption details.

Type: [EncryptionAtRest](#)

Required: False

encryptionInTransit

The details for encryption in transit.

Type: [EncryptionInTransit](#)

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.

invalidParameter

The parameter that caused the error.

Type: string
Required: False

message

The description of the error.

Type: string
Required: False

ErrorInfo

Returns information about an error state of the cluster.

errorCode

A number describing the error programmatically.

Type: string
Required: False

errorString

An optional field to provide more details about 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

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).

clusterOperationInfoList

An array of cluster operation information objects.

Type: Array of type [ClusterOperationInfo](#)

Required: False

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

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.

brokerCountUpdateInfo

Describes brokers being changed during a broker count update.

Type: [BrokerCountUpdateInfo](#)

Required: False

brokerEBSVolumeInfo

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

Type: Array of type [BrokerEBSVolumeInfo](#)

Required: False

clientAuthentication

Client Authentication details.

Type: [ClientAuthentication](#)

Required: False

configurationInfo

Information about the changes in the configuration of the brokers.

Type: [ConfigurationInfo](#)

Required: False

connectivityInfo

Defines the connectivity setting of the cluster.

Type: [ConnectivityInfo](#)

Required: False

encryptionInfo

Encryption details.

Type: [EncryptionInfo](#)

Required: False

enhancedMonitoring

The monitoring level.

Type: [EnhancedMonitoring](#)

Required: False

instanceType

The broker type.

Type: string

Required: False

kafkaVersion

The Apache Kafka version.

Type: string

Required: False

loggingInfo

LoggingInfo details.

Type: [LoggingInfo](#)

Required: False

numberOfBrokerNodes

The number of broker nodes in the cluster.

Type: integer

Required: False

openMonitoring

Open monitoring details.

Type: [OpenMonitoring](#)

Required: False

storageMode

This controls storage mode for supported storage tiers.

Type: [StorageMode](#)

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.

jmxExporter

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

Type: [JmxExporter](#)

Required: False

nodeExporter

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

Type: [NodeExporter](#)

Required: False

ProvisionedThroughput

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

enabled

Provisioned throughput is enabled or not.

Type: boolean

Required: False

volumeThroughput

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

Type: integer

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

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

enabled

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

Type: boolean

Required: True

prefix

The S3 prefix that is the destination for broker logs.

Type: string

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

StorageMode

Controls storage mode for various supported storage tiers.

LOCAL

TIERED

Tls

Details for client authentication using TLS.

certificateAuthorityArnList

List of Amazon 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.

creationTime

The time when Amazon MSK creates the VPC Connection.

Type: string

Required: False

owner

The owner of the VPC Connection.

Type: string

Required: False

userIdentity

Description of the requester that calls the API operation.

Type: [UserIdentity](#)

Required: False

vpcConnectionArn

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

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

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

Status code	Response model	Description
429	Error	429 response
500	Error	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	Error	503 response

Schemas

Request bodies

PATCH schema

```
{
  "clientAuthentication": {
    "sasl": {
      "iam": {
        "enabled": boolean
      },
      "scram": {
        "enabled": boolean
      }
    },
    "tls": {
      "certificateAuthorityArnList": [
        "string"
      ],
      "enabled": boolean
    },
    "unauthenticated": {
      "enabled": boolean
    }
  },
  "currentVersion": "string",
  "encryptionInfo": {
    "encryptionAtRest": {
      "dataVolumeKMSKeyId": "string"
    }
  }
}
```

```
    },
    "encryptionInTransit": {
      "clientBroker": enum,
      "inCluster": boolean
    }
  }
}
```

Response bodies

UpdateSecurityResponse schema

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

Error schema

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

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

unauthenticated

Details for ClientAuthentication using no authentication.

Type: [Unauthenticated](#)

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.

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

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

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.

encryptionAtRest

The data-volume encryption details.

Type: [EncryptionAtRest](#)

Required: False

encryptionInTransit

The details for encryption in transit.

Type: [EncryptionInTransit](#)

Required: False

Error

Returns information about an error.

invalidParameter

The parameter that caused the error.

Type: string

Required: False

message

The description of 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 Amazon 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.

clientAuthentication

The client authentication info details.

Type: [ClientAuthentication](#)

Required: False

currentVersion

Current cluster version.

Type: string

Required: True

encryptionInfo

The encryption info details.

Type: [EncryptionInfo](#)

Required: False

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

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

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	CreateClusterResponse	Successful response.
400	Error	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	Error	The request is not authorized. The provided credentials couldn't be validated.
403	Error	Access forbidden. Check your credentials and then retry your request.
404	Error	The resource could not be found due to incorrect input. Correct the input, then retry the request.
409	Error	This cluster name already exists. Retry your request using another name.
429	Error	429 response
500	Error	There was an unexpected internal server error. Retrying

Status code	Response model	Description
503	Error	your request might resolve the issue. 503 response

Schemas

Request bodies

POST schema

```
{
  "brokerNodeGroupInfo": {
    "brokerAZDistribution": enum,
    "clientSubnets": [
      "string"
    ],
    "connectivityInfo": {
      "publicAccess": {
        "type": "string"
      },
      "vpcConnectivity": {
        "clientAuthentication": {
          "sasl": {
            "iam": {
              "enabled": boolean
            },
            "scram": {
              "enabled": boolean
            }
          },
          "tls": {
            "enabled": boolean
          }
        }
      }
    },
    "instanceType": "string",
    "securityGroups": [
      "string"
    ]
  }
}
```

```
],
  "storageInfo": {
    "ebsStorageInfo": {
      "provisionedThroughput": {
        "enabled": boolean,
        "volumeThroughput": integer
      },
      "volumeSize": integer
    }
  },
  "zoneIds": [
    "string"
  ]
},
"clientAuthentication": {
  "sasl": {
    "iam": {
      "enabled": boolean
    },
    "scram": {
      "enabled": boolean
    }
  },
  "tls": {
    "certificateAuthorityArnList": [
      "string"
    ],
    "enabled": boolean
  },
  "unauthenticated": {
    "enabled": boolean
  }
},
"clusterName": "string",
"configurationInfo": {
  "arn": "string",
  "revision": integer
},
"encryptionInfo": {
  "encryptionAtRest": {
    "dataVolumeKMSKeyId": "string"
  },
  "encryptionInTransit": {
    "clientBroker": enum,
```

```

    "inCluster": boolean
  }
},
"enhancedMonitoring": enum,
"kafkaVersion": "string",
"loggingInfo": {
  "brokerLogs": {
    "cloudWatchLogs": {
      "enabled": boolean,
      "logGroup": "string"
    },
    "firehose": {
      "deliveryStream": "string",
      "enabled": boolean
    },
    "s3": {
      "bucket": "string",
      "enabled": boolean,
      "prefix": "string"
    }
  }
},
"numberOfBrokerNodes": integer,
"openMonitoring": {
  "prometheus": {
    "jmxExporter": {
      "enabledInBroker": boolean
    },
    "nodeExporter": {
      "enabledInBroker": boolean
    }
  }
},
"storageMode": enum,
"tags": {
}
}

```

Response bodies

ListClustersResponse schema

```
{
```

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

```
},
"clientAuthentication": {
  "sasl": {
    "iam": {
      "enabled": boolean
    },
    "scram": {
      "enabled": boolean
    }
  },
  "tls": {
    "certificateAuthorityArnList": [
      "string"
    ],
    "enabled": boolean
  },
  "unauthenticated": {
    "enabled": boolean
  }
},
"clusterArn": "string",
"clusterName": "string",
"creationTime": "string",
"currentBrokerSoftwareInfo": {
  "configurationArn": "string",
  "configurationRevision": integer,
  "kafkaVersion": "string"
},
"currentVersion": "string",
"customerActionStatus": enum,
"encryptionInfo": {
  "encryptionAtRest": {
    "dataVolumeKMSKeyId": "string"
  },
  "encryptionInTransit": {
    "clientBroker": enum,
    "inCluster": boolean
  }
},
"enhancedMonitoring": enum,
"loggingInfo": {
  "brokerLogs": {
    "cloudWatchLogs": {
      "enabled": boolean,
```

```

    "logGroup": "string"
  },
  "firehose": {
    "deliveryStream": "string",
    "enabled": boolean
  },
  "s3": {
    "bucket": "string",
    "enabled": boolean,
    "prefix": "string"
  }
},
"numberOfBrokerNodes": integer,
"openMonitoring": {
  "prometheus": {
    "jmxExporter": {
      "enabledInBroker": boolean
    },
    "nodeExporter": {
      "enabledInBroker": boolean
    }
  }
},
"state": enum,
"stateInfo": {
  "code": "string",
  "message": "string"
},
"storageMode": enum,
"tags": {
},
"zookeeperConnectString": "string",
"zookeeperConnectStringTls": "string"
}
],
"nextToken": "string"
}

```

CreateClusterResponse schema

```

{
  "clusterArn": "string",

```

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

Error schema

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

Properties

BrokerAZDistribution

This parameter is currently not in use.

DEFAULT

BrokerLogs

The broker logs configuration for this MSK cluster.

cloudWatchLogs

Details of the CloudWatch Logs destination for broker logs.

Type: [CloudWatchLogs](#)

Required: False

firehose

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

Type: [Firehose](#)

Required: False

s3

Details of the Amazon S3 destination for broker logs.

Type: [S3](#)

Required: False

BrokerNodeGroupInfo

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

brokerAZDistribution

This parameter is currently not in use.

Type: [BrokerAZDistribution](#)

Required: False

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

connectivityInfo

Information about the cluster's connectivity setting.

Type: [ConnectivityInfo](#)

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

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

storageInfo

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

Type: [StorageInfo](#)

Required: False

zonelds

The zonelds for brokers in customer account.

Type: Array of type string

Required: False

BrokerSoftwareInfo

Information about the current software installed on the cluster.

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

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

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

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

unauthenticated

Details for ClientAuthentication using no authentication.

Type: [Unauthenticated](#)

Required: False

ClientBroker

Client-broker encryption in transit setting.

TLS

TLS_PLAINTEXT

PLAINTEXT

CloudWatchLogs

Details of the CloudWatch Logs destination for broker logs.

enabled

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

Type: boolean

Required: True

logGroup

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

Type: string

Required: False

ClusterInfo

Returns information about a cluster.

activeOperationArn

Arn of active cluster operation.

Type: string

Required: False

brokerNodeGroupInfo

Information about the broker nodes.

Type: [BrokerNodeGroupInfo](#)

Required: False

clientAuthentication

Includes all client authentication information.

Type: [ClientAuthentication](#)

Required: False

clusterArn

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

Type: string

Required: False

clusterName

The name of the cluster.

Type: string

Required: False

creationTime

The time when the cluster was created.

Type: string

Required: False

currentBrokerSoftwareInfo

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

Type: [BrokerSoftwareInfo](#)

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

customerActionStatus

Determines if there is an action required from the customer.

Type: [CustomerActionStatus](#)

Required: False

encryptionInfo

Includes all encryption-related information.

Type: [EncryptionInfo](#)

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

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

numberOfBrokerNodes

The number of broker nodes in the cluster.

Type: integer

Required: False

openMonitoring

Settings for open monitoring using Prometheus.

Type: [OpenMonitoring](#)

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

stateInfo

Includes information of the cluster state.

Type: [StateInfo](#)

Required: False

storageMode

This controls storage mode for supported storage tiers.

Type: [StorageMode](#)

Required: False

tags

Tags attached to the cluster.

Type: object

Required: False

zookeeperConnectString

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

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

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.

publicAccess

Access control settings for the cluster's brokers.

Type: [PublicAccess](#)

Required: False

vpcConnectivity

VPC connection control settings for brokers

Type: [VpcConnectivity](#)

Required: False

CreateClusterRequest

Creates a cluster.

brokerNodeGroupInfo

Information about the broker nodes in the cluster.

Type: [BrokerNodeGroupInfo](#)

Required: True

clientAuthentication

Includes all client authentication related information.

Type: [ClientAuthentication](#)

Required: False

clusterName

The name of the cluster.

Type: string

Required: True

MinLength: 1

MaxLength: 64

configurationInfo

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

Type: [ConfigurationInfo](#)

Required: False

encryptionInfo

Includes all encryption-related information.

Type: [EncryptionInfo](#)

Required: False

enhancedMonitoring

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

Type: [EnhancedMonitoring](#)

Required: False

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

loggingInfo

Logging Info details.

Type: [LoggingInfo](#)

Required: False

numberOfBrokerNodes

The number of broker nodes in the cluster.

Type: integer

Required: True

openMonitoring

The settings for open monitoring.

Type: [OpenMonitoringInfo](#)

Required: False

storageMode

This controls storage mode for supported storage tiers.

Type: [StorageMode](#)

Required: False

tags

Create tags when creating the cluster.

Type: object

Required: False

CreateClusterResponse

Returns information about the created cluster.

clusterArn

The Amazon Resource Name (ARN) of the cluster.

Type: string

Required: False

clusterName

The name of the MSK cluster.

Type: string

Required: False

state

The state of the cluster. 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.

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

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

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.

encryptionAtRest

The data-volume encryption details.

Type: [EncryptionAtRest](#)

Required: False

encryptionInTransit

The details for encryption in transit.

Type: [EncryptionInTransit](#)

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.

invalidParameter

The parameter that caused the error.

Type: string
Required: False

message

The description of 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.

clusterInfoList

Information on each of the MSK clusters in the response.

Type: Array of type [ClusterInfo](#)

Required: False

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

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.

jmxExporter

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

Type: [JmxExporter](#)

Required: False

nodeExporter

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

Type: [NodeExporter](#)

Required: False

PrometheusInfo

Prometheus details.

jmxExporter

JMX Exporter details.

Type: [JmxExporterInfo](#)

Required: False

nodeExporter

Node Exporter details.

Type: [NodeExporterInfo](#)

Required: False

ProvisionedThroughput

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

enabled

Provisioned throughput is enabled or not.

Type: boolean

Required: False

volumeThroughput

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

Type: integer

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

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

enabled

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

Type: boolean

Required: True

prefix

The S3 prefix that is the destination for broker logs.

Type: string

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

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 Amazon 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

Clusters clusterArn Client-vpc-connection

URI

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

HTTP methods

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

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	RejectClientVpcConnectionResponse	Successful response.

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

Schemas

Request bodies

PUT schema

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

Response bodies

RejectClientVpcConnectionResponse schema

```
{  
}
```

Error schema

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

Properties

Error

Returns information about an error.

invalidParameter

The parameter that caused the error.

Type: string

Required: False

message

The description of 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

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.

Name	Type	Required	Description
			When the result of the operation is truncated, the call returns <code>NextToken</code> in the response. To get the next batch, provide this token in your next request.
<code>maxResults</code>	String	False	The maximum number of results to return in the response (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	ListClientVpcConnectionsResponse	Successful response.
400	Error	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	Error	The request is not authorized. The provided credentials couldn't be validated.

Status code	Response model	Description
403	Error	Access forbidden. Check your credentials and then retry your request.
404	Error	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	Error	429 response
500	Error	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	Error	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": [
    {
      "authentication": "string",
      "creationTime": "string",
      "owner": "string",
      "state": enum,
      "vpcConnectionArn": "string"
    }
  ],
  "nextToken": "string"
}
```

Error schema

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

Properties

ClientVpcConnection

VPC Connection description

authentication

The type of private link authentication.

Type: string

Required: False

creationTime

The time which the VPC Connection is created.

Type: string

Required: False

owner

The Owner of the VPC Connection.

Type: string

Required: False

state

State of the Remote VPC Connection.

Type: [VpcConnectionState](#)

Required: False

vpcConnectionArn

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

Type: string

Required: True

Error

Returns information about an error.

invalidParameter

The parameter that caused the error.

Type: string

Required: False

message

The description of 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

Clusters clusterArn Notifications

URI

/v1/clusters/*clusterArn*/notifications

HTTP methods

GET

Operation ID: ListClusterHealthAlertsResources

Returns information about all health alerts in a 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

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	ListClusterHealthAlertsResponse	Successful response.
400	Error	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	Error	The request is not authorized. The provided credentials couldn't be validated.
403	Error	Access forbidden. Check your credentials and then retry your request.

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

ListClusterHealthAlertsResponse schema

```
{
  "clusterAlertsInfoList": [
    {
      "clusterAlerts": {
        "category": enum,
        "clusterComponent": [
          "string"
        ],
        "createdDate": "string",
        "name": enum
      },
      "clusterArn": "string",
      "customerActionStatus": enum
    }
  ],
  "nextToken": "string"
}
```

Error schema

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

Properties

ClusterAlerts

Cluster alert details for the cluster.

category

The category of the cluster alert.

Type: [EventCategory](#)

Required: False

clusterComponent

A list of brokers that have cluster alerts.

Type: Array of type string

Required: False

createdDate

The time at which the alert was created.

Type: string

Required: False

name

Name of the alert type.

Type: [EventType](#)

Required: False

ClusterAlertsInfo

The info and list of alerts for a cluster.

clusterAlerts

The cluster alerts details for the cluster.

Type: [ClusterAlerts](#)

Required: False

clusterArn

The Amazon Resource Name (ARN) of the cluster.

Type: string

Required: False

customerActionStatus

The type of action required in response to a cluster alert.

Type: [CustomerActionStatus](#)

Required: False

CustomerActionStatus

A type of an action required from the customer.

CRITICAL_ACTION_REQUIRED

ACTION_RECOMMENDED

NONE

Error

Returns information about an error.

invalidParameter

The parameter that caused the error.

Type: string

Required: False

message

The description of the error.

Type: string

Required: False

EventCategory

The category of the cluster alert.

ISSUE
NOTIFICATION
SCHEDULED_CHANGE

EventType

Name of the alert type.

DATA_DISK_OVERFLOW
DATA_DISK_USAGE_80
DATA_DISK_USAGE_60

ListClusterHealthAlertsResponse

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

clusterAlertsInfoList

A detailed list of cluster alerts for a cluster.

Type: Array of type [ClusterAlertsInfo](#)

Required: False

nextToken

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

Type: string

Required: False

Clusters clusterArn Policy

URI

/v1/clusters/*clusterArn*/policy

HTTP methods

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	DeleteClusterPolicyResponse	Successful response.
400	Error	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	Error	The request is not authorized. The provided credentials couldn't be validated.
403	Error	Access forbidden. Check your credentials and then retry your request.
404	Error	The resource could not be found due to incorrect input.

Status code	Response model	Description
		Correct the input, then retry the request.
429	Error	429 response
500	Error	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	Error	503 response

GET

Operation ID: GetClusterPolicy

Get 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	GetClusterPolicyResponse	Successful response.
400	Error	The request isn't valid because the input is incorrect

Status code	Response model	Description
401	Error	. Correct your input and then submit it again.
403	Error	The request is not authorized. The provided credentials couldn't be validated.
404	Error	Access forbidden. Check your credentials and then retry your request.
429	Error	The resource could not be found due to incorrect input. Correct the input, then retry the request.
500	Error	429 response
503	Error	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

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	PutClusterPolicyResponse	Successful response.
400	Error	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	Error	The request is not authorized. The provided credentials couldn't be validated.

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

Schemas

Request bodies

PUT schema

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

Response bodies

DeleteClusterPolicyResponse schema

```
{  
}
```

GetClusterPolicyResponse schema

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

PutClusterPolicyResponse schema

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

Error schema

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

Properties

DeleteClusterPolicyResponse

Delete resource policy for MSK cluster

Error

Returns information about an error.

invalidParameter

The parameter that caused the error.

Type: string

Required: False

message

The description of 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

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

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

invalidParameter

The parameter that caused the error.

Type: string

Required: False

message

The description of the error.

Type: string

Required: False

GetCompatibleKafkaVersionsResponse

Response body for GetCompatibleKafkaVersions.

compatibleKafkaVersions

A list of CompatibleKafkaVersion objects.

Type: Array of type [CompatibleKafkaVersion](#)

Required: False

Configuration

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

URI

/v1/configurations/*arn*

HTTP methods

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	DeleteConfigurationResponse	200 response
400	Error	The request isn't valid because the input is incorrect . Correct your input and then submit it again.

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

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

Name	Type	Required	Description
			and all of its revisions .

Responses

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

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

Schemas

Request bodies

PUT schema

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

Response bodies

DeleteConfigurationResponse schema

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

DescribeConfigurationResponse schema

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

UpdateConfigurationResponse schema

```
{
```

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

Error schema

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

Arn

The Amazon Resource Name (ARN) of the configuration.

Type: string

Required: False

state

State of the configuration.

Type: [ConfigurationState](#)

Required: False

DescribeConfigurationResponse

Response body for DescribeConfiguration.

arn

The Amazon Resource Name (ARN) of the configuration.

Type: string

Required: True

creationTime

The time when the configuration was created.

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

latestRevision

Latest revision of the configuration.

Type: [ConfigurationRevision](#)

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

state

State of the configuration.

Type: [ConfigurationState](#)

Required: False

Error

Returns information about an error.

invalidParameter

The parameter that caused the error.

Type: string

Required: False

message

The description of 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

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

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

Responses

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

Status code	Response model	Description
500	Error	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	Error	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

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

Error schema

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

Properties

DescribeConfigurationRevisionResponse

Response body for DescribeConfigurationRevision.

arn

The Amazon Resource Name (ARN) of the configuration.

Type: string

Required: True

creationTime

The time when the configuration was created.

Type: string

Required: True

description

The description of the configuration.

Type: string

Required: True

revision

The revision number.

Type: integer

Required: True

Format: int64

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

Error

Returns information about an error.

invalidParameter

The parameter that caused the error.

Type: string

Required: False

message

The description of the error.

Type: string

Required: False

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

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	ListConfigurationRevisionsResponse	200 response
400	Error	The request isn't valid because the input is incorrect. Correct your input and then submit it again.
401	Error	The request is not authorized. The provided credentials couldn't be validated.
403	Error	Access forbidden. Check your credentials and then retry your request.

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

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

invalidParameter

The parameter that caused the error.

Type: string

Required: False

message

The description of 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

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.

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

Status code	Response model	Description
429	Error	429 response
500	Error	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	Error	503 response

OPTIONS

Enable CORS by returning the correct headers.

Responses

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

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

Status code	Response model	Description
409	Error	Correct the input, then retry the request.
429	Error	This cluster name already exists. Retry your request using another name.
500	Error	429 response
503	Error	There was an unexpected internal server error. Retrying your request might resolve the issue.
		503 response

Schemas

Request bodies

POST schema

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

Response bodies

ListConfigurationsResponse schema

```
{
  "configurations": [
    {
```

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

CreateConfigurationResponse schema

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

Error schema

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

Properties

Configuration

Represents an MSK Configuration.

arn

The Amazon Resource Name (ARN) of the configuration.

Type: string

Required: True

creationTime

The time when the configuration was created.

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

latestRevision

Latest revision of the configuration.

Type: [ConfigurationRevision](#)

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

state

State of the configuration.

Type: [ConfigurationState](#)

Required: False

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.

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

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

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`

arn

The Amazon Resource Name (ARN) of the configuration.

Type: string

Required: False

creationTime

The time when the configuration was created.

Type: string

Required: False

latestRevision

Latest revision of the configuration.

Type: [ConfigurationRevision](#)

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

Error

Returns information about an error.

invalidParameter

The parameter that caused the error.

Type: string

Required: False

message

The description of the error.

Type: string

Required: False

ListConfigurationsResponse

The response contains an array of Configuration and a next token if the response is truncated.

configurations

An array of MSK configurations.

Type: Array of type [Configuration](#)

Required: False

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

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

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

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 uniquely identifies the cluster.

Responses

Status code	Response model	Description
200	UpdateMonitoringRequest	Successful response.
400	Error	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	Error	The request is not authorized. The provided credentials couldn't be validated.

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

Schemas

Request bodies

PUT schema

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

```
    "bucket": "string",
    "enabled": boolean,
    "prefix": "string"
  }
},
"openMonitoring": {
  "prometheus": {
    "jmxExporter": {
      "enabledInBroker": boolean
    },
    "nodeExporter": {
      "enabledInBroker": boolean
    }
  }
}
```

Response bodies

UpdateMonitoringRequest schema

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

Error schema

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

Properties

BrokerLogs

The broker logs configuration for this MSK cluster.

cloudWatchLogs

Details of the CloudWatch Logs destination for broker logs.

Type: [CloudWatchLogs](#)

Required: False

firehose

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

Type: [Firehose](#)

Required: False

s3

Details of the Amazon S3 destination for broker logs.

Type: [S3](#)

Required: False

CloudWatchLogs

Details of the CloudWatch Logs destination for broker logs.

enabled

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

Type: boolean

Required: True

logGroup

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

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](#).

DEFAULT
PER_BROKER
PER_TOPIC_PER_BROKER
PER_TOPIC_PER_PARTITION

Error

Returns information about an error.

invalidParameter

The parameter that caused the error.

Type: string
Required: False

message

The description of 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.

jmxExporter

JMX Exporter details.

Type: [JmxExporterInfo](#)

Required: False

nodeExporter

Node Exporter details.

Type: [NodeExporterInfo](#)

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

enabled

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

Type: boolean

Required: True

prefix

The S3 prefix that is the destination for broker logs.

Type: string

Required: False

UpdateMonitoringRequest

Request body for UpdateMonitoring.

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

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

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

Reboot Broker

URI

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

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

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

Schemas

Request bodies

PUT schema

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

Response bodies

RebootBrokerResponse schema

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

Error schema

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

Properties

Error

Returns information about an error.

invalidParameter

The parameter that caused the error.

Type: string

Required: False

message

The description of 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

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 to return in the response (default maximum 100 results per API call). If there

Name	Type	Required	Description
			are more results, the response includes a NextToken parameter.

Responses

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

Status code	Response model	Description
503	Error	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

Name	Type	Required	Description
			uniquely identifies the cluster.

Responses

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

Status code	Response model	Description
429	Error	Correct the input, then retry the request.
500	Error	429 response
503	Error	There was an unexpected internal server error. Retrying your request might resolve the issue.
		503 response

Schemas

Request bodies

PATCH schema

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

POST schema

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

Response bodies

ListScramSecretsResponse schema

```
{
```



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

BatchDisassociateScramSecretResponse schema

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

BatchAssociateScramSecretResponse schema

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

Error schema

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

invalidParameter

The parameter that caused the error.

Type: string

Required: False

message

The description of the error.

Type: string

Required: False

ListScramSecretsResponse

Information about scram secrets associated to the cluster.

nextToken

Paginated results marker.

Type: string

Required: False

secretArnList

The list of scram secrets associated with the cluster.

Type: Array of type string

Required: False

UnprocessedScramSecret

Error info for scram secret associate/disassociate failure.

errorCode

Error code for associate/disassociate failure.

Type: string

Required: False

errorMessage

Error message for associate/disassociate failure.

Type: string

Required: False

secretArn

Amazon Secrets Manager secret Amazon Resource Name (ARN).

Type: string

Required: False

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

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, the following restrictions apply:

Name	Type	Required	Description
			<ul style="list-style-type: none">• 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.• 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.• Tag keys must be between 1 and 128 Unicode characters in length.• Tag keys must consist of the following characters: Unicode letters, digits, white space, and the following special characters: <code>_ . / = + - @</code>.

Responses

Status code	Response model	Description
204	None	204 response
400	Error	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	Error	The request is not authorized. The provided credentials couldn't be validated.
403	Error	Access forbidden. Check your credentials and then retry your request.
404	Error	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	Error	429 response
500	Error	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	Error	503 response

GET

Operation ID: ListTagsForResource

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

Path parameters

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

Responses

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

Status code	Response model	Description
500	Error	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	Error	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

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

Status code	Response model	Description
503	Error	your request might resolve the issue. 503 response

Schemas

Request bodies

POST schema

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

Response bodies

ListTagsForResourceResponse schema

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

Error schema

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

Properties

Error

Returns information about an error.

invalidParameter

The parameter that caused the error.

Type: string

Required: False

message

The description of 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

UpdateStorage

Updates cluster broker volume size (or) sets cluster storage mode to TIERED.

URI

/v1/clusters/*clusterArn*/storage

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

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

Schemas

Request bodies

PUT schema

```
{
  "currentVersion": "string",
  "provisionedThroughput": {
    "enabled": boolean,
    "volumeThroughput": integer
  },
  "storageMode": enum,
  "volumeSizeGB": integer
}
```

Response bodies

UpdateStorageResponse schema

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

Error schema

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

Properties

Error

Returns information about an error.

invalidParameter

The parameter that caused the error.

Type: string

Required: False

message

The description of the error.

Type: string

Required: False

ProvisionedThroughput

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

enabled

Provisioned throughput is enabled or not.

Type: boolean

Required: False

volumeThroughput

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

Type: integer

Required: False

StorageMode

Controls storage mode for various supported storage tiers.

LOCAL

TIERED

UpdateStorageRequest

Request object for UpdateStorageApi.

currentVersion

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

Type: string

Required: True

provisionedThroughput

EBS volume provisioned throughput information.

Type: [ProvisionedThroughput](#)

Required: False

storageMode

Controls storage mode for supported storage tiers.

Type: [StorageMode](#)

Required: False

volumeSizeGB

size of the EBS volume to update.

Type: integer

Required: False

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

Vpc-connection

URI

/v1/vpc-connection

HTTP methods

OPTIONS

Enable CORS by returning correct headers.

Responses

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

POST

Operation ID: CreateVpcConnection

Create remote VPC connection.

Responses

Status code	Response model	Description
200	CreateVpcConnectionResponse	HTTP Status Code 200: OK.

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

Schemas

Request bodies

POST schema

```
{  
  "authentication": "string",  
  "clientSubnets": [  
    "string"  
  ]  
}
```

```
],
  "securityGroups": [
    "string"
  ],
  "tags": {
  },
  "targetClusterArn": "string",
  "vpcId": "string"
}
```

Response bodies

CreateVpcConnectionResponse schema

```
{
  "authentication": "string",
  "clientSubnets": [
    "string"
  ],
  "creationTime": "string",
  "securityGroups": [
    "string"
  ],
  "state": enum,
  "tags": {
  },
  "vpcConnectionArn": "string",
  "vpcId": "string"
}
```

Error schema

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

Properties

CreateVpcConnectionRequest

Creates a remote VPC connection for account client.

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

clientSubnets

The list of subnets in the client VPC to connect to.

Type: Array of 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

targetClusterArn

The Amazon Resource Name (ARN) of the cluster.

Type: string

Required: True

vpId

The VPC id of the remote client.

Type: string

Required: True

CreateVpcConnectionResponse

Returns information about the created VPC connection.

authentication

The type of authentication to be uses by remote clients.

Type: string

Required: False

MinLength: 3

MaxLength: 10

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

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

vpcConnectionArn

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

Type: string

Required: False

vpcId

The VPC id of the remote client.

Type: string

Required: False

Error

Returns information about an error.

invalidParameter

The parameter that caused the error.

Type: string

Required: False

message

The description of the error.

Type: string

Required: False

VpcConnectionState

State of the vpc connection

CREATING

AVAILABLE

INACTIVE

UPDATING

DEACTIVATING

DELETING

FAILED

REJECTED

REJECTING

Vpc-connection arn

URI

/v1/vpc-connection/*arn*

HTTP methods

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	DeleteVpcConnectionResponse	HTTP Status Code 200: OK.
400	Error	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	Error	The request is not authorized. The provided credentials couldn't be validated.
403	Error	Access forbidden. Check your credentials and then retry your request.
404	Error	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	Error	429 response

Status code	Response model	Description
500	Error	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	Error	503 response

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	DescribeVpcConnectionResponse	HTTP Status Code 200: OK.
400	Error	The request isn't valid because the input is incorrect . Correct your input and then submit it again.

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

DeleteVpcConnectionResponse schema

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

DescribeVpcConnectionResponse schema

```
{
  "authentication": "string",
  "creationTime": "string",
  "securityGroups": [
    "string"
  ],
  "state": enum,
  "subnets": [
    "string"
  ],
  "tags": {
  },
  "targetClusterArn": "string",
  "vpcConnectionArn": "string",
  "vpcId": "string"
}
```

Error schema

```
{
```

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

Properties

DeleteVpcConnectionResponse

Returns information about the deleted VPC connection.

state

State of the Remote VPC Connection.

Type: [VpcConnectionState](#)

Required: False

vpcConnectionArn

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

Type: string

Required: False

DescribeVpcConnectionResponse

Response body for DescribeVpcConnection.

authentication

The type of private link authentication.

Type: string

Required: False

creationTime

The time when the configuration was created.

Type: string

Required: True

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

subnets

The list of subnets in Remote VPC Connection.

Type: Array of type string

Required: False

tags

Tags attached to the vpc connection.

Type: object

Required: False

targetClusterArn

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

Type: string

Required: True

vpcConnectionArn

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

Type: string

Required: True

vpclId

The description of the vpclId.

Type: string

Required: False

Error

Returns information about an error.

invalidParameter

The parameter that caused the error.

Type: string

Required: False

message

The description of the error.

Type: string

Required: False

VpcConnectionState

State of the vpc connection

CREATING

AVAILABLE

INACTIVE

UPDATING

DEACTIVATING

DELETING

FAILED

REJECTED
REJECTING

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	ListVpcConnectionsResponse	HTTP Status Code 200: OK.
400	Error	The request isn't valid because the input is incorrect . Correct your input and then submit it again.
401	Error	The request is not authorized. The provided credentials couldn't be validated.
403	Error	Access forbidden. Check your credentials and then retry your request.
404	Error	The resource could not be found due to incorrect input. Correct the input, then retry the request.
429	Error	429 response
500	Error	There was an unexpected internal server error. Retrying your request might resolve the issue.
503	Error	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": [
    {
      "authentication": "string",
      "creationTime": "string",
      "state": enum,
      "targetClusterArn": "string",
      "vpcConnectionArn": "string",
      "vpcId": "string"
    }
  ]
}
```

Error schema

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

Properties

Error

Returns information about an error.

invalidParameter

The parameter that caused the error.

Type: string

Required: False

message

The description of 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

authentication

The type of private link authentication.

Type: string

Required: False

creationTime

The time which the VPC Connection is created.

Type: string

Required: False

state

State of the Remote VPC Connection.

Type: [VpcConnectionState](#)

Required: False

targetClusterArn

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

Type: string

Required: True

vpcConnectionArn

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

Type: string

Required: True

vpclId

The description of the vpclId.

Type: string

Required: False

VpcConnectionState

State of the vpc connection

CREATING

AVAILABLE

INACTIVE

UPDATING

DEACTIVATING

DELETING

FAILED

REJECTED

REJECTING

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

Amazon Glossary

For the latest Amazon terminology, see the [Amazon glossary](#) in the *Amazon Web Services Glossary Reference*.