



API Reference 2.0

# Amazon MSK



# 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
<i>clusterArn</i>	String	True	ARN of the cluster to be described.

## Responses

Status code	Response model	Description
200	<a href="#">DescribeClusterV2Response</a>	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
<i>clusterArn</i>	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

### zonelds

The zonelds 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 state 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](#)

- [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	<a href="#">ListClustersV2Response</a>	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
503	None	error. Retrying your request might resolve the issue.  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	<a href="#">CreateClusterV2Response</a>	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

## zonelds

The zonelds 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 state 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

## zookeeperConnectionString

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

## zookeeperConnectionStringTls

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](#)
- [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](#)
- [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
<i>clusterArn</i>	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 subsequent request to ListClusters.
maxResults	String	False	Maximum number of clusters to fetch in one get request.

## Responses

Status code	Response model	Description
200	<a href="#">ListClusterOperationsV2Response</a>	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
<i>clusterArn</i>	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](#)
- [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
<i>clusterOperationArn</i>	String	True	ARN of the cluster operation to describe.

#### Responses

Status code	Response model	Description
200	<a href="#">DescribeClusterOperationV2Response</a>	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
<i>clusterOperationArn</i>	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
}
},
"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
}
}
},
"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

## 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 Connection.

**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 Connection.

**Type:** string

**Required:** False

### userIdentity

Description of the requester that calls the API operation.

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

**Required:** False

## VpcConnectivity

VPC connection control settings for brokers.

### clientAuthentication

VPC connection control settings for brokers.

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

**Required:** False

## VpcConnectivityClientAuthentication

Includes all client authentication information for VpcConnectivity.

### sasl

Details for VpcConnectivity ClientAuthentication using SASL.

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

**Required:** False

### tls

Details for VpcConnectivity ClientAuthentication using TLS.

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

**Required:** False

## VpcConnectivityIAM

Details for SASL/IAM client authentication for VpcConnectivity.

### enabled

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:

## 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](#)
- [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*.