
Amazon Elastic Kubernetes Service

API Reference

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Amazon Elastic Kubernetes Service: API Reference

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Welcome

Amazon Elastic Kubernetes Service (Amazon EKS) is a managed service that makes it easy for you to run Kubernetes on AWS without needing to stand up or maintain your own Kubernetes control plane. Kubernetes is an open-source system for automating the deployment, scaling, and management of containerized applications.

Amazon EKS runs up-to-date versions of the open-source Kubernetes software, so you can use all the existing plugins and tooling from the Kubernetes community. Applications running on Amazon EKS are fully compatible with applications running on any standard Kubernetes environment, whether running in on-premises data centers or public clouds. This means that you can easily migrate any standard Kubernetes application to Amazon EKS without any code modification required.

This document was last published on September 16, 2019.

Actions

The following actions are supported:

- [CreateCluster](#) (p. 3)
- [DeleteCluster](#) (p. 9)
- [DescribeCluster](#) (p. 13)
- [DescribeUpdate](#) (p. 17)
- [ListClusters](#) (p. 20)
- [ListUpdates](#) (p. 23)
- [UpdateClusterConfig](#) (p. 26)
- [UpdateClusterVersion](#) (p. 32)

CreateCluster

Creates an Amazon EKS control plane.

The Amazon EKS control plane consists of control plane instances that run the Kubernetes software, such as `etcd` and the API server. The control plane runs in an account managed by AWS, and the Kubernetes API is exposed via the Amazon EKS API server endpoint. Each Amazon EKS cluster control plane is single-tenant and unique and runs on its own set of Amazon EC2 instances.

The cluster control plane is provisioned across multiple Availability Zones and fronted by an Elastic Load Balancing Network Load Balancer. Amazon EKS also provisions elastic network interfaces in your VPC subnets to provide connectivity from the control plane instances to the worker nodes (for example, to support `kubectl exec`, `logs`, and `proxy` data flows).

Amazon EKS worker nodes run in your AWS account and connect to your cluster's control plane via the Kubernetes API server endpoint and a certificate file that is created for your cluster.

You can use the `endpointPublicAccess` and `endpointPrivateAccess` parameters to enable or disable public and private access to your cluster's Kubernetes API server endpoint. By default, public access is enabled, and private access is disabled. For more information, see [Amazon EKS Cluster Endpoint Access Control](#) in the Amazon EKS User Guide .

You can use the `logging` parameter to enable or disable exporting the Kubernetes control plane logs for your cluster to CloudWatch Logs. By default, cluster control plane logs aren't exported to CloudWatch Logs. For more information, see [Amazon EKS Cluster Control Plane Logs](#) in the Amazon EKS User Guide .

Note

CloudWatch Logs ingestion, archive storage, and data scanning rates apply to exported control plane logs. For more information, see [Amazon CloudWatch Pricing](#).

Cluster creation typically takes between 10 and 15 minutes. After you create an Amazon EKS cluster, you must configure your Kubernetes tooling to communicate with the API server and launch worker nodes into your cluster. For more information, see [Managing Cluster Authentication](#) and [Launching Amazon EKS Worker Nodes](#) in the *Amazon EKS User Guide*.

Request Syntax

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

{
  "clientRequestToken": "string",
  "logging": {
    "clusterLogging": [
      {
        "enabled": boolean,
        "types": [ "string" ]
      }
    ]
  },
  "name": "string",
  "resourcesVpcConfig": {
    "endpointPrivateAccess": boolean,
    "endpointPublicAccess": boolean,
    "securityGroupIds": [ "string" ],
    "subnetIds": [ "string" ]
  },
  "roleArn": "string",
  "version": "string"
}
```

URI Request Parameters

The request does not use any URI parameters.

Request Body

The request accepts the following data in JSON format.

clientRequestToken (p. 3)

Unique, case-sensitive identifier that you provide to ensure the idempotency of the request.

Type: String

Required: No

logging (p. 3)

Enable or disable exporting the Kubernetes control plane logs for your cluster to CloudWatch Logs. By default, cluster control plane logs aren't exported to CloudWatch Logs. For more information, see [Amazon EKS Cluster Control Plane Logs](#) in the *Amazon EKS User Guide* .

Note

CloudWatch Logs ingestion, archive storage, and data scanning rates apply to exported control plane logs. For more information, see [Amazon CloudWatch Pricing](#).

Type: [Logging](#) (p. 42) object

Required: No

name (p. 3)

The unique name to give to your cluster.

Type: String

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

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

Required: Yes

resourcesVpcConfig (p. 3)

The VPC configuration used by the cluster control plane. Amazon EKS VPC resources have specific requirements to work properly with Kubernetes. For more information, see [Cluster VPC Considerations](#) and [Cluster Security Group Considerations](#) in the *Amazon EKS User Guide*. You must specify at least two subnets. You can specify up to five security groups, but we recommend that you use a dedicated security group for your cluster control plane.

Type: [VpcConfigRequest](#) (p. 48) object

Required: Yes

roleArn (p. 3)

The Amazon Resource Name (ARN) of the IAM role that provides permissions for Amazon EKS to make calls to other AWS API operations on your behalf. For more information, see [Amazon EKS Service IAM Role](#) in the *Amazon EKS User Guide* .

Type: String

Required: Yes

version (p. 3)

The desired Kubernetes version for your cluster. If you don't specify a value here, the latest version available in Amazon EKS is used.

Type: String

Required: No

Response Syntax

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

{
  "cluster": {
    "arn": "string",
    "certificateAuthority": {
      "data": "string"
    },
    "clientRequestToken": "string",
    "createdAt": number,
    "endpoint": "string",
    "identity": {
      "oidc": {
        "issuer": "string"
      }
    },
    "logging": {
      "clusterLogging": [
        {
          "enabled": boolean,
          "types": [ "string" ]
        }
      ]
    },
    "name": "string",
    "platformVersion": "string",
    "resourcesVpcConfig": {
      "endpointPrivateAccess": boolean,
      "endpointPublicAccess": boolean,
      "securityGroupIds": [ "string" ],
      "subnetIds": [ "string" ],
      "vpcId": "string"
    },
    "roleArn": "string",
    "status": "string",
    "version": "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.

cluster (p. 5)

The full description of your new cluster.

Type: [Cluster \(p. 38\)](#) object

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 54\)](#).

ClientException

These errors are usually caused by a client action. Actions can include using an action or resource on behalf of a user that doesn't have permissions to use the action or resource or specifying an identifier that is not valid.

HTTP Status Code: 400

InvalidParameterException

The specified parameter is invalid. Review the available parameters for the API request.

HTTP Status Code: 400

ResourceInUseException

The specified resource is in use.

HTTP Status Code: 409

ResourceLimitExceededException

You have encountered a service limit on the specified resource.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server-side issue.

HTTP Status Code: 500

ServiceUnavailableException

The service is unavailable. Back off and retry the operation.

HTTP Status Code: 503

UnsupportedAvailabilityZoneException

At least one of your specified cluster subnets is in an Availability Zone that does not support Amazon EKS. The exception output specifies the supported Availability Zones for your account, from which you can choose subnets for your cluster.

HTTP Status Code: 400

Example

In the following example or examples, the Authorization header contents (`AUTHPARAMS`) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the [AWS Command Line Interface \(AWS CLI\)](#) or one of the [AWS SDKs](#) to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

The following example creates an Amazon EKS cluster called `prod` with endpoint public and private access enabled.

Sample Request

```
POST /clusters HTTP/1.1
Host: eks.us-west-2.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.120 Python/3.7.0 Darwin/18.2.0 botocore/1.12.110
X-Amz-Date: 20190322T160158Z
Authorization: AUTHPARAMS
Content-Length: 368

{
  "name": "prod",
  "roleArn": "arn:aws:iam::012345678910:role/EksServiceRole",
  "resourcesVpcConfig": {
    "subnetIds": [
      "subnet-077bc97efd5dae4f9",
      "subnet-0d6dc303cd69de702",
      "subnet-0b48c05c4cd1500cb"
    ],
    "securityGroupIds": [
      "sg-089666e5ca892599f"
    ],
    "endpointPublicAccess": true,
    "endpointPrivateAccess": true
  },
  "clientRequestToken": "644136db-8cb9-4183-b59f-11d615f979e9"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Fri, 22 Mar 2019 16:01:58 GMT
Content-Type: application/json
Content-Length: 682
x-amzn-RequestId: d1b8b8d8-4cbb-11e9-b348-0398c7ea9718
x-amz-apigw-id: W84GUEIbPHcFW2Q=
X-Amzn-Trace-Id: Root=1-5c9506f5-d1e3152f7fbec44a4c3b6dde
Connection: keep-alive

{
  "cluster": {
    "name": "prod",
    "arn": "arn:aws:eks:us-west-2:012345678910:cluster/prod",
    "createdAt": 1553270518.433,
    "version": "1.11",
    "endpoint": null,
    "roleArn": "arn:aws:iam::012345678910:role/EksServiceRole",
    "resourcesVpcConfig": {
      "subnetIds": [
        "subnet-077bc97efd5dae4f9",
        "subnet-0d6dc303cd69de702",
        "subnet-0b48c05c4cd1500cb"
      ],
      "securityGroupIds": [
        "sg-089666e5ca892599f"
      ],
      "vpcId": "vpc-0405181d8db2f03ec",
    }
  }
}
```

```
        "endpointPublicAccess": true,  
        "endpointPrivateAccess": true  
    },  
    "logging": {  
        "clusterLogging": [  
            {  
                "types": [  
                    "api",  
                    "audit",  
                    "authenticator",  
                    "controllerManager",  
                    "scheduler"  
                ],  
                "enabled": false  
            }  
        ]  
    },  
    "identity": {  
        "oidc": {  
            "issuer": null  
        }  
    },  
    "status": "CREATING",  
    "certificateAuthority": {  
        "data": null  
    },  
    "clientRequestToken": null,  
    "platformVersion": "eks.2"  
} }
```

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](#)
- [AWS SDK for Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

DeleteCluster

Deletes the Amazon EKS cluster control plane.

Note

If you have active services in your cluster that are associated with a load balancer, you must delete those services before deleting the cluster so that the load balancers are deleted properly. Otherwise, you can have orphaned resources in your VPC that prevent you from being able to delete the VPC. For more information, see [Deleting a Cluster](#) in the *Amazon EKS User Guide*.

Request Syntax

```
DELETE /clusters/name HTTP/1.1
```

URI Request Parameters

The request requires the following URI parameters.

name (p. 9)

The name of the cluster to delete.

Request Body

The request does not have a request body.

Response Syntax

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

{
  "cluster": {
    "arn": "string",
    "certificateAuthority": {
      "data": "string"
    },
    "clientRequestToken": "string",
    "createdAt": number,
    "endpoint": "string",
    "identity": {
      "oidc": {
        "issuer": "string"
      }
    },
    "logging": {
      "clusterLogging": [
        {
          "enabled": boolean,
          "types": [ "string" ]
        }
      ]
    },
    "name": "string",
    "platformVersion": "string",
    "resourcesVpcConfig": {
```

```
    "endpointPrivateAccess": boolean,
    "endpointPublicAccess": boolean,
    "securityGroupIds": [ string ],
    "subnetIds": [ string ],
    "vpcId": string
  },
  "roleArn": string,
  "status": string,
  "version": 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.

[cluster \(p. 9\)](#)

The full description of the cluster to delete.

Type: [Cluster \(p. 38\)](#) object

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 54\)](#).

ClientException

These errors are usually caused by a client action. Actions can include using an action or resource on behalf of a user that doesn't have permissions to use the action or resource or specifying an identifier that is not valid.

HTTP Status Code: 400

ResourceInUseException

The specified resource is in use.

HTTP Status Code: 409

ResourceNotFoundException

The specified resource could not be found. You can view your available clusters with [ListClusters \(p. 20\)](#). Amazon EKS clusters are Region-specific.

HTTP Status Code: 404

ServerException

These errors are usually caused by a server-side issue.

HTTP Status Code: 500

ServiceUnavailableException

The service is unavailable. Back off and retry the operation.

HTTP Status Code: 503

Example

In the following example or examples, the Authorization header contents (AUTHPARAMS) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the [AWS Command Line Interface \(AWS CLI\)](#) or one of the [AWS SDKs](#) to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

The following example deletes a cluster called `preview`.

Sample Request

```
DELETE /clusters/devel HTTP/1.1
Host: eks.us-west-2.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.15.0 Python/3.6.5 Darwin/16.7.0 botocore/1.10.0
X-Amz-Date: 20180531T231840Z
Authorization: AUTHPARAMS
```

Sample Response

```
HTTP/1.1 200 OK
Date: Thu, 31 May 2018 23:18:41 GMT
Content-Type: application/json
Content-Length: 1895
x-amzn-RequestId: f41d2cd9-6528-11e8-90a7-d126e019a58a
x-amz-apigw-id: HxlgjH_rPHcF7ag=
X-Amzn-Trace-Id: Root=1-5b1082d0-7e60338c3a68e21292b0d2ca
Connection: keep-alive

{
  "cluster": {
    "endpoint": "https://A0DCCD80A04F01705DD065655C30CC3D.yl4.us-west-2.eks.amazonaws.com",
    "status": "DELETING",
    "createdAt": 1527807879.988,
    "certificateAuthority": {
      "data": "HERE_BE_SOME_CERT_DATA=="
    },
    "arn": "arn:aws:eks:us-west-2:012345678910:cluster/devel",
    "roleArn": "arn:aws:iam:012345678910:role/eks-service-role-AWSServiceRoleForAmazonEKS-J7ONKE3BQ4PI",
    "clientRequestToken": null,
    "version": "1.10",
    "name": "devel",
    "resourcesVpcConfig": {
      "securityGroupIds": [
        "sg-6979fe18"
      ],
      "vpcId": "vpc-950809ec",
      "endpointPublicAccess": true,
      "endpointPrivateAccess": false,
      "subnetIds": [
        "subnet-6782e71e",
        "subnet-e7e761ac"
      ]
    }
  }
}
```

```
}  
}  
}
```

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](#)
- [AWS SDK for Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

DescribeCluster

Returns descriptive information about an Amazon EKS cluster.

The API server endpoint and certificate authority data returned by this operation are required for `kubectl` and `kubect1` to communicate with your Kubernetes API server. For more information, see [Create a kubeconfig for Amazon EKS](#).

Note

The API server endpoint and certificate authority data aren't available until the cluster reaches the `ACTIVE` state.

Request Syntax

```
GET /clusters/name HTTP/1.1
```

URI Request Parameters

The request requires the following URI parameters.

`name` (p. 13)

The name of the cluster to describe.

Request Body

The request does not have a request body.

Response Syntax

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

{
  "cluster": {
    "arn": "string",
    "certificateAuthority": {
      "data": "string"
    },
    "clientRequestToken": "string",
    "createdAt": number,
    "endpoint": "string",
    "identity": {
      "oidc": {
        "issuer": "string"
      }
    },
    "logging": {
      "clusterLogging": [
        {
          "enabled": boolean,
          "types": [ "string" ]
        }
      ]
    },
    "name": "string",
    "platformVersion": "string",
```

```
    "resourcesVpcConfig": {  
      "endpointPrivateAccess": boolean,  
      "endpointPublicAccess": boolean,  
      "securityGroupIds": [ string ],  
      "subnetIds": [ string ],  
      "vpcId": string  
    },  
    "roleArn": string,  
    "status": string,  
    "version": 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.

cluster (p. 13)

The full description of your specified cluster.

Type: [Cluster](#) (p. 38) object

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 54).

ClientException

These errors are usually caused by a client action. Actions can include using an action or resource on behalf of a user that doesn't have permissions to use the action or resource or specifying an identifier that is not valid.

HTTP Status Code: 400

ResourceNotFoundException

The specified resource could not be found. You can view your available clusters with [ListClusters](#) (p. 20). Amazon EKS clusters are Region-specific.

HTTP Status Code: 404

ServerException

These errors are usually caused by a server-side issue.

HTTP Status Code: 500

ServiceUnavailableException

The service is unavailable. Back off and retry the operation.

HTTP Status Code: 503

Example

In the following example or examples, the Authorization header contents (`AUTHPARAMS`) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the [AWS Command Line Interface \(AWS CLI\)](#) or one of the [AWS SDKs](#) to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

The following example describes a cluster called prod.

Sample Request

```
GET /clusters/prod HTTP/1.1
Host: eks.us-west-2.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.120 Python/3.7.0 Darwin/18.2.0 botocore/1.12.110
X-Amz-Date: 20190322T161109Z
Authorization: AUTHPARAMS
```

Sample Response

```
HTTP/1.1 200 OK
Date: Fri, 22 Mar 2019 16:11:07 GMT
Content-Type: application/json
Content-Length: 682
x-amzn-RequestId: 1978fca5-4cbd-11e9-86ea-2b6dc519decd
x-amz-apigw-id: W85cPGkVvHcFa4g=
X-Amzn-Trace-Id: Root=1-5c95091b-6e7cd4882cd91834b66ac514
Connection: keep-alive

{
  "cluster": {
    "name": "prod",
    "arn": "arn:aws:eks:us-west-2:012345678910:cluster/prod",
    "createdAt": 1553270518.433,
    "version": "1.11",
    "endpoint": null,
    "roleArn": "arn:aws:iam::012345678910:role/EksServiceRole",
    "resourcesVpcConfig": {
      "subnetIds": [
        "subnet-077bc97efd5dae4f9",
        "subnet-0d6dc303cd69de702",
        "subnet-0b48c05c4cd1500cb"
      ],
      "securityGroupIds": [
        "sg-089666e5ca892599f"
      ],
      "vpcId": "vpc-0405181d8db2f03ec",
      "endpointPublicAccess": true,
      "endpointPrivateAccess": true
    },
    "logging": {
      "clusterLogging": [
        {
          "types": [
            "api",
            "audit",
            "authenticator",
            "controllerManager",
            "scheduler"
          ],
          "enabled": false
        }
      ]
    }
  }
}
```

```
    ]
  },
  "identity": {
    "oidc": {
      "issuer": null
    }
  },
  "status": "CREATING",
  "certificateAuthority": {
    "data": null
  },
  "clientRequestToken": null,
  "platformVersion": "eks.2"
}
}
```

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](#)
- [AWS SDK for Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

DescribeUpdate

Returns descriptive information about an update against your Amazon EKS cluster.

When the status of the update is `Succeeded`, the update is complete. If an update fails, the status is `Failed`, and an error detail explains the reason for the failure.

Request Syntax

```
GET /clusters/name/updates/updateId HTTP/1.1
```

URI Request Parameters

The request requires the following URI parameters.

`name` (p. 17)

The name of the Amazon EKS cluster to update.

`updateId` (p. 17)

The ID of the update to describe.

Request Body

The request does not have a request body.

Response Syntax

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

{
  "update": {
    "createdAt": number,
    "errors": [
      {
        "errorCode": "string",
        "errorMessage": "string",
        "resourceIds": [ "string" ]
      }
    ],
    "id": "string",
    "params": [
      {
        "type": "string",
        "value": "string"
      }
    ],
    "status": "string",
    "type": "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.

[update \(p. 17\)](#)

The full description of the specified update.

Type: [Update \(p. 45\)](#) object

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 54\)](#).

ClientException

These errors are usually caused by a client action. Actions can include using an action or resource on behalf of a user that doesn't have permissions to use the action or resource or specifying an identifier that is not valid.

HTTP Status Code: 400

InvalidParameterException

The specified parameter is invalid. Review the available parameters for the API request.

HTTP Status Code: 400

ResourceNotFoundException

The specified resource could not be found. You can view your available clusters with [ListClusters \(p. 20\)](#). Amazon EKS clusters are Region-specific.

HTTP Status Code: 404

ServerException

These errors are usually caused by a server-side issue.

HTTP Status Code: 500

Example

In the following example or examples, the Authorization header contents (`AUTHPARAMS`) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the [AWS Command Line Interface \(AWS CLI\)](#) or one of the [AWS SDKs](#) to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

The following example describes an update with the ID `9f771284-9e30-4886-b5b1-3789b6bea4dc` in the `dev1` cluster.

Sample Request

```
GET /clusters/devel/updates/9f771284-9e30-4886-b5b1-3789b6bea4dc HTTP/1.1
Host: eks.us-west-2.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.56 Python/3.7.0 Darwin/17.7.0 botocore/1.12.46
X-Amz-Date: 20181129T172927Z
Authorization: AUTHPARAMS
```

Sample Response

```
HTTP/1.1 200 OK
Date: Thu, 29 Nov 2018 17:29:27 GMT
Content-Type: application/json
Content-Length: 228
x-amzn-RequestId: 52408bdb-f3fc-11e8-a2ad-4dd5bee7556d
x-amz-apigw-id: RIo-oFsVvHcFXng=
X-Amzn-Trace-Id: Root=1-5c0021f7-1bdc4007e77da96f686fecde;Sampled=1
Connection: keep-alive

{
  "update": {
    "errors": [],
    "params": [{
      "value": "1.11",
      "type": "Version"
    }, {
      "value": "eks.1",
      "type": "PlatformVersion"
    }],
    "status": "InProgress",
    "id": "9f771284-9e30-4886-b5b1-3789b6bea4dc",
    "createdAt": 1543512515.848,
    "type": "VersionUpdate"
  }
}
```

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](#)
- [AWS SDK for Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

ListClusters

Lists the Amazon EKS clusters in your AWS account in the specified Region.

Request Syntax

```
GET /clusters?maxResults=maxResults&nextToken=nextToken HTTP/1.1
```

URI Request Parameters

The request requires the following URI parameters.

[maxResults \(p. 20\)](#)

The maximum number of cluster results returned by `ListClusters` in paginated output. When you use this parameter, `ListClusters` returns only `maxResults` results in a single page along with a `nextToken` response element. You can see the remaining results of the initial request by sending another `ListClusters` request with the returned `nextToken` value. This value can be between 1 and 100. If you don't use this parameter, `ListClusters` returns up to 100 results and a `nextToken` value if applicable.

Valid Range: Minimum value of 1. Maximum value of 100.

[nextToken \(p. 20\)](#)

The `nextToken` value returned from a previous paginated `ListClusters` request where `maxResults` was used and the results exceeded the value of that parameter. Pagination continues from the end of the previous results that returned the `nextToken` value.

Note

This token should be treated as an opaque identifier that is used only to retrieve the next items in a list and not for other programmatic purposes.

Request Body

The request does not have a request body.

Response Syntax

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

{
  "clusters": [ 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.

[clusters \(p. 20\)](#)

A list of all of the clusters for your account in the specified Region.

Type: Array of strings

[nextToken \(p. 20\)](#)

The `nextToken` value to include in a future `ListClusters` request. When the results of a `ListClusters` request exceed `maxResults`, you can use this value to retrieve the next page of results. This value is `null` when there are no more results to return.

Type: String

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 54\)](#).

ClientException

These errors are usually caused by a client action. Actions can include using an action or resource on behalf of a user that doesn't have permissions to use the action or resource or specifying an identifier that is not valid.

HTTP Status Code: 400

InvalidParameterException

The specified parameter is invalid. Review the available parameters for the API request.

HTTP Status Code: 400

ServerException

These errors are usually caused by a server-side issue.

HTTP Status Code: 500

ServiceUnavailableException

The service is unavailable. Back off and retry the operation.

HTTP Status Code: 503

Example

In the following example or examples, the Authorization header contents (`AUTHPARAMS`) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the [AWS Command Line Interface \(AWS CLI\)](#) or one of the [AWS SDKs](#) to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

The following example lists all of the Amazon EKS clusters in the specified Region.

Sample Request

```
GET /clusters HTTP/1.1
Host: eks.us-west-2.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.15.0 Python/3.6.5 Darwin/16.7.0 botocore/1.10.0
X-Amz-Date: 20180531T231200Z
Authorization: AUTHPARAMS
```

Sample Response

```
HTTP/1.1 200 OK
Date: Thu, 31 May 2018 23:12:00 GMT
Content-Type: application/json
Content-Length: 46
x-amzn-RequestId: 05a756a1-6528-11e8-8b76-b9c1c7f233af
x-amz-apigw-id: HxkiCF8EPHcF4nw=
X-Amzn-Trace-Id: Root=1-5b108140-02517e16072fcc6261058b70
Connection: keep-alive

{
  "clusters": [
    "devel",
    "prod"
  ],
  "nextToken": null
}
```

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](#)
- [AWS SDK for Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

ListUpdates

Lists the updates associated with an Amazon EKS cluster in your AWS account, in the specified Region.

Request Syntax

```
GET /clusters/name/updates?maxResults=maxResults&nextToken=nextToken HTTP/1.1
```

URI Request Parameters

The request requires the following URI parameters.

maxResults (p. 23)

The maximum number of update results returned by `ListUpdates` in paginated output. When you use this parameter, `ListUpdates` returns only `maxResults` results in a single page along with a `nextToken` response element. You can see the remaining results of the initial request by sending another `ListUpdates` request with the returned `nextToken` value. This value can be between 1 and 100. If you don't use this parameter, `ListUpdates` returns up to 100 results and a `nextToken` value if applicable.

Valid Range: Minimum value of 1. Maximum value of 100.

name (p. 23)

The name of the Amazon EKS cluster to list updates for.

nextToken (p. 23)

The `nextToken` value returned from a previous paginated `ListUpdates` request where `maxResults` was used and the results exceeded the value of that parameter. Pagination continues from the end of the previous results that returned the `nextToken` value.

Request Body

The request does not have a request body.

Response Syntax

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

{
  "nextToken": "string",
  "updateIds": [ "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 (p. 23)

The `nextToken` value to include in a future `ListUpdates` request. When the results of a `ListUpdates` request exceed `maxResults`, you can use this value to retrieve the next page of results. This value is `null` when there are no more results to return.

Type: String

updateIds (p. 23)

A list of all the updates for the specified cluster and Region.

Type: Array of strings

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 54\)](#).

ClientException

These errors are usually caused by a client action. Actions can include using an action or resource on behalf of a user that doesn't have permissions to use the action or resource or specifying an identifier that is not valid.

HTTP Status Code: 400

InvalidParameterException

The specified parameter is invalid. Review the available parameters for the API request.

HTTP Status Code: 400

ResourceNotFoundException

The specified resource could not be found. You can view your available clusters with [ListClusters \(p. 20\)](#). Amazon EKS clusters are Region-specific.

HTTP Status Code: 404

ServerException

These errors are usually caused by a server-side issue.

HTTP Status Code: 500

Example

In the following example or examples, the Authorization header contents (`AUTHPARAMS`) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the [AWS Command Line Interface \(AWS CLI\)](#) or one of the [AWS SDKs](#) to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

The following example lists all updates that are associated with the `dev1` cluster.

Sample Request

```
GET /clusters/dev1/updates HTTP/1.1
Host: eks.us-west-2.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.56 Python/3.7.0 Darwin/17.7.0 botocore/1.12.46
X-Amz-Date: 20181129T172901Z
Authorization: AUTHPARAMS
```

Sample Response

```
HTTP/1.1 200 OK
Date: Thu, 29 Nov 2018 17:29:01 GMT
Content-Type: application/json
Content-Length: 71
x-amzn-RequestId: 4311fa83-f3fc-11e8-a242-fbf494fda54a
x-amz-apigw-id: RIo6pF2NPHcF5PQ=
X-Amzn-Trace-Id: Root=1-5c0021dd-1d9cd950483da98061f4f6e4;Sampled=1
Connection: keep-alive

{
  "updateIds": [ "9f771284-9e30-4886-b5b1-3789b6bea4dc" ],
  "nextToken": null
}
```

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](#)
- [AWS SDK for Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

UpdateClusterConfig

Updates an Amazon EKS cluster configuration. Your cluster continues to function during the update. The response output includes an update ID that you can use to track the status of your cluster update with the [DescribeUpdate \(p. 17\)](#) API operation.

You can use this API operation to enable or disable exporting the Kubernetes control plane logs for your cluster to CloudWatch Logs. By default, cluster control plane logs aren't exported to CloudWatch Logs. For more information, see [Amazon EKS Cluster Control Plane Logs](#) in the Amazon EKS User Guide .

Note

CloudWatch Logs ingestion, archive storage, and data scanning rates apply to exported control plane logs. For more information, see [Amazon CloudWatch Pricing](#).

You can also use this API operation to enable or disable public and private access to your cluster's Kubernetes API server endpoint. By default, public access is enabled, and private access is disabled. For more information, see [Amazon EKS Cluster Endpoint Access Control](#) in the Amazon EKS User Guide .

Important

At this time, you can not update the subnets or security group IDs for an existing cluster.

Cluster updates are asynchronous, and they should finish within a few minutes. During an update, the cluster status moves to `UPDATING` (this status transition is eventually consistent). When the update is complete (either `Failed` or `Successful`), the cluster status moves to `Active`.

Request Syntax

```
POST /clusters/name/update-config HTTP/1.1  
Content-type: application/json
```

```
{  
  "clientRequestToken": "string",  
  "logging": {  
    "clusterLogging": [  
      {  
        "enabled": boolean,  
        "types": [ "string" ]  
      }  
    ]  
  },  
  "resourcesVpcConfig": {  
    "endpointPrivateAccess": boolean,  
    "endpointPublicAccess": boolean,  
    "securityGroupIds": [ "string" ],  
    "subnetIds": [ "string" ]  
  }  
}
```

URI Request Parameters

The request requires the following URI parameters.

name (p. 26)

The name of the Amazon EKS cluster to update.

Request Body

The request accepts the following data in JSON format.

[clientRequestToken \(p. 26\)](#)

Unique, case-sensitive identifier that you provide to ensure the idempotency of the request.

Type: String

Required: No

[logging \(p. 26\)](#)

Enable or disable exporting the Kubernetes control plane logs for your cluster to CloudWatch Logs. By default, cluster control plane logs aren't exported to CloudWatch Logs. For more information, see [Amazon EKS Cluster Control Plane Logs](#) in the Amazon EKS User Guide .

Note

CloudWatch Logs ingestion, archive storage, and data scanning rates apply to exported control plane logs. For more information, see [Amazon CloudWatch Pricing](#).

Type: [Logging \(p. 42\)](#) object

Required: No

[resourcesVpcConfig \(p. 26\)](#)

An object representing the VPC configuration to use for an Amazon EKS cluster.

Type: [VpcConfigRequest \(p. 48\)](#) object

Required: No

Response Syntax

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

{
  "update": {
    "createdAt": number,
    "errors": [
      {
        "errorCode": "string",
        "errorMessage": "string",
        "resourceIds": [ "string" ]
      }
    ],
    "id": "string",
    "params": [
      {
        "type": "string",
        "value": "string"
      }
    ],
    "status": "string",
    "type": "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.

[update \(p. 27\)](#)

An object representing an asynchronous update.

Type: [Update \(p. 45\)](#) object

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 54\)](#).

ClientException

These errors are usually caused by a client action. Actions can include using an action or resource on behalf of a user that doesn't have permissions to use the action or resource or specifying an identifier that is not valid.

HTTP Status Code: 400

InvalidParameterException

The specified parameter is invalid. Review the available parameters for the API request.

HTTP Status Code: 400

InvalidRequestException

The request is invalid given the state of the cluster. Check the state of the cluster and the associated operations.

HTTP Status Code: 400

ResourceInUseException

The specified resource is in use.

HTTP Status Code: 409

ResourceNotFoundException

The specified resource could not be found. You can view your available clusters with [ListClusters \(p. 20\)](#). Amazon EKS clusters are Region-specific.

HTTP Status Code: 404

ServerException

These errors are usually caused by a server-side issue.

HTTP Status Code: 500

Examples

In the following example or examples, the Authorization header contents (`AUTHPARAMS`) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the [AWS Command Line Interface \(AWS CLI\)](#) or one of the [AWS SDKs](#) to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

The following example disables the Amazon EKS public API server endpoint for the `eks-beta` cluster.

Sample Request

```
POST /clusters/eks-beta/update-config HTTP/1.1
Host: eks.us-west-2.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.56 Python/3.7.0 Darwin/17.7.0 botocore/1.12.46
X-Amz-Date: 20190228T215632Z
Authorization: AUTHPARAMS

{
  "resourcesVpcConfig": {
    "endpointPublicAccess": false
  },
  "clientRequestToken": "a6de6687-1ca1-43f1-b48b-94216f825c79"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Thu, 28 Feb 2019 21:56:33 GMT
Content-Type: application/json
Content-Length: 254
x-amzn-RequestId: b5cc3dc8-3ba3-11e9-a848-01d90c7ee6d7
x-amz-apigw-id: V1LanEMJPHcFvTg=
X-Amzn-Trace-Id: Root=1-5c785910-79fbf3674d4a5ddee4cf970f;Sampled=1
Connection: keep-alive

{
  "update": {
    "id": "71abb011-b524-4983-b17f-c30baa1b5530",
    "status": "InProgress",
    "type": "EndpointAccessUpdate",
    "params": [
      {
        "type": "EndpointPublicAccess",
        "value": "false"
      },
      {
        "type": "EndpointPrivateAccess",
        "value": "true"
      }
    ],
    "createdAt": 1551390993.374,
    "errors": []
  }
}
```

Example

The following example enables exporting all cluster control plane logs to CloudWatch Logs.

Sample Request

```
POST /clusters/prod/update-config HTTP/1.1
Host: eks.us-west-2.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.120 Python/3.7.0 Darwin/18.2.0 botocore/1.12.110
X-Amz-Date: 20190322T162335Z
Authorization: AUTHPARAMS

{
  "logging": {
    "clusterLogging": [
      {
        "types": [
          "api",
          "audit",
          "authenticator",
          "controllerManager",
          "scheduler"
        ],
        "enabled": true
      }
    ]
  },
  "clientRequestToken": "ceec3afd-1731-4a94-9a1f-26e0e7eb46b1"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Fri, 22 Mar 2019 16:23:34 GMT
Content-Type: application/json
Content-Length: 313
x-amzn-RequestId: d6791f22-4cbe-11e9-82e1-ed8db84fbba9
x-amz-apigw-id: W87Q5H1CvHcFxDa=
X-Amzn-Trace-Id: Root=1-5c950c05-15477600e07ec800d410cc00
Connection: keep-alive

{
  "update": {
    "id": "883405c8-65c6-4758-8cee-2a7c1340a6d9",
    "status": "InProgress",
    "type": "LoggingUpdate",
    "params": [
      {
        "type": "ClusterLogging",
        "value": "{\"clusterLogging\": [{\"types\": [\"api\", \"audit\", \"authenticator\", \"controllerManager\", \"scheduler\"], \"enabled\": true}]}"
      }
    ],
    "createdAt": 1553271814.684,
    "errors": []
  }
}
```

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](#)
- [AWS SDK for Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

UpdateClusterVersion

Updates an Amazon EKS cluster to the specified Kubernetes version. Your cluster continues to function during the update. The response output includes an update ID that you can use to track the status of your cluster update with the [DescribeUpdate \(p. 17\)](#) API operation.

Cluster updates are asynchronous, and they should finish within a few minutes. During an update, the cluster status moves to `UPDATING` (this status transition is eventually consistent). When the update is complete (either `Failed` or `Successful`), the cluster status moves to `Active`.

Request Syntax

```
POST /clusters/name/updates HTTP/1.1
Content-type: application/json

{
  "clientRequestToken": "string",
  "version": "string"
}
```

URI Request Parameters

The request requires the following URI parameters.

name (p. 32)

The name of the Amazon EKS cluster to update.

Request Body

The request accepts the following data in JSON format.

clientRequestToken (p. 32)

Unique, case-sensitive identifier that you provide to ensure the idempotency of the request.

Type: String

Required: No

version (p. 32)

The desired Kubernetes version following a successful update.

Type: String

Required: Yes

Response Syntax

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

{
  "update": {
```

```
"createdAt": number,
"errors": [
  {
    "errorCode": "string",
    "errorMessage": "string",
    "resourceIds": [ "string" ]
  }
],
"id": "string",
"params": [
  {
    "type": "string",
    "value": "string"
  }
],
"status": "string",
"type": "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.

[update \(p. 32\)](#)

The full description of the specified update

Type: [Update \(p. 45\)](#) object

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 54\)](#).

ClientException

These errors are usually caused by a client action. Actions can include using an action or resource on behalf of a user that doesn't have permissions to use the action or resource or specifying an identifier that is not valid.

HTTP Status Code: 400

InvalidParameterException

The specified parameter is invalid. Review the available parameters for the API request.

HTTP Status Code: 400

InvalidRequestException

The request is invalid given the state of the cluster. Check the state of the cluster and the associated operations.

HTTP Status Code: 400

ResourceInUseException

The specified resource is in use.

HTTP Status Code: 409

ResourceNotFoundException

The specified resource could not be found. You can view your available clusters with [ListClusters \(p. 20\)](#). Amazon EKS clusters are Region-specific.

HTTP Status Code: 404

ServerException

These errors are usually caused by a server-side issue.

HTTP Status Code: 500

Example

In the following example or examples, the Authorization header contents (AUTHPARAMS) must be replaced with an AWS Signature Version 4 signature. For more information about creating these signatures, see [Signature Version 4 Signing Process](#) in the *AWS General Reference*.

You need to learn how to sign HTTP requests only if you intend to manually create them. When you use the [AWS Command Line Interface \(AWS CLI\)](#) or one of the [AWS SDKs](#) to make requests to AWS, these tools automatically sign the requests for you with the access key that you specify when you configure the tools. When you use these tools, you don't need to learn how to sign requests yourself.

Example

The following example updates the `devel` cluster to Kubernetes version 1.11.

Sample Request

```
POST /clusters/devel/updates HTTP/1.1
Host: eks.us-west-2.amazonaws.com
Accept-Encoding: identity
User-Agent: aws-cli/1.16.56 Python/3.7.0 Darwin/17.7.0 botocore/1.12.46
X-Amz-Date: 20181129T172834Z
Authorization: AUTHPARAMS

{
  "version": "1.11",
  "clientRequestToken": "b07dab93-51bc-4094-8372-96f3ccf888ff"
}
```

Sample Response

```
HTTP/1.1 200 OK
Date: Thu, 29 Nov 2018 17:28:35 GMT
Content-Type: application/json
Content-Length: 228
x-amzn-RequestId: 3300f0c-f3fc-11e8-9ddb-9bc150e1f1e4
x-amz-apigw-id: RIo2bEs8vHcFXoA=
X-Amzn-Trace-Id: Root=1-5c0021c2-e5132580188eafa8600f2fb0;Sampled=1
Connection: keep-alive

{
  "update": {
    "errors": [],
    "params": [{
      "value": "1.11",
      "type": "Version"
    }
  ]
}
```

```
}, {  
  "value": "eks.1",  
  "type": "PlatformVersion"  
}],  
"status": "InProgress",  
"id": "9f771284-9e30-4886-b5b1-3789b6bea4dc",  
"createdAt": 1543512515.848,  
"type": "VersionUpdate"  
}  
}
```

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](#)
- [AWS SDK for Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)
- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

Data Types

The Amazon Elastic Kubernetes Service 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](#) (p. 37)
- [Cluster](#) (p. 38)
- [ErrorDetail](#) (p. 40)
- [Identity](#) (p. 41)
- [Logging](#) (p. 42)
- [LogSetup](#) (p. 43)
- [OIDC](#) (p. 44)
- [Update](#) (p. 45)
- [UpdateParam](#) (p. 47)
- [VpcConfigRequest](#) (p. 48)
- [VpcConfigResponse](#) (p. 50)

Certificate

An object representing the `certificate-authority-data` for your cluster.

Contents

data

The Base64-encoded certificate data required to communicate with your cluster. Add this to the `certificate-authority-data` section of the `kubeconfig` file for your cluster.

Type: 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 Go](#)
- [AWS SDK for Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

Cluster

An object representing an Amazon EKS cluster.

Contents

arn

The Amazon Resource Name (ARN) of the cluster.

Type: String

Required: No

certificateAuthority

The `certificate-authority-data` for your cluster.

Type: [Certificate \(p. 37\)](#) object

Required: No

clientRequestToken

Unique, case-sensitive identifier that you provide to ensure the idempotency of the request.

Type: String

Required: No

createdAt

The Unix epoch timestamp in seconds for when the cluster was created.

Type: Timestamp

Required: No

endpoint

The endpoint for your Kubernetes API server.

Type: String

Required: No

identity

The identity provider information for the cluster.

Type: [Identity \(p. 41\)](#) object

Required: No

logging

The logging configuration for your cluster.

Type: [Logging \(p. 42\)](#) object

Required: No

name

The name of the cluster.

Type: String

Required: No

platformVersion

The platform version of your Amazon EKS cluster. For more information, see [Platform Versions](#) in the Amazon EKS User Guide .

Type: String

Required: No

resourcesVpcConfig

The VPC configuration used by the cluster control plane. Amazon EKS VPC resources have specific requirements to work properly with Kubernetes. For more information, see [Cluster VPC Considerations](#) and [Cluster Security Group Considerations](#) in the *Amazon EKS User Guide*.

Type: [VpcConfigResponse](#) (p. 50) object

Required: No

roleArn

The Amazon Resource Name (ARN) of the IAM role that provides permissions for the Kubernetes control plane to make calls to AWS API operations on your behalf.

Type: String

Required: No

status

The current status of the cluster.

Type: String

Valid Values: `CREATING` | `ACTIVE` | `DELETING` | `FAILED`

Required: No

version

The Kubernetes server version for the cluster.

Type: 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 Go](#)
- [AWS SDK for Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

ErrorDetail

An object representing an error when an asynchronous operation fails.

Contents

errorCode

A brief description of the error.

- **SubnetNotFound:** We couldn't find one of the subnets associated with the cluster.
- **SecurityGroupNotFound:** We couldn't find one of the security groups associated with the cluster.
- **EniLimitReached:** You have reached the elastic network interface limit for your account.
- **IpNotAvailable:** A subnet associated with the cluster doesn't have any free IP addresses.
- **AccessDenied:** You don't have permissions to perform the specified operation.
- **OperationNotPermitted:** The service role associated with the cluster doesn't have the required access permissions for Amazon EKS.
- **VpcIdNotFound:** We couldn't find the VPC associated with the cluster.

Type: String

Valid Values: `SubnetNotFound` | `SecurityGroupNotFound` | `EniLimitReached` | `IpNotAvailable` | `AccessDenied` | `OperationNotPermitted` | `VpcIdNotFound` | `Unknown`

Required: No

errorMessage

A more complete description of the error.

Type: String

Required: No

resourceIds

An optional field that contains the resource IDs associated with the error.

Type: Array of strings

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 Go](#)
- [AWS SDK for Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

Identity

An object representing an identity provider for authentication credentials.

Contents

oidc

The [OpenID Connect](#) identity provider information for the cluster.

Type: [OIDC \(p. 44\)](#) 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 Go](#)
- [AWS SDK for Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

Logging

An object representing the logging configuration for resources in your cluster.

Contents

clusterLogging

The cluster control plane logging configuration for your cluster.

Type: Array of [LogSetup \(p. 43\)](#) objects

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 Go](#)
- [AWS SDK for Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

LogSetup

An object representing the enabled or disabled Kubernetes control plane logs for your cluster.

Contents

enabled

If a log type is enabled, that log type exports its control plane logs to CloudWatch Logs. If a log type isn't enabled, that log type doesn't export its control plane logs. Each individual log type can be enabled or disabled independently.

Type: Boolean

Required: No

types

The available cluster control plane log types.

Type: Array of strings

Valid Values: `api` | `audit` | `authenticator` | `controllerManager` | `scheduler`

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 Go](#)
- [AWS SDK for Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

OIDC

An object representing the [OpenID Connect](#) identity provider information for the cluster.

Contents

issuer

The issuer URL for the OpenID Connect identity provider.

Type: 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 Go](#)
- [AWS SDK for Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

Update

An object representing an asynchronous update.

Contents

createdAt

The Unix epoch timestamp in seconds for when the update was created.

Type: Timestamp

Required: No

errors

Any errors associated with a `Failed` update.

Type: Array of [ErrorDetail \(p. 40\)](#) objects

Required: No

id

A UUID that is used to track the update.

Type: String

Required: No

params

A key-value map that contains the parameters associated with the update.

Type: Array of [UpdateParam \(p. 47\)](#) objects

Required: No

status

The current status of the update.

Type: String

Valid Values: `InProgress` | `Failed` | `Cancelled` | `Successful`

Required: No

type

The type of the update.

Type: String

Valid Values: `VersionUpdate` | `EndpointAccessUpdate` | `LoggingUpdate`

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 Go](#)
- [AWS SDK for Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

UpdateParam

An object representing the details of an update request.

Contents

type

The keys associated with an update request.

Type: String

Valid Values: `Version` | `PlatformVersion` | `EndpointPrivateAccess` | `EndpointPublicAccess` | `ClusterLogging`

Required: No

value

The value of the keys submitted as part of an update request.

Type: 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 Go](#)
- [AWS SDK for Go - Pilot](#)
- [AWS SDK for Java](#)
- [AWS SDK for Ruby V2](#)

VpcConfigRequest

An object representing the VPC configuration to use for an Amazon EKS cluster.

Contents

endpointPrivateAccess

Set this value to `true` to enable private access for your cluster's Kubernetes API server endpoint. If you enable private access, Kubernetes API requests from within your cluster's VPC use the private VPC endpoint. The default value for this parameter is `false`, which disables private access for your Kubernetes API server. For more information, see [Amazon EKS Cluster Endpoint Access Control](#) in the Amazon EKS User Guide .

Type: Boolean

Required: No

endpointPublicAccess

Set this value to `false` to disable public access for your cluster's Kubernetes API server endpoint. If you disable public access, your cluster's Kubernetes API server can receive only requests from within the cluster VPC. The default value for this parameter is `true`, which enables public access for your Kubernetes API server. For more information, see [Amazon EKS Cluster Endpoint Access Control](#) in the Amazon EKS User Guide .

Type: Boolean

Required: No

securityGroupIds

Specify one or more security groups for the cross-account elastic network interfaces that Amazon EKS creates to use to allow communication between your worker nodes and the Kubernetes control plane. If you don't specify a security group, the default security group for your VPC is used.

Type: Array of strings

Required: No

subnetIds

Specify subnets for your Amazon EKS worker nodes. Amazon EKS creates cross-account elastic network interfaces in these subnets to allow communication between your worker nodes and the Kubernetes control plane.

Type: Array of strings

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 Go](#)
- [AWS SDK for Go - Pilot](#)
- [AWS SDK for Java](#)

- [AWS SDK for Ruby V2](#)

VpcConfigResponse

An object representing an Amazon EKS cluster VPC configuration response.

Contents

endpointPrivateAccess

This parameter indicates whether the Amazon EKS private API server endpoint is enabled. If the Amazon EKS private API server endpoint is enabled, Kubernetes API requests that originate from within your cluster's VPC use the private VPC endpoint instead of traversing the internet.

Type: Boolean

Required: No

endpointPublicAccess

This parameter indicates whether the Amazon EKS public API server endpoint is enabled. If the Amazon EKS public API server endpoint is disabled, your cluster's Kubernetes API server can receive only requests that originate from within the cluster VPC.

Type: Boolean

Required: No

securityGroupIds

The security groups associated with the cross-account elastic network interfaces that are used to allow communication between your worker nodes and the Kubernetes control plane.

Type: Array of strings

Required: No

subnetIds

The subnets associated with your cluster.

Type: Array of strings

Required: No

vpcId

The VPC associated with your cluster.

Type: 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 Go](#)
- [AWS SDK for Go - Pilot](#)
- [AWS SDK for Java](#)

- [AWS SDK for Ruby V2](#)

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 [Signature Version 4 Signing Process](#) in the *Amazon Web Services General Reference*.

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 [Task 2: Create a String to Sign for Signature Version 4](#) in the *Amazon Web Services General Reference*.

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'THHMMSS'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 [Handling Dates in Signature Version 4](#) in the *Amazon Web Services General Reference*.

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 Security Token Service, go to [AWS Services That Work with IAM](#) in the *IAM User Guide*.

Condition: If you're using temporary security credentials from the AWS Security Token Service, 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 [Task 1: Create a Canonical Request For Signature Version 4](#) in the *Amazon Web Services General Reference*.

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: 400

IncompleteSignature

The request signature does not conform to AWS standards.

HTTP Status Code: 400

InternalFailure

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

HTTP Status Code: 500

InvalidAction

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

HTTP Status Code: 400

InvalidClientTokenId

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

HTTP Status Code: 403

InvalidParameterCombination

Parameters that must not be used together were used together.

HTTP Status Code: 400

InvalidParameterValue

An invalid or out-of-range value was supplied for the input parameter.

HTTP Status Code: 400

InvalidQueryParameter

The AWS query string is malformed or does not adhere to AWS standards.

HTTP Status Code: 400

MalformedQueryString

The query string contains a syntax error.

HTTP Status Code: 404

MissingAction

The request is missing an action or a required parameter.

HTTP Status Code: 400

MissingAuthenticationToken

The request must contain either a valid (registered) AWS access key ID or X.509 certificate.

HTTP Status Code: 403

MissingParameter

A required parameter for the specified action is not supplied.

HTTP Status Code: 400

OptInRequired

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

HTTP Status Code: 403

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

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

ValidationError

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

HTTP Status Code: 400