API Reference 2.0

Amazon MSK

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Amazon MSK: API Reference 2.0

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Amazon Managed Streaming for Apache Kafka API Reference 2.0

Welcome to API Reference 2.0. This API reference describes three new Amazon MSK operations: CreateClusterV2, ListClustersV2, and DescribeClusterV2. We recommend that you use these operations instead of the CreateCluster, ListClusters, and DescribeCluster that are described in Amazon MSK API Reference 1.0.

Operations

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

- CreateClusterV2

  Creates a serverless or provisioned cluster.
- DescribeClusterOperationV2
- DescribeClusterV2

  Returns information about a cluster.
- ListClusterOperationsV2
- ListClustersV2

  Lists all serverless and provisioned clusters.

Resources

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

Topics

- Cluster
- Clusters
- V2 Clusters clusterArn Operations
- V2 Operations clusterOperationArn

Cluster

Represents an Amazon MSK cluster.

URI

`/api/v2/clusters/`*`clusterArn`*

HTTP methods

GET

Operation ID: `DescribeClusterV2`

Returns information about a cluster.

Path parameters

Name	Type	Required	Description
`clusterArn`	String	True	ARN of the cluster to be described.

Responses

Status code	Response model	Description
200	DescribeClusterV2Response	HTTP Status Code 200: OK.
400	None	HTTP Status Code 400: Bad request due to incorrect input. Correct your request and then retry it.
401	None	HTTP Status Code 401: Unauthorized request. The provided credentials couldn't be validated.
403	None	HTTP Status Code 403: Access forbidden. Correct your credentials and then retry your request.
404	None	HTTP Status Code 404: Resource not found due to incorrect input. Correct your request and then retry it.
429	None	HTTP Status Code 429: Limit exceeded. Resource limit reached.
500	None	HTTP Status Code 500: Unexpected internal server error. Retrying your request might resolve the issue.
503	None	HTTP Status Code 503: Service Unavailable. Retrying

Status code	Response model	Description
		your request in some time might resolve the issue.

OPTIONS

Enable CORS by returning correct headers

Path parameters

Name	Type	Required	Description
clusterArn	String	True	ARN of the cluster to be described.

Responses

Status code	Response model	Description
200	None	200 response

Schemas

Response bodies

DescribeClusterV2Response schema

```
{
  "clusterInfo": {
    "clusterType": enum,
    "clusterArn": "string",
    "activeOperationArn": "string",
    "provisioned": {
      "encryptionInfo": {
        "encryptionInTransit": {
          "inCluster": boolean,
          "clientBroker": enum
        },
```

```
        "encryptionAtRest": {
          "dataVolumeKMSKeyId": "string"
        }
      },
      "zookeeperConnectString": "string",
      "customerActionStatus": enum,
      "zookeeperConnectStringTls": "string",
      "loggingInfo": {
        "brokerLogs": {
          "s3": {
            "bucket": "string",
            "prefix": "string",
            "enabled": boolean
          },
          "firehose": {
            "deliveryStream": "string",
            "enabled": boolean
          },
          "cloudWatchLogs": {
            "logGroup": "string",
            "enabled": boolean
          }
        }
      },
      "numberOfBrokerNodes": integer,
      "enhancedMonitoring": enum,
      "storageMode": enum,
      "clientAuthentication": {
        "sasl": {
          "iam": {
            "enabled": boolean
          },
          "scram": {
            "enabled": boolean
          }
        },
        "unauthenticated": {
          "enabled": boolean
        },
        "tls": {
          "certificateAuthorityArnList": [
            "string"
          ],
          "enabled": boolean
```

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

```
      "openMonitoring": {
        "prometheus": {
          "nodeExporter": {
            "enabledInBroker": boolean
          },
          "jmxExporter": {
            "enabledInBroker": boolean
          }
        }
      },
      "rebalancing": {
        "status": enum
      },
      "currentBrokerSoftwareInfo": {
        "configurationRevision": integer,
        "kafkaVersion": "string",
        "configurationArn": "string"
      }
    },
    "creationTime": "string",
    "clusterName": "string",
    "serverless": {
      "vpcConfigs": [
        {
          "securityGroupIds": [
            "string"
          ],
          "subnetIds": [
            "string"
          ]
        }
      ],
      "kafkaVersion": "string",
      "clientAuthentication": {
        "sasl": {
          "iam": {
            "enabled": boolean
          }
        }
      }
    },
    "stateInfo": {
      "code": "string",
      "message": "string"
```

```
    },
    "state": enum,
    "currentVersion": "string",
    "tags": {
    }
  }
}
```

Properties

BrokerAZDistribution

The distribution of broker nodes across Availability Zones.

DEFAULT

BrokerLogs

Broker Logs details for cluster.

s3

S3 Log destination details.

Type: S3
Required: False

firehose

Type: Firehose
Required: False

cloudWatchLogs

CloudWatch Log destination details.

Type: CloudWatchLogs
Required: False

BrokerNodeGroupInfo

Describes the setup to be used for the brokers.

clientSubnets

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

Type: Array of type string
Required: True

zoneIds

The zoneIds for brokers in customer account.

Type: Array of type string
Required: False

instanceType

The type of broker used for the cluster.

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

connectivityInfo

Information about the cluster access configuration.

Type: ConnectivityInfo
Required: False

securityGroups

The security groups to attach to the ENIs for the broker nodes.

Type: Array of type string

Required: False

brokerAZDistribution

The distribution of broker nodes across Availability Zones.

Type: BrokerAZDistribution
Required: False

storageInfo

Data volume information.

Type: StorageInfo
Required: False

BrokerSoftwareInfo

Information about current software installed in the cluster.

configurationRevision

Revision of the configuration to use.

Type: integer
Required: False
Format: int64

kafkaVersion

The version of Apache Kafka to install and run on the cluster.

Type: string
Required: False

configurationArn

ARN of the configuration used on the cluster.

Type: string
Required: False

ClientAuthentication

Includes all client authentication information.

sasl

Details for ClientAuthentication using SASL.

Type: Sasl
Required: False

unauthenticated

Details for ClientAuthentication using no authentication.

Type: Unauthenticated
Required: False

tls

Details for ClientAuthentication using TLS.

Type: Tls
Required: False

ClientBroker

Client-broker encryption in transit setting.

```
TLS
TLS_PLAINTEXT
PLAINTEXT
```

CloudWatchLogs

CloudWatchLogs details for BrokerLogs.

logGroup

CloudWatch LogGroup where the logs will be delivered.

Type: string
Required: False

enabled

Broker logs for destination CW enabled or not.

Type: boolean
Required: True

Cluster

Returns information about a cluster.

clusterType

Type of the backend cluster.

Type: ClusterType
Required: False

clusterArn

The Amazon Resource Name (ARN) of the cluster.

Type: string
Required: False

activeOperationArn

Arn of active cluster operation.

Type: string
Required: False

provisioned

Properties of a provisioned cluster.

Type: Provisioned
Required: False

creationTime

The time when the cluster was created.

Type: string
Required: False

clusterName

The name of the cluster.

Type: string
Required: False

serverless

Properties of a serverless cluster.

Type: Serverless
Required: False

stateInfo

Includes information of the cluster state.

Type: StateInfo
Required: False

state

State of the cluster.

Type: ClusterState
Required: False

currentVersion

Current version of cluster.

Type: string
Required: False

tags

Tags attached to the cluster.

Type: object
Required: False

ClusterState

The sate of an MSK cluster.

```
ACTIVE
CREATING
UPDATING
DELETING
FAILED
MAINTENANCE
REBOOTING_BROKER
HEALING
```

ClusterType

The type of backend cluster.

```
PROVISIONED
SERVERLESS
```

ConnectivityInfo

Broker access controls

vpcConnectivity

VPC connection control settings for brokers.

Type: VpcConnectivity
Required: False

publicAccess

Access control settings for brokers

Type: PublicAccess
Required: False

CustomerActionStatus

A type of an action required from the customer.

```
CRITICAL_ACTION_REQUIRED
ACTION_RECOMMENDED
NONE
```

DescribeClusterV2Response

Returns information about a cluster.

clusterInfo

Cluster information

Type: Cluster
Required: False

EBSStorageInfo

Contains information about the EBS storage volumes that are attached to the brokers.

provisionedThroughput

EBS volume provisioned throughput information.

Type: ProvisionedThroughput
Required: False

volumeSize

The size of the EBS volumes for the data drive on each of the brokers in GiB.

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

EncryptionAtRest

Details for encryption at rest.

dataVolumeKMSKeyId

KMS key used for data volume encryption.

Type: string
Required: True

EncryptionInTransit

Details for encryption in transit.

inCluster

In-cluster encryption in transit setting.

Type: boolean
Required: False

clientBroker

Client-broker encryption in transit setting.

Type: ClientBroker
Required: False

EncryptionInfo

Includes all encryption related information.

encryptionInTransit

Details for encryption in transit.

Type: EncryptionInTransit
Required: False

encryptionAtRest

Details for encryption at rest.

Type: EncryptionAtRest
Required: False

EnhancedMonitoring

Controls level of cluster metrics Amazon pushes to customer's cloudwatch account.

```
DEFAULT
PER_BROKER
PER_TOPIC_PER_BROKER
PER_TOPIC_PER_PARTITION
```

Firehose

Firehose details for BrokerLogs.

deliveryStream

Firehose delivery stream where the logs will be delivered.

Type: string
Required: False

enabled

Broker logs for destination firehose enabled or not.

Type: boolean
Required: True

IAM

Details for SASL/IAM client authentication.

enabled

SASL/IAM authentication is enabled or not.

Type: boolean
Required: False

JmxExporter

JMX Exporter details.

enabledInBroker

JMX Exporter being enabled in broker.

Type: boolean
Required: True

LoggingInfo

Logging info details for the cluster.

brokerLogs

Broker Logs details.

Type: BrokerLogs
Required: True

NodeExporter

Node Exporter details.

enabledInBroker

Node Exporter being enabled in broker.

Type: boolean
Required: True

OpenMonitoring

JMX and Node monitoring for cluster.

prometheus

Prometheus details.

Type: Prometheus
Required: True

Prometheus

Prometheus details.

nodeExporter

Node Exporter details.

Type: NodeExporter
Required: False

jmxExporter

JMX Exporter details.

Type: JmxExporter
Required: False

Provisioned

Properties of a provisioned cluster.

encryptionInfo

Includes all encryption related information.

Type: EncryptionInfo
Required: False

zookeeperConnectString

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

Type: string
Required: False

customerActionStatus

Determines if there is an action required from the customer.

Type: CustomerActionStatus
Required: False

zookeeperConnectStringTls

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

Type: string
Required: False

loggingInfo

Logging Info details.

Type: LoggingInfo
Required: False

numberOfBrokerNodes

The number of brokers to create in the cluster.

Type: integer
Required: False

enhancedMonitoring

This knob controls level of metrics pushed customer's cloudwatch account.

Type: EnhancedMonitoring
Required: False

storageMode

This controls storage mode for supported storage tiers.

Type: StorageMode
Required: False

clientAuthentication

Includes all client authentication information.

Type: ClientAuthentication
Required: False

brokerNodeGroupInfo

Information about the brokers of the cluster.

Type: BrokerNodeGroupInfo
Required: False

openMonitoring

Open monitoring details.

Type: OpenMonitoring
Required: False

rebalancing

Contains information about intelligent rebalancing for the cluster.

Type: Rebalancing
Required: False

currentBrokerSoftwareInfo

Information about the version of the software that is deployed on the brokers of the cluster.

Type: BrokerSoftwareInfo
Required: False

ProvisionedThroughput

Contains information about provisioned throughput for the EBS storage volumes that are attached to the brokers.

volumeThroughput

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

Type: integer
Required: False

enabled

Whether provisioned throughput is turned on.

Type: boolean
Required: False

PublicAccess

Broker access controls

type

If public access is disabled, or if enabled the EIP provider

Type: string
Required: False

Rebalancing

Contains information about intelligent rebalancing for the cluster. Intelligent rebalancing performs automatic partition balancing operations when you scale your clusters up or down.

status

Intelligent rebalancing status. The default intelligent rebalancing status is ACTIVE for all new MSK Provisioned clusters with Express brokers.

Type: RebalancingStatus
Required: True

RebalancingStatus

Intelligent rebalancing status. The default intelligent rebalancing status is ACTIVE for all new MSK Provisioned clusters with Express brokers.

```
PAUSED
ACTIVE
```

S3

S3 details for BrokerLogs.

bucket

Name of the bucket where the logs will be delivered.

Type: string
Required: False

prefix

prefix to the S3 bucket where the logs will be delivered.

Type: string
Required: False

enabled

Broker logs for destination S3 enabled or not.

Type: boolean
Required: True

Sasl

Details for client authentication using SASL.

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

Serverless

Properties to create a serverless cluster

vpcConfigs

VPC configuration information

Type: Array of type VpcConfig
Required: True

kafkaVersion

The version of Apache Kafka for the serverless cluster.

Type: string
Required: False

clientAuthentication

Includes all client authentication related information.

Type: ServerlessClientAuthentication
Required: True

ServerlessClientAuthentication

Details for client authentication using SASL.

sasl

Details for ClientAuthentication using IAM.

Type: ServerlessSasl
Required: False

ServerlessSasl

Details for client authentication using SASL for Serverless Cluster.

iam

Details for ClientAuthentication using IAM for Serverless Cluster.

Type: IAM
Required: False

StateInfo

Includes information about the cluster state.

code

Code for cluster state.

Type: string
Required: False

message

Message for cluster state.

Type: string
Required: False

StorageInfo

Contains information about the storage volumes that are attached to the brokers.

ebsStorageInfo

EBS volume information.

Type: EBSStorageInfo
Required: False

StorageMode

Controls storage mode for various supported storage tiers.

```
LOCAL
TIERED
```

Tls

The details of client authentication using TLS.

certificateAuthorityArnList

List of ACM CertificateAuthority ARNs.

Type: Array of type string
Required: False

enabled

Whether TLS authentication is turned on.

Type: boolean
Required: False

Unauthenticated

Details for allowing no client authentication.

enabled

Unauthenticated is enabled or not.

Type: boolean
Required: False

VpcConfig

Includes information about subnets and security groups for a VPC.

securityGroupIds

The security groups to attach to the ENIs for the broker nodes.

Type: Array of type string
Required: False

subnetIds

The list of subnets in the client VPC to connect to. Client subnets can't occupy the Availability Zone with ID use1-az3.

Type: Array of type string
Required: True

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

Specifies whether 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

Specifies whether SASL/SCRAM authentication is enabled or not.

Type: boolean
Required: False

VpcConnectivityTls

Details for client authentication using TLS for vpcConnectivity.

enabled

Specifies whether TLS authentication is enabled or not.

Type: boolean
Required: False

See also

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

DescribeClusterV2

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)

- AWS SDK for Ruby V3

Clusters

Represents the Amazon MSK clusters in an account.

URI

`/api/v2/clusters`

HTTP methods

GET

Operation ID: `ListClustersV2`

Lists all serverless and provisioned clusters.

Query parameters

Name	Type	Required	Description
`nextToken`	String	False	If the response of ListClusters is truncated, it returns a nextToken in the response. This nextToken should be sent in the subsequent request to ListClusters.
`clusterNameFilter`	String	False	Returns clusters starting with given name.
`maxResults`	String	False	Maximum number of clusters to fetch in one get request.

Name	Type	Required	Description
`clusterTypeFilter`	String	False	Returns clusters with the given type.

Responses

Status code	Response model	Description
200	`ListClustersV2Response`	HTTP Status Code 200: OK.
400	None	HTTP Status Code 400: Bad request due to incorrect input. Correct your request and then retry it.
401	None	HTTP Status Code 401: Unauthorized request. The provided credentials couldn't be validated.
403	None	HTTP Status Code 403: Access forbidden. Correct your credentials and then retry your request.
404	None	HTTP Status Code 404: Resource not found due to incorrect input. Correct your request and then retry it.
429	None	HTTP Status Code 429: Limit exceeded. Resource limit reached.
500	None	HTTP Status Code 500: Unexpected internal server

Status code	Response model	Description
		error. Retrying your request might resolve the issue.
503	None	HTTP Status Code 503: Service Unavailable. Retrying your request in some time might resolve the issue.

POST

Operation ID: `CreateClusterV2`

Creates a serverless or provisioned cluster.

Responses

Status code	Response model	Description
200	`CreateClusterV2Response`	HTTP Status Code 200: OK.
400	None	HTTP Status Code 400: Bad request due to incorrect input. Correct your request and then retry it.
401	None	HTTP Status Code 401: Unauthorized request. The provided credentials couldn't be validated.
403	None	HTTP Status Code 403: Access forbidden. Correct your credentials and then retry your request.
404	None	HTTP Status Code 404: Resource not found due to

Status code	Response model	Description
		incorrect input. Correct your request and then retry it.
409	None	HTTP Status Code 409: Conflict. This cluster name already exists. Retry your request with another name.
429	None	HTTP Status Code 429: Limit exceeded. Resource limit reached.
500	None	HTTP Status Code 500: Unexpected internal server error. Retrying your request might resolve the issue.
503	None	HTTP Status Code 503: Service Unavailable. Retrying your request in some time might resolve the issue.

OPTIONS

Enable CORS by returning correct headers

Responses

Status code	Response model	Description
200	None	200 response

Schemas

Request bodies

POST schema

```
{
  "provisioned": {
    "encryptionInfo": {
      "encryptionInTransit": {
        "inCluster": boolean,
        "clientBroker": enum
      },
      "encryptionAtRest": {
        "dataVolumeKMSKeyId": "string"
      }
    },
    "numberOfBrokerNodes": integer,
    "configurationInfo": {
      "arn": "string",
      "revision": integer
    },
    "enhancedMonitoring": enum,
    "storageMode": enum,
    "kafkaVersion": "string",
    "clientAuthentication": {
      "sasl": {
        "iam": {
          "enabled": boolean
        },
        "scram": {
          "enabled": boolean
        }
      },
      "unauthenticated": {
        "enabled": boolean
      },
      "tls": {
        "certificateAuthorityArnList": [
          "string"
        ],
        "enabled": boolean
      }
```

```
    },
    "loggingInfo": {
      "brokerLogs": {
        "s3": {
          "bucket": "string",
          "prefix": "string",
          "enabled": boolean
        },
        "firehose": {
          "deliveryStream": "string",
          "enabled": boolean
        },
        "cloudWatchLogs": {
          "logGroup": "string",
          "enabled": boolean
        }
      }
    },
    "brokerNodeGroupInfo": {
      "clientSubnets": [
        "string"
      ],
      "zoneIds": [
        "string"
      ],
      "instanceType": "string",
      "connectivityInfo": {
        "vpcConnectivity": {
          "clientAuthentication": {
            "sasl": {
              "iam": {
                "enabled": boolean
              },
              "scram": {
                "enabled": boolean
              }
            },
            "tls": {
              "enabled": boolean
            }
          }
        },
        "publicAccess": {
          "type": "string"
```

```
        }
      },
      "securityGroups": [
        "string"
      ],
      "brokerAZDistribution": enum,
      "storageInfo": {
        "ebsStorageInfo": {
          "provisionedThroughput": {
            "volumeThroughput": integer,
            "enabled": boolean
          },
          "volumeSize": integer
        }
      }
    },
    "openMonitoring": {
      "prometheus": {
        "nodeExporter": {
          "enabledInBroker": boolean
        },
        "jmxExporter": {
          "enabledInBroker": boolean
        }
      }
    },
    "rebalancing": {
      "status": enum
    }
  },
  "clusterName": "string",
  "serverless": {
    "vpcConfigs": [
      {
        "securityGroupIds": [
          "string"
        ],
        "subnetIds": [
          "string"
        ]
      }
    ],
    "clientAuthentication": {
      "sasl": {
```

```
        "iam": {
          "enabled": boolean
        }
      }
    }
  },
  "tags": {
  }
}
```

Response bodies

ListClustersV2Response schema

```
{
  "nextToken": "string",
  "clusterInfoList": [
    {
      "clusterType": enum,
      "clusterArn": "string",
      "activeOperationArn": "string",
      "provisioned": {
        "encryptionInfo": {
          "encryptionInTransit": {
            "inCluster": boolean,
            "clientBroker": enum
          },
          "encryptionAtRest": {
            "dataVolumeKMSKeyId": "string"
          }
        },
        "zookeeperConnectString": "string",
        "customerActionStatus": enum,
        "zookeeperConnectStringTls": "string",
        "loggingInfo": {
          "brokerLogs": {
            "s3": {
              "bucket": "string",
              "prefix": "string",
              "enabled": boolean
            },
            "firehose": {
              "deliveryStream": "string",
```

```
            "enabled": boolean
          },
          "cloudWatchLogs": {
            "logGroup": "string",
            "enabled": boolean
          }
        }
      },
      "numberOfBrokerNodes": integer,
      "enhancedMonitoring": enum,
      "storageMode": enum,
      "clientAuthentication": {
        "sasl": {
          "iam": {
            "enabled": boolean
          },
          "scram": {
            "enabled": boolean
          }
        },
        "unauthenticated": {
          "enabled": boolean
        },
        "tls": {
          "certificateAuthorityArnList": [
            "string"
          ],
          "enabled": boolean
        }
      },
      "brokerNodeGroupInfo": {
        "clientSubnets": [
          "string"
        ],
        "zoneIds": [
          "string"
        ],
        "instanceType": "string",
        "connectivityInfo": {
          "vpcConnectivity": {
            "clientAuthentication": {
              "sasl": {
                "iam": {
                  "enabled": boolean
```

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

```
          "configurationArn": "string"
        }
      },
      "creationTime": "string",
      "clusterName": "string",
      "serverless": {
        "vpcConfigs": [
          {
            "securityGroupIds": [
              "string"
            ],
            "subnetIds": [
              "string"
            ]
          }
        ],
        "kafkaVersion": "string",
        "clientAuthentication": {
          "sasl": {
            "iam": {
              "enabled": boolean
            }
          }
        }
      },
      "stateInfo": {
        "code": "string",
        "message": "string"
      },
      "state": enum,
      "currentVersion": "string",
      "tags": {
      }
    }
  ]
}
```

CreateClusterV2Response schema

```
{
  "clusterType": enum,
  "clusterArn": "string",
  "clusterName": "string",
```

```
  "state": enum
}
```

Properties

BrokerAZDistribution

The distribution of broker nodes across Availability Zones.

DEFAULT

BrokerLogs

Broker Logs details for cluster.

s3

S3 Log destination details.

Type: S3
Required: False

firehose

Type: Firehose
Required: False

cloudWatchLogs

CloudWatch Log destination details.

Type: CloudWatchLogs
Required: False

BrokerNodeGroupInfo

Describes the setup to be used for the brokers.

clientSubnets

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

Type: Array of type string
Required: True

zoneIds

The zoneIds for brokers in customer account.

Type: Array of type string
Required: False

instanceType

The type of broker used for the cluster.

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

connectivityInfo

Information about the cluster access configuration.

Type: ConnectivityInfo
Required: False

securityGroups

The security groups to attach to the ENIs for the broker nodes.

Type: Array of type string
Required: False

brokerAZDistribution

The distribution of broker nodes across Availability Zones.

Type: BrokerAZDistribution
Required: False

storageInfo

Data volume information.

Type: StorageInfo
Required: False

BrokerSoftwareInfo

Information about current software installed in the cluster.

configurationRevision

Revision of the configuration to use.

Type: integer
Required: False
Format: int64

kafkaVersion

The version of Apache Kafka to install and run on the cluster.

Type: string
Required: False

configurationArn

ARN of the configuration used on the cluster.

Type: string

Required: False

ClientAuthentication

Includes all client authentication information.

sasl

Details for ClientAuthentication using SASL.

Type: Sasl
Required: False

unauthenticated

Details for ClientAuthentication using no authentication.

Type: Unauthenticated
Required: False

tls

Details for ClientAuthentication using TLS.

Type: Tls
Required: False

ClientBroker

Client-broker encryption in transit setting.

```
TLS
TLS_PLAINTEXT
PLAINTEXT
```

CloudWatchLogs

CloudWatchLogs details for BrokerLogs.

logGroup

CloudWatch LogGroup where the logs will be delivered.

Type: string
Required: False

enabled

Broker logs for destination CW enabled or not.

Type: boolean
Required: True

Cluster

Returns information about a cluster.

clusterType

Type of the backend cluster.

Type: ClusterType
Required: False

clusterArn

The Amazon Resource Name (ARN) of the cluster.

Type: string
Required: False

activeOperationArn

Arn of active cluster operation.

Type: string
Required: False

provisioned

Properties of a provisioned cluster.

Type: Provisioned
Required: False

creationTime

The time when the cluster was created.

Type: string
Required: False

clusterName

The name of the cluster.

Type: string
Required: False

serverless

Properties of a serverless cluster.

Type: Serverless
Required: False

stateInfo

Includes information of the cluster state.

Type: StateInfo
Required: False

state

State of the cluster.

Type: ClusterState
Required: False

currentVersion

Current version of cluster.

Type: string
Required: False

tags

Tags attached to the cluster.

Type: object
Required: False

ClusterState

The sate of an MSK cluster.

```
ACTIVE
CREATING
UPDATING
DELETING
FAILED
MAINTENANCE
REBOOTING_BROKER
HEALING
```

ClusterType

The type of backend cluster.

```
PROVISIONED
SERVERLESS
```

ConfigurationInfo

Specifies the configuration to be used on the brokers.

arn

ARN of the configuration to use.

Type: string
Required: True

revision

The revision of the configuration to use.

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

ConnectivityInfo

Broker access controls

vpcConnectivity

VPC connection control settings for brokers.

Type: VpcConnectivity
Required: False

publicAccess

Access control settings for brokers

Type: PublicAccess
Required: False

CreateClusterV2Request

Creates a provisioned or serverless cluster.

provisioned

Properties required for creating a provisioned cluster.

Type: ProvisionedRequest
Required: False

clusterName

The name of the cluster.

Type: string
Required: True
MinLength: 1
MaxLength: 64

serverless

Properties required for creating a serverless cluster.

Type: ServerlessRequest
Required: False

tags

Create tags when creating the cluster.

Type: object
Required: False

CreateClusterV2Response

Returns information about the created cluster.

clusterType

Type of the backend cluster.

Type: ClusterType
Required: False

clusterArn

The Amazon Resource Name (ARN) of the cluster.

Type: string
Required: False

clusterName

Name of the cluster provided by the customer.

Type: string
Required: False

state

State of the cluster.

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 that are attached to the brokers.

provisionedThroughput

EBS volume provisioned throughput information.

Type: ProvisionedThroughput
Required: False

volumeSize

The size of the EBS volumes for the data drive on each of the brokers in GiB.

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

EncryptionAtRest

Details for encryption at rest.

dataVolumeKMSKeyId

KMS key used for data volume encryption.

Type: string
Required: True

EncryptionInTransit

Details for encryption in transit.

inCluster

In-cluster encryption in transit setting.

Type: boolean
Required: False

clientBroker

Client-broker encryption in transit setting.

Type: ClientBroker
Required: False

EncryptionInfo

Includes all encryption related information.

encryptionInTransit

Details for encryption in transit.

Type: EncryptionInTransit
Required: False

encryptionAtRest

Details for encryption at rest.

Type: EncryptionAtRest
Required: False

EnhancedMonitoring

Controls level of cluster metrics Amazon pushes to customer's cloudwatch account.

```
DEFAULT
PER_BROKER
PER_TOPIC_PER_BROKER
PER_TOPIC_PER_PARTITION
```

Firehose

Firehose details for BrokerLogs.

deliveryStream

Firehose delivery stream where the logs will be delivered.

Type: string
Required: False

enabled

Broker logs for destination firehose enabled or not.

Type: boolean
Required: True

IAM

Details for SASL/IAM client authentication.

enabled

SASL/IAM authentication is enabled or not.

Type: boolean
Required: False

JmxExporter

JMX Exporter details.

enabledInBroker

JMX Exporter being enabled in broker.

Type: boolean
Required: True

JmxExporterInfo

JMX Exporter details.

enabledInBroker

JMX Exporter being enabled in broker.

Type: boolean
Required: True

ListClustersV2Response

The response contains an array of cluster information and a nextToken if the response is truncated.

nextToken

If the response of ListClustersV2 is truncated, it returns a NextToken in the response. Pass this NextToken in a subsequent request to ListClustersV2 to get the next set of results.

Type: string
Required: False

clusterInfoList

An array of clusters.

Type: Array of type Cluster
Required: False

LoggingInfo

Logging info details for the cluster.

brokerLogs

Broker Logs details.

Type: BrokerLogs
Required: True

NodeExporter

Node Exporter details.

enabledInBroker

Node Exporter being enabled in broker.

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 cluster.

prometheus

Prometheus details.

Type: Prometheus
Required: True

OpenMonitoringInfo

JMX and Node monitoring for the cluster.

prometheus

Prometheus details.

Type: PrometheusInfo
Required: True

Prometheus

Prometheus details.

nodeExporter

Node Exporter details.

Type: NodeExporter
Required: False

jmxExporter

JMX Exporter details.

Type: JmxExporter
Required: False

PrometheusInfo

Prometheus details.

nodeExporter

Node Exporter details.

Type: NodeExporterInfo
Required: False

jmxExporter

JMX Exporter details.

Type: JmxExporterInfo
Required: False

Provisioned

Properties of a provisioned cluster.

encryptionInfo

Includes all encryption related information.

Type: EncryptionInfo
Required: False

zookeeperConnectString

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

Type: string
Required: False

customerActionStatus

Determines if there is an action required from the customer.

Type: CustomerActionStatus
Required: False

zookeeperConnectStringTls

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

Type: string
Required: False

loggingInfo

Logging Info details.

Type: LoggingInfo
Required: False

numberOfBrokerNodes

The number of brokers to create in the cluster.

Type: integer
Required: False

enhancedMonitoring

This knob controls level of metrics pushed customer's cloudwatch account.

Type: EnhancedMonitoring
Required: False

storageMode

This controls storage mode for supported storage tiers.

Type: StorageMode
Required: False

clientAuthentication

Includes all client authentication information.

Type: ClientAuthentication
Required: False

brokerNodeGroupInfo

Information about the brokers of the cluster.

Type: BrokerNodeGroupInfo
Required: False

openMonitoring

Open monitoring details.

Type: OpenMonitoring
Required: False

rebalancing

Contains information about intelligent rebalancing for the cluster.

Type: Rebalancing
Required: False

currentBrokerSoftwareInfo

Information about the version of the software that is deployed on the brokers of the cluster.

Type: BrokerSoftwareInfo
Required: False

ProvisionedRequest

Properties for creating a provisioned cluster.

encryptionInfo

Includes all encryption related information.

Type: EncryptionInfo
Required: False

numberOfBrokerNodes

The number of brokers to create in the cluster.

Type: integer
Required: False

configurationInfo

The configuration to be used on the brokers.

Type: ConfigurationInfo
Required: False

enhancedMonitoring

Specifies the monitoring level for the cluster.

Type: EnhancedMonitoring
Required: False

storageMode

Specifies the storage mode for supported storage tiers.

Type: StorageMode
Required: False

kafkaVersion

The version of Apache Kafka to install and run on the cluster.

Type: string
Required: False
MinLength: 1
MaxLength: 128

clientAuthentication

Includes all client authentication related information.

Type: ClientAuthentication
Required: False

loggingInfo

Logging Info details.

Type: LoggingInfo
Required: False

brokerNodeGroupInfo

Information about the brokers of the cluster.

Type: BrokerNodeGroupInfo
Required: False

openMonitoring

The open-monitoring details.

Type: OpenMonitoringInfo
Required: False

rebalancing

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

Type: Rebalancing
Required: False

ProvisionedThroughput

Contains information about provisioned throughput for the EBS storage volumes that are attached to the brokers.

volumeThroughput

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

Type: integer
Required: False

enabled

Whether provisioned throughput is turned on.

Type: boolean
Required: False

PublicAccess

Broker access controls

type

If public access is disabled, or if enabled the EIP provider

Type: string
Required: False

Rebalancing

Contains information about intelligent rebalancing for the cluster. Intelligent rebalancing performs automatic partition balancing operations when you scale your clusters up or down.

status

Intelligent rebalancing status. The default intelligent rebalancing status is ACTIVE for all new MSK Provisioned clusters with Express brokers.

Type: RebalancingStatus
Required: True

RebalancingStatus

Intelligent rebalancing status. The default intelligent rebalancing status is ACTIVE for all new MSK Provisioned clusters with Express brokers.

```
PAUSED
ACTIVE
```

S3

S3 details for BrokerLogs.

bucket

Name of the bucket where the logs will be delivered.

Type: string
Required: False

prefix

prefix to the S3 bucket where the logs will be delivered.

Type: string
Required: False

enabled

Broker logs for destination S3 enabled or not.

Type: boolean
Required: True

Sasl

Details for client authentication using SASL.

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

Serverless

Properties to create a serverless cluster

vpcConfigs

VPC configuration information

Type: Array of type VpcConfig
Required: True

kafkaVersion

The version of Apache Kafka for the serverless cluster.

Type: string
Required: False

clientAuthentication

Includes all client authentication related information.

Type: ServerlessClientAuthentication
Required: True

ServerlessClientAuthentication

Details for client authentication using SASL.

sasl

Details for ClientAuthentication using IAM.

Type: ServerlessSasl
Required: False

ServerlessRequest

Properties for creating a serverless cluster.

vpcConfigs

VPC configuration information

Type: Array of type VpcConfig
Required: True

clientAuthentication

Includes all client authentication related information.

Type: ServerlessClientAuthentication
Required: True

ServerlessSasl

Details for client authentication using SASL for Serverless Cluster.

iam

Details for ClientAuthentication using IAM for Serverless Cluster.

Type: IAM
Required: False

StateInfo

Includes information about the cluster state.

code

Code for cluster state.

Type: string
Required: False

message

Message for cluster state.

Type: string
Required: False

StorageInfo

Contains information about the storage volumes that are attached to the brokers.

ebsStorageInfo

EBS volume information.

Type: EBSStorageInfo
Required: False

StorageMode

Controls storage mode for various supported storage tiers.

```
LOCAL
TIERED
```

Tls

The details of client authentication using TLS.

certificateAuthorityArnList

List of ACM CertificateAuthority ARNs.

Type: Array of type string
Required: False

enabled

Whether TLS authentication is turned on.

Type: boolean
Required: False

Unauthenticated

Details for allowing no client authentication.

enabled

Unauthenticated is enabled or not.

Type: boolean
Required: False

VpcConfig

Includes information about subnets and security groups for a VPC.

securityGroupIds

The security groups to attach to the ENIs for the broker nodes.

Type: Array of type string
Required: False

subnetIds

The list of subnets in the client VPC to connect to. Client subnets can't occupy the Availability Zone with ID use1-az3.

Type: Array of type string

Required: True

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

Specifies whether 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

Specifies whether SASL/SCRAM authentication is enabled or not.

Type: boolean
Required: False

VpcConnectivityTls

Details for client authentication using TLS for vpcConnectivity.

enabled

Specifies whether TLS authentication is enabled or not.

Type: boolean

Required: False

See also

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

ListClustersV2

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

CreateClusterV2

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

V2 Clusters clusterArn Operations

URI

`/api/v2/clusters/clusterArn/operations`

HTTP methods

GET

Operation ID: `ListClusterOperationsV2`

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

Path parameters

Name	Type	Required	Description
clusterArn	String	True	ARN of the cluster to be described.

Query parameters

Name	Type	Required	Description
nextToken	String	False	If the response of ListClusters is truncated, it returns a nextToken in the response. This nextToken should be sent in the subsequen t request to ListClust ers.
maxResults	String	False	Maximum number of clusters to fetch in one get request.

Responses

Status code	Response model	Description
200	ListClusterOperationsV2Response	HTTP Status Code 200: OK.
400	None	HTTP Status Code 400: Bad request due to incorrect input. Correct your request and then retry it.
401	None	HTTP Status Code 401: Unauthorized request. The provided credentials couldn't be validated.
403	None	HTTP Status Code 403: Access forbidden. Correct your credentials and then retry your request.
404	None	HTTP Status Code 404: Resource not found due to incorrect input. Correct your request and then retry it.
429	None	HTTP Status Code 429: Limit exceeded. Resource limit reached.
500	None	HTTP Status Code 500: Unexpected internal server error. Retrying your request might resolve the issue.
503	None	HTTP Status Code 503: Service Unavailable. Retrying

Status code	Response model	Description
		your request in some time might resolve the issue.

OPTIONS

Enable CORS by returning correct headers

Path parameters

Name	Type	Required	Description
clusterArn	String	True	ARN of the cluster to be described.

Responses

Status code	Response model	Description
200	None	200 response

Schemas

Response bodies

ListClusterOperationsV2Response schema

```
{
  "nextToken": "string",
  "clusterOperationInfoList": [
    {
      "clusterType": enum,
      "clusterArn": "string",
      "operationState": "string",
      "startTime": "string",
      "operationType": "string",
      "endTime": "string",
```

```
      "operationArn": "string"
    }
  ]
}
```

Properties

ClusterOperationV2Summary

Returns information about a cluster operation.

clusterType

Type of the backend cluster.

Type: ClusterType
Required: False

clusterArn

ARN of the cluster.

Type: string
Required: False

operationState

State of the cluster operation.

Type: string
Required: False

startTime

The time at which operation was created.

Type: string
Required: False

operationType

Type of the cluster operation.

Type: string
Required: False

endTime

The time at which the operation finished.

Type: string
Required: False

operationArn

ARN of the cluster operation.

Type: string
Required: False

ClusterType

The type of backend cluster.

```
PROVISIONED
SERVERLESS
```

ListClusterOperationsV2Response

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

nextToken

If the response of ListClusterOperationsV2 is truncated, it returns a nextToken in the response. This nextToken should be sent in the subsequent request to ListClusterOperationsV2.

Type: string

Required: False

clusterOperationInfoList

An array of cluster operation information objects.

Type: Array of type ClusterOperationV2Summary

Required: False

See also

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

ListClusterOperationsV2

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

V2 Operations clusterOperationArn

URI

```
/api/v2/operations/clusterOperationArn
```

HTTP methods

GET

Operation ID: `DescribeClusterOperationV2`

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

Path parameters

Name	Type	Required	Description
clusterOperationArn	String	True	ARN of the cluster operation to describe.

Responses

Status code	Response model	Description
200	DescribeClusterOperationV2Response	200 response
400	None	HTTP Status Code 400: Bad request due to incorrect input. Correct your request and then retry it.
401	None	HTTP Status Code 401: Unauthorized request. The provided credentials couldn't be validated.
403	None	HTTP Status Code 403: Access forbidden. Correct your credentials and then retry your request.
404	None	HTTP Status Code 404: Resource not found due to

Status code	Response model	Description
		incorrect input. Correct your request and then retry it.
429	None	HTTP Status Code 429: Limit exceeded. Resource limit reached.
500	None	HTTP Status Code 500: Unexpected internal server error. Retrying your request might resolve the issue.
503	None	HTTP Status Code 503: Service Unavailable. Retrying your request in some time might resolve the issue.

OPTIONS

Enable CORS by returning correct headers

Path parameters

Name	Type	Required	Description
clusterOperationArn	String	True	

Responses

Status code	Response model	Description
200	None	200 response

Schemas

Response bodies

DescribeClusterOperationV2Response schema

```
{
  "clusterOperationInfo": {
    "clusterType": enum,
    "clusterArn": "string",
    "provisioned": {
      "sourceClusterInfo": {
        "encryptionInfo": {
          "encryptionInTransit": {
            "inCluster": boolean,
            "clientBroker": enum
          },
          "encryptionAtRest": {
            "dataVolumeKMSKeyId": "string"
          }
        },
        "configurationInfo": {
          "arn": "string",
          "revision": integer
        },
        "brokerCountUpdateInfo": {
          "createdBrokerIds": [
            number
          ],
          "deletedBrokerIds": [
            number
          ]
        },
        "instanceType": "string",
        "loggingInfo": {
          "brokerLogs": {
            "s3": {
              "bucket": "string",
              "prefix": "string",
              "enabled": boolean
            },
            "firehose": {
              "deliveryStream": "string",
```

```
            "enabled": boolean
          },
          "cloudWatchLogs": {
            "logGroup": "string",
            "enabled": boolean
          }
        }
      },
      "brokerEBSVolumeInfo": [
        {
          "volumeSizeGB": integer,
          "provisionedThroughput": {
            "volumeThroughput": integer,
            "enabled": boolean
          },
          "kafkaBrokerNodeId": "string"
        }
      ],
      "numberOfBrokerNodes": integer,
      "enhancedMonitoring": enum,
      "storageMode": enum,
      "kafkaVersion": "string",
      "connectivityInfo": {
        "vpcConnectivity": {
          "clientAuthentication": {
            "sasl": {
              "iam": {
                "enabled": boolean
              },
              "scram": {
                "enabled": boolean
              }
            },
            "tls": {
              "enabled": boolean
            }
          }
        },
        "publicAccess": {
          "type": "string"
        }
      },
      "clientAuthentication": {
        "sasl": {
```

```
            "iam": {
              "enabled": boolean
            },
            "scram": {
              "enabled": boolean
            }
          },
          "unauthenticated": {
            "enabled": boolean
          },
          "tls": {
            "certificateAuthorityArnList": [
              "string"
            ],
            "enabled": boolean
          }
        },
        "openMonitoring": {
          "prometheus": {
            "nodeExporter": {
              "enabledInBroker": boolean
            },
            "jmxExporter": {
              "enabledInBroker": boolean
            }
          }
        },
        "rebalancing": {
          "status": enum
        },
        "zookeeperAccess": {
          "enabled": boolean
        }
      },
      "vpcConnectionInfo": {
        "owner": "string",
        "vpcConnectionArn": "string",
        "creationTime": "string",
        "userIdentity": {
          "principalId": "string",
          "type": enum
        }
      },
      "operationSteps": [
```

```
        {
          "stepName": "string",
          "stepInfo": {
            "stepStatus": "string"
          }
        }
      ],
      "targetClusterInfo": {
        "encryptionInfo": {
          "encryptionInTransit": {
            "inCluster": boolean,
            "clientBroker": enum
          },
          "encryptionAtRest": {
            "dataVolumeKMSKeyId": "string"
          }
        },
        "configurationInfo": {
          "arn": "string",
          "revision": integer
        },
        "brokerCountUpdateInfo": {
          "createdBrokerIds": [
            number
          ],
          "deletedBrokerIds": [
            number
          ]
        },
        "instanceType": "string",
        "loggingInfo": {
          "brokerLogs": {
            "s3": {
              "bucket": "string",
              "prefix": "string",
              "enabled": boolean
            },
            "firehose": {
              "deliveryStream": "string",
              "enabled": boolean
            },
            "cloudWatchLogs": {
              "logGroup": "string",
              "enabled": boolean
```

```
            }
          }
        },
        "brokerEBSVolumeInfo": [
          {
            "volumeSizeGB": integer,
            "provisionedThroughput": {
              "volumeThroughput": integer,
              "enabled": boolean
            },
            "kafkaBrokerNodeId": "string"
          }
        ],
        "numberOfBrokerNodes": integer,
        "enhancedMonitoring": enum,
        "storageMode": enum,
        "kafkaVersion": "string",
        "connectivityInfo": {
          "vpcConnectivity": {
            "clientAuthentication": {
              "sasl": {
                "iam": {
                  "enabled": boolean
                },
                "scram": {
                  "enabled": boolean
                }
              },
              "tls": {
                "enabled": boolean
              }
            }
          },
          "publicAccess": {
            "type": "string"
          }
        },
        "clientAuthentication": {
          "sasl": {
            "iam": {
              "enabled": boolean
            },
            "scram": {
              "enabled": boolean
```

```
            }
          },
          "unauthenticated": {
            "enabled": boolean
          },
          "tls": {
            "certificateAuthorityArnList": [
              "string"
            ],
            "enabled": boolean
          }
        },
        "openMonitoring": {
          "prometheus": {
            "nodeExporter": {
              "enabledInBroker": boolean
            },
            "jmxExporter": {
              "enabledInBroker": boolean
            }
          }
        },
        "rebalancing": {
          "status": enum
        },
        "zookeeperAccess": {
          "enabled": boolean
        }
      }
    },
    "operationState": "string",
    "serverless": {
      "vpcConnectionInfo": {
        "owner": "string",
        "vpcConnectionArn": "string",
        "creationTime": "string",
        "userIdentity": {
          "principalId": "string",
          "type": enum
        }
      }
    },
    "errorInfo": {
      "errorString": "string",
```

```
      "errorCode": "string"
    },
    "operationType": "string",
    "startTime": "string",
    "endTime": "string",
    "operationArn": "string"
  }
}
```

Properties

BrokerCountUpdateInfo

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

createdBrokerIds

List of Kafka Broker IDs being created.

Type: Array of type number
Required: False

deletedBrokerIds

List of Kafka Broker IDs being deleted.

Type: Array of type number
Required: False

BrokerEBSVolumeInfo

Specifies the EBS volume object per broker which captures broker identifier and corresponding target volume size. Broker identifier could be id or arn or the keyword 'ALL'. If it is 'ALL', all nodes of the cluster will be considered for the operation.

volumeSizeGB

Size of the EBS volume to update.

Type: integer

Required: False

provisionedThroughput

EBS volume provisioned throughput information.

Type: ProvisionedThroughput
Required: False

kafkaBrokerNodeId

Kafka id of the broker in the cluster to update.

Type: string
Required: True

BrokerLogs

Broker Logs details for cluster.

s3

S3 Log destination details.

Type: S3
Required: False

firehose

Type: Firehose
Required: False

cloudWatchLogs

CloudWatch Log destination details.

Type: CloudWatchLogs
Required: False

ClientAuthentication

Includes all client authentication information.

sasl

Details for ClientAuthentication using SASL.

Type: Sasl
Required: False

unauthenticated

Details for ClientAuthentication using no authentication.

Type: Unauthenticated
Required: False

tls

Details for ClientAuthentication using TLS.

Type: Tls
Required: False

ClientBroker

Client-broker encryption in transit setting.

```
TLS
TLS_PLAINTEXT
PLAINTEXT
```

CloudWatchLogs

CloudWatchLogs details for BrokerLogs.

logGroup

CloudWatch LogGroup where the logs will be delivered.

Type: string
Required: False

enabled

Broker logs for destination CW enabled or not.

Type: boolean
Required: True

ClusterOperationStep

Step taken during a cluster operation.

stepName

The name of the step.

Type: string
Required: False

stepInfo

Information about the step and its status.

Type: ClusterOperationStepInfo
Required: False

ClusterOperationStepInfo

State information about the operation step.

stepStatus

The steps current status.

Type: string
Required: False

ClusterOperationV2

Returns information about a cluster operation.

clusterType

Type of the backend cluster.

Type: ClusterType
Required: False

clusterArn

ARN of the cluster.

Type: string
Required: False

provisioned

Properties of a provisioned cluster.

Type: ClusterOperationV2Provisioned
Required: False

operationState

State of the cluster operation.

Type: string
Required: False

serverless

Properties of a serverless cluster.

Type: ClusterOperationV2Serverless
Required: False

errorInfo

If cluster operation failed from an error, it describes the error.

Type: ErrorInfo
Required: False

operationType

Type of the cluster operation.

Type: string
Required: False

startTime

The time at which operation was created.

Type: string
Required: False

endTime

The time at which the operation finished.

Type: string
Required: False

operationArn

ARN of the cluster operation.

Type: string
Required: False

ClusterOperationV2Provisioned

Returns information about a provisioned cluster operation.

sourceClusterInfo

Information about cluster attributes before a cluster is updated.

Type: MutableClusterInfo
Required: False

vpcConnectionInfo

Description of the VPC connection for CreateVpcConnection and DeleteVpcConnection operations.

Type: VpcConnectionInfo
Required: False

operationSteps

Steps completed during the operation.

Type: Array of type ClusterOperationStep
Required: False

targetClusterInfo

Information about cluster attributes after a cluster is updated.

Type: MutableClusterInfo
Required: False

ClusterOperationV2Serverless

Returns information about a serverless cluster operation.

vpcConnectionInfo

Description of the VPC connection for CreateVpcConnection and DeleteVpcConnection operations.

Type: VpcConnectionInfoServerless
Required: False

ClusterType

The type of backend cluster.

```
PROVISIONED
SERVERLESS
```

ConfigurationInfo

Specifies the configuration to be used on the brokers.

arn

ARN of the configuration to use.

Type: string
Required: True

revision

The revision of the configuration to use.

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

ConnectivityInfo

Broker access controls

vpcConnectivity

VPC connection control settings for brokers.

Type: VpcConnectivity
Required: False

publicAccess

Access control settings for brokers

Type: PublicAccess
Required: False

DescribeClusterOperationV2Response

Information about a cluster operation.

clusterOperationInfo

Cluster operation information.

Type: ClusterOperationV2
Required: False

EncryptionAtRest

Details for encryption at rest.

dataVolumeKMSKeyId

KMS key used for data volume encryption.

Type: string
Required: True

EncryptionInTransit

Details for encryption in transit.

inCluster

In-cluster encryption in transit setting.

Type: boolean
Required: False

clientBroker

Client-broker encryption in transit setting.

Type: ClientBroker
Required: False

EncryptionInfo

Includes all encryption related information.

encryptionInTransit

Details for encryption in transit.

Type: EncryptionInTransit
Required: False

encryptionAtRest

Details for encryption at rest.

Type: EncryptionAtRest
Required: False

EnhancedMonitoring

Controls level of cluster metrics Amazon pushes to customer's cloudwatch account.

```
DEFAULT
PER_BROKER
PER_TOPIC_PER_BROKER
PER_TOPIC_PER_PARTITION
```

ErrorInfo

Error Information about a failed cluster operation.

errorString

error message.

Type: string
Required: False

errorCode

error code.

Type: string
Required: False

Firehose

Firehose details for BrokerLogs.

deliveryStream

Firehose delivery stream where the logs will be delivered.

Type: string
Required: False

enabled

Broker logs for destination firehose enabled or not.

Type: boolean
Required: True

IAM

Details for SASL/IAM client authentication.

enabled

SASL/IAM authentication is enabled or not.

Type: boolean

Required: False

JmxExporter

JMX Exporter details.

enabledInBroker

JMX Exporter being enabled in broker.

Type: boolean
Required: True

LoggingInfo

Logging info details for the cluster.

brokerLogs

Broker Logs details.

Type: BrokerLogs
Required: True

MutableClusterInfo

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

encryptionInfo

Encryption details.

Type: EncryptionInfo
Required: False

configurationInfo

Information about the Kafka configuration deployed on the brokers of the cluster.

Type: ConfigurationInfo
Required: False

brokerCountUpdateInfo

Describes brokers being changed during a broker count update.

Type: BrokerCountUpdateInfo
Required: False

instanceType

The instance type.

Type: string
Required: False

loggingInfo

LoggingInfo details.

Type: LoggingInfo
Required: False

brokerEBSVolumeInfo

Type: Array of type BrokerEBSVolumeInfo
Required: False

numberOfBrokerNodes

The number of Kafka broker nodes of the Cluster.

Type: integer
Required: False

enhancedMonitoring

This knob controls level of metrics pushed customer's CloudWatch account.

Type: EnhancedMonitoring
Required: False

storageMode

This controls storage mode for supported storage tiers.

Type: StorageMode
Required: False

kafkaVersion

The Kafka version.

Type: string
Required: False

connectivityInfo

Defines the connectivity configuration of the cluster.

Type: ConnectivityInfo
Required: False

clientAuthentication

Client Authentication details.

Type: ClientAuthentication
Required: False

openMonitoring

Open monitoring details.

Type: OpenMonitoring
Required: False

rebalancing

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

Type: Rebalancing
Required: False

zookeeperAccess

The ZooKeeper access setting for the cluster.

Type: ZookeeperAccess
Required: False

NodeExporter

Node Exporter details.

enabledInBroker

Node Exporter being enabled in broker.

Type: boolean
Required: True

OpenMonitoring

JMX and Node monitoring for cluster.

prometheus

Prometheus details.

Type: Prometheus
Required: True

Prometheus

Prometheus details.

nodeExporter

Node Exporter details.

Type: NodeExporter
Required: False

jmxExporter

JMX Exporter details.

Type: JmxExporter
Required: False

ProvisionedThroughput

Contains information about provisioned throughput for the EBS storage volumes that are attached to the brokers.

volumeThroughput

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

Type: integer
Required: False

enabled

Whether provisioned throughput is turned on.

Type: boolean
Required: False

PublicAccess

Broker access controls

type

If public access is disabled, or if enabled the EIP provider

Type: string
Required: False

Rebalancing

Contains information about intelligent rebalancing for the cluster. Intelligent rebalancing performs automatic partition balancing operations when you scale your clusters up or down.

status

Intelligent rebalancing status. The default intelligent rebalancing status is ACTIVE for all new MSK Provisioned clusters with Express brokers.

Type: RebalancingStatus
Required: True

RebalancingStatus

Intelligent rebalancing status. The default intelligent rebalancing status is ACTIVE for all new MSK Provisioned clusters with Express brokers.

```
PAUSED
ACTIVE
```

S3

S3 details for BrokerLogs.

bucket

Name of the bucket where the logs will be delivered.

Type: string
Required: False

prefix

prefix to the S3 bucket where the logs will be delivered.

Type: string
Required: False

enabled

Broker logs for destination S3 enabled or not.

Type: boolean
Required: True

Sasl

Details for client authentication using SASL.

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

The details of client authentication using TLS.

certificateAuthorityArnList

List of ACM CertificateAuthority ARNs.

Type: Array of type string
Required: False

enabled

Whether TLS authentication is turned on.

Type: boolean
Required: False

Unauthenticated

Details for allowing no client authentication.

enabled

Unauthenticated is enabled or not.

Type: boolean
Required: False

UserIdentity

Description of the requester that calls the API operation.

principalId

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

Type: string
Required: False

type

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

Type: UserIdentityType
Required: False

UserIdentityType

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

```
AWSAccount
AWSService
```

VpcConnectionInfo

Description of the VPC connection.

owner

The owner of the VPC connection.

Type: string
Required: False

vpcConnectionArn

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

Type: string
Required: False

creationTime

The time when Amazon MSK creates the VPC Connnection.

Type: string
Required: False

userIdentity

Description of the requester that calls the API operation.

Type: UserIdentity
Required: False

VpcConnectionInfoServerless

Description of the VPC connection for CreateVpcConnection and DeleteVpcConnection operations.

owner

The owner of the VPC connection.

Type: string
Required: False

vpcConnectionArn

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

Type: string
Required: False

creationTime

The time when Amazon MSK creates the VPC Connnection.

Type: string
Required: False

userIdentity

Description of the requester that calls the API operation.

Type: UserIdentity
Required: False

VpcConnectivity

VPC connection control settings for brokers.

clientAuthentication

VPC connection control settings for brokers.

Type: VpcConnectivityClientAuthentication
Required: False

VpcConnectivityClientAuthentication

Includes all client authentication information for VpcConnectivity.

sasl

Details for VpcConnectivity ClientAuthentication using SASL.

Type: VpcConnectivitySasl
Required: False

tls

Details for VpcConnectivity ClientAuthentication using TLS.

Type: VpcConnectivityTls
Required: False

VpcConnectivityIAM

Details for SASL/IAM client authentication for VpcConnectivity.

enabled

Specifies whether 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

Specifies whether SASL/SCRAM authentication is enabled or not.

Type: boolean
Required: False

VpcConnectivityTls

Details for client authentication using TLS for vpcConnectivity.

enabled

Specifies whether TLS authentication is enabled or not.

Type: boolean
Required: False

ZookeeperAccess

ZooKeeper access control settings for the cluster.

enabled

Specifies whether direct Apache ZooKeeper client access is enabled or disabled for the cluster.

Type: boolean
Required: False

See also

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

DescribeClusterOperationV2

- AWS Command Line Interface V2
- AWS SDK for .NET V4
- AWS SDK for C++
- AWS SDK for Go v2
- AWS SDK for Java V2
- AWS SDK for JavaScript V3
- AWS SDK for Kotlin
- AWS SDK for PHP V3
- AWS SDK for Python (Boto3)
- AWS SDK for Ruby V3

Document History for API Reference 2.0

The following table describes the documentation for this release of ServiceName.

- **API version: 2019-05-30**
- **Latest documentation update:** May 14, 2024

Change	Description	Date
Amazon MSK DescribeClusterOperationV2 and ListClusterOperationsV2	This is the release of the Amazon MSK API Reference 2.0 to support DescribeClusterOperationV2 and ListClusterOperationsV2.	July 27, 2023
ListClusterOperationsV2 and DescribeClusterOperationV2	Updates for release of the remove broker feature.	May 16, 2024

AWS Glossary

For the latest AWS terminology, see the AWS glossary in the *AWS Glossary Reference*.