



Amazon EMR on EKS API Reference

# Amazon EMR on EKS



**API Version 2020-10-01**

Copyright © 2026 Amazon Web Services, Inc. and/or its affiliates. All rights reserved.

# Amazon EMR on EKS: Amazon EMR on EKS API Reference

Copyright © 2026 Amazon Web Services, Inc. and/or its affiliates. All rights reserved.

Amazon's trademarks and trade dress may not be used in connection with any product or service that is not Amazon's, in any manner that is likely to cause confusion among customers, or in any manner that disparages or discredits Amazon. All other trademarks not owned by Amazon are the property of their respective owners, who may or may not be affiliated with, connected to, or sponsored by Amazon.

---

# Table of Contents

<b>Welcome</b> .....	<b>1</b>
<b>Actions</b> .....	<b>2</b>
<b>CancelJobRun</b> .....	<b>3</b>
Request Syntax .....	3
URI Request Parameters .....	3
Request Body .....	3
Response Syntax .....	3
Response Elements .....	4
Errors .....	4
See Also .....	5
<b>CreateJobTemplate</b> .....	<b>6</b>
Request Syntax .....	6
URI Request Parameters .....	7
Request Body .....	7
Response Syntax .....	9
Response Elements .....	9
Errors .....	10
See Also .....	10
<b>CreateManagedEndpoint</b> .....	<b>12</b>
Request Syntax .....	12
URI Request Parameters .....	13
Request Body .....	13
Response Syntax .....	15
Response Elements .....	16
Errors .....	17
See Also .....	17
<b>CreateSecurityConfiguration</b> .....	<b>19</b>
Request Syntax .....	19
URI Request Parameters .....	20
Request Body .....	20
Response Syntax .....	21
Response Elements .....	21
Errors .....	22
See Also .....	23

CreateVirtualCluster .....	24
Request Syntax .....	24
URI Request Parameters .....	24
Request Body .....	24
Response Syntax .....	26
Response Elements .....	26
Errors .....	27
See Also .....	27
DeleteJobTemplate .....	29
Request Syntax .....	29
URI Request Parameters .....	29
Request Body .....	29
Response Syntax .....	29
Response Elements .....	29
Errors .....	30
See Also .....	30
DeleteManagedEndpoint .....	32
Request Syntax .....	32
URI Request Parameters .....	32
Request Body .....	32
Response Syntax .....	32
Response Elements .....	33
Errors .....	33
See Also .....	34
DeleteVirtualCluster .....	35
Request Syntax .....	35
URI Request Parameters .....	35
Request Body .....	35
Response Syntax .....	35
Response Elements .....	36
Errors .....	36
See Also .....	36
DescribeJobRun .....	38
Request Syntax .....	38
URI Request Parameters .....	38
Request Body .....	38

Response Syntax .....	38
Response Elements .....	40
Errors .....	40
See Also .....	41
<b>DescribeJobTemplate .....</b>	<b>42</b>
Request Syntax .....	42
URI Request Parameters .....	42
Request Body .....	42
Response Syntax .....	42
Response Elements .....	44
Errors .....	44
See Also .....	45
<b>DescribeManagedEndpoint .....</b>	<b>46</b>
Request Syntax .....	46
URI Request Parameters .....	46
Request Body .....	46
Response Syntax .....	46
Response Elements .....	48
Errors .....	48
See Also .....	49
<b>DescribeSecurityConfiguration .....</b>	<b>50</b>
Request Syntax .....	50
URI Request Parameters .....	50
Request Body .....	50
Response Syntax .....	50
Response Elements .....	51
Errors .....	51
See Also .....	52
<b>DescribeVirtualCluster .....</b>	<b>53</b>
Request Syntax .....	53
URI Request Parameters .....	53
Request Body .....	53
Response Syntax .....	53
Response Elements .....	54
Errors .....	54
See Also .....	55

GetManagedEndpointSessionCredentials .....	56
Request Syntax .....	56
URI Request Parameters .....	56
Request Body .....	57
Response Syntax .....	58
Response Elements .....	58
Errors .....	59
See Also .....	59
ListJobRuns .....	61
Request Syntax .....	61
URI Request Parameters .....	61
Request Body .....	62
Response Syntax .....	62
Response Elements .....	64
Errors .....	64
See Also .....	65
ListJobTemplates .....	66
Request Syntax .....	66
URI Request Parameters .....	66
Request Body .....	66
Response Syntax .....	67
Response Elements .....	68
Errors .....	69
See Also .....	69
ListManagedEndpoints .....	70
Request Syntax .....	70
URI Request Parameters .....	70
Request Body .....	71
Response Syntax .....	71
Response Elements .....	73
Errors .....	73
See Also .....	73
ListSecurityConfigurations .....	75
Request Syntax .....	75
URI Request Parameters .....	75
Request Body .....	75

Response Syntax .....	76
Response Elements .....	77
Errors .....	77
See Also .....	77
ListTagsForResource .....	79
Request Syntax .....	79
URI Request Parameters .....	79
Request Body .....	79
Response Syntax .....	79
Response Elements .....	79
Errors .....	80
See Also .....	80
ListVirtualClusters .....	82
Request Syntax .....	82
URI Request Parameters .....	82
Request Body .....	83
Response Syntax .....	83
Response Elements .....	84
Errors .....	84
See Also .....	85
StartJobRun .....	86
Request Syntax .....	86
URI Request Parameters .....	87
Request Body .....	87
Response Syntax .....	90
Response Elements .....	90
Errors .....	91
See Also .....	92
TagResource .....	93
Request Syntax .....	93
URI Request Parameters .....	93
Request Body .....	93
Response Syntax .....	94
Response Elements .....	94
Errors .....	94
See Also .....	95

UntagResource .....	96
Request Syntax .....	96
URI Request Parameters .....	96
Request Body .....	96
Response Syntax .....	96
Response Elements .....	97
Errors .....	97
See Also .....	97
<b>Data Types .....</b>	<b>99</b>
AuthorizationConfiguration .....	101
Contents .....	101
See Also .....	101
Certificate .....	102
Contents .....	102
See Also .....	102
CloudWatchMonitoringConfiguration .....	103
Contents .....	103
See Also .....	103
Configuration .....	104
Contents .....	104
See Also .....	105
ConfigurationOverrides .....	106
Contents .....	106
See Also .....	106
ContainerInfo .....	107
Contents .....	107
See Also .....	107
ContainerLogRotationConfiguration .....	108
Contents .....	108
See Also .....	108
ContainerProvider .....	109
Contents .....	109
See Also .....	109
Credentials .....	111
Contents .....	111
See Also .....	111

EksInfo .....	112
Contents .....	112
See Also .....	112
EncryptionConfiguration .....	113
Contents .....	113
See Also .....	113
Endpoint .....	114
Contents .....	114
See Also .....	118
InTransitEncryptionConfiguration .....	120
Contents .....	120
See Also .....	120
JobDriver .....	121
Contents .....	121
See Also .....	121
JobRun .....	122
Contents .....	122
See Also .....	126
JobTemplate .....	127
Contents .....	127
See Also .....	129
JobTemplateData .....	130
Contents .....	130
See Also .....	131
LakeFormationConfiguration .....	133
Contents .....	133
See Also .....	133
ManagedLogs .....	135
Contents .....	135
See Also .....	135
MonitoringConfiguration .....	136
Contents .....	136
See Also .....	137
ParametricCloudWatchMonitoringConfiguration .....	138
Contents .....	138
See Also .....	138

ParametricConfigurationOverrides .....	139
Contents .....	139
See Also .....	139
ParametricMonitoringConfiguration .....	140
Contents .....	140
See Also .....	140
ParametricS3MonitoringConfiguration .....	142
Contents .....	142
See Also .....	142
RetryPolicyConfiguration .....	143
Contents .....	143
See Also .....	143
RetryPolicyExecution .....	144
Contents .....	144
See Also .....	144
S3MonitoringConfiguration .....	145
Contents .....	145
See Also .....	145
SecureNamespaceInfo .....	146
Contents .....	146
See Also .....	146
SecurityConfiguration .....	147
Contents .....	147
See Also .....	149
SecurityConfigurationData .....	150
Contents .....	150
See Also .....	150
SparkSqlJobDriver .....	151
Contents .....	151
See Also .....	151
SparkSubmitJobDriver .....	152
Contents .....	152
See Also .....	153
TemplateParameterConfiguration .....	154
Contents .....	154
See Also .....	154

---

TLSCertificateConfiguration .....	155
Contents .....	155
See Also .....	156
VirtualCluster .....	157
Contents .....	157
See Also .....	159
<b>Common Parameters .....</b>	<b>160</b>
<b>Common Error Types .....</b>	<b>163</b>

# Welcome

Amazon EMR on EKS provides a deployment option for Amazon EMR that allows you to run open-source big data frameworks on Amazon Elastic Kubernetes Service (Amazon EKS). With this deployment option, you can focus on running analytics workloads while Amazon EMR on EKS builds, configures, and manages containers for open-source applications. For more information about Amazon EMR on EKS concepts and tasks, see [What is Amazon EMR on EKS](#).

*Amazon EMR containers* is the API name for Amazon EMR on EKS. The `emr-containers` prefix is used in the following scenarios:

- It is the prefix in the CLI commands for Amazon EMR on EKS. For example, `aws emr-containers start-job-run`.
- It is the prefix before IAM policy actions for Amazon EMR on EKS. For example, "Action": [ "emr-containers:StartJobRun" ]. For more information, see [Policy actions for Amazon EMR on EKS](#).
- It is the prefix used in Amazon EMR on EKS service endpoints. For example, `emr-containers.us-east-2.amazonaws.com`. For more information, see [Amazon EMR on EKSService Endpoints](#).

This document was last published on April 17, 2026.

# Actions

The following actions are supported:

- [CancelJobRun](#)
- [CreateJobTemplate](#)
- [CreateManagedEndpoint](#)
- [CreateSecurityConfiguration](#)
- [CreateVirtualCluster](#)
- [DeleteJobTemplate](#)
- [DeleteManagedEndpoint](#)
- [DeleteVirtualCluster](#)
- [DescribeJobRun](#)
- [DescribeJobTemplate](#)
- [DescribeManagedEndpoint](#)
- [DescribeSecurityConfiguration](#)
- [DescribeVirtualCluster](#)
- [GetManagedEndpointSessionCredentials](#)
- [ListJobRuns](#)
- [ListJobTemplates](#)
- [ListManagedEndpoints](#)
- [ListSecurityConfigurations](#)
- [ListTagsForResource](#)
- [ListVirtualClusters](#)
- [StartJobRun](#)
- [TagResource](#)
- [UntagResource](#)

# CancelJobRun

Cancel a job run. A job run is a unit of work, such as a Spark jar, PySpark script, or SparkSQL query, that you submit to Amazon EMR on EKS.

## Request Syntax

```
DELETE /virtualclusters/virtualClusterId/jobruns/jobRunId HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### jobRunId

The ID of the job run to cancel.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[0-9a-z]+`

Required: Yes

### virtualClusterId

The ID of the virtual cluster for which the job run will be canceled.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[0-9a-z]+`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
```

```
Content-type: application/json

{
  "id": "string",
  "virtualClusterId": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### id

The output contains the ID of the cancelled job run.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: [0-9a-z]+

### virtualClusterId

The output contains the virtual cluster ID for which the job run is cancelled.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: [0-9a-z]+

## Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

### InternalServerErrorException

This is an internal server exception.

HTTP Status Code: 500

## ValidationException

There are invalid parameters in the client request.

HTTP Status Code: 400

## See Also

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

- [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](#)

# CreateJobTemplate

Creates a job template. Job template stores values of StartJobRun API request in a template and can be used to start a job run. Job template allows two use cases: avoid repeating recurring StartJobRun API request values, enforcing certain values in StartJobRun API request.

## Request Syntax

```
POST /jobtemplates HTTP/1.1
Content-type: application/json

{
  "clientToken": "string",
  "jobTemplateData": {
    "configurationOverrides": {
      "applicationConfiguration": [
        {
          "classification": "string",
          "configurations": [
            "Configuration"
          ],
          "properties": {
            "string" : "string"
          }
        }
      ],
    },
    "monitoringConfiguration": {
      "cloudWatchMonitoringConfiguration": {
        "logGroupName": "string",
        "logStreamNamePrefix": "string"
      },
      "persistentAppUI": "string",
      "s3MonitoringConfiguration": {
        "logUri": "string"
      }
    }
  },
  "executionRoleArn": "string",
  "jobDriver": {
    "sparkSqlJobDriver": {
      "entryPoint": "string",
      "sparkSqlParameters": "string"
    }
  }
}
```

```
    },
    "sparkSubmitJobDriver": {
      "entryPoint": "string",
      "entryPointArguments": [ "string" ],
      "sparkSubmitParameters": "string"
    }
  },
  "jobTags": {
    "string" : "string"
  },
  "parameterConfiguration": {
    "string" : {
      "defaultValue": "string",
      "type": "string"
    }
  },
  "releaseLabel": "string"
},
"kmsKeyArn": "string",
"name": "string",
"tags": {
  "string" : "string"
}
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### clientToken

The client token of the job template.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: .\*\\S.\*

Required: Yes

## jobTemplateData

The job template data which holds values of StartJobRun API request.

Type: [JobTemplateData](#) object

Required: Yes

## kmsKeyArn

The KMS key ARN used to encrypt the job template.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 2048.

Pattern: `^(arn:(aws[a-zA-Z0-9-]*) : kms : .+ : (\d{12})? : key\/[ (0-9a-zA-Z)-? ]+ | \${ [a-zA-Z] \w* \} )$`

Required: No

## name

The specified name of the job template.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[\.\-_\#A-Za-z0-9]+`

Required: Yes

## tags

The tags that are associated with the job template.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Key Pattern: `.*\S.*`

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Value Pattern: `.*\S.*`

Required: No

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "arn": "string",
  "createdAt": "string",
  "id": "string",
  "name": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### arn

This output display the ARN of the created job template.

Type: String

Length Constraints: Minimum length of 60. Maximum length of 1024.

Pattern: `^arn:(aws[a-zA-Z0-9-]*):emr-containers:.*:(\d{12}):\/jobtemplates\/[0-9a-zA-Z]+$`

### createdAt

This output displays the date and time when the job template was created.

Type: Timestamp

### id

This output display the created job template ID.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[0-9a-z]+`

### name

This output displays the name of the created job template.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[\.\-_\/#A-Za-z0-9]+`

## Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

### InternalServerErrorException

This is an internal server exception.

HTTP Status Code: 500

### ResourceNotFoundException

The specified resource was not found.

HTTP Status Code: 400

### ValidationException

There are invalid parameters in the client request.

HTTP Status Code: 400

## See Also

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

- [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](#)

# CreateManagedEndpoint

Creates a managed endpoint. A managed endpoint is a gateway that connects Amazon EMR Studio to Amazon EMR on EKS so that Amazon EMR Studio can communicate with your virtual cluster.

## Request Syntax

POST /virtualclusters/*virtualClusterId*/endpoints HTTP/1.1  
Content-type: application/json

```
{
  "certificateArn": "string",
  "clientToken": "string",
  "configurationOverrides": {
    "applicationConfiguration": [
      {
        "classification": "string",
        "configurations": [
          "Configuration"
        ],
        "properties": {
          "string" : "string"
        }
      }
    ],
    "monitoringConfiguration": {
      "cloudWatchMonitoringConfiguration": {
        "logGroupName": "string",
        "logStreamNamePrefix": "string"
      },
      "containerLogRotationConfiguration": {
        "maxFilesToKeep": number,
        "rotationSize": "string"
      },
      "managedLogs": {
        "allowAWSToRetainLogs": "string",
        "encryptionKeyArn": "string"
      },
      "persistentAppUI": "string",
      "s3MonitoringConfiguration": {
        "logUri": "string"
      }
    }
  }
}
```

```
},  
"executionRoleArn": "string",  
"name": "string",  
"releaseLabel": "string",  
"tags": {  
  "string" : "string"  
},  
"type": "string"  
}
```

## URI Request Parameters

The request uses the following URI parameters.

### virtualClusterId

The ID of the virtual cluster for which a managed endpoint is created.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: [0-9a-z]+

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### certificateArn

*This parameter has been deprecated.*

The certificate ARN provided by users for the managed endpoint. This field is under deprecation and will be removed in future releases.

Type: String

Length Constraints: Minimum length of 44. Maximum length of 2048.

Pattern: ^arn:(aws[a-zA-Z0-9-]\*):acm:.\*:(\d{12}):certificate/.+&

Required: No

## clientToken

The client idempotency token for this create call.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `.*\S.*`

Required: Yes

## configurationOverrides

The configuration settings that will be used to override existing configurations.

Type: [ConfigurationOverrides](#) object

Required: No

## executionRoleArn

The ARN of the execution role.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `^arn:(aws[a-zA-Z0-9-]*):iam::(\d{12})?:(role((\u002F)|(\u002F[\u0021-\u007F]+\u002F))[\w+=,.\e-]+)$`

Required: Yes

## name

The name of the managed endpoint.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[\.\-_\#A-Za-z0-9]+`

Required: Yes

## releaseLabel

The Amazon EMR release version.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[\.\-_\/A-Za-z0-9]+`

Required: Yes

## tags

The tags of the managed endpoint.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Key Pattern: `.*\S.*`

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Value Pattern: `.*\S.*`

Required: No

## type

The type of the managed endpoint.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `.*\S.*`

Required: Yes

## Response Syntax

```
HTTP/1.1 200
```

```
Content-type: application/json

{
  "arn": "string",
  "id": "string",
  "name": "string",
  "virtualClusterId": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### arn

The output contains the ARN of the managed endpoint.

Type: String

Length Constraints: Minimum length of 60. Maximum length of 1024.

Pattern: `^arn:(aws[a-zA-Z0-9-]*):emr-containers:.+:(\d{12}):virtualclusters/[0-9a-zA-Z]+/endpoints/[0-9a-zA-Z]+$`

### id

The output contains the ID of the managed endpoint.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[0-9a-z]+`

### name

The output contains the name of the managed endpoint.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[\.\-_\/#A-Za-z0-9]+`

## virtualClusterId

The output contains the ID of the virtual cluster.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[0-9a-z]+`

## Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

### InternalServerError

This is an internal server exception.

HTTP Status Code: 500

### ResourceNotFoundException

The specified resource was not found.

HTTP Status Code: 400

### ValidationException

There are invalid parameters in the client request.

HTTP Status Code: 400

## See Also

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

- [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](#)

# CreateSecurityConfiguration

Creates a security configuration. Security configurations in Amazon EMR on EKS are templates for different security setups. You can use security configurations to configure the AWS Lake Formation integration setup. You can also create a security configuration to re-use a security setup each time you create a virtual cluster.

## Request Syntax

```
POST /securityconfigurations HTTP/1.1
```

```
Content-type: application/json
```

```
{
  "clientToken": "string",
  "containerProvider": {
    "id": "string",
    "info": { ... },
    "type": "string"
  },
  "name": "string",
  "securityConfigurationData": {
    "authorizationConfiguration": {
      "encryptionConfiguration": {
        "inTransitEncryptionConfiguration": {
          "tlsCertificateConfiguration": {
            "certificateProviderType": "string",
            "privateCertificateSecretArn": "string",
            "publicCertificateSecretArn": "string"
          }
        }
      }
    },
    "lakeFormationConfiguration": {
      "authorizedSessionTagValue": "string",
      "queryEngineRoleArn": "string",
      "secureNamespaceInfo": {
        "clusterId": "string",
        "namespace": "string"
      }
    }
  }
},
"tags": {
```

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

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### clientToken

The client idempotency token to use when creating the security configuration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: .\*\\S.\*

Required: Yes

### containerProvider

The container provider associated with the security configuration.

Type: [ContainerProvider](#) object

Required: No

### name

The name of the security configuration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: [\\.\\-\\\_/#A-Za-z0-9]+

Required: Yes

## securityConfigurationData

Security configuration input for the request.

Type: [SecurityConfigurationData](#) object

Required: Yes

## tags

The tags to add to the security configuration.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Key Pattern: `.*\S.*`

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Value Pattern: `.*\S.*`

Required: No

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json
```

```
{
  "arn": "string",
  "id": "string",
  "name": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

## arn

The ARN (Amazon Resource Name) of the security configuration.

Type: String

Length Constraints: Minimum length of 60. Maximum length of 1024.

Pattern: `^arn:(aws[a-zA-Z0-9-]*):emr-containers:.+:(\d{12}):\/securityconfigurations\/[0-9a-zA-Z]+$`

## id

The ID of the security configuration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[0-9a-z]+`

## name

The name of the security configuration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[\.\-_\/#A-Za-z0-9]+`

## Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

### **InternalServerErrorException**

This is an internal server exception.

HTTP Status Code: 500

### **ValidationException**

There are invalid parameters in the client request.

HTTP Status Code: 400

## See Also

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

- [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](#)

# CreateVirtualCluster

Creates a virtual cluster. Virtual cluster is a managed entity on Amazon EMR on EKS. You can create, describe, list and delete virtual clusters. They do not consume any additional resource in your system. A single virtual cluster maps to a single Kubernetes namespace. Given this relationship, you can model virtual clusters the same way you model Kubernetes namespaces to meet your requirements.

## Request Syntax

```
POST /virtualclusters HTTP/1.1
Content-type: application/json

{
  "clientToken": "string",
  "containerProvider": {
    "id": "string",
    "info": { ... },
    "type": "string"
  },
  "name": "string",
  "securityConfigurationId": "string",
  "tags": {
    "string" : "string"
  }
}
```

## URI Request Parameters

The request does not use any URI parameters.

## Request Body

The request accepts the following data in JSON format.

### clientToken

The client token of the virtual cluster.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `.*\S.*`

Required: Yes

### containerProvider

The container provider of the virtual cluster.

Type: [ContainerProvider](#) object

Required: Yes

### name

The specified name of the virtual cluster.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[\.\-_\#A-Za-z0-9]+`

Required: Yes

### securityConfigurationId

The ID of the security configuration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[0-9a-z]+`

Required: No

### tags

The tags assigned to the virtual cluster.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Key Pattern: `.*\S.*`

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Value Pattern: `.*\S.*`

Required: No

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "arn": "string",
  "id": "string",
  "name": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### arn

This output contains the ARN of virtual cluster.

Type: String

Length Constraints: Minimum length of 60. Maximum length of 1024.

Pattern: `^arn:(aws[a-zA-Z0-9-]*):emr-containers:.*:(\d{12}):virtualclusters/[0-9a-zA-Z]+$`

### id

This output contains the virtual cluster ID.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[0-9a-z]+`

### name

This output contains the name of the virtual cluster.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[\.\-_\#A-Za-z0-9]+`

## Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

### **EKSRequestThrottledException**

The request exceeded the Amazon EKS API operation limits.

HTTP Status Code: 429

### **InternalServerErrorException**

This is an internal server exception.

HTTP Status Code: 500

### **ResourceNotFoundException**

The specified resource was not found.

HTTP Status Code: 400

### **ValidationException**

There are invalid parameters in the client request.

HTTP Status Code: 400

## See Also

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

- [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](#)

# DeleteJobTemplate

Deletes a job template. Job template stores values of StartJobRun API request in a template and can be used to start a job run. Job template allows two use cases: avoid repeating recurring StartJobRun API request values, enforcing certain values in StartJobRun API request.

## Request Syntax

```
DELETE /jobtemplates/templateId HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### templateId

The ID of the job template that will be deleted.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: [0-9a-z]+

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "id": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### **id**

This output contains the ID of the job template that was deleted.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: [0-9a-z]+

## **Errors**

For information about the errors that are common to all actions, see [Common Error Types](#).

### **InternalServerErrorException**

This is an internal server exception.

HTTP Status Code: 500

### **ValidationException**

There are invalid parameters in the client request.

HTTP Status Code: 400

## **See Also**

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

- [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](#)

# DeleteManagedEndpoint

Deletes a managed endpoint. A managed endpoint is a gateway that connects Amazon EMR Studio to Amazon EMR on EKS so that Amazon EMR Studio can communicate with your virtual cluster.

## Request Syntax

```
DELETE /virtualclusters/virtualClusterId/endpoints/endpointId HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### endpointId

The ID of the managed endpoint.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[0-9a-z]+`

Required: Yes

### virtualClusterId

The ID of the endpoint's virtual cluster.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[0-9a-z]+`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
```

```
Content-type: application/json

{
  "id": "string",
  "virtualClusterId": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### id

The output displays the ID of the managed endpoint.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: [0-9a-z]+

### virtualClusterId

The output displays the ID of the endpoint's virtual cluster.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: [0-9a-z]+

## Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

### InternalServerErrorException

This is an internal server exception.

HTTP Status Code: 500

## ValidationException

There are invalid parameters in the client request.

HTTP Status Code: 400

## See Also

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

- [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](#)

# DeleteVirtualCluster

Deletes a virtual cluster. Virtual cluster is a managed entity on Amazon EMR on EKS. You can create, describe, list and delete virtual clusters. They do not consume any additional resource in your system. A single virtual cluster maps to a single Kubernetes namespace. Given this relationship, you can model virtual clusters the same way you model Kubernetes namespaces to meet your requirements.

## Request Syntax

```
DELETE /virtualclusters/virtualClusterId HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### virtualClusterId

The ID of the virtual cluster that will be deleted.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[0-9a-z]+`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "id": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### id

This output contains the ID of the virtual cluster that will be deleted.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[0-9a-z]+`

## Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

### **InternalServerErrorException**

This is an internal server exception.

HTTP Status Code: 500

### **ValidationException**

There are invalid parameters in the client request.

HTTP Status Code: 400

## See Also

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

- [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](#)

# DescribeJobRun

Displays detailed information about a job run. A job run is a unit of work, such as a Spark jar, PySpark script, or SparkSQL query, that you submit to Amazon EMR on EKS.

## Request Syntax

```
GET /virtualclusters/virtualClusterId/jobruns/jobRunId HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### jobRunId

The ID of the job run request.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[0-9a-z]+`

Required: Yes

### virtualClusterId

The ID of the virtual cluster for which the job run is submitted.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[0-9a-z]+`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
```

```

"jobRun": {
  "arn": "string",
  "clientToken": "string",
  "configurationOverrides": {
    "applicationConfiguration": [
      {
        "classification": "string",
        "configurations": [
          "Configuration"
        ],
        "properties": {
          "string" : "string"
        }
      }
    ],
    "monitoringConfiguration": {
      "cloudWatchMonitoringConfiguration": {
        "logGroupName": "string",
        "logStreamNamePrefix": "string"
      },
      "containerLogRotationConfiguration": {
        "maxFilesToKeep": number,
        "rotationSize": "string"
      },
      "managedLogs": {
        "allowAWSToRetainLogs": "string",
        "encryptionKeyArn": "string"
      },
      "persistentAppUI": "string",
      "s3MonitoringConfiguration": {
        "logUri": "string"
      }
    }
  },
  "createdAt": "string",
  "createdBy": "string",
  "executionRoleArn": "string",
  "failureReason": "string",
  "finishedAt": "string",
  "id": "string",
  "jobDriver": {
    "sparkSqlJobDriver": {
      "entryPoint": "string",
      "sparkSqlParameters": "string"
    }
  }
}

```

```
    },
    "sparkSubmitJobDriver": {
      "entryPoint": "string",
      "entryPointArguments": [ "string" ],
      "sparkSubmitParameters": "string"
    }
  },
  "name": "string",
  "releaseLabel": "string",
  "retryPolicyConfiguration": {
    "maxAttempts": number
  },
  "retryPolicyExecution": {
    "currentAttemptCount": number
  },
  "state": "string",
  "stateDetails": "string",
  "tags": {
    "string" : "string"
  },
  "virtualClusterId": "string"
}
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### jobRun

The output displays information about a job run.

Type: [JobRun](#) object

## Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

### InternalServerErrorException

This is an internal server exception.

HTTP Status Code: 500

### **ResourceNotFoundException**

The specified resource was not found.

HTTP Status Code: 400

### **ValidationException**

There are invalid parameters in the client request.

HTTP Status Code: 400

## **See Also**

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

- [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](#)

# DescribeJobTemplate

Displays detailed information about a specified job template. Job template stores values of StartJobRun API request in a template and can be used to start a job run. Job template allows two use cases: avoid repeating recurring StartJobRun API request values, enforcing certain values in StartJobRun API request.

## Request Syntax

```
GET /jobtemplates/templateId HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### templateId

The ID of the job template that will be described.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[0-9a-z]+`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "jobTemplate": {
    "arn": "string",
    "createdAt": "string",
    "createdBy": "string",
    "decryptionError": "string",
    "id": "string",
```

```

"jobTemplateData": {
  "configurationOverrides": {
    "applicationConfiguration": [
      {
        "classification": "string",
        "configurations": [
          "Configuration"
        ],
        "properties": {
          "string": "string"
        }
      }
    ],
    "monitoringConfiguration": {
      "cloudWatchMonitoringConfiguration": {
        "logGroupName": "string",
        "logStreamNamePrefix": "string"
      },
      "persistentAppUI": "string",
      "s3MonitoringConfiguration": {
        "logUri": "string"
      }
    }
  },
  "executionRoleArn": "string",
  "jobDriver": {
    "sparkSqlJobDriver": {
      "entryPoint": "string",
      "sparkSqlParameters": "string"
    },
    "sparkSubmitJobDriver": {
      "entryPoint": "string",
      "entryPointArguments": [ "string" ],
      "sparkSubmitParameters": "string"
    }
  },
  "jobTags": {
    "string": "string"
  },
  "parameterConfiguration": {
    "string": {
      "defaultValue": "string",
      "type": "string"
    }
  }
}

```

```
    },
    "releaseLabel": "string"
  },
  "kmsKeyArn": "string",
  "name": "string",
  "tags": {
    "string" : "string"
  }
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### jobTemplate

This output displays information about the specified job template.

Type: [JobTemplate](#) object

## Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

### **InternalServerError**

This is an internal server exception.

HTTP Status Code: 500

### **ResourceNotFoundException**

The specified resource was not found.

HTTP Status Code: 400

### **ValidationException**

There are invalid parameters in the client request.

HTTP Status Code: 400

## See Also

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

- [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](#)

# DescribeManagedEndpoint

Displays detailed information about a managed endpoint. A managed endpoint is a gateway that connects Amazon EMR Studio to Amazon EMR on EKS so that Amazon EMR Studio can communicate with your virtual cluster.

## Request Syntax

```
GET /virtualclusters/virtualClusterId/endpoints/endpointId HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### endpointId

This output displays ID of the managed endpoint.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[0-9a-z]+`

Required: Yes

### virtualClusterId

The ID of the endpoint's virtual cluster.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[0-9a-z]+`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200  
Content-type: application/json
```

```

{
  "endpoint": {
    "arn": "string",
    "certificateArn": "string",
    "certificateAuthority": {
      "certificateArn": "string",
      "certificateData": "string"
    },
    "configurationOverrides": {
      "applicationConfiguration": [
        {
          "classification": "string",
          "configurations": [
            "Configuration"
          ],
          "properties": {
            "string": "string"
          }
        }
      ],
      "monitoringConfiguration": {
        "cloudWatchMonitoringConfiguration": {
          "logGroupName": "string",
          "logStreamNamePrefix": "string"
        },
        "containerLogRotationConfiguration": {
          "maxFilesToKeep": number,
          "rotationSize": "string"
        },
        "managedLogs": {
          "allowAWSToRetainLogs": "string",
          "encryptionKeyArn": "string"
        },
        "persistentAppUI": "string",
        "s3MonitoringConfiguration": {
          "logUri": "string"
        }
      }
    },
    "createdAt": "string",
    "executionRoleArn": "string",
    "failureReason": "string",
    "id": "string",

```

```
"name": "string",
"releaseLabel": "string",
"securityGroup": "string",
"serverUrl": "string",
"state": "string",
"stateDetails": "string",
"subnetIds": [ "string" ],
"tags": {
  "string" : "string"
},
"type": "string",
"virtualClusterId": "string"
}
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### endpoint

This output displays information about a managed endpoint.

Type: [Endpoint](#) object

## Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

### **InternalServerErrorException**

This is an internal server exception.

HTTP Status Code: 500

### **ResourceNotFoundException**

The specified resource was not found.

HTTP Status Code: 400

## ValidationException

There are invalid parameters in the client request.

HTTP Status Code: 400

## See Also

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

- [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](#)

# DescribeSecurityConfiguration

Displays detailed information about a specified security configuration. Security configurations in Amazon EMR on EKS are templates for different security setups. You can use security configurations to configure the AWS Lake Formation integration setup. You can also create a security configuration to re-use a security setup each time you create a virtual cluster.

## Request Syntax

```
GET /securityconfigurations/securityConfigurationId HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### securityConfigurationId

The ID of the security configuration.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[0-9a-z]+`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "securityConfiguration": {
    "arn": "string",
    "createdAt": "string",
    "createdBy": "string",
    "id": "string",
    "name": "string",
```

```

    "securityConfigurationData": {
      "authorizationConfiguration": {
        "encryptionConfiguration": {
          "inTransitEncryptionConfiguration": {
            "tlsCertificateConfiguration": {
              "certificateProviderType": "string",
              "privateCertificateSecretArn": "string",
              "publicCertificateSecretArn": "string"
            }
          }
        }
      },
      "lakeFormationConfiguration": {
        "authorizedSessionTagValue": "string",
        "queryEngineRoleArn": "string",
        "secureNamespaceInfo": {
          "clusterId": "string",
          "namespace": "string"
        }
      }
    },
    "tags": {
      "string" : "string"
    }
  }
}

```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### securityConfiguration

Details of the security configuration.

Type: [SecurityConfiguration](#) object

## Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

## InternalServerErrorException

This is an internal server exception.

HTTP Status Code: 500

## ResourceNotFoundException

The specified resource was not found.

HTTP Status Code: 400

## ValidationException

There are invalid parameters in the client request.

HTTP Status Code: 400

## See Also

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

- [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](#)

# DescribeVirtualCluster

Displays detailed information about a specified virtual cluster. Virtual cluster is a managed entity on Amazon EMR on EKS. You can create, describe, list and delete virtual clusters. They do not consume any additional resource in your system. A single virtual cluster maps to a single Kubernetes namespace. Given this relationship, you can model virtual clusters the same way you model Kubernetes namespaces to meet your requirements.

## Request Syntax

```
GET /virtualclusters/virtualClusterId HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### virtualClusterId

The ID of the virtual cluster that will be described.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[0-9a-z]+`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "virtualCluster": {
    "arn": "string",
    "containerProvider": {
```

```
    "id": "string",
    "info": { ... },
    "type": "string"
  },
  "createdAt": "string",
  "id": "string",
  "name": "string",
  "securityConfigurationId": "string",
  "state": "string",
  "tags": {
    "string" : "string"
  }
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### virtualCluster

This output displays information about the specified virtual cluster.

Type: [VirtualCluster](#) object

## Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

### InternalServerError

This is an internal server exception.

HTTP Status Code: 500

### ResourceNotFoundException

The specified resource was not found.

HTTP Status Code: 400

## ValidationException

There are invalid parameters in the client request.

HTTP Status Code: 400

## See Also

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

- [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](#)

# GetManagedEndpointSessionCredentials

Generate a session token to connect to a managed endpoint.

## Request Syntax

```
POST /virtualclusters/virtualClusterId/endpoints/endpointId/credentials HTTP/1.1
Content-type: application/json
```

```
{
  "clientId": "string",
  "credentialType": "string",
  "durationInSeconds": number,
  "executionRoleArn": "string",
  "logContext": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### endpointId

The ARN of the managed endpoint for which the request is submitted.

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `.*\S.*`

Required: Yes

### virtualClusterId

The ARN of the Virtual Cluster which the Managed Endpoint belongs to.

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `.*\S.*`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### clientToken

The client idempotency token of the job run request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `.*\S.*`

Required: No

### credentialType

Type of the token requested. Currently supported and default value of this field is "TOKEN."

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^\.*\S.*$`

Required: Yes

### durationInSeconds

Duration in seconds for which the session token is valid. The default duration is 15 minutes and the maximum is 12 hours.

Type: Integer

Required: No

### executionRoleArn

The IAM Execution Role ARN that will be used by the job run.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `^arn:(aws[a-zA-Z0-9-]*):iam::(\d{12})?:(role((\u002F)|(\u002F[\u0021-\u007F]+\u002F))[\w+=,.\e-]+)$`

Required: Yes

### logContext

String identifier used to separate sections of the execution logs uploaded to S3.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 63.

Pattern: `^(?!.*-s3alias)(?!xn--.*)[a-z0-9][-a-z0-9.]*?[a-z0-9]$`

Required: No

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "credentials": { ... },
  "expiresAt": "string",
  "id": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### credentials

The structure containing the session credentials.

Type: [Credentials](#) object

**Note:** This object is a Union. Only one member of this object can be specified or returned.

### expiresAt

The date and time when the session token will expire.

Type: Timestamp

## id

The identifier of the session token returned.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: [0-9a-z]+

## Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

### **InternalServerErrorException**

This is an internal server exception.

HTTP Status Code: 500

### **RequestThrottledException**

The request throttled.

HTTP Status Code: 400

### **ResourceNotFoundException**

The specified resource was not found.

HTTP Status Code: 400

### **ValidationException**

There are invalid parameters in the client request.

HTTP Status Code: 400

## See Also

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

- [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](#)

# ListJobRuns

Lists job runs based on a set of parameters. A job run is a unit of work, such as a Spark jar, PySpark script, or SparkSQL query, that you submit to Amazon EMR on EKS.

## Request Syntax

```
GET /virtualclusters/virtualClusterId/jobruns?  
createdAfter=createdAfter&createdBefore=createdBefore&maxResults=maxResults&name=name&nextToken=nextToken  
HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### [createdAfter](#)

The date and time after which the job runs were submitted.

### [createdBefore](#)

The date and time before which the job runs were submitted.

### [maxResults](#)

The maximum number of job runs that can be listed.

### [name](#)

The name of the job run.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[\.\-_\#A-Za-z0-9]+`

### [nextToken](#)

The token for the next set of job runs to return.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `.*\S.*`

### [states](#)

The states of the job run.

Array Members: Maximum number of 10 items.

Valid Values: PENDING | SUBMITTED | RUNNING | FAILED | CANCELLED | CANCEL\_PENDING | COMPLETED

### virtualClusterId

The ID of the virtual cluster for which to list the job run.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: [0-9a-z]+

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "jobRuns": [
    {
      "arn": "string",
      "clientToken": "string",
      "configurationOverrides": {
        "applicationConfiguration": [
          {
            "classification": "string",
            "configurations": [
              "Configuration"
            ],
            "properties": {
              "string" : "string"
            }
          }
        ],
        "monitoringConfiguration": {
          "cloudWatchMonitoringConfiguration": {
```

```

        "logGroupName": "string",
        "logStreamNamePrefix": "string"
    },
    "containerLogRotationConfiguration": {
        "maxFilesToKeep": number,
        "rotationSize": "string"
    },
    "managedLogs": {
        "allowAWSToRetainLogs": "string",
        "encryptionKeyArn": "string"
    },
    "persistentAppUI": "string",
    "s3MonitoringConfiguration": {
        "logUri": "string"
    }
}
},
"createdAt": "string",
"createdBy": "string",
"executionRoleArn": "string",
"failureReason": "string",
"finishedAt": "string",
"id": "string",
"jobDriver": {
    "sparkSqlJobDriver": {
        "entryPoint": "string",
        "sparkSqlParameters": "string"
    },
    "sparkSubmitJobDriver": {
        "entryPoint": "string",
        "entryPointArguments": [ "string" ],
        "sparkSubmitParameters": "string"
    }
},
"name": "string",
"releaseLabel": "string",
"retryPolicyConfiguration": {
    "maxAttempts": number
},
"retryPolicyExecution": {
    "currentAttemptCount": number
},
"state": "string",
"stateDetails": "string",

```

```
    "tags": {
      "string" : "string"
    },
    "virtualClusterId": "string"
  }
],
"nextToken": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### jobRuns

This output lists information about the specified job runs.

Type: Array of [JobRun](#) objects

### nextToken

This output displays the token for the next set of job runs.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: .\*\\S.\*

## Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

### **InternalServerErrorException**

This is an internal server exception.

HTTP Status Code: 500

### **ValidationException**

There are invalid parameters in the client request.

HTTP Status Code: 400

## See Also

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

- [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](#)

# ListJobTemplates

Lists job templates based on a set of parameters. Job template stores values of StartJobRun API request in a template and can be used to start a job run. Job template allows two use cases: avoid repeating recurring StartJobRun API request values, enforcing certain values in StartJobRun API request.

## Request Syntax

```
GET /jobtemplates?  
createdAfter=createdAfter&createdBefore=createdBefore&maxResults=maxResults&nextToken=nextToken  
HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### createdAfter

The date and time after which the job templates were created.

### createdBefore

The date and time before which the job templates were created.

### maxResults

The maximum number of job templates that can be listed.

### nextToken

The token for the next set of job templates to return.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `.*\S.*`

## Request Body

The request does not have a request body.

## Response Syntax

HTTP/1.1 200

Content-type: application/json

```
{
  "nextToken": "string",
  "templates": [
    {
      "arn": "string",
      "createdAt": "string",
      "createdBy": "string",
      "decryptionError": "string",
      "id": "string",
      "jobTemplateData": {
        "configurationOverrides": {
          "applicationConfiguration": [
            {
              "classification": "string",
              "configurations": [
                "Configuration"
              ],
              "properties": {
                "string" : "string"
              }
            }
          ],
          "monitoringConfiguration": {
            "cloudWatchMonitoringConfiguration": {
              "logGroupName": "string",
              "logStreamNamePrefix": "string"
            },
            "persistentAppUI": "string",
            "s3MonitoringConfiguration": {
              "logUri": "string"
            }
          }
        },
        "executionRoleArn": "string",
        "jobDriver": {
          "sparkSqlJobDriver": {
            "entryPoint": "string",
            "sparkSqlParameters": "string"
          }
        }
      }
    }
  ]
}
```

```

    },
    "sparkSubmitJobDriver": {
      "entryPoint": "string",
      "entryPointArguments": [ "string" ],
      "sparkSubmitParameters": "string"
    }
  },
  "jobTags": {
    "string" : "string"
  },
  "parameterConfiguration": {
    "string" : {
      "defaultValue": "string",
      "type": "string"
    }
  },
  "releaseLabel": "string"
},
"kmsKeyArn": "string",
"name": "string",
"tags": {
  "string" : "string"
}
}
]
}

```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### [nextToken](#)

This output displays the token for the next set of job templates.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: .\*\\S.\*

## [templates](#)

This output lists information about the specified job templates.

Type: Array of [JobTemplate](#) objects

## Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

### InternalServerErrorException

This is an internal server exception.

HTTP Status Code: 500

### ValidationException

There are invalid parameters in the client request.

HTTP Status Code: 400

## See Also

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

- [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](#)

# ListManagedEndpoints

Lists managed endpoints based on a set of parameters. A managed endpoint is a gateway that connects Amazon EMR Studio to Amazon EMR on EKS so that Amazon EMR Studio can communicate with your virtual cluster.

## Request Syntax

```
GET /virtualclusters/virtualClusterId/endpoints?  
createdAfter=createdAfter&createdBefore=createdBefore&maxResults=maxResults&nextToken=nextToken  
HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### [createdAfter](#)

The date and time after which the endpoints are created.

### [createdBefore](#)

The date and time before which the endpoints are created.

### [maxResults](#)

The maximum number of managed endpoints that can be listed.

### [nextToken](#)

The token for the next set of managed endpoints to return.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `.*\S.*`

### [states](#)

The states of the managed endpoints.

Array Members: Maximum number of 10 items.

Valid Values: CREATING | ACTIVE | TERMINATING | TERMINATED |  
TERMINATED\_WITH\_ERRORS

## types

The types of the managed endpoints.

Array Members: Maximum number of 10 items.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `.*\S.*`

## virtualClusterId

The ID of the virtual cluster.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[0-9a-z]+`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "endpoints": [
    {
      "arn": "string",
      "certificateArn": "string",
      "certificateAuthority": {
        "certificateArn": "string",
        "certificateData": "string"
      },
      "configurationOverrides": {
        "applicationConfiguration": [
          {
            "classification": "string",
            "configurations": [
              "Configuration"
            ]
          }
        ]
      }
    }
  ]
}
```

```

    ],
    "properties": {
      "string": "string"
    }
  ],
  "monitoringConfiguration": {
    "cloudWatchMonitoringConfiguration": {
      "logGroupName": "string",
      "logStreamNamePrefix": "string"
    },
    "containerLogRotationConfiguration": {
      "maxFilesToKeep": number,
      "rotationSize": "string"
    },
    "managedLogs": {
      "allowAWSToRetainLogs": "string",
      "encryptionKeyArn": "string"
    },
    "persistentAppUI": "string",
    "s3MonitoringConfiguration": {
      "logUri": "string"
    }
  }
},
"createdAt": "string",
"executionRoleArn": "string",
"failureReason": "string",
"id": "string",
"name": "string",
"releaseLabel": "string",
"securityGroup": "string",
"serverUrl": "string",
"state": "string",
"stateDetails": "string",
"subnetIds": [ "string" ],
"tags": {
  "string": "string"
},
"type": "string",
"virtualClusterId": "string"
}
],
"nextToken": "string"

```

```
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### endpoints

The managed endpoints to be listed.

Type: Array of [Endpoint](#) objects

### nextToken

The token for the next set of endpoints to return.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `.*\S.*`

## Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

### **InternalServerErrorException**

This is an internal server exception.

HTTP Status Code: 500

### **ValidationException**

There are invalid parameters in the client request.

HTTP Status Code: 400

## See Also

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

- [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](#)

# ListSecurityConfigurations

Lists security configurations based on a set of parameters. Security configurations in Amazon EMR on EKS are templates for different security setups. You can use security configurations to configure the AWS Lake Formation integration setup. You can also create a security configuration to re-use a security setup each time you create a virtual cluster.

## Request Syntax

```
GET /securityconfigurations?  
createdAfter=createdAfter&createdBefore=createdBefore&maxResults=maxResults&nextToken=nextToken  
HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### createdAfter

The date and time after which the security configuration was created.

### createdBefore

The date and time before which the security configuration was created.

### maxResults

The maximum number of security configurations the operation can list.

### nextToken

The token for the next set of security configurations to return.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `.*\S.*`

## Request Body

The request does not have a request body.

## Response Syntax

HTTP/1.1 200

Content-type: application/json

```
{
  "nextToken": "string",
  "securityConfigurations": [
    {
      "arn": "string",
      "createdAt": "string",
      "createdBy": "string",
      "id": "string",
      "name": "string",
      "securityConfigurationData": {
        "authorizationConfiguration": {
          "encryptionConfiguration": {
            "inTransitEncryptionConfiguration": {
              "tlsCertificateConfiguration": {
                "certificateProviderType": "string",
                "privateCertificateSecretArn": "string",
                "publicCertificateSecretArn": "string"
              }
            }
          }
        },
        "lakeFormationConfiguration": {
          "authorizedSessionTagValue": "string",
          "queryEngineRoleArn": "string",
          "secureNamespaceInfo": {
            "clusterId": "string",
            "namespace": "string"
          }
        }
      }
    },
    {
      "tags": {
        "string" : "string"
      }
    }
  ]
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### nextToken

The token for the next set of security configurations to return.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `.*\S.*`

### securityConfigurations

The list of returned security configurations.

Type: Array of [SecurityConfiguration](#) objects

## Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

### **InternalServerErrorException**

This is an internal server exception.

HTTP Status Code: 500

### **ValidationException**

There are invalid parameters in the client request.

HTTP Status Code: 400

## See Also

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

- [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](#)

# ListTagsForResource

Lists the tags assigned to the resources.

## Request Syntax

```
GET /tags/resourceArn HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### resourceArn

The ARN of tagged resources.

Length Constraints: Minimum length of 60. Maximum length of 500.

Pattern: `^arn:(aws[a-zA-Z0-9-]*):emr-containers:.+:(\d{12}):/virtualclusters/.+$`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

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

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

## tags

The tags assigned to resources.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Key Pattern: `.*\S.*`

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Value Pattern: `.*\S.*`

## Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

### InternalServerErrorException

This is an internal server exception.

HTTP Status Code: 500

### ResourceNotFoundException

The specified resource was not found.

HTTP Status Code: 400

### ValidationException

There are invalid parameters in the client request.

HTTP Status Code: 400

## See Also

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

- [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](#)

# ListVirtualClusters

Lists information about the specified virtual cluster. Virtual cluster is a managed entity on Amazon EMR on EKS. You can create, describe, list and delete virtual clusters. They do not consume any additional resource in your system. A single virtual cluster maps to a single Kubernetes namespace. Given this relationship, you can model virtual clusters the same way you model Kubernetes namespaces to meet your requirements.

## Request Syntax

```
GET /virtualclusters?  
containerProviderId=containerProviderId&containerProviderType=containerProviderType&createdAfter  
HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### containerProviderId

The container provider ID of the virtual cluster.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `.*\S.*`

### containerProviderType

The container provider type of the virtual cluster. Amazon EKS is the only supported type as of now.

Valid Values: EKS

### createdAfter

The date and time after which the virtual clusters are created.

### createdBefore

The date and time before which the virtual clusters are created.

## eksAccessEntryIntegrated

Optional Boolean that specifies whether the operation should return the virtual clusters that have the access entry integration enabled or disabled. If not specified, the operation returns all applicable virtual clusters.

## maxResults

The maximum number of virtual clusters that can be listed.

## nextToken

The token for the next set of virtual clusters to return.

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `.*\S.*`

## states

The states of the requested virtual clusters.

Array Members: Maximum number of 10 items.

Valid Values: `RUNNING` | `TERMINATING` | `TERMINATED` | `ARRESTED`

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "nextToken": "string",
  "virtualClusters": [
    {
      "arn": "string",
      "containerProvider": {
        "id": "string",
        "info": { ... },

```

```
    "type": "string"
  },
  "createdAt": "string",
  "id": "string",
  "name": "string",
  "securityConfigurationId": "string",
  "state": "string",
  "tags": {
    "string" : "string"
  }
}
]
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

### nextToken

This output displays the token for the next set of virtual clusters.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: .\*\\S.\*

### virtualClusters

This output lists the specified virtual clusters.

Type: Array of [VirtualCluster](#) objects

## Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

### **InternalServerErrorException**

This is an internal server exception.

HTTP Status Code: 500

## ValidationException

There are invalid parameters in the client request.

HTTP Status Code: 400

## See Also

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

- [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](#)

# StartJobRun

Starts a job run. A job run is a unit of work, such as a Spark jar, PySpark script, or SparkSQL query, that you submit to Amazon EMR on EKS.

## Request Syntax

POST /virtualclusters/*virtualClusterId*/jobruns HTTP/1.1

Content-type: application/json

```
{
  "clientToken": "string",
  "configurationOverrides": {
    "applicationConfiguration": [
      {
        "classification": "string",
        "configurations": [
          "Configuration"
        ],
        "properties": {
          "string": "string"
        }
      }
    ],
    "monitoringConfiguration": {
      "cloudWatchMonitoringConfiguration": {
        "logGroupName": "string",
        "logStreamNamePrefix": "string"
      },
      "containerLogRotationConfiguration": {
        "maxFilesToKeep": number,
        "rotationSize": "string"
      },
      "managedLogs": {
        "allowAWSToRetainLogs": "string",
        "encryptionKeyArn": "string"
      },
      "persistentAppUI": "string",
      "s3MonitoringConfiguration": {
        "logUri": "string"
      }
    }
  }
},
```

```

"executionRoleArn": "string",
"jobDriver": {
  "sparkSqlJobDriver": {
    "entryPoint": "string",
    "sparkSqlParameters": "string"
  },
  "sparkSubmitJobDriver": {
    "entryPoint": "string",
    "entryPointArguments": [ "string" ],
    "sparkSubmitParameters": "string"
  }
},
"jobTemplateId": "string",
"jobTemplateParameters": {
  "string" : "string"
},
"name": "string",
"releaseLabel": "string",
"retryPolicyConfiguration": {
  "maxAttempts": number
},
"tags": {
  "string" : "string"
}
}

```

## URI Request Parameters

The request uses the following URI parameters.

### virtualClusterId

The virtual cluster ID for which the job run request is submitted.

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: [0-9a-z]+

Required: Yes

## Request Body

The request accepts the following data in JSON format.

## clientToken

The client idempotency token of the job run request.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `.*\S.*`

Required: Yes

## configurationOverrides

The configuration overrides for the job run.

Type: [ConfigurationOverrides](#) object

Required: No

## executionRoleArn

The execution role ARN for the job run.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `^arn:(aws[a-zA-Z0-9-]*):iam::(\d{12})?:(role((\u002F)|(\u002F[\u0021-\u007F]+\u002F))[\w+=,.\u002D]+)$`

Required: No

## jobDriver

The job driver for the job run.

Type: [JobDriver](#) object

Required: No

## jobTemplateId

The job template ID to be used to start the job run.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[0-9a-z]+`

Required: No

### jobTemplateParameters

The values of job template parameters to start a job run.

Type: String to string map

Map Entries: Maximum number of 100 items.

Key Length Constraints: Minimum length of 1. Maximum length of 512.

Key Pattern: `[\.\-_\#A-Za-z0-9]+`

Value Length Constraints: Minimum length of 1. Maximum length of 1024.

Value Pattern: `.*\S.*`

Required: No

### name

The name of the job run.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[\.\-_\#A-Za-z0-9]+`

Required: No

### releaseLabel

The Amazon EMR release version to use for the job run.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[\.\-_\#A-Za-z0-9]+`

Required: No

## retryPolicyConfiguration

The retry policy configuration for the job run.

Type: [RetryPolicyConfiguration](#) object

Required: No

## tags

The tags assigned to job runs.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Key Pattern: `.*\S.*`

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Value Pattern: `.*\S.*`

Required: No

## Response Syntax

```
HTTP/1.1 200
Content-type: application/json

{
  "arn": "string",
  "id": "string",
  "name": "string",
  "virtualClusterId": "string"
}
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response.

The following data is returned in JSON format by the service.

## arn

This output lists the ARN of job run.

Type: String

Length Constraints: Minimum length of 60. Maximum length of 1024.

Pattern: `^arn:(aws[a-zA-Z0-9-]*):emr-containers:.+:(\d{12}):virtualclusters/[0-9a-zA-Z]+/jobruns/[0-9a-zA-Z]+$`

## id

This output displays the started job run ID.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[0-9a-z]+`

## name

This output displays the name of the started job run.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[\.\-_\#A-Za-z0-9]+`

## virtualClusterId

This output displays the virtual cluster ID for which the job run was submitted.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[0-9a-z]+`

## Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

## InternalServerErrorException

This is an internal server exception.

HTTP Status Code: 500

## ResourceNotFoundException

The specified resource was not found.

HTTP Status Code: 400

## ValidationException

There are invalid parameters in the client request.

HTTP Status Code: 400

## See Also

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

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

# TagResource

Assigns tags to resources. A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value, both of which you define. Tags enable you to categorize your AWS resources by attributes such as purpose, owner, or environment. When you have many resources of the same type, you can quickly identify a specific resource based on the tags you've assigned to it. For example, you can define a set of tags for your Amazon EMR on EKS clusters to help you track each cluster's owner and stack level. We recommend that you devise a consistent set of tag keys for each resource type. You can then search and filter the resources based on the tags that you add.

## Request Syntax

```
POST /tags/resourceArn HTTP/1.1
Content-type: application/json

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

## URI Request Parameters

The request uses the following URI parameters.

### resourceArn

The ARN of resources.

Length Constraints: Minimum length of 60. Maximum length of 500.

Pattern: `^arn:(aws[a-zA-Z0-9-]*) :emr-containers:.+:(\d{12}) : /virtualclusters/.+$`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

## tags

The tags assigned to resources.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Key Pattern: `.*\S.*`

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Value Pattern: `.*\S.*`

Required: Yes

## Response Syntax

```
HTTP/1.1 200
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

## Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

### **InternalServerErrorException**

This is an internal server exception.

HTTP Status Code: 500

### **ResourceNotFoundException**

The specified resource was not found.

HTTP Status Code: 400

## ValidationException

There are invalid parameters in the client request.

HTTP Status Code: 400

## See Also

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

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

# UntagResource

Removes tags from resources.

## Request Syntax

```
DELETE /tags/resourceArn?tagKeys=tagKeys HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### resourceArn

The ARN of resources.

Length Constraints: Minimum length of 60. Maximum length of 500.

Pattern: `^arn:(aws[a-zA-Z0-9-]*) :emr-containers: .+:(\d{12}) : /virtualclusters/.+$`

Required: Yes

### tagKeys

The tag keys of the resources.

Array Members: Minimum number of 0 items. Maximum number of 50 items.

Length Constraints: Minimum length of 1. Maximum length of 128.

Pattern: `.*\S.*`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

```
HTTP/1.1 200
```

## Response Elements

If the action is successful, the service sends back an HTTP 200 response with an empty HTTP body.

## Errors

For information about the errors that are common to all actions, see [Common Error Types](#).

### InternalServerError

This is an internal server exception.

HTTP Status Code: 500

### ResourceNotFoundException

The specified resource was not found.

HTTP Status Code: 400

### ValidationException

There are invalid parameters in the client request.

HTTP Status Code: 400

## See Also

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

- [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](#)

# Data Types

The Amazon EMR Containers API contains several data types that various actions use. This section describes each data type in detail.

## Note

The order of each element in a data type structure is not guaranteed. Applications should not assume a particular order.

The following data types are supported:

- [AuthorizationConfiguration](#)
- [Certificate](#)
- [CloudWatchMonitoringConfiguration](#)
- [Configuration](#)
- [ConfigurationOverrides](#)
- [ContainerInfo](#)
- [ContainerLogRotationConfiguration](#)
- [ContainerProvider](#)
- [Credentials](#)
- [EksInfo](#)
- [EncryptionConfiguration](#)
- [Endpoint](#)
- [InTransitEncryptionConfiguration](#)
- [JobDriver](#)
- [JobRun](#)
- [JobTemplate](#)
- [JobTemplateData](#)
- [LakeFormationConfiguration](#)
- [ManagedLogs](#)
- [MonitoringConfiguration](#)

- [ParametricCloudWatchMonitoringConfiguration](#)
- [ParametricConfigurationOverrides](#)
- [ParametricMonitoringConfiguration](#)
- [ParametricS3MonitoringConfiguration](#)
- [RetryPolicyConfiguration](#)
- [RetryPolicyExecution](#)
- [S3MonitoringConfiguration](#)
- [SecureNamespaceInfo](#)
- [SecurityConfiguration](#)
- [SecurityConfigurationData](#)
- [SparkSqlJobDriver](#)
- [SparkSubmitJobDriver](#)
- [TemplateParameterConfiguration](#)
- [TLSCertificateConfiguration](#)
- [VirtualCluster](#)

# AuthorizationConfiguration

Authorization-related configuration inputs for the security configuration.

## Contents

### encryptionConfiguration

Encryption-related configuration input for the security configuration.

Type: [EncryptionConfiguration](#) object

Required: No

### lakeFormationConfiguration

AWS Lake Formation related configuration inputs for the security configuration.

Type: [LakeFormationConfiguration](#) object

Required: No

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# Certificate

The entity representing certificate data generated for managed endpoint.

## Contents

### **certificateArn**

The ARN of the certificate generated for managed endpoint.

Type: String

Length Constraints: Minimum length of 44. Maximum length of 2048.

Pattern: `^arn:(aws[a-zA-Z0-9-]*):acm:.*:(\d{12}):certificate/.+&`

Required: No

### **certificateData**

The base64 encoded PEM certificate data generated for managed endpoint.

Type: String

Length Constraints: Maximum length of 5000.

Pattern: `^([A-Za-z0-9+/]{4})*([A-Za-z0-9+/]{4}|[A-Za-z0-9+/]{3}=[A-Za-z0-9+/]{2}==)?&`

Required: No

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# CloudWatchMonitoringConfiguration

A configuration for CloudWatch monitoring. You can configure your jobs to send log information to CloudWatch Logs.

## Contents

### logGroupName

The name of the log group for log publishing.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 512.

Pattern: `[\.\-_\/#A-Za-z0-9]+`

Required: Yes

### logStreamNamePrefix

The specified name prefix for log streams.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

Required: No

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# Configuration

A configuration specification to be used when provisioning virtual clusters, which can include configurations for applications and software bundled with Amazon EMR on EKS. A configuration consists of a classification, properties, and optional nested configurations. A classification refers to an application-specific configuration file. Properties are the settings you want to change in that file.

## Contents

### classification

The classification within a configuration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `.*\S.*`

Required: Yes

### configurations

A list of additional configurations to apply within a configuration object.

Type: Array of [Configuration](#) objects

Array Members: Maximum number of 100 items.

Required: No

### properties

A set of properties specified within a configuration classification.

Type: String to string map

Map Entries: Maximum number of 100 items.

Key Length Constraints: Minimum length of 1. Maximum length of 1024.

Key Pattern: `.*\S.*`

Value Length Constraints: Minimum length of 1. Maximum length of 1024.

Value Pattern: `.*\S.*`

Required: No

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# ConfigurationOverrides

A configuration specification to be used to override existing configurations.

## Contents

### applicationConfiguration

The configurations for the application running by the job run.

Type: Array of [Configuration](#) objects

Array Members: Maximum number of 100 items.

Required: No

### monitoringConfiguration

The configurations for monitoring.

Type: [MonitoringConfiguration](#) object

Required: No

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# ContainerInfo

The information about the container used for a job run or a managed endpoint.

## Contents

### Important

This data type is a UNION, so only one of the following members can be specified when used or returned.

### eksInfo

The information about the Amazon EKS cluster.

Type: [EksInfo](#) object

Required: No

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# ContainerLogRotationConfiguration

The settings for container log rotation.

## Contents

### maxFilesToKeep

The number of files to keep in container after rotation.

Type: Integer

Valid Range: Minimum value of 1. Maximum value of 50.

Required: Yes

### rotationSize

The file size at which to rotate logs. Minimum of 2KB, Maximum of 2GB.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 12.

Pattern: `^\d+(\.\d+)?[KMG][Bb]?$`

Required: Yes

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# ContainerProvider

The information about the container provider.

## Contents

### id

The ID of the container cluster.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 100.

Pattern: `^[0-9A-Za-z][A-Za-z0-9\-\_]*`

Required: Yes

### type

The type of the container provider. Amazon EKS is the only supported type as of now.

Type: String

Valid Values: EKS

Required: Yes

### info

The information about the container cluster.

Type: [ContainerInfo](#) object

**Note:** This object is a Union. Only one member of this object can be specified or returned.

Required: No

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# Credentials

The structure containing the session token being returned.

## Contents

### Important

This data type is a UNION, so only one of the following members can be specified when used or returned.

### token

The actual session token being returned.

Type: String

Length Constraints: Minimum length of 1.

Pattern: `^\.*\S.*$`

Required: No

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# EksInfo

The information about the Amazon EKS cluster.

## Contents

### namespace

The namespaces of the Amazon EKS cluster.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 63.

Pattern: `[a-z0-9]([-a-z0-9]*[a-z0-9])?`

Required: No

### nodeLabel

The nodeLabel of the nodes where the resources of this virtual cluster can get scheduled. It requires relevant scaling and policy engine addons.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `^[a-z0-9](?:[a-z0-9-]*[a-z0-9])?$`

Required: No

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# EncryptionConfiguration

Configurations related to encryption for the security configuration.

## Contents

### inTransitEncryptionConfiguration

In-transit encryption-related input for the security configuration.

Type: [InTransitEncryptionConfiguration](#) object

Required: No

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# Endpoint

This entity represents the endpoint that is managed by Amazon EMR on EKS.

## Contents

### arn

The ARN of the endpoint.

Type: String

Length Constraints: Minimum length of 60. Maximum length of 1024.

Pattern: `^arn:(aws[a-zA-Z0-9-]*) :emr-containers: .+:(\d{12}): \virtualclusters\/[0-9a-zA-Z]+\ /endpoints\/[0-9a-zA-Z]+$`

Required: No

### certificateArn

*This member has been deprecated.*

The certificate ARN of the endpoint. This field is under deprecation and will be removed in future.

Type: String

Length Constraints: Minimum length of 44. Maximum length of 2048.

Pattern: `^arn:(aws[a-zA-Z0-9-]*) :acm: .+:(\d{12}): certificate/.+$`

Required: No

### certificateAuthority

The certificate generated by emr control plane on customer behalf to secure the managed endpoint.

Type: [Certificate](#) object

Required: No

## **configurationOverrides**

The configuration settings that are used to override existing configurations for endpoints.

Type: [ConfigurationOverrides](#) object

Required: No

## **createdAt**

The date and time when the endpoint was created.

Type: Timestamp

Required: No

## **executionRoleArn**

The execution role ARN of the endpoint.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `^arn:(aws[a-zA-Z0-9-]*) :iam::(\d{12})?:(role((\u002F)|(\u002F[\u0021-\u007F]+\u002F))[\w+=, .@-]+)$`

Required: No

## **failureReason**

The reasons why the endpoint has failed.

Type: String

Valid Values: INTERNAL\_ERROR | USER\_ERROR | VALIDATION\_ERROR | CLUSTER\_UNAVAILABLE

Required: No

## **id**

The ID of the endpoint.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[0-9a-z]+`

Required: No

### **name**

The name of the endpoint.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[\.\-_\#A-Za-z0-9]+`

Required: No

### **releaseLabel**

The EMR release version to be used for the endpoint.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[\.\-_/A-Za-z0-9]+`

Required: No

### **securityGroup**

The security group configuration of the endpoint.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

Required: No

### **serverUrl**

The server URL of the endpoint.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 10280.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFD\uD800\uDBFF-\uDC00\uDFFF\r\n\t]*`

Required: No

### **state**

The state of the endpoint.

Type: String

Valid Values: CREATING | ACTIVE | TERMINATING | TERMINATED |  
TERMINATED\_WITH\_ERRORS

Required: No

### **stateDetails**

Additional details of the endpoint state.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

Required: No

### **subnetIds**

The subnet IDs of the endpoint.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

Required: No

### **tags**

The tags of the endpoint.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Key Pattern: `.*\S.*`

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Value Pattern: `.*\S.*`

Required: No

## **type**

The type of the endpoint.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `.*\S.*`

Required: No

## **virtualClusterId**

The ID of the endpoint's virtual cluster.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[0-9a-z]+`

Required: No

## **See Also**

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)

- [AWS SDK for Ruby V3](#)

# InTransitEncryptionConfiguration

Configurations related to in-transit encryption for the security configuration.

## Contents

### tlsCertificateConfiguration

TLS certificate-related configuration input for the security configuration.

Type: [TLSCertificateConfiguration](#) object

Required: No

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# JobDriver

Specify the driver that the job runs on. Exactly one of the two available job drivers is required, either `sparkSqlJobDriver` or `sparkSubmitJobDriver`.

## Contents

### `sparkSqlJobDriver`

The job driver for job type.

Type: [SparkSqlJobDriver](#) object

Required: No

### `sparkSubmitJobDriver`

The job driver parameters specified for spark submit.

Type: [SparkSubmitJobDriver](#) object

Required: No

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# JobRun

This entity describes a job run. A job run is a unit of work, such as a Spark jar, PySpark script, or SparkSQL query, that you submit to Amazon EMR on EKS.

## Contents

### arn

The ARN of job run.

Type: String

Length Constraints: Minimum length of 60. Maximum length of 1024.

Pattern: `^arn:(aws[a-zA-Z0-9-]*):emr-containers:.+:(\d{12}):virtualclusters/[0-9a-zA-Z]+/jobruns/[0-9a-zA-Z]+$`

Required: No

### clientToken

The client token used to start a job run.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `.*\S.*`

Required: No

### configurationOverrides

The configuration settings that are used to override default configuration.

Type: [ConfigurationOverrides](#) object

Required: No

### createdAt

The date and time when the job run was created.

Type: Timestamp

Required: No

### **createdBy**

The user who created the job run.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `^arn:(aws[a-zA-Z0-9-]*):(iam|sts)::(\d{12})?:[\w/+=, .@-]+$`

Required: No

### **executionRoleArn**

The execution role ARN of the job run.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `^arn:(aws[a-zA-Z0-9-]*):iam::(\d{12})?:(role((\u002F)|(\u002F[\u0021-\u007F]+\u002F))[\w+=, .@-]+)$`

Required: No

### **failureReason**

The reasons why the job run has failed.

Type: String

Valid Values: INTERNAL\_ERROR | USER\_ERROR | VALIDATION\_ERROR | CLUSTER\_UNAVAILABLE

Required: No

### **finishedAt**

The date and time when the job run has finished.

Type: Timestamp

Required: No

**id**

The ID of the job run.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: [0-9a-z]+

Required: No

**jobDriver**

Parameters of job driver for the job run.

Type: [JobDriver](#) object

Required: No

**name**

The name of the job run.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: [\.\-\_\#A-Za-z0-9]+

Required: No

**releaseLabel**

The release version of Amazon EMR.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: [\.\-\_/A-Za-z0-9]+

Required: No

**retryPolicyConfiguration**

The configuration of the retry policy that the job runs on.

Type: [RetryPolicyConfiguration](#) object

Required: No

### **retryPolicyExecution**

The current status of the retry policy executed on the job.

Type: [RetryPolicyExecution](#) object

Required: No

### **state**

The state of the job run.

Type: String

Valid Values: PENDING | SUBMITTED | RUNNING | FAILED | CANCELLED | CANCEL\_PENDING | COMPLETED

Required: No

### **stateDetails**

Additional details of the job run state.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

Required: No

### **tags**

The assigned tags of the job run.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Key Pattern: `.*\S.*`

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Value Pattern: `.*\S.*`

Required: No

### **virtualClusterId**

The ID of the job run's virtual cluster.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[0-9a-z]+`

Required: No

## **See Also**

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# JobTemplate

This entity describes a job template. Job template stores values of StartJobRun API request in a template and can be used to start a job run. Job template allows two use cases: avoid repeating recurring StartJobRun API request values, enforcing certain values in StartJobRun API request.

## Contents

### jobTemplateData

The job template data which holds values of StartJobRun API request.

Type: [JobTemplateData](#) object

Required: Yes

### arn

The ARN of the job template.

Type: String

Length Constraints: Minimum length of 60. Maximum length of 1024.

Pattern: `^arn:(aws[a-zA-Z0-9-]*) :emr-containers: .+:(\d{12}): \/jobtemplates \/[0-9a-zA-Z]+$`

Required: No

### createdAt

The date and time when the job template was created.

Type: Timestamp

Required: No

### createdBy

The user who created the job template.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `^arn:(aws[a-zA-Z0-9-]*):(iam|sts)::(\d{12})?:[\w/+=,.\@-]+$`

Required: No

### **decryptionError**

The error message in case the decryption of job template fails.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 2048.

Pattern: `.*\S.*`

Required: No

### **id**

The ID of the job template.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[0-9a-z]+`

Required: No

### **kmsKeyArn**

The KMS key ARN used to encrypt the job template.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 2048.

Pattern: `^(arn:(aws[a-zA-Z0-9-]*):kms:.\+:(\d{12})?:key\/[0-9a-zA-Z-?]+\|\\\{[a-zA-Z]\w*\})$`

Required: No

### **name**

The name of the job template.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[\.\-_/#A-Za-z0-9]+`

Required: No

## tags

The tags assigned to the job template.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Key Pattern: `.*\S.*`

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Value Pattern: `.*\S.*`

Required: No

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# JobTemplateData

The values of StartJobRun API requests used in job runs started using the job template.

## Contents

### executionRoleArn

The execution role ARN of the job run.

Type: String

Length Constraints: Minimum length of 4. Maximum length of 2048.

Pattern: `(^arn:(aws[a-zA-Z0-9-]*) :iam::(\d{12})?:(role((\u002F)|(\u002F[\u0021-\u007F]+\u002F))[\w+=,.\@-]+)$)|([\.\-_\#A-Za-z0-9$\{\}\+] )`

Required: Yes

### jobDriver

Specify the driver that the job runs on. Exactly one of the two available job drivers is required, either sparkSqlJobDriver or sparkSubmitJobDriver.

Type: [JobDriver](#) object

Required: Yes

### releaseLabel

The release version of Amazon EMR.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `([\.\-_\#A-Za-z0-9]+|\$\{[a-zA-Z]\w*\})`

Required: Yes

### configurationOverrides

The configuration settings that are used to override defaults configuration.

Type: [ParametricConfigurationOverrides](#) object

Required: No

### **jobTags**

The tags assigned to jobs started using the job template.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Key Pattern: `.*\S.*`

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Value Pattern: `.*\S.*`

Required: No

### **parameterConfiguration**

The configuration of parameters existing in the job template.

Type: String to [TemplateParameterConfiguration](#) object map

Map Entries: Maximum number of 100 items.

Key Length Constraints: Minimum length of 1. Maximum length of 512.

Key Pattern: `[\.\-_\#A-Za-z0-9]+`

Required: No

## **See Also**

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)

- [AWS SDK for Ruby V3](#)

# LakeFormationConfiguration

AWS Lake Formation related configuration inputs for the security configuration.

## Contents

### **authorizedSessionTagValue**

The session tag to authorize Amazon EMR on EKS for API calls to AWS Lake Formation.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 512.

Pattern: `[\.\-_\#A-Za-z0-9 ]+`

Required: No

### **queryEngineRoleArn**

The query engine IAM role ARN that is tied to the secure Spark job. The QueryEngine role assumes the JobExecutionRole to execute all the Lake Formation calls.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `^arn:(aws[a-zA-Z0-9-]*):iam:([\d]{12})?:(role([\u002F]|([\u002F[\u0021-\u007F]+\u002F)])[\w+=,.\@-]+)$`

Required: No

### **secureNamespaceInfo**

The namespace input of the system job.

Type: [SecureNamespaceInfo](#) object

Required: No

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# ManagedLogs

The entity that provides configuration control over managed logs.

## Contents

### **allowAWSToRetainLogs**

Determines whether AWS can retain logs.

Type: String

Valid Values: ENABLED | DISABLED

Required: No

### **encryptionKeyArn**

The Amazon resource name (ARN) of the encryption key for logs.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 2048.

Pattern: `^(arn:(aws[a-zA-Z0-9-]*) : kms : .+ : (\d{12})? : key\/[([0-9a-zA-Z-?])+ | \${[a-zA-Z]\w*\})$`

Required: No

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# MonitoringConfiguration

Configuration setting for monitoring.

## Contents

### cloudWatchMonitoringConfiguration

Monitoring configurations for CloudWatch.

Type: [CloudWatchMonitoringConfiguration](#) object

Required: No

### containerLogRotationConfiguration

Enable or disable container log rotation.

Type: [ContainerLogRotationConfiguration](#) object

Required: No

### managedLogs

The entity that controls configuration for managed logs.

Type: [ManagedLogs](#) object

Required: No

### persistentAppUI

Monitoring configurations for the persistent application UI.

Type: String

Valid Values: ENABLED | DISABLED

Required: No

### s3MonitoringConfiguration

Amazon S3 configuration for monitoring log publishing.

Type: [S3MonitoringConfiguration](#) object

Required: No

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# ParametricCloudWatchMonitoringConfiguration

A configuration for CloudWatch monitoring. You can configure your jobs to send log information to CloudWatch Logs. This data type allows job template parameters to be specified within.

## Contents

### logGroupName

The name of the log group for log publishing.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 512.

Pattern: `[\.\-_\#A-Za-z0-9\$\{\}\+]`

Required: No

### logStreamNamePrefix

The specified name prefix for log streams.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

Required: No

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# ParametricConfigurationOverrides

A configuration specification to be used to override existing configurations. This data type allows job template parameters to be specified within.

## Contents

### applicationConfiguration

The configurations for the application running by the job run.

Type: Array of [Configuration](#) objects

Array Members: Maximum number of 100 items.

Required: No

### monitoringConfiguration

The configurations for monitoring.

Type: [ParametricMonitoringConfiguration](#) object

Required: No

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# ParametricMonitoringConfiguration

Configuration setting for monitoring. This data type allows job template parameters to be specified within.

## Contents

### cloudWatchMonitoringConfiguration

Monitoring configurations for CloudWatch.

Type: [ParametricCloudWatchMonitoringConfiguration](#) object

Required: No

### persistentAppUI

Monitoring configurations for the persistent application UI.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 512.

Pattern: `[\.\-_\/#A-Za-z0-9\$\{\}\+]`

Required: No

### s3MonitoringConfiguration

Amazon S3 configuration for monitoring log publishing.

Type: [ParametricS3MonitoringConfiguration](#) object

Required: No

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)

- [AWS SDK for Ruby V3](#)

# ParametricS3MonitoringConfiguration

Amazon S3 configuration for monitoring log publishing. You can configure your jobs to send log information to Amazon S3. This data type allows job template parameters to be specified within.

## Contents

### logUri

Amazon S3 destination URI for log publishing.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 10280.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFF\uD800\uDBFF-\uDC00\uDFFF\u\u0000-\u000F\u0010-\u001F\u0020-\u007F\u0080-\u00FF\u0100-\u017F\u0180-\u01FF\u0200-\u02FF\u0300-\u037F\u0380-\u03FF\u0400-\u047F\u0480-\u04FF\u0500-\u057F\u0580-\u05FF\u0600-\u06FF\u0700-\u077F\u0780-\u07FF\u0800-\u087F\u0880-\u08FF\u0900-\u097F\u0980-\u09FF\u0A00-\u0A7F\u0A80-\u0AFF\u0B00-\u0B7F\u0B80-\u0BFF\u0C00-\u0C7F\u0C80-\u0CFF\u0D00-\u0D7F\u0D80-\u0DBF\u0E00-\u0E7F\u0E80-\u0EFF\u0F00-\u0F7F\u0F80-\u0FFF\u1000-\u107F\u1080-\u10FF\u1100-\u117F\u1180-\u11FF\u1200-\u127F\u1280-\u12FF\u1300-\u137F\u1380-\u13FF\u1400-\u147F\u1480-\u14FF\u1500-\u157F\u1580-\u15FF\u1600-\u167F\u1680-\u16FF\u1700-\u177F\u1780-\u17FF\u1800-\u187F\u1880-\u18FF\u1900-\u197F\u1980-\u19FF\u1A00-\u1A7F\u1A80-\u1AFF\u1B00-\u1B7F\u1B80-\u1BFF\u1C00-\u1C7F\u1C80-\u1CFF\u1D00-\u1D7F\u1D80-\u1DBF\u1E00-\u1E7F\u1E80-\u1EFF\u1F00-\u1F7F\u1F80-\u1FFF\u2000-\u207F\u2080-\u20FF\u2100-\u217F\u2180-\u21FF\u2200-\u227F\u2280-\u22FF\u2300-\u237F\u2380-\u23FF\u2400-\u247F\u2480-\u24FF\u2500-\u257F\u2580-\u25FF\u2600-\u267F\u2680-\u26FF\u2700-\u277F\u2780-\u27FF\u2800-\u287F\u2880-\u28FF\u2900-\u297F\u2980-\u29FF\u2A00-\u2A7F\u2A80-\u2AFF\u2B00-\u2B7F\u2B80-\u2BFF\u2C00-\u2C7F\u2C80-\u2CFF\u2D00-\u2D7F\u2D80-\u2DBF\u2E00-\u2E7F\u2E80-\u2EFF\u2F00-\u2F7F\u2F80-\u2FFF\u3000-\u307F\u3080-\u30FF\u3100-\u317F\u3180-\u31FF\u3200-\u327F\u3280-\u32FF\u3300-\u337F\u3380-\u33FF\u3400-\u347F\u3480-\u34FF\u3500-\u357F\u3580-\u35FF\u3600-\u367F\u3680-\u36FF\u3700-\u377F\u3780-\u37FF\u3800-\u387F\u3880-\u38FF\u3900-\u397F\u3980-\u39FF\u3A00-\u3A7F\u3A80-\u3AFF\u3B00-\u3B7F\u3B80-\u3BFF\u3C00-\u3C7F\u3C80-\u3CFF\u3D00-\u3D7F\u3D80-\u3DBF\u3E00-\u3E7F\u3E80-\u3EFF\u3F00-\u3F7F\u3F80-\u3FFF\u4000-\u407F\u4080-\u40FF\u4100-\u417F\u4180-\u41FF\u4200-\u427F\u4280-\u42FF\u4300-\u437F\u4380-\u43FF\u4400-\u447F\u4480-\u44FF\u4500-\u457F\u4580-\u45FF\u4600-\u467F\u4680-\u46FF\u4700-\u477F\u4780-\u47FF\u4800-\u487F\u4880-\u48FF\u4900-\u497F\u4980-\u49FF\u4A00-\u4A7F\u4A80-\u4AFF\u4B00-\u4B7F\u4B80-\u4BFF\u4C00-\u4C7F\u4C80-\u4CFF\u4D00-\u4D7F\u4D80-\u4DBF\u4E00-\u4E7F\u4E80-\u4EFF\u4F00-\u4F7F\u4F80-\u4FFF\u5000-\u507F\u5080-\u50FF\u5100-\u517F\u5180-\u51FF\u5200-\u527F\u5280-\u52FF\u5300-\u537F\u5380-\u53FF\u5400-\u547F\u5480-\u54FF\u5500-\u557F\u5580-\u55FF\u5600-\u567F\u5680-\u56FF\u5700-\u577F\u5780-\u57FF\u5800-\u587F\u5880-\u58FF\u5900-\u597F\u5980-\u59FF\u5A00-\u5A7F\u5A80-\u5AFF\u5B00-\u5B7F\u5B80-\u5BFF\u5C00-\u5C7F\u5C80-\u5CFF\u5D00-\u5D7F\u5D80-\u5DBF\u5E00-\u5E7F\u5E80-\u5EFF\u5F00-\u5F7F\u5F80-\u5FFF\u6000-\u607F\u6080-\u60FF\u6100-\u617F\u6180-\u61FF\u6200-\u627F\u6280-\u62FF\u6300-\u637F\u6380-\u63FF\u6400-\u647F\u6480-\u64FF\u6500-\u657F\u6580-\u65FF\u6600-\u667F\u6680-\u66FF\u6700-\u677F\u6780-\u67FF\u6800-\u687F\u6880-\u68FF\u6900-\u697F\u6980-\u69FF\u6A00-\u6A7F\u6A80-\u6AFF\u6B00-\u6B7F\u6B80-\u6BFF\u6C00-\u6C7F\u6C80-\u6CFF\u6D00-\u6D7F\u6D80-\u6DBF\u6E00-\u6E7F\u6E80-\u6EFF\u6F00-\u6F7F\u6F80-\u6FFF\u7000-\u707F\u7080-\u70FF\u7100-\u717F\u7180-\u71FF\u7200-\u727F\u7280-\u72FF\u7300-\u737F\u7380-\u73FF\u7400-\u747F\u7480-\u74FF\u7500-\u757F\u7580-\u75FF\u7600-\u767F\u7680-\u76FF\u7700-\u777F\u7780-\u77FF\u7800-\u787F\u7880-\u78FF\u7900-\u797F\u7980-\u79FF\u7A00-\u7A7F\u7A80-\u7AFF\u7B00-\u7B7F\u7B80-\u7BFF\u7C00-\u7C7F\u7C80-\u7CFF\u7D00-\u7D7F\u7D80-\u7DBF\u7E00-\u7E7F\u7E80-\u7EFF\u7F00-\u7F7F\u7F80-\u7FFF\u8000-\u807F\u8080-\u80FF\u8100-\u817F\u8180-\u81FF\u8200-\u827F\u8280-\u82FF\u8300-\u837F\u8380-\u83FF\u8400-\u847F\u8480-\u84FF\u8500-\u857F\u8580-\u85FF\u8600-\u867F\u8680-\u86FF\u8700-\u877F\u8780-\u87FF\u8800-\u887F\u8880-\u88FF\u8900-\u897F\u8980-\u89FF\u8A00-\u8A7F\u8A80-\u8AFF\u8B00-\u8B7F\u8B80-\u8BFF\u8C00-\u8C7F\u8C80-\u8CFF\u8D00-\u8D7F\u8D80-\u8DBF\u8E00-\u8E7F\u8E80-\u8EFF\u8F00-\u8F7F\u8F80-\u8FFF\u9000-\u907F\u9080-\u90FF\u9100-\u917F\u9180-\u91FF\u9200-\u927F\u9280-\u92FF\u9300-\u937F\u9380-\u93FF\u9400-\u947F\u9480-\u94FF\u9500-\u957F\u9580-\u95FF\u9600-\u967F\u9680-\u96FF\u9700-\u977F\u9780-\u97FF\u9800-\u987F\u9880-\u98FF\u9900-\u997F\u9980-\u99FF\u9A00-\u9A7F\u9A80-\u9AFF\u9B00-\u9B7F\u9B80-\u9BFF\u9C00-\u9C7F\u9C80-\u9CFF\u9D00-\u9D7F\u9D80-\u9DBF\u9E00-\u9E7F\u9E80-\u9EFF\u9F00-\u9F7F\u9F80-\u9FFF\uA000-\uA07F\uA080-\uA0FF\uA100-\uA17F\uA180-\uA1FF\uA200-\uA27F\uA280-\uA2FF\uA300-\uA37F\uA380-\uA3FF\uA400-\uA47F\uA480-\uA4FF\uA500-\uA57F\uA580-\uA5FF\uA600-\uA67F\uA680-\uA6FF\uA700-\uA77F\uA780-\uA7FF\uA800-\uA87F\uA880-\uA8FF\uA900-\uA97F\uA980-\uA9FF\uAA00-\uAA7F\uAA80-\uAAFF\uAB00-\uAB7F\uAB80-\uABFF\uAC00-\uAC7F\uAC80-\uACFF\uAD00-\uAD7F\uAD80-\uADB\uAEE00-\uAEE7F\uAEE80-\uAEEFF\uAF00-\uAF7F\uAF80-\uAFFF\uB000-\uB07F\uB080-\uB0FF\uB100-\uB17F\uB180-\uB1FF\uB200-\uB27F\uB280-\uB2FF\uB300-\uB37F\uB380-\uB3FF\uB400-\uB47F\uB480-\uB4FF\uB500-\uB57F\uB580-\uB5FF\uB600-\uB67F\uB680-\uB6FF\uB700-\uB77F\uB780-\uB7FF\uB800-\uB87F\uB880-\uB8FF\uB900-\uB97F\uB980-\uB9FF\uBA00-\uBA7F\uBA80-\uBAFF\uBB00-\uBB7F\uBB80-\uBBFF\uBC00-\uBC7F\uBC80-\uBCFF\uBD00-\uBD7F\uBD80-\uBDB\uBE00-\uBE7F\uBE80-\uBEFF\uBF00-\uBF7F\uBF80-\uBFFF\uC000-\uC07F\uC080-\uC0FF\uC100-\uC17F\uC180-\uC1FF\uC200-\uC27F\uC280-\uC2FF\uC300-\uC37F\uC380-\uC3FF\uC400-\uC47F\uC480-\uC4FF\uC500-\uC57F\uC580-\uC5FF\uC600-\uC67F\uC680-\uC6FF\uC700-\uC77F\uC780-\uC7FF\uC800-\uC87F\uC880-\uC8FF\uC900-\uC97F\uC980-\uC9FF\uCA00-\uCA7F\uCA80-\uCAFF\uCB00-\uCB7F\uCB80-\uCBFF\uCC00-\uCC7F\uCC80-\uCCFF\uCD00-\uCD7F\uCD80-\uCDFF\uCE00-\uCE7F\uCE80-\uCEFF\uCF00-\uCF7F\uCF80-\uCFFF\uD000-\uD07F\uD080-\uD0FF\uD100-\uD17F\uD180-\uD1FF\uD200-\uD27F\uD280-\uD2FF\uD300-\uD37F\uD380-\uD3FF\uD400-\uD47F\uD480-\uD4FF\uD500-\uD57F\uD580-\uD5FF\uD600-\uD67F\uD680-\uD6FF\uD700-\uD77F\uD780-\uD7FF\uD800-\uD87F\uD880-\uD8FF\uD900-\uD97F\uD980-\uD9FF\uDA00-\uDA7F\uDA80-\uDAFF\uDB00-\uDB7F\uDB80-\uDBFF\uDC00-\uDC7F\uDC80-\uDCFF\uDD00-\uDD7F\uDD80-\uDDFF\uDE00-\uDE7F\uDE80-\uDEFF\uDF00-\uDF7F\uDF80-\uDFFF\uE000-\uE07F\uE080-\uE0FF\uE100-\uE17F\uE180-\uE1FF\uE200-\uE27F\uE280-\uE2FF\uE300-\uE37F\uE380-\uE3FF\uE400-\uE47F\uE480-\uE4FF\uE500-\uE57F\uE580-\uE5FF\uE600-\uE67F\uE680-\uE6FF\uE700-\uE77F\uE780-\uE7FF\uE800-\uE87F\uE880-\uE8FF\uE900-\uE97F\uE980-\uE9FF\uEA00-\uEA7F\uEA80-\uEAFF\uEB00-\uEB7F\uEB80-\uEBFF\uEC00-\uEC7F\uEC80-\uECFF\uED00-\uED7F\uED80-\uEDFF\uEE00-\uEE7F\uEE80-\uEEFF\uEF00-\uEF7F\uEF80-\uEFFF\uF000-\uF07F\uF080-\uF0FF\uF100-\uF17F\uF180-\uF1FF\uF200-\uF27F\uF280-\uF2FF\uF300-\uF37F\uF380-\uF3FF\uF400-\uF47F\uF480-\uF4FF\uF500-\uF57F\uF580-\uF5FF\uF600-\uF67F\uF680-\uF6FF\uF700-\uF77F\uF780-\uF7FF\uF800-\uF87F\uF880-\uF8FF\uF900-\uF97F\uF980-\uF9FF\uFA00-\uFA7F\uFA80-\uFAFF\uFB00-\uFB7F\uFB80-\uFBFF\uFC00-\uFC7F\uFC80-\uFCFF\uFD00-\uFD7F\uFD80-\uFDFF\uFE00-\uFE7F\uFE80-\uFEFF\uFF00-\uFF7F\uFF80-\uFFFF]`

Required: No

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# RetryPolicyConfiguration

The configuration of the retry policy that the job runs on.

## Contents

### maxAttempts

The maximum number of attempts on the job's driver.

Type: Integer

Required: Yes

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# RetryPolicyExecution

The current status of the retry policy executed on the job.

## Contents

### currentAttemptCount

The current number of attempts made on the driver of the job.

Type: Integer

Required: Yes

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# S3MonitoringConfiguration

Amazon S3 configuration for monitoring log publishing. You can configure your jobs to send log information to Amazon S3.

## Contents

### logUri

Amazon S3 destination URI for log publishing.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 10280.

Pattern: `[\u0020-\uD7FF\uE000-\uFFFF\uD800\uDBFF-\uDC00\uDFFF\u\u0000-\u001F\u0020-\u007F\u0080-\u00FF\u0100-\u017F\u0180-\u01FF\u0200-\u02FF\u0300-\u037F\u0380-\u03FF\u0400-\u047F\u0480-\u04FF\u0500-\u057F\u0580-\u05FF\u0600-\u06FF\u0700-\u077F\u0780-\u07FF\u0800-\u087F\u0880-\u08FF\u0900-\u097F\u0980-\u09FF\u0A00-\u0A7F\u0A80-\u0AFF\u0B00-\u0B7F\u0B80-\u0BFF\u0C00-\u0C7F\u0C80-\u0CFF\u0D00-\u0D7F\u0D80-\u0DBF\u0E00-\u0E7F\u0E80-\u0EBF\u0F00-\u0F7F\u0F80-\u0FFF\u1000-\u107F\u1080-\u10FF\u1100-\u117F\u1180-\u11FF\u1200-\u127F\u1280-\u12FF\u1300-\u137F\u1380-\u13FF\u1400-\u147F\u1480-\u14FF\u1500-\u157F\u1580-\u15FF\u1600-\u167F\u1680-\u16FF\u1700-\u177F\u1780-\u17FF\u1800-\u187F\u1880-\u18FF\u1900-\u197F\u1980-\u19FF\u1A00-\u1A7F\u1A80-\u1AFF\u1B00-\u1B7F\u1B80-\u1BBF\u1C00-\u1C7F\u1C80-\u1CBF\u1D00-\u1D7F\u1D80-\u1DBF\u1E00-\u1E7F\u1E80-\u1EBF\u1F00-\u1F7F\u1F80-\u1FFF\u2000-\u207F\u2080-\u20FF\u2100-\u217F\u2180-\u21FF\u2200-\u227F\u2280-\u22FF\u2300-\u237F\u2380-\u23FF\u2400-\u247F\u2480-\u24FF\u2500-\u257F\u2580-\u25FF\u2600-\u267F\u2680-\u26FF\u2700-\u277F\u2780-\u27FF\u2800-\u287F\u2880-\u28FF\u2900-\u297F\u2980-\u29FF\u2A00-\u2A7F\u2A80-\u2AFF\u2B00-\u2B7F\u2B80-\u2BBF\u2C00-\u2C7F\u2C80-\u2CBF\u2D00-\u2D7F\u2D80-\u2DBF\u2E00-\u2E7F\u2E80-\u2EBF\u2F00-\u2F7F\u2F80-\u2FFF\u3000-\u307F\u3080-\u30FF\u3100-\u317F\u3180-\u31FF\u3200-\u327F\u3280-\u32FF\u3300-\u337F\u3380-\u33FF\u3400-\u347F\u3480-\u34FF\u3500-\u357F\u3580-\u35FF\u3600-\u367F\u3680-\u36FF\u3700-\u377F\u3780-\u37FF\u3800-\u387F\u3880-\u38FF\u3900-\u397F\u3980-\u39FF\u3A00-\u3A7F\u3A80-\u3AFF\u3B00-\u3B7F\u3B80-\u3BBF\u3C00-\u3C7F\u3C80-\u3CBF\u3D00-\u3D7F\u3D80-\u3DBF\u3E00-\u3E7F\u3E80-\u3EBF\u3F00-\u3F7F\u3F80-\u3FFF\u4000-\u407F\u4080-\u40FF\u4100-\u417F\u4180-\u41FF\u4200-\u427F\u4280-\u42FF\u4300-\u437F\u4380-\u43FF\u4400-\u447F\u4480-\u44FF\u4500-\u457F\u4580-\u45FF\u4600-\u467F\u4680-\u46FF\u4700-\u477F\u4780-\u47FF\u4800-\u487F\u4880-\u48FF\u4900-\u497F\u4980-\u49FF\u4A00-\u4A7F\u4A80-\u4AFF\u4B00-\u4B7F\u4B80-\u4BBF\u4C00-\u4C7F\u4C80-\u4CBF\u4D00-\u4D7F\u4D80-\u4DBF\u4E00-\u4E7F\u4E80-\u4EBF\u4F00-\u4F7F\u4F80-\u4FFF\u5000-\u507F\u5080-\u50FF\u5100-\u517F\u5180-\u51FF\u5200-\u527F\u5280-\u52FF\u5300-\u537F\u5380-\u53FF\u5400-\u547F\u5480-\u54FF\u5500-\u557F\u5580-\u55FF\u5600-\u567F\u5680-\u56FF\u5700-\u577F\u5780-\u57FF\u5800-\u587F\u5880-\u58FF\u5900-\u597F\u5980-\u59FF\u5A00-\u5A7F\u5A80-\u5AFF\u5B00-\u5B7F\u5B80-\u5BBF\u5C00-\u5C7F\u5C80-\u5CBF\u5D00-\u5D7F\u5D80-\u5DBF\u5E00-\u5E7F\u5E80-\u5EBF\u5F00-\u5F7F\u5F80-\u5FFF\u6000-\u607F\u6080-\u60FF\u6100-\u617F\u6180-\u61FF\u6200-\u627F\u6280-\u62FF\u6300-\u637F\u6380-\u63FF\u6400-\u647F\u6480-\u64FF\u6500-\u657F\u6580-\u65FF\u6600-\u667F\u6680-\u66FF\u6700-\u677F\u6780-\u67FF\u6800-\u687F\u6880-\u68FF\u6900-\u697F\u6980-\u69FF\u6A00-\u6A7F\u6A80-\u6AFF\u6B00-\u6B7F\u6B80-\u6BBF\u6C00-\u6C7F\u6C80-\u6CBF\u6D00-\u6D7F\u6D80-\u6DBF\u6E00-\u6E7F\u6E80-\u6EBF\u6F00-\u6F7F\u6F80-\u6FFF\u7000-\u707F\u7080-\u70FF\u7100-\u717F\u7180-\u71FF\u7200-\u727F\u7280-\u72FF\u7300-\u737F\u7380-\u73FF\u7400-\u747F\u7480-\u74FF\u7500-\u757F\u7580-\u75FF\u7600-\u767F\u7680-\u76FF\u7700-\u777F\u7780-\u77FF\u7800-\u787F\u7880-\u78FF\u7900-\u797F\u7980-\u79FF\u7A00-\u7A7F\u7A80-\u7AFF\u7B00-\u7B7F\u7B80-\u7BBF\u7C00-\u7C7F\u7C80-\u7CBF\u7D00-\u7D7F\u7D80-\u7DBF\u7E00-\u7E7F\u7E80-\u7EBF\u7F00-\u7F7F\u7F80-\u7FFF\u8000-\u807F\u8080-\u80FF\u8100-\u817F\u8180-\u81FF\u8200-\u827F\u8280-\u82FF\u8300-\u837F\u8380-\u83FF\u8400-\u847F\u8480-\u84FF\u8500-\u857F\u8580-\u85FF\u8600-\u867F\u8680-\u86FF\u8700-\u877F\u8780-\u87FF\u8800-\u887F\u8880-\u88FF\u8900-\u897F\u8980-\u89FF\u8A00-\u8A7F\u8A80-\u8AFF\u8B00-\u8B7F\u8B80-\u8BBF\u8C00-\u8C7F\u8C80-\u8CBF\u8D00-\u8D7F\u8D80-\u8DBF\u8E00-\u8E7F\u8E80-\u8EBF\u8F00-\u8F7F\u8F80-\u8FFF\u9000-\u907F\u9080-\u90FF\u9100-\u917F\u9180-\u91FF\u9200-\u927F\u9280-\u92FF\u9300-\u937F\u9380-\u93FF\u9400-\u947F\u9480-\u94FF\u9500-\u957F\u9580-\u95FF\u9600-\u967F\u9680-\u96FF\u9700-\u977F\u9780-\u97FF\u9800-\u987F\u9880-\u98FF\u9900-\u997F\u9980-\u99FF\u9A00-\u9A7F\u9A80-\u9AFF\u9B00-\u9B7F\u9B80-\u9BBF\u9C00-\u9C7F\u9C80-\u9CBF\u9D00-\u9D7F\u9D80-\u9DBF\u9E00-\u9E7F\u9E80-\u9EBF\u9F00-\u9F7F\u9F80-\u9FFF\uA000-\uA07F\uA080-\uA0FF\uA100-\uA17F\uA180-\uA1FF\uA200-\uA27F\uA280-\uA2FF\uA300-\uA37F\uA380-\uA3FF\uA400-\uA47F\uA480-\uA4FF\uA500-\uA57F\uA580-\uA5FF\uA600-\uA67F\uA680-\uA6FF\uA700-\uA77F\uA780-\uA7FF\uA800-\uA87F\uA880-\uA8FF\uA900-\uA97F\uA980-\uA9FF\uAA00-\uAA7F\uAA80-\uAAFF\uAB00-\uAB7F\uAB80-\uABBF\uAC00-\uAC7F\uAC80-\uACBF\uAD00-\uAD7F\uAD80-\uADBF\uAE00-\uAE7F\uAE80-\uAEBF\uAF00-\uAF7F\uAF80-\uAFFF\uB000-\uB07F\uB080-\uB0FF\uB100-\uB17F\uB180-\uB1FF\uB200-\uB27F\uB280-\uB2FF\uB300-\uB37F\uB380-\uB3FF\uB400-\uB47F\uB480-\uB4FF\uB500-\uB57F\uB580-\uB5FF\uB600-\uB67F\uB680-\uB6FF\uB700-\uB77F\uB780-\uB7FF\uB800-\uB87F\uB880-\uB8FF\uB900-\uB97F\uB980-\uB9FF\uBA00-\uBA7F\uBA80-\uBAFF\uBB00-\uBB7F\uBB80-\uBBBF\uBC00-\uBC7F\uBC80-\uBCBF\uBD00-\uBD7F\uBD80-\uBDBF\uBE00-\uBE7F\uBE80-\uBEBF\uBF00-\uBF7F\uBF80-\uBFFF\uC000-\uC07F\uC080-\uC0FF\uC100-\uC17F\uC180-\uC1FF\uC200-\uC27F\uC280-\uC2FF\uC300-\uC37F\uC380-\uC3FF\uC400-\uC47F\uC480-\uC4FF\uC500-\uC57F\uC580-\uC5FF\uC600-\uC67F\uC680-\uC6FF\uC700-\uC77F\uC780-\uC7FF\uC800-\uC87F\uC880-\uC8FF\uC900-\uC97F\uC980-\uC9FF\uCA00-\uCA7F\uCA80-\uCAFF\uCB00-\uCB7F\uCB80-\uCBBF\uCC00-\uCC7F\uCC80-\uCCBF\uCD00-\uCD7F\uCD80-\uCDBF\uCE00-\uCE7F\uCE80-\uCEBF\uCF00-\uCF7F\uCF80-\uCFFF\uD000-\uD07F\uD080-\uD0FF\uD100-\uD17F\uD180-\uD1FF\uD200-\uD27F\uD280-\uD2FF\uD300-\uD37F\uD380-\uD3FF\uD400-\uD47F\uD480-\uD4FF\uD500-\uD57F\uD580-\uD5FF\uD600-\uD67F\uD680-\uD6FF\uD700-\uD77F\uD780-\uD7FF\uD800-\uD87F\uD880-\uD8FF\uD900-\uD97F\uD980-\uD9FF\uDA00-\uDA7F\uDA80-\uDAFF\uDB00-\uDB7F\uDB80-\uDBBF\uDC00-\uDC7F\uDC80-\uDCBF\uDD00-\uDD7F\uDD80-\uDDBF\uDE00-\uDE7F\uDE80-\uDEBF\uDF00-\uDF7F\uDF80-\uDFFF\uE000-\uE07F\uE080-\uE0FF\uE100-\uE17F\uE180-\uE1FF\uE200-\uE27F\uE280-\uE2FF\uE300-\uE37F\uE380-\uE3FF\uE400-\uE47F\uE480-\uE4FF\uE500-\uE57F\uE580-\uE5FF\uE600-\uE67F\uE680-\uE6FF\uE700-\uE77F\uE780-\uE7FF\uE800-\uE87F\uE880-\uE8FF\uE900-\uE97F\uE980-\uE9FF\uEA00-\uEA7F\uEA80-\uEAFF\uEB00-\uEB7F\uEB80-\uEBBF\uEC00-\uEC7F\uEC80-\uECBF\uED00-\uED7F\uED80-\uEDBF\uEE00-\uEE7F\uEE80-\uEEBF\uEF00-\uEF7F\uEF80-\uEFFF\uF000-\uF07F\uF080-\uF0FF\uF100-\uF17F\uF180-\uF1FF\uF200-\uF27F\uF280-\uF2FF\uF300-\uF37F\uF380-\uF3FF\uF400-\uF47F\uF480-\uF4FF\uF500-\uF57F\uF580-\uF5FF\uF600-\uF67F\uF680-\uF6FF\uF700-\uF77F\uF780-\uF7FF\uF800-\uF87F\uF880-\uF8FF\uF900-\uF97F\uF980-\uF9FF\uFA00-\uFA7F\uFA80-\uFAFF\uFB00-\uFB7F\uFB80-\uFBBF\uFC00-\uFC7F\uFC80-\uFCBF\uFD00-\uFD7F\uFD80-\uFDBF\uFE00-\uFE7F\uFE80-\uFEBF\uFF00-\uFF7F\uFF80-\uFFFF]`

Required: Yes

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# SecureNamespaceInfo

Namespace inputs for the system job.

## Contents

### clusterId

The ID of the Amazon EKS cluster where Amazon EMR on EKS jobs run.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 100.

Pattern: `^[0-9A-Za-z][A-Za-z0-9\-\_]*`

Required: No

### namespace

The namespace of the Amazon EKS cluster where the system jobs run.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 63.

Pattern: `[a-z0-9]([-a-z0-9]*[a-z0-9])?`

Required: No

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# SecurityConfiguration

Inputs related to the security configuration. Security configurations in Amazon EMR on EKS are templates for different security setups. You can use security configurations to configure the AWS Lake Formation integration setup. You can also create a security configuration to re-use a security setup each time you create a virtual cluster.

## Contents

### arn

The ARN (Amazon Resource Name) of the security configuration.

Type: String

Length Constraints: Minimum length of 60. Maximum length of 1024.

Pattern: `^arn:(aws[a-zA-Z0-9-]*):emr-containers:.+:(\d{12}):\/securityconfigurations\/[0-9a-zA-Z]+$`

Required: No

### createdAt

The date and time that the job run was created.

Type: Timestamp

Required: No

### createdBy

The user who created the job run.

Type: String

Length Constraints: Minimum length of 20. Maximum length of 2048.

Pattern: `^arn:(aws[a-zA-Z0-9-]*):(iam|sts)::(\d{12})?:[\w/+=, .@-]+$`

Required: No

### id

The ID of the security configuration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[0-9a-z]+`

Required: No

### **name**

The name of the security configuration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[\.\-_\#A-Za-z0-9]+`

Required: No

### **securityConfigurationData**

Security configuration inputs for the request.

Type: [SecurityConfigurationData](#) object

Required: No

### **tags**

The tags to assign to the security configuration.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Key Pattern: `.*\S.*`

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Value Pattern: `.*\S.*`

Required: No

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# SecurityConfigurationData

Configurations related to the security configuration for the request.

## Contents

### authorizationConfiguration

Authorization-related configuration input for the security configuration.

Type: [AuthorizationConfiguration](#) object

Required: No

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# SparkSqlJobDriver

The job driver for job type.

## Contents

### entryPoint

The SQL file to be executed.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

Required: No

### sparkSqlParameters

The Spark parameters to be included in the Spark SQL command.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 102400.

Pattern: `.*\S.*`

Required: No

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# SparkSubmitJobDriver

The information about job driver for Spark submit.

## Contents

### entryPoint

The entry point of job application.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 256.

Pattern: `.*\S.*`

Required: Yes

### entryPointArguments

The arguments for job application.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 10280.

Pattern: `.*\S.*`

Required: No

### sparkSubmitParameters

The Spark submit parameters that are used for job runs.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 102400.

Pattern: `.*\S.*`

Required: No

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# TemplateParameterConfiguration

The configuration of a job template parameter.

## Contents

### defaultValue

The default value for the job template parameter.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1024.

Pattern: `.*\S.*`

Required: No

### type

The type of the job template parameter. Allowed values are: 'STRING', 'NUMBER'.

Type: String

Valid Values: NUMBER | STRING

Required: No

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# TLSCertificateConfiguration

Configurations related to the TLS certificate for the security configuration.

## Contents

### **certificateProviderType**

The TLS certificate type. Acceptable values: PEM or Custom.

Type: String

Valid Values: PEM

Required: No

### **privateCertificateSecretArn**

Secrets Manager ARN that contains the private TLS certificate contents, used for communication between the user job and the system job.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 2048.

Pattern: `^arn:(aws[a-zA-Z0-9-]*):secretsmanager:.\+:(\d{12}):secret:[0-9a-zA-Z/_+=.@-]+\$`

Required: No

### **publicCertificateSecretArn**

Secrets Manager ARN that contains the public TLS certificate contents, used for communication between the user job and the system job.

Type: String

Length Constraints: Minimum length of 3. Maximum length of 2048.

Pattern: `^arn:(aws[a-zA-Z0-9-]*):secretsmanager:.\+:(\d{12}):secret:[0-9a-zA-Z/_+=.@-]+\$`

Required: No

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# VirtualCluster

This entity describes a virtual cluster. A virtual cluster is a Kubernetes namespace that Amazon EMR is registered with. Amazon EMR uses virtual clusters to run jobs and host endpoints. Multiple virtual clusters can be backed by the same physical cluster. However, each virtual cluster maps to one namespace on an Amazon EKS cluster. Virtual clusters do not create any active resources that contribute to your bill or that require lifecycle management outside the service.

## Contents

### arn

The ARN of the virtual cluster.

Type: String

Length Constraints: Minimum length of 60. Maximum length of 1024.

Pattern: `^arn:(aws[a-zA-Z0-9-]*):emr-containers:.+:(\d{12}):virtualclusters/[0-9a-zA-Z]+$`

Required: No

### containerProvider

The container provider of the virtual cluster.

Type: [ContainerProvider](#) object

Required: No

### createdAt

The date and time when the virtual cluster is created.

Type: Timestamp

Required: No

### id

The ID of the virtual cluster.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[0-9a-z]+`

Required: No

### **name**

The name of the virtual cluster.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[\.\-_\#A-Za-z0-9]+`

Required: No

### **securityConfigurationId**

The ID of the security configuration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 64.

Pattern: `[0-9a-z]+`

Required: No

### **state**

The state of the virtual cluster.

Type: String

Valid Values: `RUNNING` | `TERMINATING` | `TERMINATED` | `ARRESTED`

Required: No

### **tags**

The assigned tags of the virtual cluster.

Type: String to string map

Map Entries: Minimum number of 0 items. Maximum number of 50 items.

Key Length Constraints: Minimum length of 1. Maximum length of 128.

Key Pattern: `.*\S.*`

Value Length Constraints: Minimum length of 0. Maximum length of 256.

Value Pattern: `.*\S.*`

Required: No

## See Also

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

- [AWS SDK for C++](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# Common Parameters

The following list contains the parameters that all actions use for signing Signature Version 4 requests with a query string. Any action-specific parameters are listed in the topic for that action. For more information about Signature Version 4, see [Signing AWS API requests](#) in the *IAM User Guide*.

## X-Amz-Algorithm

The hash algorithm that you used to create the request signature.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Valid Values: AWS4-HMAC-SHA256

Required: Conditional

## X-Amz-Credential

The credential scope value, which is a string that includes your access key, the date, the region you are targeting, the service you are requesting, and a termination string ("aws4\_request"). The value is expressed in the following format: *access\_key/YYYYMMDD/region/service/aws4\_request*.

For more information, see [Create a signed AWS API request](#) in the *IAM User Guide*.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

## X-Amz-Date

The date that is used to create the signature. The format must be ISO 8601 basic format (YYYYMMDD'T'HHMMSS'Z'). For example, the following date time is a valid X-Amz-Date value: 20120325T120000Z.

Condition: X-Amz-Date is optional for all requests; it can be used to override the date used for signing requests. If the Date header is specified in the ISO 8601 basic format, X-Amz-Date is not required. When X-Amz-Date is used, it always overrides the value of the Date header. For more information, see [Elements of an AWS API request signature](#) in the *IAM User Guide*.

Type: string

Required: Conditional

### **X-Amz-Security-Token**

The temporary security token that was obtained through a call to AWS Security Token Service (AWS STS). For a list of services that support temporary security credentials from AWS STS, see [AWS services that work with IAM](#) in the *IAM User Guide*.

Condition: If you're using temporary security credentials from AWS STS, you must include the security token.

Type: string

Required: Conditional

### **X-Amz-Signature**

Specifies the hex-encoded signature that was calculated from the string to sign and the derived signing key.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

### **X-Amz-SignedHeaders**

Specifies all the HTTP headers that were included as part of the canonical request. For more information about specifying signed headers, see [Create a signed AWS API request](#) in the *IAM User Guide*.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

**Required: Conditional**

# Common Error Types

This section lists common error types that this AWS service may return. Not all services return all error types listed here. For errors specific to an API action for this service, see the topic for that API action.

## **AccessDeniedException**

You don't have permission to perform this action. Verify that your IAM policy includes the required permissions.

HTTP Status Code: 403

## **ExpiredTokenException**

The security token included in the request has expired. Request a new security token and try again.

HTTP Status Code: 403

## **IncompleteSignature**

The request signature doesn't conform to AWS standards. Verify that you're using valid AWS credentials and that your request is properly formatted. If you're using an SDK, ensure it's up to date.

HTTP Status Code: 403

## **InternalFailure**

The request can't be processed right now because of an internal server issue. Try again later. If the problem persists, contact AWS Support.

HTTP Status Code: 500

## **MalformedHttpRequestException**

The request body can't be processed. This typically happens when the request body can't be decompressed using the specified content encoding algorithm. Verify that the content encoding header matches the compression format used.

HTTP Status Code: 400

**NotAuthorized**

You don't have permissions to perform this action. Verify that your IAM policy includes the required permissions.

HTTP Status Code: 401

**OptInRequired**

Your AWS account needs a subscription for this service. Verify that you've enabled the service in your account.

HTTP Status Code: 403

**RequestAbortedException**

The request was aborted before a response could be returned. This typically happens when the client closes the connection.

HTTP Status Code: 400

**RequestEntityTooLargeException**

The request entity is too large. Reduce the size of the request body and try again.

HTTP Status Code: 413

**RequestTimeoutException**

The request timed out. The server didn't receive the complete request within the expected time frame. Try again.

HTTP Status Code: 408

**ServiceUnavailable**

The service is temporarily unavailable. Try again later.

HTTP Status Code: 503

**ThrottlingException**

Your request rate is too high. The AWS SDKs automatically retry requests that receive this exception. Reduce the frequency of requests.

HTTP Status Code: 400

**UnknownOperationException**

The action or operation isn't recognized. Verify that the action name is spelled correctly and that it's supported by the API version you're using.

HTTP Status Code: 404

**UnrecognizedClientException**

The X.509 certificate or AWS access key ID you provided doesn't exist in our records. Verify that you're using valid credentials and that they haven't expired.

HTTP Status Code: 403

**ValidationError**

The input doesn't meet the required format or constraints. Check that all required parameters are included and that values are valid.

HTTP Status Code: 400