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# Amazon Managed Workflows for Apache Airflow

**Amazon MWAA**

**API Version 2020-07-01**



## **Amazon Managed Workflows for Apache Airflow: Amazon MWAA**

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# Welcome

This section contains the Amazon Managed Workflows for Apache Airflow (MWAA) API reference documentation. For more information, see [What Is Amazon MWAA?](#).

## Endpoints

- `api.airflow.{region}.amazonaws.com` - This endpoint is used for environment management.
  - [CreateEnvironment](#)
  - [DeleteEnvironment](#)
  - [GetEnvironment](#)
  - [ListEnvironments](#)
  - [ListTagsForResource](#)
  - [TagResource](#)
  - [UntagResource](#)
  - [UpdateEnvironment](#)
- `env.airflow.{region}.amazonaws.com` - This endpoint is used to operate the Airflow environment.
  - [CreateCliToken](#)
  - [CreateWebLoginToken](#)
- `ops.airflow.{region}.amazonaws.com` - This endpoint is used to push environment metrics that track environment health.
  - [PublishMetrics](#)

## Regions

For a list of regions that Amazon MWAA supports, see [Region availability](#) in the *Amazon MWAA User Guide*.

This document was last published on September 22, 2021.

# Actions

The following actions are supported:

- [CreateCliToken](#) (p. 3)
- [CreateEnvironment](#) (p. 5)
- [CreateWebLoginToken](#) (p. 12)
- [DeleteEnvironment](#) (p. 14)
- [GetEnvironment](#) (p. 16)
- [ListEnvironments](#) (p. 19)
- [ListTagsForResource](#) (p. 21)
- [PublishMetrics](#) (p. 23)
- [TagResource](#) (p. 25)
- [UntagResource](#) (p. 27)
- [UpdateEnvironment](#) (p. 29)

# CreateCliToken

Creates a CLI token for the Airflow CLI. To learn more, see [Creating an Apache Airflow CLI token](#).

## Request Syntax

```
POST /clitoken/Name HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### Name (p. 3)

The name of the Amazon MWAA environment. For example, `MyMWAAEnvironment`.

Length Constraints: Minimum length of 1. Maximum length of 80.

Pattern: `^[a-zA-Z][0-9a-zA-Z-_*]*$`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

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

{
  "CliToken": "string",
  "WebServerHostname": "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.

### CliToken (p. 3)

An Airflow CLI login token.

Type: String

### WebServerHostname (p. 3)

The Airflow web server hostname for the environment.

Type: String



Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `^([a-zA-Z0-9]|[a-zA-Z0-9][a-zA-Z0-9\-\]*[a-zA-Z0-9])\.[a-zA-Z0-9]|[a-zA-Z0-9][a-zA-Z0-9\-\]*[a-zA-Z0-9])$`

## Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 56\)](#).

### **ResourceNotFoundException**

ResourceNotFoundException: The resource is not available.

HTTP Status Code: 404

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

# CreateEnvironment

Creates an Amazon Managed Workflows for Apache Airflow (MWAA) environment.

## Request Syntax

```
PUT /environments/Name HTTP/1.1
Content-type: application/json

{
  "AirflowConfigurationOptions": {
    "string": "string"
  },
  "AirflowVersion": "string",
  "DagS3Path": "string",
  "EnvironmentClass": "string",
  "ExecutionRoleArn": "string",
  "KmsKey": "string",
  "LoggingConfiguration": {
    "DagProcessingLogs": {
      "Enabled": boolean,
      "LogLevel": "string"
    },
    "SchedulerLogs": {
      "Enabled": boolean,
      "LogLevel": "string"
    },
    "TaskLogs": {
      "Enabled": boolean,
      "LogLevel": "string"
    },
    "WebserverLogs": {
      "Enabled": boolean,
      "LogLevel": "string"
    },
    "WorkerLogs": {
      "Enabled": boolean,
      "LogLevel": "string"
    }
  },
  "MaxWorkers": number,
  "MinWorkers": number,
  "NetworkConfiguration": {
    "SecurityGroupIds": [ "string" ],
    "SubnetIds": [ "string" ]
  },
  "PluginsS3ObjectVersion": "string",
  "PluginsS3Path": "string",
  "RequirementsS3ObjectVersion": "string",
  "RequirementsS3Path": "string",
  "Schedulers": number,
  "SourceBucketArn": "string",
  "Tags": {
    "string": "string"
  },
  "WebserverAccessMode": "string",
  "WeeklyMaintenanceWindowStart": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### Name (p. 5)

The name of the Amazon MWAA environment. For example, `MyMWAAEnvironment`.

Length Constraints: Minimum length of 1. Maximum length of 80.

Pattern: `^[a-zA-Z][0-9a-zA-Z-_]*$`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### AirflowConfigurationOptions (p. 5)

A list of key-value pairs containing the Apache Airflow configuration options you want to attach to your environment. To learn more, see [Apache Airflow configuration options](#).

Type: String to string map

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

Key Pattern: `^[a-z]+([a-z0-9._]*[a-z0-9_]+)?$`

Value Length Constraints: Minimum length of 1. Maximum length of 65536.

Value Pattern: `^[ -~]+$`

Required: No

### AirflowVersion (p. 5)

The Apache Airflow version for your environment. If no value is specified, defaults to the latest version. Valid values: `1.10.12`, `2.0.2`. To learn more, see [Apache Airflow versions on Amazon Managed Workflows for Apache Airflow \(MWAA\)](#).

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^[0-9a-z.]+$`

Required: No

### DagS3Path (p. 5)

The relative path to the DAGs folder on your Amazon S3 bucket. For example, `dags`. To learn more, see [Adding or updating DAGs](#).

Type: String

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

Pattern: `.*`

Required: Yes

### EnvironmentClass (p. 5)

The environment class type. Valid values: `mw1.small`, `mw1.medium`, `mw1.large`. To learn more, see [Amazon MWAA environment class](#).

Type: String

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

Required: No

### ExecutionRoleArn (p. 5)

The Amazon Resource Name (ARN) of the execution role for your environment. An execution role is an AWS Identity and Access Management (IAM) role that grants MWAA permission to access AWS services and resources used by your environment. For example, `arn:aws:iam::123456789:role/my-execution-role`. To learn more, see [Amazon MWAA Execution role](#).

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `^arn:aws(-[a-z]+)? :iam: : \d{12} : role / ? [a-zA-Z_0-9+=, .@ \_ / ] + $`

Required: Yes

### KmsKey (p. 5)

The AWS Key Management Service (KMS) key to encrypt the data in your environment. You can use an AWS owned CMK, or a Customer managed CMK (advanced). To learn more, see [Create an Amazon MWAA environment](#).

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `^(((arn:aws(-[a-z]+)? :kms: [a-z]{2} - [a-z]+ - \d: \d+: )? key \ / )? [a-f0-9]{8} - [a-f0-9]{4} - [a-f0-9]{4} - [a-f0-9]{4} - [a-f0-9]{12} | (arn:aws(-[a-z]+)? :kms: [a-z]{2} - [a-z]+ - \d: \d+: )? alias / . + ) $`

Required: No

### LoggingConfiguration (p. 5)

Defines the Apache Airflow logs to send to CloudWatch Logs.

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

Required: No

### MaxWorkers (p. 5)

The maximum number of workers that you want to run in your environment. MWAA scales the number of Apache Airflow workers up to the number you specify in the `MaxWorkers` field. For example, 20. When there are no more tasks running, and no more in the queue, MWAA disposes of the extra workers leaving the one worker that is included with your environment, or the number you specify in `MinWorkers`.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

### **MinWorkers (p. 5)**

The minimum number of workers that you want to run in your environment. MWAA scales the number of Apache Airflow workers up to the number you specify in the `MaxWorkers` field. When there are no more tasks running, and no more in the queue, MWAA disposes of the extra workers leaving the worker count you specify in the `MinWorkers` field. For example, 2.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

### **NetworkConfiguration (p. 5)**

The VPC networking components used to secure and enable network traffic between the AWS resources for your environment. To learn more, see [About networking on Amazon MWAA](#).

Type: [NetworkConfiguration \(p. 50\)](#) object

Required: Yes

### **PluginsS3ObjectVersion (p. 5)**

The version of the `plugins.zip` file on your Amazon S3 bucket. A version must be specified each time a `plugins.zip` file is updated. To learn more, see [How S3 Versioning works](#).

Type: String

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

Required: No

### **PluginsS3Path (p. 5)**

The relative path to the `plugins.zip` file on your Amazon S3 bucket. For example, `plugins.zip`. If specified, then the `plugins.zip` version is required. To learn more, see [Installing custom plugins](#).

Type: String

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

Pattern: `.*`

Required: No

### **RequirementsS3ObjectVersion (p. 5)**

The version of the `requirements.txt` file on your Amazon S3 bucket. A version must be specified each time a `requirements.txt` file is updated. To learn more, see [How S3 Versioning works](#).

Type: String

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

Required: No

### **RequirementsS3Path (p. 5)**

The relative path to the `requirements.txt` file on your Amazon S3 bucket. For example, `requirements.txt`. If specified, then a file version is required. To learn more, see [Installing Python dependencies](#).

Type: String

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

Pattern: .\*

Required: No

#### Schedulers (p. 5)

The number of Apache Airflow schedulers to run in your environment. Valid values:

- v2.0.2 - Accepts between 2 to 5. Defaults to 2.
- v1.10.12 - Accepts 1.

Type: Integer

Valid Range: Maximum value of 5.

Required: No

#### SourceBucketArn (p. 5)

The Amazon Resource Name (ARN) of the Amazon S3 bucket where your DAG code and supporting files are stored. For example, `arn:aws:s3:::my-airflow-bucket-unique-name`. To learn more, see [Create an Amazon S3 bucket for Amazon MWWA](#).

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `^arn:aws(-[a-z]+)? :s3:::[a-z0-9.\-]+$`

Required: Yes

#### Tags (p. 5)

The key-value tag pairs you want to associate to your environment. For example, "Environment": "Staging". To learn more, see [Tagging AWS resources](#).

Type: String to string map

Map Entries: Maximum number of 50 items.

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

Key Pattern: `^[ \p{L}\p{Z}\p{N}_ . : / = + \ - @ ] * $`

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

Value Pattern: `^[ \p{L}\p{Z}\p{N}_ . : / = + \ - @ ] * $`

Required: No

#### WebserverAccessMode (p. 5)

The Apache Airflow *Web server* access mode. To learn more, see [Apache Airflow access modes](#).

Type: String

Valid Values: `PRIVATE_ONLY | PUBLIC_ONLY`

Required: No

#### WeeklyMaintenanceWindowStart (p. 5)

The day and time of the week in Coordinated Universal Time (UTC) 24-hour standard time to start weekly maintenance updates of your environment in the following format: `DAY:HH:MM`. For example: `TUE:03:30`. You can specify a start time in 30 minute increments only.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 9.

Pattern: (MON|TUE|WED|THU|FRI|SAT|SUN):([01]\d|2[0-3]):(00|30)

Required: No

## Response Syntax

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

{
  "Arn": "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 (p. 10)

The Amazon Resource Name (ARN) returned in the response for the environment.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: ^arn:aws(-[a-z]+)?:airflow:[a-z0-9\-\+]:\d{12}:environment/\w+

## Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 56\)](#).

### InternalServerErrorException

InternalServerErrorException: An internal error has occurred.

HTTP Status Code: 500

### ValidationException

ValidationException: The provided input is not valid.

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



# CreateWebLoginToken

Creates a web login token for the Airflow Web UI. To learn more, see [Creating an Apache Airflow web login token](#).

## Request Syntax

```
POST /webtoken/Name HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### Name (p. 12)

The name of the Amazon MWAA environment. For example, `MyMWAAEnvironment`.

Length Constraints: Minimum length of 1. Maximum length of 80.

Pattern: `^[a-zA-Z][0-9a-zA-Z-_*]*$`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

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

{
  "WebServerHostname": "string",
  "WebToken": "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.

### WebServerHostname (p. 12)

The Airflow web server hostname for the environment.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 255.

Pattern: `^((([a-zA-Z0-9]|[a-zA-Z0-9][a-zA-Z0-9\-\]*[a-zA-Z0-9])\.)+)([A-Za-z0-9]|[A-Za-z0-9][A-Za-z0-9\-\]*[A-Za-z0-9])$`

### [WebToken \(p. 12\)](#)

An Airflow web server login token.

Type: String

## Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 56\)](#).

### **AccessDeniedException**

Access to the Apache Airflow Web UI or CLI has been denied due to insufficient permissions. To learn more, see [Accessing an Amazon MWAAs environment](#).

HTTP Status Code: 403

### **InternalServerError**

InternalServerError: An internal error has occurred.

HTTP Status Code: 500

### **ResourceNotFoundException**

ResourceNotFoundException: The resource is not available.

HTTP Status Code: 404

### **ValidationException**

ValidationException: The provided input is not valid.

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

# DeleteEnvironment

Deletes an Amazon Managed Workflows for Apache Airflow (MWAA) environment.

## Request Syntax

```
DELETE /environments/Name HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### Name (p. 14)

The name of the Amazon MWAA environment. For example, `MyMWAAEnvironment`.

Length Constraints: Minimum length of 1. Maximum length of 80.

Pattern: `^[a-zA-Z][0-9a-zA-Z-_]*$`

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 \(p. 56\)](#).

### InternalServerErrorException

InternalServerErrorException: An internal error has occurred.

HTTP Status Code: 500

### ResourceNotFoundException

ResourceNotFoundException: The resource is not available.

HTTP Status Code: 404

### ValidationException

ValidationException: The provided input is not valid.

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

# GetEnvironment

Describes an Amazon Managed Workflows for Apache Airflow (MWAA) environment.

## Request Syntax

```
GET /environments/Name HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### Name (p. 16)

The name of the Amazon MWAA environment. For example, `MyMWAAEnvironment`.

Length Constraints: Minimum length of 1. Maximum length of 80.

Pattern: `^[a-zA-Z][0-9a-zA-Z-_]*$`

Required: Yes

## Request Body

The request does not have a request body.

## Response Syntax

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

{
  "Environment": {
    "AirflowConfigurationOptions": {
      "string": "string"
    },
    "AirflowVersion": "string",
    "Arn": "string",
    "CreatedAt": number,
    "DagS3Path": "string",
    "EnvironmentClass": "string",
    "ExecutionRoleArn": "string",
    "KmsKey": "string",
    "LastUpdate": {
      "CreatedAt": number,
      "Error": {
        "ErrorCode": "string",
        "ErrorMessage": "string"
      }
    },
    "Source": "string",
    "Status": "string"
  },
  "LoggingConfiguration": {
    "DagProcessingLogs": {
      "CloudWatchLogGroupArn": "string",
      "Enabled": boolean,
      "LogLevel": "string"
    }
  }
}
```

```
    },
    "SchedulerLogs": {
      "CloudWatchLogGroupArn": "string",
      "Enabled": boolean,
      "LogLevel": "string"
    },
    "TaskLogs": {
      "CloudWatchLogGroupArn": "string",
      "Enabled": boolean,
      "LogLevel": "string"
    },
    "WebserverLogs": {
      "CloudWatchLogGroupArn": "string",
      "Enabled": boolean,
      "LogLevel": "string"
    },
    "WorkerLogs": {
      "CloudWatchLogGroupArn": "string",
      "Enabled": boolean,
      "LogLevel": "string"
    }
  },
  "MaxWorkers": number,
  "MinWorkers": number,
  "Name": "string",
  "NetworkConfiguration": {
    "SecurityGroupIds": [ "string" ],
    "SubnetIds": [ "string" ]
  },
  "PluginsS3ObjectVersion": "string",
  "PluginsS3Path": "string",
  "RequirementsS3ObjectVersion": "string",
  "RequirementsS3Path": "string",
  "Schedulers": number,
  "ServiceRoleArn": "string",
  "SourceBucketArn": "string",
  "Status": "string",
  "Tags": {
    "string" : "string"
  },
  "WebserverAccessMode": "string",
  "WebserverUrl": "string",
  "WeeklyMaintenanceWindowStart": "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.

### Environment (p. 16)

An object containing all available details about the environment.

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

## Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 56\)](#).

### **InternalServerErrorException**

InternalServerErrorException: An internal error has occurred.

HTTP Status Code: 500

### **ResourceNotFoundException**

ResourceNotFoundException: The resource is not available.

HTTP Status Code: 404

### **ValidationException**

ValidationException: The provided input is not valid.

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

# ListEnvironments

Lists the Amazon Managed Workflows for Apache Airflow (MWAA) environments.

## Request Syntax

```
GET /environments?MaxResults=MaxResults&NextToken=NextToken HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### MaxResults (p. 19)

The maximum number of results to retrieve per page. For example, 5 environments per page.

Valid Range: Minimum value of 1. Maximum value of 25.

### NextToken (p. 19)

Retrieves the next page of the results.

Length Constraints: Minimum length of 0. Maximum length of 2048.

## Request Body

The request does not have a request body.

## Response Syntax

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

{
  "Environments": [ 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.

### Environments (p. 19)

Returns a list of Amazon MWAA environments.

Type: Array of strings

Length Constraints: Minimum length of 1. Maximum length of 80.

Pattern: `^[a-zA-Z][0-9a-zA-Z-_*]*$`



### [NextToken \(p. 19\)](#)

Retrieves the next page of the results.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 2048.

## Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 56\)](#).

### **InternalServerErrorException**

InternalServerErrorException: An internal error has occurred.

HTTP Status Code: 500

### **ValidationException**

ValidationException: The provided input is not valid.

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

# ListTagsForResource

Lists the key-value tag pairs associated to the Amazon Managed Workflows for Apache Airflow (MWAA) environment. For example, "Environment": "Staging".

## Request Syntax

```
GET /tags/ResourceArn HTTP/1.1
```

## URI Request Parameters

The request uses the following URI parameters.

### ResourceArn (p. 21)

The Amazon Resource Name (ARN) of the Amazon MWAA environment. For example, `arn:aws:airflow:us-east-1:123456789012:environment/MyMWAAEnvironment`.

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `^arn:aws(-[a-z]+)?:airflow:[a-z0-9\-\+]:\d{12}:environment/\w+`

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 (p. 21)

The key-value tag pairs associated to your environment. To learn more, see [Tagging AWS resources](#).

Type: String to string map

Map Entries: Maximum number of 50 items.

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

Key Pattern: `^[ \p{L}\p{Z}\p{N}_ . : / = + \ - @ ] * ) $`

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

Value Pattern: `^[ \p{L}\p{Z}\p{N}_ . : / = + \ - @ ] * ) $`

## Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 56\)](#).

### **InternalServerErrorException**

InternalServerErrorException: An internal error has occurred.

HTTP Status Code: 500

### **ResourceNotFoundException**

ResourceNotFoundException: The resource is not available.

HTTP Status Code: 404

### **ValidationException**

ValidationException: The provided input is not valid.

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

## PublishMetrics

**Internal only.** Publishes environment health metrics to Amazon CloudWatch.

### Request Syntax

```
POST /metrics/environments/EnvironmentName HTTP/1.1  
Content-type: application/json
```

```
{  
  "MetricData": [  
    {  
      "Dimensions": [  
        {  
          "Name": "string",  
          "Value": "string"  
        }  
      ],  
      "MetricName": "string",  
      "StatisticValues": {  
        "Maximum": number,  
        "Minimum": number,  
        "SampleCount": number,  
        "Sum": number  
      },  
      "Timestamp": number,  
      "Unit": "string",  
      "Value": number  
    }  
  ]  
}
```

### URI Request Parameters

The request uses the following URI parameters.

#### **EnvironmentName** (p. 23)

**Internal only.** The name of the environment.

Length Constraints: Minimum length of 1. Maximum length of 80.

Pattern: `^[a-zA-Z][0-9a-zA-Z-_*]*$`

Required: Yes

### Request Body

The request accepts the following data in JSON format.

#### **MetricData** (p. 23)

**Internal only.** Publishes metrics to Amazon CloudWatch. To learn more about the metrics published to Amazon CloudWatch, see [Amazon MWAA performance metrics in Amazon CloudWatch](#).

Type: Array of [MetricDatum](#) (p. 46) objects

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 \(p. 56\)](#).

### **InternalServerErrorException**

InternalServerErrorException: An internal error has occurred.

HTTP Status Code: 500

### **ValidationException**

ValidationException: The provided input is not valid.

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

# TagResource

Associates key-value tag pairs to your Amazon Managed Workflows for Apache Airflow (MWAA) environment.

## 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 (p. 25)

The Amazon Resource Name (ARN) of the Amazon MWAA environment. For example, `arn:aws:airflow:us-east-1:123456789012:environment/MyMWAAEnvironment`.

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `^arn:aws(-[a-z]+)?:airflow:[a-z0-9\-\+]:\d{12}:environment/\w+`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### Tags (p. 25)

The key-value tag pairs you want to associate to your environment. For example, `"Environment": "Staging"`. To learn more, see [Tagging AWS resources](#).

Type: String to string map

Map Entries: Maximum number of 50 items.

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

Key Pattern: `^([\p{L}\p{Z}\p{N}_\.:/+\\-@]*)$`

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

Value Pattern: `^([\p{L}\p{Z}\p{N}_\.:/+\\-@]*)$`

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 \(p. 56\)](#).

### **InternalServerErrorException**

InternalServerErrorException: An internal error has occurred.

HTTP Status Code: 500

### **ResourceNotFoundException**

ResourceNotFoundException: The resource is not available.

HTTP Status Code: 404

### **ValidationException**

ValidationException: The provided input is not valid.

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

# UntagResource

Removes key-value tag pairs associated to your Amazon Managed Workflows for Apache Airflow (MWAA) environment. For example, "Environment": "Staging".

## Request Syntax

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

## URI Request Parameters

The request uses the following URI parameters.

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

The Amazon Resource Name (ARN) of the Amazon MWAA environment. For example, `arn:aws:airflow:us-east-1:123456789012:environment/MyMWAAEnvironment`.

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `^arn:aws(-[a-z]+)?:airflow:[a-z0-9\-\+]:\d{12}:environment/\w+`

Required: Yes

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

The key-value tag pair you want to remove. For example, "Environment": "Staging".

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

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

Pattern: `^([\p{L}\p{Z}\p{N}_./=+\-@]*)$`

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 \(p. 56\)](#).



### **InternalServerErrorException**

InternalServerErrorException: An internal error has occurred.

HTTP Status Code: 500

### **ResourceNotFoundException**

ResourceNotFoundException: The resource is not available.

HTTP Status Code: 404

### **ValidationException**

ValidationException: The provided input is not valid.

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

# UpdateEnvironment

Updates an Amazon Managed Workflows for Apache Airflow (MWAA) environment.

## Request Syntax

```
PATCH /environments/Name HTTP/1.1
Content-type: application/json

{
  "AirflowConfigurationOptions": {
    "string" : "string"
  },
  "AirflowVersion": "string",
  "DagS3Path": "string",
  "EnvironmentClass": "string",
  "ExecutionRoleArn": "string",
  "LoggingConfiguration": {
    "DagProcessingLogs": {
      "Enabled": boolean,
      "LogLevel": "string"
    },
    "SchedulerLogs": {
      "Enabled": boolean,
      "LogLevel": "string"
    },
    "TaskLogs": {
      "Enabled": boolean,
      "LogLevel": "string"
    },
    "WebserverLogs": {
      "Enabled": boolean,
      "LogLevel": "string"
    },
    "WorkerLogs": {
      "Enabled": boolean,
      "LogLevel": "string"
    }
  },
  "MaxWorkers": number,
  "MinWorkers": number,
  "NetworkConfiguration": {
    "SecurityGroupIds": [ "string" ]
  },
  "PluginsS3ObjectVersion": "string",
  "PluginsS3Path": "string",
  "RequirementsS3ObjectVersion": "string",
  "RequirementsS3Path": "string",
  "Schedulers": number,
  "SourceBucketArn": "string",
  "WebserverAccessMode": "string",
  "WeeklyMaintenanceWindowStart": "string"
}
```

## URI Request Parameters

The request uses the following URI parameters.

### Name (p. 29)

The name of your Amazon MWAA environment. For example, `MyMWAAEnvironment`.

Length Constraints: Minimum length of 1. Maximum length of 80.

Pattern: `^[a-zA-Z][0-9a-zA-Z-_]*$`

Required: Yes

## Request Body

The request accepts the following data in JSON format.

### **AirflowConfigurationOptions** (p. 29)

A list of key-value pairs containing the Apache Airflow configuration options you want to attach to your environment. To learn more, see [Apache Airflow configuration options](#).

Type: String to string map

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

Key Pattern: `^[a-z]+([a-z0-9._]*[a-z0-9_])?$`

Value Length Constraints: Minimum length of 1. Maximum length of 65536.

Value Pattern: `^[ -~]+$`

Required: No

### **AirflowVersion** (p. 29)

The Apache Airflow version for your environment. If no value is specified, defaults to the latest version. Valid values: 1.10.12, 2.0.2.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^[0-9a-z.]+$`

Required: No

### **DagS3Path** (p. 29)

The relative path to the DAGs folder on your Amazon S3 bucket. For example, dags. To learn more, see [Adding or updating DAGs](#).

Type: String

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

Pattern: `.*`

Required: No

### **EnvironmentClass** (p. 29)

The environment class type. Valid values: mw1.small, mw1.medium, mw1.large. To learn more, see [Amazon MWAA environment class](#).

Type: String

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

Required: No

### **ExecutionRoleArn (p. 29)**

The Amazon Resource Name (ARN) of the execution role in IAM that allows MWAA to access AWS resources in your environment. For example, `arn:aws:iam::123456789:role/my-execution-role`. To learn more, see [Amazon MWAA Execution role](#).

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `^arn:aws(-[a-z]+)?:iam:~\d{12}:role/?[a-zA-Z_0-9+=,.\@-\_/\]+$`

Required: No

### **LoggingConfiguration (p. 29)**

The Apache Airflow log types to send to CloudWatch Logs.

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

Required: No

### **MaxWorkers (p. 29)**

The maximum number of workers that you want to run in your environment. MWAA scales the number of Apache Airflow workers up to the number you specify in the `MaxWorkers` field. For example, 20. When there are no more tasks running, and no more in the queue, MWAA disposes of the extra workers leaving the one worker that is included with your environment, or the number you specify in `MinWorkers`.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

### **MinWorkers (p. 29)**

The minimum number of workers that you want to run in your environment. MWAA scales the number of Apache Airflow workers up to the number you specify in the `MaxWorkers` field. When there are no more tasks running, and no more in the queue, MWAA disposes of the extra workers leaving the worker count you specify in the `MinWorkers` field. For example, 2.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

### **NetworkConfiguration (p. 29)**

The VPC networking components used to secure and enable network traffic between the AWS resources for your environment. To learn more, see [About networking on Amazon MWAA](#).

Type: [UpdateNetworkConfigurationInput \(p. 53\)](#) object

Required: No

### **PluginsS3ObjectVersion (p. 29)**

The version of the `plugins.zip` file on your Amazon S3 bucket. A version must be specified each time a `plugins.zip` file is updated. To learn more, see [How S3 Versioning works](#).

Type: String

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

Required: No

#### **PluginsS3Path (p. 29)**

The relative path to the `plugins.zip` file on your Amazon S3 bucket. For example, `plugins.zip`. If specified, then the `plugins.zip` version is required. To learn more, see [Installing custom plugins](#).

Type: String

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

Pattern: `.*`

Required: No

#### **RequirementsS3ObjectVersion (p. 29)**

The version of the `requirements.txt` file on your Amazon S3 bucket. A version must be specified each time a `requirements.txt` file is updated. To learn more, see [How S3 Versioning works](#).

Type: String

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

Required: No

#### **RequirementsS3Path (p. 29)**

The relative path to the `requirements.txt` file on your Amazon S3 bucket. For example, `requirements.txt`. If specified, then a file version is required. To learn more, see [Installing Python dependencies](#).

Type: String

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

Pattern: `.*`

Required: No

#### **Schedulers (p. 29)**

The number of Apache Airflow schedulers to run in your Amazon MWAA environment.

Type: Integer

Valid Range: Maximum value of 5.

Required: No

#### **SourceBucketArn (p. 29)**

The Amazon Resource Name (ARN) of the Amazon S3 bucket where your DAG code and supporting files are stored. For example, `arn:aws:s3:::my-airflow-bucket-unique-name`. To learn more, see [Create an Amazon S3 bucket for Amazon MWAA](#).

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `^arn:aws(-[a-z]+)?:s3:::[a-z0-9.\-]+$`

Required: No

### WebserverAccessMode (p. 29)

The Apache Airflow *Web server* access mode. To learn more, see [Apache Airflow access modes](#).

Type: String

Valid Values: PRIVATE\_ONLY | PUBLIC\_ONLY

Required: No

### WeeklyMaintenanceWindowStart (p. 29)

The day and time of the week in Coordinated Universal Time (UTC) 24-hour standard time to start weekly maintenance updates of your environment in the following format: DAY:HH:MM. For example: TUE:03:30. You can specify a start time in 30 minute increments only.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 9.

Pattern: (MON|TUE|WED|THU|FRI|SAT|SUN):([01]\d|2[0-3]):(00|30)

Required: No

## Response Syntax

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

{
  "Arn": "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 (p. 33)

The Amazon Resource Name (ARN) of the Amazon MWA environment. For example, `arn:aws:airflow:us-east-1:123456789012:environment/MyMWAEnvironment`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: ^arn:aws(-[a-z]+)?:airflow:[a-z0-9\-\]+\:\d{12}:environment/\w+

## Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 56\)](#).

### InternalServerError

InternalServerError: An internal error has occurred.

HTTP Status Code: 500

**ResourceNotFoundException**

ResourceNotFoundException: The resource is not available.

HTTP Status Code: 404

**ValidationException**

ValidationException: The provided input is not valid.

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

# Data Types

The AmazonMWAA 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:

- [Dimension](#) (p. 36)
- [Environment](#) (p. 37)
- [LastUpdate](#) (p. 43)
- [LoggingConfiguration](#) (p. 44)
- [LoggingConfigurationInput](#) (p. 45)
- [MetricDatum](#) (p. 46)
- [ModuleLoggingConfiguration](#) (p. 48)
- [ModuleLoggingConfigurationInput](#) (p. 49)
- [NetworkConfiguration](#) (p. 50)
- [StatisticSet](#) (p. 51)
- [UpdateError](#) (p. 52)
- [UpdateNetworkConfigurationInput](#) (p. 53)



## Dimension

**Internal only.** Represents the dimensions of a metric. To learn more about the metrics published to Amazon CloudWatch, see [Amazon MWAA performance metrics in Amazon CloudWatch](#).

### Contents

#### Name

**Internal only.** The name of the dimension.

Type: String

Required: Yes

#### Value

**Internal only.** The value of the dimension.

Type: String

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

# Environment

Describes an Amazon Managed Workflows for Apache Airflow (MWAA) environment.

## Contents

### **AirflowConfigurationOptions**

A list of key-value pairs containing the Apache Airflow configuration options attached to your environment. To learn more, see [Apache Airflow configuration options](#).

Type: String to string map

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

Key Pattern: `^[a-z]+([a-z0-9._]*[a-z0-9_]+)?$`

Value Length Constraints: Minimum length of 1. Maximum length of 65536.

Value Pattern: `^[ -~]+$`

Required: No

### **AirflowVersion**

The Apache Airflow version on your environment. Valid values: 1.10.12, 2.0.2.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 32.

Pattern: `^[0-9a-z.]+$`

Required: No

### **Arn**

The Amazon Resource Name (ARN) of the Amazon MWAA environment.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `^arn:aws(-[a-z]+)?:airflow:[a-z0-9\-\-]+\:\d{12}:environment/\w+`

Required: No

### **CreatedAt**

The day and time the environment was created.

Type: Timestamp

Required: No

### **DagS3Path**

The relative path to the DAGs folder on your Amazon S3 bucket. For example, dags. To learn more, see [Adding or updating DAGs](#).

Type: String

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

Pattern: .\*

Required: No

#### **EnvironmentClass**

The environment class type. Valid values: `mw1.small`, `mw1.medium`, `mw1.large`. To learn more, see [Amazon MWAA environment class](#).

Type: String

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

Required: No

#### **ExecutionRoleArn**

The Amazon Resource Name (ARN) of the execution role in IAM that allows MWAA to access AWS resources in your environment. For example, `arn:aws:iam::123456789:role/my-execution-role`. To learn more, see [Amazon MWAA Execution role](#).

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `^arn:aws(-[a-z]+)? :iam: : \d{12} : role / ? [a-zA-Z_0-9+=, .@ \- _ / ] + $`

Required: No

#### **KmsKey**

The AWS Key Management Service (KMS) encryption key used to encrypt the data in your environment.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `^(((arn:aws(-[a-z]+)? :kms: [a-z]{2} - [a-z]+ - \d: \d+: )? key \ / )? [a-f0-9]{8} - [a-f0-9]{4} - [a-f0-9]{4} - [a-f0-9]{4} - [a-f0-9]{12} | (arn:aws(-[a-z]+)? :kms: [a-z]{2} - [a-z]+ - \d: \d+: )? alias / . + ) $`

Required: No

#### **LastUpdate**

The status of the last update on the environment.

Type: [LastUpdate \(p. 43\)](#) object

Required: No

#### **LoggingConfiguration**

The Apache Airflow logs published to CloudWatch Logs.

Type: [LoggingConfiguration \(p. 44\)](#) object

Required: No

#### **MaxWorkers**

The maximum number of workers that run in your environment. For example, 20.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

#### **MinWorkers**

The minimum number of workers that run in your environment. For example, 2.

Type: Integer

Valid Range: Minimum value of 1.

Required: No

#### **Name**

The name of the Amazon MWAA environment. For example, `MyMWAAEnvironment`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 80.

Pattern: `^[a-zA-Z][0-9a-zA-Z-_]*$`

Required: No

#### **NetworkConfiguration**

Describes the VPC networking components used to secure and enable network traffic between the AWS resources for your environment. To learn more, see [About networking on Amazon MWAA](#).

Type: [NetworkConfiguration \(p. 50\)](#) object

Required: No

#### **PluginsS3ObjectVersion**

The version of the `plugins.zip` file on your Amazon S3 bucket. To learn more, see [Installing custom plugins](#).

Type: String

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

Required: No

#### **PluginsS3Path**

The relative path to the `plugins.zip` file on your Amazon S3 bucket. For example, `plugins.zip`. To learn more, see [Installing custom plugins](#).

Type: String

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

Pattern: `.*`

Required: No

#### **RequirementsS3ObjectVersion**

The version of the `requirements.txt` file on your Amazon S3 bucket. To learn more, see [Installing Python dependencies](#).

Type: String

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

Required: No

#### RequirementsS3Path

The relative path to the `requirements.txt` file on your Amazon S3 bucket. For example, `requirements.txt`. To learn more, see [Installing Python dependencies](#).

Type: String

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

Pattern: `.*`

Required: No

#### Schedulers

The number of Apache Airflow schedulers that run in your Amazon MWA environment.

Type: Integer

Valid Range: Maximum value of 5.

Required: No

#### ServiceRoleArn

The Amazon Resource Name (ARN) for the service-linked role of the environment. To learn more, see [Amazon MWA Service-linked role](#).

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `^arn:aws(-[a-z]+)? :iam: : \d{12} : role / ? [a-zA-Z_0-9+=, .@ \_ / ] + $`

Required: No

#### SourceBucketArn

The Amazon Resource Name (ARN) of the Amazon S3 bucket where your DAG code and supporting files are stored. For example, `arn:aws:s3:::my-airflow-bucket-unique-name`. To learn more, see [Create an Amazon S3 bucket for Amazon MWA](#).

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `^arn:aws(-[a-z]+)? :s3: : : [a-z0-9. \_ - ] + $`

Required: No

#### Status

The status of the Amazon MWA environment. Valid values:

- `CREATING` - Indicates the request to create the environment is in progress.
- `CREATE_FAILED` - Indicates the request to create the environment failed, and the environment could not be created.
- `AVAILABLE` - Indicates the request was successful and the environment is ready to use.
- `UPDATING` - Indicates the request to update the environment is in progress.
- `DELETING` - Indicates the request to delete the environment is in progress.

- **DELETED** - Indicates the request to delete the environment is complete, and the environment has been deleted.
- **UNAVAILABLE** - Indicates the request failed, but the environment was unable to rollback and is not in a stable state.
- **UPDATE\_FAILED** - Indicates the request to update the environment failed, and the environment has rolled back successfully and is ready to use.

We recommend reviewing our troubleshooting guide for a list of common errors and their solutions. To learn more, see [Amazon MWAA troubleshooting](#).

Type: String

Valid Values: `CREATING` | `CREATE_FAILED` | `AVAILABLE` | `UPDATING` | `DELETING` | `DELETED` | `UNAVAILABLE` | `UPDATE_FAILED`

Required: No

### Tags

The key-value tag pairs associated to your environment. For example, "Environment": "Staging". To learn more, see [Tagging AWS resources](#).

Type: String to string map

Map Entries: Maximum number of 50 items.

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

Key Pattern: `^([\p{L}\p{Z}\p{N}_.:/=+\-@]*)$`

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

Value Pattern: `^([\p{L}\p{Z}\p{N}_.:/=+\-@]*)$`

Required: No

### WebserverAccessMode

The Apache Airflow *Web server* access mode. To learn more, see [Apache Airflow access modes](#).

Type: String

Valid Values: `PRIVATE_ONLY` | `PUBLIC_ONLY`

Required: No

### WebserverUrl

The Apache Airflow *Web server* host name for the Amazon MWAA environment. To learn more, see [Accessing the Apache Airflow UI](#).

Type: String

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

Pattern: `^https://.++$`

Required: No

### WeeklyMaintenanceWindowStart

The day and time of the week in Coordinated Universal Time (UTC) 24-hour standard time that weekly maintenance updates are scheduled. For example: `TUE:03:30`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 9.

Pattern: (MON|TUE|WED|THU|FRI|SAT|SUN):([01]\d|2[0-3]):(00|30)

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

## LastUpdate

Describes the status of the last update on the environment, and any errors that were encountered.

### Contents

#### CreatedAt

The day and time of the last update on the environment.

Type: Timestamp

Required: No

#### Error

The error that was encountered during the last update of the environment.

Type: [UpdateError \(p. 52\)](#) object

Required: No

#### Source

The source of the last update to the environment. Includes internal processes by Amazon MWAA, such as an environment maintenance update.

Type: String

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

Pattern: `^ . +$`

Required: No

#### Status

The status of the last update on the environment.

Type: String

Valid Values: `SUCCESS` | `PENDING` | `FAILED`

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



# LoggingConfiguration

Describes the Apache Airflow log types that are published to CloudWatch Logs.

## Contents

### DagProcessingLogs

The Airflow DAG processing logs published to CloudWatch Logs and the log level.

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

Required: No

### SchedulerLogs

The Airflow scheduler logs published to CloudWatch Logs and the log level.

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

Required: No

### TaskLogs

The Airflow task logs published to CloudWatch Logs and the log level.

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

Required: No

### WebserverLogs

The Airflow web server logs published to CloudWatch Logs and the log level.

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

Required: No

### WorkerLogs

The Airflow worker logs published to CloudWatch Logs and the log level.

Type: [ModuleLoggingConfiguration \(p. 48\)](#) 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 Java V2](#)
- [AWS SDK for Ruby V3](#)

# LoggingConfigurationInput

Defines the Apache Airflow log types to send to CloudWatch Logs.

## Contents

### DagProcessingLogs

Publishes Airflow DAG processing logs to CloudWatch Logs.

Type: [ModuleLoggingConfigurationInput](#) (p. 49) object

Required: No

### SchedulerLogs

Publishes Airflow scheduler logs to CloudWatch Logs.

Type: [ModuleLoggingConfigurationInput](#) (p. 49) object

Required: No

### TaskLogs

Publishes Airflow task logs to CloudWatch Logs.

Type: [ModuleLoggingConfigurationInput](#) (p. 49) object

Required: No

### WebserverLogs

Publishes Airflow web server logs to CloudWatch Logs.

Type: [ModuleLoggingConfigurationInput](#) (p. 49) object

Required: No

### WorkerLogs

Publishes Airflow worker logs to CloudWatch Logs.

Type: [ModuleLoggingConfigurationInput](#) (p. 49) 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 Java V2](#)
- [AWS SDK for Ruby V3](#)

# MetricDatum

**Internal only.** Collects Apache Airflow metrics. To learn more about the metrics published to Amazon CloudWatch, see [Amazon MWAA performance metrics in Amazon CloudWatch](#).

## Contents

### Dimensions

**Internal only.** The dimensions associated with the metric.

Type: Array of [Dimension \(p. 36\)](#) objects

Required: No

### MetricName

**Internal only.** The name of the metric.

Type: String

Required: Yes

### StatisticValues

**Internal only.** The statistical values for the metric.

Type: [StatisticSet \(p. 51\)](#) object

Required: No

### Timestamp

**Internal only.** The time the metric data was received.

Type: Timestamp

Required: Yes

### Unit

**Internal only.** The unit used to store the metric.

Type: String

Valid Values: Seconds | Microseconds | Milliseconds | Bytes | Kilobytes | Megabytes | Gigabytes | Terabytes | Bits | Kilobits | Megabits | Gigabits | Terabits | Percent | Count | Bytes/Second | Kilobytes/Second | Megabytes/Second | Gigabytes/Second | Terabytes/Second | Bits/Second | Kilobits/Second | Megabits/Second | Gigabits/Second | Terabits/Second | Count/Second | None

Required: No

### Value

**Internal only.** The value for the metric.

Type: Double

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

# ModuleLoggingConfiguration

Describes the Apache Airflow log details for the log type (e.g. DagProcessingLogs).

## Contents

### CloudWatchLogGroupArn

The Amazon Resource Name (ARN) for the CloudWatch Logs group where the Apache Airflow log type (e.g. DagProcessingLogs) is published. For example, `arn:aws:logs:us-east-1:123456789012:log-group:airflow-MyMWAAEnvironment-MwaaEnvironment-DAGProcessing:*`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1224.

Pattern: `^arn:aws(-[a-z]+)?:logs:[a-z0-9\-\_]+:\d{12}:log-group:\w+`

Required: No

### Enabled

Indicates whether the Apache Airflow log type (e.g. DagProcessingLogs) is enabled.

Type: Boolean

Required: No

### LogLevel

The Apache Airflow log level for the log type (e.g. DagProcessingLogs).

Type: String

Valid Values: `CRITICAL | ERROR | WARNING | INFO | DEBUG`

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

# ModuleLoggingConfigurationInput

Enables the Apache Airflow log type (e.g. `DagProcessingLogs`) and defines the log level to send to CloudWatch Logs (e.g. `INFO`).

## Contents

### Enabled

Indicates whether to enable the Apache Airflow log type (e.g. `DagProcessingLogs`).

Type: Boolean

Required: Yes

### LogLevel

Defines the Apache Airflow log level (e.g. `INFO`) to send to CloudWatch Logs.

Type: String

Valid Values: `CRITICAL` | `ERROR` | `WARNING` | `INFO` | `DEBUG`

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

# NetworkConfiguration

Describes the VPC networking components used to secure and enable network traffic between the AWS resources for your environment. To learn more, see [About networking on Amazon MWA](#).

## Contents

### SecurityGroupIds

A list of security group IDs. To learn more, see [Security in your VPC on Amazon MWA](#).

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 5 items.

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

Pattern: `^sg-[a-zA-Z0-9\-. _]+`

Required: No

### SubnetIds

A list of subnet IDs. To learn more, see [About networking on Amazon MWA](#).

Type: Array of strings

Array Members: Fixed number of 2 items.

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

Pattern: `^subnet-[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 Go](#)
- [AWS SDK for Java V2](#)
- [AWS SDK for Ruby V3](#)

# StatisticSet

**Internal only.** Represents a set of statistics that describe a specific metric. To learn more about the metrics published to Amazon CloudWatch, see [Amazon MWAA performance metrics in Amazon CloudWatch](#).

## Contents

### Maximum

**Internal only.** The maximum value of the sample set.

Type: Double

Required: No

### Minimum

**Internal only.** The minimum value of the sample set.

Type: Double

Required: No

### SampleCount

**Internal only.** The number of samples used for the statistic set.

Type: Integer

Required: No

### Sum

**Internal only.** The sum of values for the sample set.

Type: Double

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



# UpdateError

Describes the error(s) encountered with the last update of the environment.

## Contents

### **ErrorCode**

The error code that corresponds to the error with the last update.

Type: String

Required: No

### **ErrorMessage**

The error message that corresponds to the error code.

Type: String

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

Pattern: ^.+\$

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

# UpdateNetworkConfigurationInput

Defines the VPC networking components used to secure and enable network traffic between the AWS resources for your environment. To learn more, see [About networking on Amazon MWAA](#).

## Contents

### SecurityGroupIds

A list of security group IDs. A security group must be attached to the same VPC as the subnets. To learn more, see [Security in your VPC on Amazon MWAA](#).

Type: Array of strings

Array Members: Minimum number of 1 item. Maximum number of 5 items.

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

Pattern: `^sg-[a-zA-Z0-9\-\._]+`

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 Go](#)
- [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 [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

**NotAuthorized**

You do not have permission to perform this action.

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