



Amazon EMR on EKS API Reference

Amazon EMR on EKS



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Amazon EMR on EKS: Amazon EMR on EKS API Reference

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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 July 2, 2024.

Actions

The following actions are supported:

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

CancelJobRun

Cancels 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 Errors](#).

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

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](#)

- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [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"
      },
      "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+=,.\u002D-]+)$`

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 Errors](#).

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

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 Errors](#).

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

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:

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- [AWS SDK for C++](#)
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- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [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 Errors](#).

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:

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- [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 Errors](#).

InternalServerError

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](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)

- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [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"
      },
      "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"
  }
},
"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 Errors](#).

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

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](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [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"
        },
        "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 Errors](#).

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](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [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",
  "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 Errors](#).

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

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](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [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"
    },
    "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 Errors](#).

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

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](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [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"
    },
    "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 Errors](#).

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

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](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [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",
    "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 Errors](#).

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](#)
- [AWS SDK for .NET](#)
- [AWS SDK for C++](#)
- [AWS SDK for Go v2](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for JavaScript V3](#)
- [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"
      },
      "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 Errors](#).

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

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

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

- [Certificate](#)
- [CloudWatchMonitoringConfiguration](#)
- [Configuration](#)
- [ConfigurationOverrides](#)
- [ContainerInfo](#)
- [ContainerLogRotationConfiguration](#)
- [ContainerProvider](#)
- [Credentials](#)
- [EksInfo](#)
- [Endpoint](#)
- [JobDriver](#)
- [JobRun](#)
- [JobTemplate](#)
- [JobTemplateData](#)
- [MonitoringConfiguration](#)
- [ParametricCloudWatchMonitoringConfiguration](#)
- [ParametricConfigurationOverrides](#)
- [ParametricMonitoringConfiguration](#)
- [ParametricS3MonitoringConfiguration](#)
- [RetryPolicyConfiguration](#)

- [RetryPolicyExecution](#)
- [S3MonitoringConfiguration](#)
- [SparkSqlJobDriver](#)
- [SparkSubmitJobDriver](#)
- [TemplateParameterConfiguration](#)
- [VirtualCluster](#)

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

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-\uFFFF\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](#)

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](#)

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

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\i\n\t]*`

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-\u0FBF\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-\u1FBF\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-\u2FBF\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-\u3FBF\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-\u4FBF\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-\u5FBF\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-\u6FBF\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-\u7FBF\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-\u8FBF\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-\u9FBF\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-\uAFBF\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-\uBFBF\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-\uCFBF\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-\uDFBF\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-\uEFBF\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-\uFFBF]`*

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](#)

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](#)

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

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*.

Action

The action to be performed.

Type: string

Required: Yes

Version

The API version that the request is written for, expressed in the format YYYY-MM-DD.

Type: string

Required: Yes

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 Errors

This section lists the errors common to the API actions of all AWS services. For errors specific to an API action for this service, see the topic for that API action.

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 403

ExpiredTokenException

The security token included in the request is expired

HTTP Status Code: 403

IncompleteSignature

The request signature does not conform to AWS standards.

HTTP Status Code: 403

InternalFailure

The request processing has failed because of an unknown error, exception or failure.

HTTP Status Code: 500

MalformedHttpRequestException

Problems with the request at the HTTP level, e.g. we can't decompress the body according to the decompression algorithm specified by the content-encoding.

HTTP Status Code: 400

NotAuthorized

You do not have permission to perform this action.

HTTP Status Code: 401

OptInRequired

The AWS access key ID needs a subscription for the service.

HTTP Status Code: 403

RequestAbortedException

Convenient exception that can be used when a request is aborted before a reply is sent back (e.g. client closed connection).

HTTP Status Code: 400

RequestEntityTooLargeException

Problems with the request at the HTTP level. The request entity is too large.

HTTP Status Code: 413

RequestExpired

The request reached the service more than 15 minutes after the date stamp on the request or more than 15 minutes after the request expiration date (such as for pre-signed URLs), or the date stamp on the request is more than 15 minutes in the future.

HTTP Status Code: 400

RequestTimeoutException

Problems with the request at the HTTP level. Reading the Request timed out.

HTTP Status Code: 408

ServiceUnavailable

The request has failed due to a temporary failure of the server.

HTTP Status Code: 503

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 400

UnrecognizedClientException

The X.509 certificate or AWS access key ID provided does not exist in our records.

HTTP Status Code: 403

UnknownOperationException

The action or operation requested is invalid. Verify that the action is typed correctly.

HTTP Status Code: 404

ValidationError

The input fails to satisfy the constraints specified by an AWS service.

HTTP Status Code: 400