
AWS Data Pipeline

API Reference

API Version 2012-10-29



AWS Data Pipeline: API Reference

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Welcome

AWS Data Pipeline configures and manages a data-driven workflow called a pipeline. AWS Data Pipeline handles the details of scheduling and ensuring that data dependencies are met so that your application can focus on processing the data.

AWS Data Pipeline provides a JAR implementation of a task runner called AWS Data Pipeline Task Runner. AWS Data Pipeline Task Runner provides logic for common data management scenarios, such as performing database queries and running data analysis using Amazon Elastic MapReduce (Amazon EMR). You can use AWS Data Pipeline Task Runner as your task runner, or you can write your own task runner to provide custom data management.

AWS Data Pipeline implements two main sets of functionality. Use the first set to create a pipeline and define data sources, schedules, dependencies, and the transforms to be performed on the data. Use the second set in your task runner application to receive the next task ready for processing. The logic for performing the task, such as querying the data, running data analysis, or converting the data from one format to another, is contained within the task runner. The task runner performs the task assigned to it by the web service, reporting progress to the web service as it does so. When the task is done, the task runner reports the final success or failure of the task to the web service.

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Actions

The following actions are supported:

- [ActivatePipeline](#) (p. 3)
- [AddTags](#) (p. 6)
- [CreatePipeline](#) (p. 8)
- [DeactivatePipeline](#) (p. 11)
- [DeletePipeline](#) (p. 13)
- [DescribeObjects](#) (p. 15)
- [DescribePipelines](#) (p. 19)
- [EvaluateExpression](#) (p. 22)
- [GetPipelineDefinition](#) (p. 25)
- [ListPipelines](#) (p. 29)
- [PollForTask](#) (p. 32)
- [PutPipelineDefinition](#) (p. 36)
- [QueryObjects](#) (p. 42)
- [RemoveTags](#) (p. 46)
- [ReportTaskProgress](#) (p. 48)
- [ReportTaskRunnerHeartbeat](#) (p. 51)
- [SetStatus](#) (p. 54)
- [SetTaskStatus](#) (p. 57)
- [ValidatePipelineDefinition](#) (p. 60)

ActivatePipeline

Validates the specified pipeline and starts processing pipeline tasks. If the pipeline does not pass validation, activation fails.

If you need to pause the pipeline to investigate an issue with a component, such as a data source or script, call [DeactivatePipeline](#) (p. 11).

To activate a finished pipeline, modify the end date for the pipeline and then activate it.

If you activate an on-demand pipeline that is already running, it will cancel all running objects and re-run the pipeline. StartTimestamp does not apply to on-demand pipelines.

Request Syntax

```
{
  "parameterValues": [
    {
      "id": "string",
      "stringValue": "string"
    }
  ],
  "pipelineId": "string",
  "startTimestamp": number
}
```

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 82).

The request accepts the following data in JSON format.

parameterValues (p. 3)

A list of parameter values to pass to the pipeline at activation.

Type: array of [ParameterValue](#) (p. 72) objects

Required: No

pipelineId (p. 3)

The ID of the pipeline.

Type: String

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

Pattern: [\u0020-\u007F\u00E000-\u00FFFD\u0800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: Yes

startTimestamp (p. 3)

The date and time to resume the pipeline. By default, the pipeline resumes from the last completed execution.

Type: Timestamp

Required: No

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. 84).

InternalServerError

An internal service error occurred.

HTTP Status Code: 500

InvalidRequestException

The request was not valid. Verify that your request was properly formatted, that the signature was generated with the correct credentials, and that you haven't exceeded any of the service limits for your account.

HTTP Status Code: 400

PipelineDeletedException

The specified pipeline has been deleted.

HTTP Status Code: 400

PipelineNotFoundException

The specified pipeline was not found. Verify that you used the correct user and account identifiers.

HTTP Status Code: 400

Example

Sample Request

```
POST / HTTP/1.1
Content-Type: application/x-amz-json-1.1
X-Amz-Target: DataPipeline.ActivatePipeline
Content-Length: 39
Host: datapipeline.us-east-1.amazonaws.com
X-Amz-Date: Mon, 12 Nov 2012 17:49:52 GMT
Authorization: AuthParams

{"pipelineId": "df-06372391ZG65EXAMPLE"}
```

Sample Response

```
HTTP/1.1 200
x-amzn-RequestId: ee19d5bf-074e-11e2-af6f-6bc7a6be60d9
Content-Type: application/x-amz-json-1.1
Content-Length: 2
Date: Mon, 12 Nov 2012 17:50:53 GMT

{}
```

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

AddTags

Adds or modifies tags for the specified pipeline.

Request Syntax

```
{
  "pipelineId": "string",
  "tags": [
    {
      "key": "string",
      "value": "string"
    }
  ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 82\)](#).

The request accepts the following data in JSON format.

pipelineId (p. 6)

The ID of the pipeline.

Type: String

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

Pattern: [0020-0D7FF\uE000-\uFFFFD\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: Yes

tags (p. 6)

The tags to add, as key/value pairs.

Type: array of [Tag \(p. 78\)](#) objects

Array Members: Minimum number of 0 items. Maximum number of 10 items.

Required: Yes

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 \(p. 84\)](#).

InternalServerError

An internal service error occurred.

HTTP Status Code: 500

InvalidRequestException

The request was not valid. Verify that your request was properly formatted, that the signature was generated with the correct credentials, and that you haven't exceeded any of the service limits for your account.

HTTP Status Code: 400

PipelineDeletedException

The specified pipeline has been deleted.

HTTP Status Code: 400

PipelineNotFoundException

The specified pipeline was not found. Verify that you used the correct user and account identifiers.

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

CreatePipeline

Creates a new, empty pipeline. Use [PutPipelineDefinition](#) (p. 36) to populate the pipeline.

Request Syntax

```
{
  "description": "string",
  "name": "string",
  "tags": [
    {
      "key": "string",
      "value": "string"
    }
  ],
  "uniqueId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 82).

The request accepts the following data in JSON format.

description (p. 8)

The description for the pipeline.

Type: String

Required: No

name (p. 8)

The name for the pipeline. You can use the same name for multiple pipelines associated with your AWS account, because AWS Data Pipeline assigns each pipeline a unique pipeline identifier.

Type: String

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

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

Required: Yes

tags (p. 8)

A list of tags to associate with the pipeline at creation. Tags let you control access to pipelines. For more information, see [Controlling User Access to Pipelines](#) in the *AWS Data Pipeline Developer Guide*.

Type: array of [Tag](#) (p. 78) objects

Array Members: Minimum number of 0 items. Maximum number of 10 items.

Required: No

uniqueId (p. 8)

A unique identifier. This identifier is not the same as the pipeline identifier assigned by AWS Data Pipeline. You are responsible for defining the format and ensuring the uniqueness of this identifier. You use this parameter to ensure idempotency during repeated calls to `CreatePipeline`. For example, if the first call to `CreatePipeline` does not succeed, you can pass in the same unique identifier and pipeline name combination on a subsequent call to `CreatePipeline`. `CreatePipeline` ensures that if a pipeline already exists with the same name and unique identifier, a new pipeline is not created. Instead, you'll receive the pipeline identifier from the previous attempt. The uniqueness of the name and unique identifier combination is scoped to the AWS account or IAM user credentials.

Type: String
Length Constraints: Minimum length of 1. Maximum length of 1024.
Pattern: [\\u0020-\\uD7FF\\uE000-\\uFFFF\\uD800\\uDC00-\\uDBFF\\uDFFF\\r\\n\\t]*
Required: Yes

Response Syntax

```
{  
  "pipelineId": "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.

pipelineId (p. 9)

The ID that AWS Data Pipeline assigns the newly created pipeline. For example, `df-06372391ZG65EXAMPLE`.

Type: String
Length Constraints: Minimum length of 1. Maximum length of 1024.
Pattern: [\\u0020-\\uD7FF\\uE000-\\uFFFF\\uD800\\uDC00-\\uDBFF\\uDFFF\\r\\n\\t]*

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 84).

InternalServiceError

An internal service error occurred.
HTTP Status Code: 500

InvalidRequestException

The request was not valid. Verify that your request was properly formatted, that the signature was generated with the correct credentials, and that you haven't exceeded any of the service limits for your account.
HTTP Status Code: 400

Example

Sample Request

```
POST / HTTP/1.1  
Content-Type: application/x-amz-json-1.1  
X-Amz-Target: DataPipeline.CreatePipeline  
Content-Length: 91  
Host: datapipeline.us-east-1.amazonaws.com  
X-Amz-Date: Mon, 12 Nov 2012 17:49:52 GMT  
Authorization: AuthParams
```

```
{ "name": "myPipeline",  
  "uniqueId": "123456789",  
  "description": "This is my first pipeline" }
```

Sample Response

```
HTTP/1.1 200  
x-amzn-RequestId: b16911ce-0774-11e2-af6f-6bc7a6be60d9  
Content-Type: application/x-amz-json-1.1  
Content-Length: 40  
Date: Mon, 12 Nov 2012 17:50:53 GMT  
  
{ "pipelineId": "df-06372391ZG65EXAMPLE" }
```

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

DeactivatePipeline

Deactivates the specified running pipeline. The pipeline is set to the `DEACTIVATING` state until the deactivation process completes.

To resume a deactivated pipeline, use [ActivatePipeline \(p. 3\)](#). By default, the pipeline resumes from the last completed execution. Optionally, you can specify the date and time to resume the pipeline.

Request Syntax

```
{  
  "cancelActive": boolean,  
  "pipelineId": "string"  
}
```

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 82\)](#).

The request accepts the following data in JSON format.

cancelActive (p. 11)

Indicates whether to cancel any running objects. The default is true, which sets the state of any running objects to `CANCELED`. If this value is false, the pipeline is deactivated after all running objects finish.

Type: Boolean

Required: No

pipelineId (p. 11)

The ID of the pipeline.

Type: String

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

Pattern: [`\u0020-\u007F\u0000-\u00FF\u0080-\u00C0-\u00DB\u00DF\u00E0-\u00FF`]*

Required: Yes

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 \(p. 84\)](#).

InternalServerError

An internal service error occurred.

HTTP Status Code: 500

InvalidRequestException

The request was not valid. Verify that your request was properly formatted, that the signature was generated with the correct credentials, and that you haven't exceeded any of the service limits for your account.

HTTP Status Code: 400

PipelineDeletedException

The specified pipeline has been deleted.

HTTP Status Code: 400

PipelineNotFoundException

The specified pipeline was not found. Verify that you used the correct user and account identifiers.

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

DeletePipeline

Deletes a pipeline, its pipeline definition, and its run history. AWS Data Pipeline attempts to cancel instances associated with the pipeline that are currently being processed by task runners.

Deleting a pipeline cannot be undone. You cannot query or restore a deleted pipeline. To temporarily pause a pipeline instead of deleting it, call [SetStatus \(p. 54\)](#) with the status set to `PAUSE` on individual components. Components that are paused by [SetStatus \(p. 54\)](#) can be resumed.

Request Syntax

```
{  
  "pipelineId": "string"  
}
```

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 82\)](#).

The request accepts the following data in JSON format.

pipelineId (p. 13)

The ID of the pipeline.

Type: String

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

Pattern: [`\u0020-\u007F\u0000-\u00FF\u0080-\u00FF\u00C0-\u00FF\u0000-\u00FF`]*

Required: Yes

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 \(p. 84\)](#).

InternalServerError

An internal service error occurred.

HTTP Status Code: 500

InvalidRequestException

The request was not valid. Verify that your request was properly formatted, that the signature was generated with the correct credentials, and that you haven't exceeded any of the service limits for your account.

HTTP Status Code: 400

PipelineNotFoundException

The specified pipeline was not found. Verify that you used the correct user and account identifiers.

HTTP Status Code: 400

Example

Sample Request

```
POST / HTTP/1.1
Content-Type: application/x-amz-json-1.1
X-Amz-Target: DataPipeline.DeletePipeline
Content-Length: 50
Host: datapipeline.us-east-1.amazonaws.com
X-Amz-Date: Mon, 12 Nov 2012 17:49:52 GMT
Authorization: AuthParams

{"pipelineId": "df-06372391ZG65EXAMPLE"}
```

Sample Response

```
x-amzn-RequestId: b7a88c81-0754-11e2-af6f-6bc7a6be60d9
Content-Type: application/x-amz-json-1.1
Content-Length: 0
Date: Mon, 12 Nov 2012 17:50:53 GMT

Unexpected response: 200, OK, undefined
```

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

DescribeObjects

Gets the object definitions for a set of objects associated with the pipeline. Object definitions are composed of a set of fields that define the properties of the object.

Request Syntax

```
{
  "evaluateExpressions": boolean,
  "marker": "string",
  "objectIds": [ "string" ],
  "pipelineId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 82\)](#).

The request accepts the following data in JSON format.

evaluateExpressions (p. 15)

Indicates whether any expressions in the object should be evaluated when the object descriptions are returned.

Type: Boolean

Required: No

marker (p. 15)

The starting point for the results to be returned. For the first call, this value should be empty. As long as there are more results, continue to call `DescribeObjects` with the marker value from the previous call to retrieve the next set of results.

Type: String

Required: No

objectIds (p. 15)

The IDs of the pipeline objects that contain the definitions to be described. You can pass as many as 25 identifiers in a single call to `DescribeObjects`.

Type: array of Strings

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

Pattern: [0020-\u007F\u00E000-\u00FFFD\u00800\u00DC00-\u00DBFF\u00DFFF\r\n\t]*

Required: Yes

pipelineId (p. 15)

The ID of the pipeline that contains the object definitions.

Type: String

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

Pattern: [0020-\u007F\u00E000-\u00FFFD\u00800\u00DC00-\u00DBFF\u00DFFF\r\n\t]*

Required: Yes

Response Syntax

```
{
```

```
"hasMoreResults": boolean,  
"marker": "string",  
"pipelineObjects": [  
  {  
    "fields": [  
      {  
        "key": "string",  
        "refValue": "string",  
        "stringValue": "string"  
      }  
    ],  
    "id": "string",  
    "name": "string"  
  }  
]
```

Response Elements

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

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

hasMoreResults (p. 15)

Indicates whether there are more results to return.

Type: Boolean

marker (p. 15)

The starting point for the next page of results. To view the next page of results, call `DescribeObjects` again with this marker value. If the value is null, there are no more results.

Type: String

pipelineObjects (p. 15)

An array of object definitions.

Type: array of [PipelineObject](#) (p. 75) objects

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 84).

InternalServiceError

An internal service error occurred.

HTTP Status Code: 500

InvalidRequestException

The request was not valid. Verify that your request was properly formatted, that the signature was generated with the correct credentials, and that you haven't exceeded any of the service limits for your account.

HTTP Status Code: 400

PipelineDeletedException

The specified pipeline has been deleted.

HTTP Status Code: 400

PipelineNotFoundException

The specified pipeline was not found. Verify that you used the correct user and account identifiers.

HTTP Status Code: 400

Example

Sample Request

```
POST / HTTP/1.1
Content-Type: application/x-amz-json-1.1
X-Amz-Target: DataPipeline.DescribeObjects
Content-Length: 98
Host: datapipeline.us-east-1.amazonaws.com
X-Amz-Date: Mon, 12 Nov 2012 17:49:52 GMT
Authorization: AuthParams

{"pipelineId": "df-06372391ZG65EXAMPLE",
 "objectIds":
  ["Schedule"],
 "evaluateExpressions": true}
```

Sample Response

```
x-amzn-RequestId: 4c18ea5d-0777-11e2-8a14-21bb8a1f50ef
Content-Type: application/x-amz-json-1.1
Content-Length: 1488
Date: Mon, 12 Nov 2012 17:50:53 GMT

{"hasMoreResults": false,
 "pipelineObjects":
  [
    {"fields":
      [
        {"key": "startDateTime",
         "stringValue": "2012-12-12T00:00:00"},
        {"key": "parent",
         "refValue": "Default"},
        {"key": "@sphere",
         "stringValue": "COMPONENT"},
        {"key": "type",
         "stringValue": "Schedule"},
        {"key": "period",
         "stringValue": "1 hour"},
        {"key": "endDateTime",
         "stringValue": "2012-12-21T18:00:00"},
        {"key": "@version",
         "stringValue": "1"},
        {"key": "@status",
         "stringValue": "PENDING"},
        {"key": "@pipelineId",
         "stringValue": "df-06372391ZG65EXAMPLE"}
      ],
     "id": "Schedule",
     "name": "Schedule"}
```

```
]
}
```

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

DescribePipelines

Retrieves metadata about one or more pipelines. The information retrieved includes the name of the pipeline, the pipeline identifier, its current state, and the user account that owns the pipeline. Using account credentials, you can retrieve metadata about pipelines that you or your IAM users have created. If you are using an IAM user account, you can retrieve metadata about only those pipelines for which you have read permissions.

To retrieve the full pipeline definition instead of metadata about the pipeline, call [GetPipelineDefinition](#) (p. 25).

Request Syntax

```
{  
  "pipelineIds": [ "string" ]  
}
```

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 82).

The request accepts the following data in JSON format.

pipelineIds (p. 19)

The IDs of the pipelines to describe. You can pass as many as 25 identifiers in a single call. To obtain pipeline IDs, call [ListPipelines](#) (p. 29).

Type: array of Strings

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

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

Required: Yes

Response Syntax

```
{  
  "pipelineDescriptionList": [  
    {  
      "description": "string",  
      "fields": [  
        {  
          "key": "string",  
          "refValue": "string",  
          "stringValue": "string"  
        }  
      ],  
      "name": "string",  
      "pipelineId": "string",  
      "tags": [  
        {  
          "key": "string",  
          "value": "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.

pipelineDescriptionList (p. 19)

An array of descriptions for the specified pipelines.
Type: array of [PipelineDescription](#) (p. 73) objects

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 84).

InternalServerError

An internal service error occurred.
HTTP Status Code: 500

InvalidRequestException

The request was not valid. Verify that your request was properly formatted, that the signature was generated with the correct credentials, and that you haven't exceeded any of the service limits for your account.
HTTP Status Code: 400

PipelineDeletedException

The specified pipeline has been deleted.
HTTP Status Code: 400

PipelineNotFoundException

The specified pipeline was not found. Verify that you used the correct user and account identifiers.
HTTP Status Code: 400

Example

Sample Request

```
POST / HTTP/1.1
Content-Type: application/x-amz-json-1.1
X-Amz-Target: DataPipeline.DescribePipelines
Content-Length: 70
Host: datapipeline.us-east-1.amazonaws.com
X-Amz-Date: Mon, 12 Nov 2012 17:49:52 GMT
Authorization: AuthParams

{"pipelineIds":
  ["df-08785951KAKJEXAMPLE"]}
}
```

Sample Response

```
x-amzn-RequestId: 02870eb7-0736-11e2-af6f-6bc7a6be60d9
Content-Type: application/x-amz-json-1.1
Content-Length: 767
Date: Mon, 12 Nov 2012 17:50:53 GMT
```

```
{ "pipelineDescriptionList":
  [
    { "description": "This is my first pipeline",
      "fields":
        [
          { "key": "@pipelineState",
            "stringValue": "SCHEDULED" },
          { "key": "description",
            "stringValue": "This is my first pipeline" },
          { "key": "name",
            "stringValue": "myPipeline" },
          { "key": "@creationTime",
            "stringValue": "2012-12-13T01:24:06" },
          { "key": "@id",
            "stringValue": "df-0937003356ZJEXAMPLE" },
          { "key": "@sphere",
            "stringValue": "PIPELINE" },
          { "key": "@version",
            "stringValue": "1" },
          { "key": "@userId",
            "stringValue": "924374875933" },
          { "key": "@accountId",
            "stringValue": "924374875933" },
          { "key": "uniqueId",
            "stringValue": "1234567890" }
        ],
      "name": "myPipeline",
      "pipelineId": "df-0937003356ZJEXAMPLE" }
  ]
}
```

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

EvaluateExpression

Task runners call `EvaluateExpression` to evaluate a string in the context of the specified object. For example, a task runner can evaluate SQL queries stored in Amazon S3.

Request Syntax

```
{  
  "expression": "string",  
  "objectId": "string",  
  "pipelineId": "string"  
}
```

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters \(p. 82\)](#).

The request accepts the following data in JSON format.

expression (p. 22)

The expression to evaluate.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 20971520.

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

Required: Yes

objectId (p. 22)

The ID of the object.

Type: String

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

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

Required: Yes

pipelineId (p. 22)

The ID of the pipeline.

Type: String

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

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

Required: Yes

Response Syntax

```
{  
  "evaluatedExpression": "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.

evaluatedExpression (p. 22)

The evaluated expression.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 20971520.

Pattern: [\u0020-\uD7FF\uE000-\uFFFF\uD800\uDC00-\uDBFF\uDF00-\uDFFF\u0000-\u001F]*

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 84\)](#).

InternalServerError

An internal service error occurred.

HTTP Status Code: 500

InvalidRequestException

The request was not valid. Verify that your request was properly formatted, that the signature was generated with the correct credentials, and that you haven't exceeded any of the service limits for your account.

HTTP Status Code: 400

PipelineDeletedException

The specified pipeline has been deleted.

HTTP Status Code: 400

PipelineNotFoundException

The specified pipeline was not found. Verify that you used the correct user and account identifiers.

HTTP Status Code: 400

TaskNotFoundException

The specified task was not found.

HTTP Status Code: 400

Example

Sample Request

```
POST / HTTP/1.1
Content-Type: application/x-amz-json-1.1
X-Amz-Target: DataPipeline.DescribePipelines
Content-Length: 164
Host: datapipeline.us-east-1.amazonaws.com
X-Amz-Date: Mon, 12 Nov 2012 17:49:52 GMT
Authorization: AuthParams

{"pipelineId": "df-08785951KAKJEXAMPLE",
  "objectId": "Schedule",
  "expression": "Transform started at #{startDateTime} and finished at
  #{endDateTime}" }
```

Sample Response

```
x-amzn-RequestId: 02870eb7-0736-11e2-af6f-6bc7a6be60d9
Content-Type: application/x-amz-json-1.1
Content-Length: 103
Date: Mon, 12 Nov 2012 17:50:53 GMT

{"evaluatedExpression": "Transform started at 2012-12-12T00:00:00 and
finished at 2012-12-21T18:00:00"}
```

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

GetPipelineDefinition

Gets the definition of the specified pipeline. You can call `GetPipelineDefinition` to retrieve the pipeline definition that you provided using [PutPipelineDefinition](#) (p. 36).

Request Syntax

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

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 82).

The request accepts the following data in JSON format.

pipelineId (p. 25)

The ID of the pipeline.

Type: String

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

Pattern: `[\u0020-\u007F\u00E000-\u00FFFD\u0800\uDC00-\uDBFF\uDFFF\r\n\t]*`

Required: Yes

version (p. 25)

The version of the pipeline definition to retrieve. Set this parameter to `latest` (default) to use the last definition saved to the pipeline or `active` to use the last definition that was activated.

Type: String

Required: No

Response Syntax

```
{
  "parameterObjects": [
    {
      "attributes": [
        {
          "key": "string",
          "stringValue": "string"
        }
      ],
      "id": "string"
    }
  ],
  "parameterValues": [
    {
      "id": "string",
      "stringValue": "string"
    }
  ],
  "pipelineObjects": [
    {
      "fields": [
```

```
    {
      "key": "string",
      "refValue": "string",
      "stringValue": "string"
    },
    {
      "id": "string",
      "name": "string"
    }
  ]
}
```

Response Elements

If the action is successful, the service sends back an HTTP 200 response. The following data is returned in JSON format by the service.

parameterObjects (p. 25)

The parameter objects used in the pipeline definition.
Type: array of [ParameterObject](#) (p. 71) objects

parameterValues (p. 25)

The parameter values used in the pipeline definition.
Type: array of [ParameterValue](#) (p. 72) objects

pipelineObjects (p. 25)

The objects defined in the pipeline.
Type: array of [PipelineObject](#) (p. 75) objects

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 84).

InternalServerError

An internal service error occurred.
HTTP Status Code: 500

InvalidRequestException

The request was not valid. Verify that your request was properly formatted, that the signature was generated with the correct credentials, and that you haven't exceeded any of the service limits for your account.
HTTP Status Code: 400

PipelineDeletedException

The specified pipeline has been deleted.
HTTP Status Code: 400

PipelineNotFoundException

The specified pipeline was not found. Verify that you used the correct user and account identifiers.
HTTP Status Code: 400

Example

Sample Request

```
POST / HTTP/1.1
Content-Type: application/x-amz-json-1.1
X-Amz-Target: DataPipeline.GetPipelineDefinition
Content-Length: 40
Host: datapipeline.us-east-1.amazonaws.com
X-Amz-Date: Mon, 12 Nov 2012 17:49:52 GMT
Authorization: AuthParams
```

```
{"pipelineId": "df-06372391ZG65EXAMPLE"}
```

Sample Response

```
x-amzn-RequestId: e28309e5-0776-11e2-8a14-21bb8a1f50ef
Content-Type: application/x-amz-json-1.1
Content-Length: 890
Date: Mon, 12 Nov 2012 17:50:53 GMT
```

```
{"pipelineObjects":
  [
    {"fields":
      [
        {"key": "workerGroup",
          "stringValue": "workerGroup"}
      ],
      "id": "Default",
      "name": "Default"},
    {"fields":
      [
        {"key": "startDateTime",
          "stringValue": "2012-09-25T17:00:00"},
        {"key": "type",
          "stringValue": "Schedule"},
        {"key": "period",
          "stringValue": "1 hour"},
        {"key": "endDateTime",
          "stringValue": "2012-09-25T18:00:00"}
      ],
      "id": "Schedule",
      "name": "Schedule"},
    {"fields":
      [
        {"key": "schedule",
          "refValue": "Schedule"},
        {"key": "command",
          "stringValue": "echo hello"},
        {"key": "parent",
          "refValue": "Default"},
        {"key": "type",
          "stringValue": "ShellCommandActivity"}
      ],
      "id": "SayHello",
      "name": "SayHello"}
  ]
}
```

```
]
}
```

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

ListPipelines

Lists the pipeline identifiers for all active pipelines that you have permission to access.

Request Syntax

```
{  
  "marker": "string"  
}
```

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 82).

The request accepts the following data in JSON format.

marker (p. 29)

The starting point for the results to be returned. For the first call, this value should be empty. As long as there are more results, continue to call `ListPipelines` with the marker value from the previous call to retrieve the next set of results.

Type: String

Required: No

Response Syntax

```
{  
  "hasMoreResults": boolean,  
  "marker": "string",  
  "pipelineIdList": [  
    {  
      "id": "string",  
      "name": "string"  
    }  
  ]  
}
```

Response Elements

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

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

hasMoreResults (p. 29)

Indicates whether there are more results that can be obtained by a subsequent call.

Type: Boolean

marker (p. 29)

The starting point for the next page of results. To view the next page of results, call `ListPipelinesOutput` again with this marker value. If the value is null, there are no more results.

Type: String

pipelineIdList (p. 29)

The pipeline identifiers. If you require additional information about the pipelines, you can use these identifiers to call [DescribePipelines](#) (p. 19) and [GetPipelineDefinition](#) (p. 25).

Type: array of [PipelineIdName \(p. 74\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 84\)](#).

InternalServerError

An internal service error occurred.

HTTP Status Code: 500

InvalidRequestException

The request was not valid. Verify that your request was properly formatted, that the signature was generated with the correct credentials, and that you haven't exceeded any of the service limits for your account.

HTTP Status Code: 400

Example

Sample Request

```
POST / HTTP/1.1
Content-Type: application/x-amz-json-1.1
X-Amz-Target: DataPipeline.ListPipelines
Content-Length: 14
Host: datapipeline.us-east-1.amazonaws.com
X-Amz-Date: Mon, 12 Nov 2012 17:49:52 GMT
Authorization: AuthParams
```

```
{}
```

Sample Response

```
Status:
x-amzn-RequestId: b3104dc5-0734-11e2-af6f-6bc7a6be60d9
Content-Type: application/x-amz-json-1.1
Content-Length: 39
Date: Mon, 12 Nov 2012 17:50:53 GMT
```

```
{"PipelineIdList":
 [
  {"id": "df-08785951KAKJEXAMPLE",
   "name": "MyPipeline"},
  {"id": "df-08662578ISYEXAMPLE",
   "name": "MySecondPipeline"}
 ]
}
```

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

PollForTask

Task runners call `PollForTask` to receive a task to perform from AWS Data Pipeline. The task runner specifies which tasks it can perform by setting a value for the `workerGroup` parameter. The task returned can come from any of the pipelines that match the `workerGroup` value passed in by the task runner and that was launched using the IAM user credentials specified by the task runner.

If tasks are ready in the work queue, `PollForTask` returns a response immediately. If no tasks are available in the queue, `PollForTask` uses long-polling and holds on to a poll connection for up to a 90 seconds, during which time the first newly scheduled task is handed to the task runner. To accommodate this, set the socket timeout in your task runner to 90 seconds. The task runner should not call `PollForTask` again on the same `workerGroup` until it receives a response, and this can take up to 90 seconds.

Request Syntax

```
{
  "hostname": "string",
  "instanceIdentity": {
    "document": "string",
    "signature": "string"
  },
  "workerGroup": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 82).

The request accepts the following data in JSON format.

[hostname](#) (p. 32)

The public DNS name of the calling task runner.

Type: String

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

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

Required: No

[instanceIdentity](#) (p. 32)

Identity information for the EC2 instance that is hosting the task runner. You can get this value from the instance using `http://169.254.169.254/latest/meta-data/instance-id`. For more information, see [Instance Metadata](#) in the *Amazon Elastic Compute Cloud User Guide*. Passing in this value proves that your task runner is running on an EC2 instance, and ensures the proper AWS Data Pipeline service charges are applied to your pipeline.

Type: [InstanceIdentity](#) (p. 68) object

Required: No

[workerGroup](#) (p. 32)

The type of task the task runner is configured to accept and process. The worker group is set as a field on objects in the pipeline when they are created. You can only specify a single value for `workerGroup` in the call to `PollForTask`. There are no wildcard values permitted in `workerGroup`; the string must be an exact, case-sensitive, match.

Type: String

Required: Yes

Response Syntax

```
{
  "taskObject": {
    "attemptId": "string",
    "objects": {
      "string": {
        "fields": [
          {
            "key": "string",
            "refValue": "string",
            "stringValue": "string"
          }
        ],
        "id": "string",
        "name": "string"
      }
    },
    "pipelineId": "string",
    "taskId": "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.

taskObject (p. 33)

The information needed to complete the task that is being assigned to the task runner. One of the fields returned in this object is `taskId`, which contains an identifier for the task being assigned. The calling task runner uses `taskId` in subsequent calls to [ReportTaskProgress](#) (p. 48) and [SetTaskStatus](#) (p. 57).

Type: [TaskObject](#) (p. 79) object

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 84).

InternalServiceError

An internal service error occurred.

HTTP Status Code: 500

InvalidRequestException

The request was not valid. Verify that your request was properly formatted, that the signature was generated with the correct credentials, and that you haven't exceeded any of the service limits for your account.

HTTP Status Code: 400

TaskNotFoundException

The specified task was not found.

HTTP Status Code: 400

Example

Sample Request

```
POST / HTTP/1.1
Content-Type: application/x-amz-json-1.1
X-Amz-Target: DataPipeline.PollForTask
Content-Length: 59
Host: datapipeline.us-east-1.amazonaws.com
X-Amz-Date: Mon, 12 Nov 2012 17:49:52 GMT
Authorization: AuthParams
```

```
{ "workerGroup": "MyworkerGroup",
  "hostname": "example.com" }
```

Sample Response

```
x-amzn-RequestId: 41c713d2-0775-11e2-af6f-6bc7a6be60d9
Content-Type: application/x-amz-json-1.1
Content-Length: 39
Date: Mon, 12 Nov 2012 17:50:53 GMT
```

```
{ "taskObject":
  { "attemptId": "@SayHello_2012-12-12T00:00:00_Attempt=1",
    "objects":
      { "@SayHello_2012-12-12T00:00:00_Attempt=1":
          { "fields":
              [
                { "key": "@componentParent",
                  "refValue": "SayHello" },
                { "key": "@scheduledStartTime",
                  "stringValue": "2012-12-12T00:00:00" },
                { "key": "parent",
                  "refValue": "SayHello" },
                { "key": "@sphere",
                  "stringValue": "ATTEMPT" },
                { "key": "workerGroup",
                  "stringValue": "workerGroup" },
                { "key": "@instanceParent",
                  "refValue": "@SayHello_2012-12-12T00:00:00" },
                { "key": "type",
                  "stringValue": "ShellCommandActivity" },
                { "key": "@status",
                  "stringValue": "WAITING_FOR_RUNNER" },
                { "key": "@version",
                  "stringValue": "1" },
                { "key": "schedule",
                  "refValue": "Schedule" },
                { "key": "@actualStartTime",
                  "stringValue": "2012-12-13T01:40:50" },
```



```
        {"key": "command",
         "stringValue": "echo hello"},
        {"key": "@scheduledEndTime",
         "stringValue": "2012-12-12T01:00:00"},
        {"key": "@activeInstances",
         "refValue": "@SayHello_2012-12-12T00:00:00"},
        {"key": "@pipelineId",
         "stringValue": "df-0937003356ZJEXAMPLE"}
    ],
    "id": "@SayHello_2012-12-12T00:00:00_Attempt=1",
    "name": "@SayHello_2012-12-12T00:00:00_Attempt=1"
  },
  "pipelineId": "df-0937003356ZJEXAMPLE",
  "taskId": "2xaM4wRs5zOsIH
+g9U3oVHfAgAlbSqU6XduncB0HhZ3xMnmvfePZPn4dIbYXHyWyRK
+cU15MqDHwdrvftx/4wv+sNS4w34vJfv7QA9aOoOazW2811GYsb2ZRR0N0paiQp
+d1MhSKo10hOTWosVK5S5Lnx9Qm6omFgXHyIvZRIVtLrQMprlxuUrflyGofbFOGpOLpvPE172MYdqpZKnBSS4TcuqgQ
UHg9A80+KVpuXuqzmz3m1MXwHFgxjdmuesXNOrrlGpeLcCzRWD
+aGo0RN1NqhQRzNAig8V4GlaPTQzMsRCljKqvrIyAoP3Tt2XEGsHkkQo12rEX8Z90957XX2qKRwhruwYzqGkSLWjINo
CEyy9DwuPi66cLz0NBcgbCM5LKjTBOwolm+am
+pvM1kSposeE9FPP1+RFGb8k6jQBTJx3TRzlyKilnGXQTZ5xvdOFpJrklIT00XP1MG3+auM9F1JA
+1dX90QoNJE5z7axmK//
MOGXUdkqFe2kiDkorqjxwDvc0Js9pVKfKvAmW8YqUbmI910ERpWCXXnLVHnmpWz3jaPY
+OBAmuJWDmxB/Z8p94aEDg4BVXQ7LvsKQ3DLYhaB7yJ390CJT+i0mm+EBqY60V6YikPSWDFrYQ/
NPi2b1DgE19mX8zHqw8qprIl4yh1Ckx2Iige4En/N5ktOoIxnASxAw/TzcE2skxdw5K1HDF
+UTj71m16CR/dIaKlXi jlfN1NzUBo/bNSadCQn3G5No0501wPKI:XO50TgDNyo8EXAMPLE/
g==:1" }
}
```

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

PutPipelineDefinition

Adds tasks, schedules, and preconditions to the specified pipeline. You can use `PutPipelineDefinition` to populate a new pipeline.

`PutPipelineDefinition` also validates the configuration as it adds it to the pipeline. Changes to the pipeline are saved unless one of the following three validation errors exists in the pipeline.

1. An object is missing a name or identifier field.
2. A string or reference field is empty.
3. The number of objects in the pipeline exceeds the maximum allowed objects.
4. The pipeline is in a FINISHED state.

Pipeline object definitions are passed to the `PutPipelineDefinition` action and returned by the [GetPipelineDefinition](#) (p. 25) action.

Request Syntax

```
{
  "parameterObjects": [
    {
      "attributes": [
        {
          "key": "string",
          "stringValue": "string"
        }
      ],
      "id": "string"
    }
  ],
  "parameterValues": [
    {
      "id": "string",
      "stringValue": "string"
    }
  ],
  "pipelineId": "string",
  "pipelineObjects": [
    {
      "fields": [
        {
          "key": "string",
          "refValue": "string",
          "stringValue": "string"
        }
      ],
      "id": "string",
      "name": "string"
    }
  ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 82).

The request accepts the following data in JSON format.

parameterObjects (p. 36)

The parameter objects used with the pipeline.
Type: array of [ParameterObject \(p. 71\)](#) objects
Required: No

parameterValues (p. 36)

The parameter values used with the pipeline.
Type: array of [ParameterValue \(p. 72\)](#) objects
Required: No

pipelineId (p. 36)

The ID of the pipeline.
Type: String
Length Constraints: Minimum length of 1. Maximum length of 1024.
Pattern: `[\u0020-\uD7FF\uE000-\uFFFF\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*`
Required: Yes

pipelineObjects (p. 36)

The objects that define the pipeline. These objects overwrite the existing pipeline definition.
Type: array of [PipelineObject \(p. 75\)](#) objects
Required: Yes

Response Syntax

```
{
  "errored": boolean,
  "validationErrors": [
    {
      "errors": [ "string" ],
      "id": "string"
    }
  ],
  "validationWarnings": [
    {
      "id": "string",
      "warnings": [ "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.

errored (p. 37)

Indicates whether there were validation errors, and the pipeline definition is stored but cannot be activated until you correct the pipeline and call `PutPipelineDefinition` to commit the corrected pipeline.
Type: Boolean

validationErrors (p. 37)

The validation errors that are associated with the objects defined in `pipelineObjects`.
Type: array of [ValidationError \(p. 80\)](#) objects

validationWarnings (p. 37)

The validation warnings that are associated with the objects defined in `pipelineObjects`.

Type: array of [ValidationWarning \(p. 81\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 84\)](#).

InternalServiceError

An internal service error occurred.

HTTP Status Code: 500

InvalidRequestException

The request was not valid. Verify that your request was properly formatted, that the signature was generated with the correct credentials, and that you haven't exceeded any of the service limits for your account.

HTTP Status Code: 400

PipelineDeletedException

The specified pipeline has been deleted.

HTTP Status Code: 400

PipelineNotFoundException

The specified pipeline was not found. Verify that you used the correct user and account identifiers.

HTTP Status Code: 400

Examples

Example 1

This example sets an valid pipeline configuration and returns success.

Sample Request

```
POST / HTTP/1.1
Content-Type: application/x-amz-json-1.1
X-Amz-Target: DataPipeline.PutPipelineDefinition
Content-Length: 914
Host: datapipeline.us-east-1.amazonaws.com
X-Amz-Date: Mon, 12 Nov 2012 17:49:52 GMT
Authorization: AuthParams

{"pipelineId": "df-0937003356ZJEXAMPLE",
 "pipelineObjects":
 [
  {"id": "Default",
   "name": "Default",
   "fields":
   [
    {"key": "workerGroup",
     "stringValue": "workerGroup"}
   ]
  },
  {"id": "Schedule",
   "name": "Schedule",
```

```
"fields":
[
  {
    "key": "startDateTime",
    "stringValue": "2012-12-12T00:00:00"},
    {
    "key": "type",
    "stringValue": "Schedule"},
    {
    "key": "period",
    "stringValue": "1 hour"},
    {
    "key": "endDateTime",
    "stringValue": "2012-12-21T18:00:00"}
  ]
},
{
  "id": "SayHello",
  "name": "SayHello",
  "fields":
  [
    {
      "key": "type",
      "stringValue": "ShellCommandActivity"},
    {
      "key": "command",
      "stringValue": "echo hello"},
    {
      "key": "parent",
      "refValue": "Default"},
    {
      "key": "schedule",
      "refValue": "Schedule"}
  ]
}
]
```

Sample Response

```
HTTP/1.1 200
x-amzn-RequestId: f74afc14-0754-11e2-af6f-6bc7a6be60d9
Content-Type: application/x-amz-json-1.1
Content-Length: 18
Date: Mon, 12 Nov 2012 17:50:53 GMT

{"errored": false}
```

Example 2

This example sets an invalid pipeline configuration (the value for `workerGroup` is an empty string) and returns an error message.

Sample Request

```
POST / HTTP/1.1
Content-Type: application/x-amz-json-1.1
```

```
X-Amz-Target: DataPipeline.PutPipelineDefinition
Content-Length: 903
Host: datapipeline.us-east-1.amazonaws.com
X-Amz-Date: Mon, 12 Nov 2012 17:49:52 GMT
Authorization: AuthParams
```

```
{
  "pipelineId": "df-06372391ZG65EXAMPLE",
  "pipelineObjects":
  [
    {
      "id": "Default",
      "name": "Default",
      "fields":
      [
        {
          "key": "workerGroup",
          "stringValue": ""
        }
      ]
    },
    {
      "id": "Schedule",
      "name": "Schedule",
      "fields":
      [
        {
          "key": "startDateTime",
          "stringValue": "2012-09-25T17:00:00"
        },
        {
          "key": "type",
          "stringValue": "Schedule"
        },
        {
          "key": "period",
          "stringValue": "1 hour"
        },
        {
          "key": "endDateTime",
          "stringValue": "2012-09-25T18:00:00"
        }
      ]
    },
    {
      "id": "SayHello",
      "name": "SayHello",
      "fields":
      [
        {
          "key": "type",
          "stringValue": "ShellCommandActivity"
        },
        {
          "key": "command",
          "stringValue": "echo hello"
        },
        {
          "key": "parent",
          "refValue": "Default"
        },
        {
          "key": "schedule",
          "refValue": "Schedule"
        }
      ]
    }
  ]
}
```

Sample Response

```
HTTP/1.1 200
x-amzn-RequestId: f74afc14-0754-11e2-af6f-6bc7a6be60d9
Content-Type: application/x-amz-json-1.1
```

```
Content-Length: 18
Date: Mon, 12 Nov 2012 17:50:53 GMT

{"__type": "com.amazon.setl.webservice#InvalidRequestException",
 "message": "Pipeline definition has errors: Could
not save the pipeline definition due to FATAL errors:
[com.amazon.setl.webservice.ValidationError@108d7ea9] Please call Validate
to validate your pipeline"}
```

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

QueryObjects

Queries the specified pipeline for the names of objects that match the specified set of conditions.

Request Syntax

```
{
  "limit": number,
  "marker": "string",
  "pipelineId": "string",
  "query": {
    "selectors": [
      {
        "fieldName": "string",
        "operator": {
          "type": "string",
          "values": [ "string" ]
        }
      }
    ]
  },
  "sphere": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 82).

The request accepts the following data in JSON format.

limit (p. 42)

The maximum number of object names that `QueryObjects` will return in a single call. The default value is 100.

Type: Integer

Required: No

marker (p. 42)

The starting point for the results to be returned. For the first call, this value should be empty. As long as there are more results, continue to call `QueryObjects` with the marker value from the previous call to retrieve the next set of results.

Type: String

Required: No

pipelineId (p. 42)

The ID of the pipeline.

Type: String

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

Pattern: [0020-\uD7FF\uE000-\uFFFF\uD800\uDC00-\uDBFF\uDFFF\r\n\t]*

Required: Yes

query (p. 42)

The query that defines the objects to be returned. The `Query` object can contain a maximum of ten selectors. The conditions in the query are limited to top-level String fields in the object. These filters can be applied to components, instances, and attempts.

Type: [Query](#) (p. 76) object

Required: No

sphere (p. 42)

Indicates whether the query applies to components or instances. The possible values are: COMPONENT, INSTANCE, and ATTEMPT.

Type: String

Required: Yes

Response Syntax

```
{
  "hasMoreResults": boolean,
  "ids": [ "string" ],
  "marker": "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.

hasMoreResults (p. 43)

Indicates whether there are more results that can be obtained by a subsequent call.

Type: Boolean

ids (p. 43)

The identifiers that match the query selectors.

Type: array of Strings

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

Pattern: [\u0020-\u007F\u00E000-\u00FFFD\u00800\u00DC00-\u00DBFF\u00DFFF\r\n\t]*

marker (p. 43)

The starting point for the next page of results. To view the next page of results, call `QueryObjects` again with this marker value. If the value is null, there are no more results.

Type: String

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 84\)](#).

InternalServerError

An internal service error occurred.

HTTP Status Code: 500

InvalidRequestException

The request was not valid. Verify that your request was properly formatted, that the signature was generated with the correct credentials, and that you haven't exceeded any of the service limits for your account.

HTTP Status Code: 400

PipelineDeletedException

The specified pipeline has been deleted.

HTTP Status Code: 400

PipelineNotFoundException

The specified pipeline was not found. Verify that you used the correct user and account identifiers.

HTTP Status Code: 400

Example

Sample Request

```
POST / HTTP/1.1
Content-Type: application/x-amz-json-1.1
X-Amz-Target: DataPipeline.QueryObjects
Content-Length: 123
Host: datapipeline.us-east-1.amazonaws.com
X-Amz-Date: Mon, 12 Nov 2012 17:49:52 GMT
Authorization: AuthParams

{"pipelineId": "df-06372391ZG65EXAMPLE",
 "query":
  { "selectors":
    [
      ]
    },
  "sphere": "INSTANCE",
  "marker": "",
  "limit": 10}
```

Sample Response

```
x-amzn-RequestId: 14d704c1-0775-11e2-af6f-6bc7a6be60d9
Content-Type: application/x-amz-json-1.1
Content-Length: 72
Date: Mon, 12 Nov 2012 17:50:53 GMT

{"hasMoreResults": false,
 "ids":
  [ "@SayHello_1_2012-09-25T17:00:00" ]
}
```

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](#)
- [AWS SDK for JavaScript](#)
- [AWS SDK for PHP V3](#)

- [AWS SDK for Python](#)
- [AWS SDK for Ruby V2](#)

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

ReportTaskProgress

Task runners call `ReportTaskProgress` when assigned a task to acknowledge that it has the task. If the web service does not receive this acknowledgement within 2 minutes, it assigns the task in a subsequent `PollForTask` (p. 32) call. After this initial acknowledgement, the task runner only needs to report progress every 15 minutes to maintain its ownership of the task. You can change this reporting time from 15 minutes by specifying a `reportProgressTimeout` field in your pipeline.

If a task runner does not report its status after 5 minutes, AWS Data Pipeline assumes that the task runner is unable to process the task and reassigns the task in a subsequent response to `PollForTask` (p. 32). Task runners should call `ReportTaskProgress` every 60 seconds.

Request Syntax

```
{
  "fields": [
    {
      "key": "string",
      "refValue": "string",
      "stringValue": "string"
    }
  ],
  "taskId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 82).

The request accepts the following data in JSON format.

fields (p. 48)

Key-value pairs that define the properties of the `ReportTaskProgressInput` object.

Type: array of [Field](#) (p. 67) objects

Required: No

taskId (p. 48)

The ID of the task assigned to the task runner. This value is provided in the response for `PollForTask` (p. 32).

Type: String

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

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

Required: Yes

Response Syntax

```
{
  "canceled": boolean
}
```

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.

anceled (p. 48)

If true, the calling task runner should cancel processing of the task. The task runner does not need to call [SetTaskStatus \(p. 57\)](#) for canceled tasks.

Type: Boolean

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 84\)](#).

InternalServiceError

An internal service error occurred.

HTTP Status Code: 500

InvalidRequestException

The request was not valid. Verify that your request was properly formatted, that the signature was generated with the correct credentials, and that you haven't exceeded any of the service limits for your account.

HTTP Status Code: 400

PipelineDeletedException

The specified pipeline has been deleted.

HTTP Status Code: 400

PipelineNotFoundExcepion

The specified pipeline was not found. Verify that you used the correct user and account identifiers.

HTTP Status Code: 400

TaskNotFoundExcepion

The specified task was not found.

HTTP Status Code: 400

Example

Sample Request

```
POST / HTTP/1.1
Content-Type: application/x-amz-json-1.1
X-Amz-Target: DataPipeline.ReportTaskProgress
Content-Length: 832
Host: datapipeline.us-east-1.amazonaws.com
X-Amz-Date: Mon, 12 Nov 2012 17:49:52 GMT
Authorization: AuthParams

{"taskId": "aaGgHT4LuH0T0Y0oLrJRjas5qH0d8cDPADxqq3tn
+zCWGELkCdV2JprLreXmloxeP5EFZHFLJ69kjSsLYE0iYHYBYVGBrB
+E/pYq7ANEeEGJFnSBMRiXZVA+8UJ3OzcInvXeinqBmBaKwii7hnnKb/
AXjXiNTXyxgydX1KAyglAkwBYG4cfPYMZbuEbQJFJvv5C/2+GVXz1w94nKYTeUeepwUOFouRLS6JvtZoYwpF56E
+Yfk1IcGpFOvCZ01B4Bkuu7x3J+MD/
j6kJgZLAgbCJQtI3eiW3kdGmX0p0I2BdY1ZsX6b4UiSvM30mJ6NEHJCJL4E0ZffitnhCoe24Kvjo6C2hFbZq
+ei/HPgSXBQMSagkr4vS9c0ChzxH2+LNYvec6bY4kymkaZI1dvOzmpa0FcnGf5AjSK4GpsViZ/
ujz6zxFv81qBXzjF0/4M1775rjV1VUdyKaixiA/
sJiACNezqZqETidp8d24BDPRhGsJ6pBCrnelqGFrk/gXEXUSJ
```

```
+xwMifRC8UVwiKekpAvHUywVk7Ku4jH/  
n3i2VoLRP6FXwpUbelu34iiZ9czpXyLtyPKwxa87dlrnRVURwkcVjOt2Mcrcaqe  
+cbWHvNRhyrPkddfSF3ac8/  
wfgVbXvLEB2k9mKc67aD9rvdc1PKX09Tk8BKklsMTpZ3TRCd4NzQlJKigMe8Jat9+1tKj40le5ZzW6uyTu2s2iFjEV8  
+C6Y4ldpfOh288SLDEVx0/  
UySlqOEdhba7c6BiPp5r3hKj3mk9lFy5OYp1aoGLeeFmjXveTnPdf2gkWqXXg7AUbj7jEs1F0lKZQg4szep2gcKyAJX  
Ee7wYmyOcAaRpDBoFNSbtoVXar46teIrpho+ZDvynUXvU0grHWGOk=:wn3SgymHZM99bEXAMPLE",  
  "fields":  
    [  
      {"key": "percentComplete",  
        "stringValue": "50"}  
    ]  
  }  
}
```

Sample Response

```
x-amzn-RequestId: 640bd023-0775-11e2-af6f-6bc7a6be60d9  
Content-Type: application/x-amz-json-1.1  
Content-Length: 18  
Date: Mon, 12 Nov 2012 17:50:53 GMT  
  
{"canceled": false}
```

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

ReportTaskRunnerHeartbeat

Task runners call `ReportTaskRunnerHeartbeat` every 15 minutes to indicate that they are operational. If the AWS Data Pipeline Task Runner is launched on a resource managed by AWS Data Pipeline, the web service can use this call to detect when the task runner application has failed and restart a new instance.

Request Syntax

```
{  
  "hostname": "string",  
  "taskrunnerId": "string",  
  "workerGroup": "string"  
}
```

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 82).

The request accepts the following data in JSON format.

hostname (p. 51)

The public DNS name of the task runner.

Type: String

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

Pattern: [0020-d7FF\uE000-\uFFFFd800\uDC00-\uDBFF\uDFFF\u_r\n\t]*

Required: No

taskrunnerId (p. 51)

The ID of the task runner. This value should be unique across your AWS account. In the case of AWS Data Pipeline Task Runner launched on a resource managed by AWS Data Pipeline, the web service provides a unique identifier when it launches the application. If you have written a custom task runner, you should assign a unique identifier for the task runner.

Type: String

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

Pattern: [0020-d7FF\uE000-\uFFFFd800\uDC00-\uDBFF\uDFFF\u_r\n\t]*

Required: Yes

workerGroup (p. 51)

The type of task the task runner is configured to accept and process. The worker group is set as a field on objects in the pipeline when they are created. You can only specify a single value for `workerGroup`. There are no wildcard values permitted in `workerGroup`; the string must be an exact, case-sensitive, match.

Type: String

Required: No

Response Syntax

```
{  
  "terminate": boolean  
}
```

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.

terminate (p. 51)

Indicates whether the calling task runner should terminate.

Type: Boolean

Errors

For information about the errors that are common to all actions, see [Common Errors](#) (p. 84).

InternalServiceError

An internal service error occurred.

HTTP Status Code: 500

InvalidRequestException

The request was not valid. Verify that your request was properly formatted, that the signature was generated with the correct credentials, and that you haven't exceeded any of the service limits for your account.

HTTP Status Code: 400

Example

Sample Request

```
POST / HTTP/1.1
Content-Type: application/x-amz-json-1.1
X-Amz-Target: DataPipeline.ReportTaskRunnerHeartbeat
Content-Length: 84
Host: datapipeline.us-east-1.amazonaws.com
X-Amz-Date: Mon, 12 Nov 2012 17:49:52 GMT
Authorization: AuthParams

{"taskrunnerId": "1234567890",
 "workerGroup": "wg-12345",
 "hostname": "example.com"}
```

Sample Response

```
Status:
x-amzn-RequestId: b3104dc5-0734-11e2-af6f-6bc7a6be60d9
Content-Type: application/x-amz-json-1.1
Content-Length: 20
Date: Mon, 12 Nov 2012 17:50:53 GMT

{"terminate": false}
```

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

SetStatus

Requests that the status of the specified physical or logical pipeline objects be updated in the specified pipeline. This update might not occur immediately, but is eventually consistent. The status that can be set depends on the type of object (for example, `DataNode` or `Activity`). You cannot perform this operation on `FINISHED` pipelines and attempting to do so returns `InvalidRequestException`.

Request Syntax

```
{  
  "objectIds": [ "string" ],  
  "pipelineId": "string",  
  "status": "string"  
}
```

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 82).

The request accepts the following data in JSON format.

objectIds (p. 54)

The IDs of the objects. The corresponding objects can be either physical or components, but not a mix of both types.

Type: array of Strings

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

Pattern: [`\u0020-\u007F\u0000-\u00FF\u0080-\u00FF\u00C0-\u00FF\u0000-\u00FF`]*

Required: Yes

pipelineId (p. 54)

The ID of the pipeline that contains the objects.

Type: String

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

Pattern: [`\u0020-\u007F\u0000-\u00FF\u0080-\u00FF\u00C0-\u00FF\u0000-\u00FF`]*

Required: Yes

status (p. 54)

The status to be set on all the objects specified in `objectIds`. For components, use `PAUSE` or `RESUME`. For instances, use `TRY_CANCEL`, `RERUN`, or `MARK_FINISHED`.

Type: String

Required: Yes

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. 84).

InternalServerError

An internal service error occurred.

HTTP Status Code: 500

InvalidRequestException

The request was not valid. Verify that your request was properly formatted, that the signature was generated with the correct credentials, and that you haven't exceeded any of the service limits for your account.

HTTP Status Code: 400

PipelineDeletedException

The specified pipeline has been deleted.

HTTP Status Code: 400

PipelineNotFoundException

The specified pipeline was not found. Verify that you used the correct user and account identifiers.

HTTP Status Code: 400

Example

Sample Request

```
POST / HTTP/1.1
Content-Type: application/x-amz-json-1.1
X-Amz-Target: DataPipeline.SetStatus
Content-Length: 100
Host: datapipeline.us-east-1.amazonaws.com
X-Amz-Date: Mon, 12 Nov 2012 17:49:52 GMT
Authorization: AuthParams

{"pipelineId": "df-0634701J7KEXAMPLE",
 "objectIds":
  ["o-08600941GHJWMBR9E2"],
 "status": "pause"}
```

Sample Response

```
x-amzn-RequestId: e83b8ab7-076a-11e2-af6f-6bc7a6be60d9
Content-Type: application/x-amz-json-1.1
Content-Length: 0
Date: Mon, 12 Nov 2012 17:50:53 GMT

Unexpected response: 200, OK, undefined
```

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

SetTaskStatus

Task runners call `SetTaskStatus` to notify AWS Data Pipeline that a task is completed and provide information about the final status. A task runner makes this call regardless of whether the task was successful. A task runner does not need to call `SetTaskStatus` for tasks that are canceled by the web service during a call to [ReportTaskProgress](#) (p. 48).

Request Syntax

```
{
  "errorId": "string",
  "errorMessage": "string",
  "errorStackTrace": "string",
  "taskId": "string",
  "taskStatus": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 82).

The request accepts the following data in JSON format.

errorId (p. 57)

If an error occurred during the task, this value specifies the error code. This value is set on the physical attempt object. It is used to display error information to the user. It should not start with string "Service_" which is reserved by the system.

Type: String

Required: No

errorMessage (p. 57)

If an error occurred during the task, this value specifies a text description of the error. This value is set on the physical attempt object. It is used to display error information to the user. The web service does not parse this value.

Type: String

Required: No

errorStackTrace (p. 57)

If an error occurred during the task, this value specifies the stack trace associated with the error. This value is set on the physical attempt object. It is used to display error information to the user. The web service does not parse this value.

Type: String

Required: No

taskId (p. 57)

The ID of the task assigned to the task runner. This value is provided in the response for [PollForTask](#) (p. 32).

Type: String

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

Pattern: [0020-D7FF\uE000-\uFFFFD800\uDC00-\uDBFF\uDFFF\u_r\n\t]*

Required: Yes

taskStatus (p. 57)

If `FINISHED`, the task successfully completed. If `FAILED`, the task ended unsuccessfully. Preconditions use false.

Type: String

Valid Values: FINISHED | FAILED | FALSE

Required: Yes

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 \(p. 84\)](#).

InternalServiceError

An internal service error occurred.

HTTP Status Code: 500

InvalidRequestException

The request was not valid. Verify that your request was properly formatted, that the signature was generated with the correct credentials, and that you haven't exceeded any of the service limits for your account.

HTTP Status Code: 400

PipelineDeletedException

The specified pipeline has been deleted.

HTTP Status Code: 400

PipelineNotFound

The specified pipeline was not found. Verify that you used the correct user and account identifiers.

HTTP Status Code: 400

TaskNotFound

The specified task was not found.

HTTP Status Code: 400

Example

Sample Request

```
POST / HTTP/1.1
Content-Type: application/x-amz-json-1.1
X-Amz-Target: DataPipeline.SetTaskStatus
Content-Length: 847
Host: datapipeline.us-east-1.amazonaws.com
X-Amz-Date: Mon, 12 Nov 2012 17:49:52 GMT
Authorization: AuthParams

{"taskId": "aaGgHT4LuH0T0Y0oLrJRjas5qH0d8cDPADxqq3tn
+zcWGELkCdV2JprLreXmloxeP5EFZHF LJ69k jSsLYE0iYHYBYVGBrB
+E/pYq7ANEeEgJFnSBMRiXZVA+8UJ3OzcInvXeinqBmBaKwii7hnnKb/
AXjXiNTXyxgydX1KAyglAkwBYG4cfPYMZbuEbQJFJvv5C/2+GVXz1w94nKYTeUeepwUOFouRLS6JvtZoYwpF56E
+Yfk1IcGpFOvCZ01B4Bkuu7x3J+MD/
j6kJgZLAgbCJQtI3eiW3kdGmX0p0I2BdY1ZsX6b4UiSvM30mJ6NEHJCJL4E0ZfitnhCoe24Kvjo6C2hFbZq
+ei/HPgSXBQMSagkr4vS9c0ChzxH2+LNYvec6bY4kymkaZI1dvOzmpa0FcnGf5AjSK4GpsViZ/
ujz6zxFv81qBXzjF0/4M1775rjv1VUdyKaixiA/
sJiACNezqZqETidp8d24BDPRhGs j6pBCrnelqGFrk/gXEXUSJ
```



```
+xwMifRC8UVwiKekpAvHUywVk7Ku4jH/  
n3i2VoLRP6FXwpUbelu34iiz9czpXyLtyPKwxa87dlrnRVURwkcVjOt2Mcrcaqe  
+cbWHvNRhyrPkpdfSF3ac8/  
wfgVbXvLEB2k9mKc67aD9rvdc1PKX09Tk8BKklsMTpZ3TRCd4NzQlJKigMe8Jat9+1tKj40le5ZzW6uyTu2s2iFjEV8  
+C6Y41dpfOh288SLDEVx0/  
UySlqOEdhba7c6BiPp5r3hKj3mk9lFy5OYp1aoGLeeFmjXveTnPdf2gkWqXXg7AUbJ7jEs1F0lKZQg4szep2gcKyAJX  
Ee7wYmyOcAaRpDBoFNSbtoVXar46teIrpho+ZDvynUXvU0grHWGOk=:wn3SgymHZM99bEXAMPLE",  
  "taskStatus": "FINISHED" }
```

Sample Response

```
x-amzn-RequestId: 8c8deb53-0788-11e2-af9c-6bc7a6be6qr8  
Content-Type: application/x-amz-json-1.1  
Content-Length: 0  
Date: Mon, 12 Nov 2012 17:50:53 GMT  
  
{ }
```

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

ValidatePipelineDefinition

Validates the specified pipeline definition to ensure that it is well formed and can be run without error.

Request Syntax

```
{
  "parameterObjects": [
    {
      "attributes": [
        {
          "key": "string",
          "stringValue": "string"
        }
      ],
      "id": "string"
    }
  ],
  "parameterValues": [
    {
      "id": "string",
      "stringValue": "string"
    }
  ],
  "pipelineId": "string",
  "pipelineObjects": [
    {
      "fields": [
        {
          "key": "string",
          "refValue": "string",
          "stringValue": "string"
        }
      ],
      "id": "string",
      "name": "string"
    }
  ]
}
```

Request Parameters

For information about the parameters that are common to all actions, see [Common Parameters](#) (p. 82).

The request accepts the following data in JSON format.

parameterObjects (p. 60)

The parameter objects used with the pipeline.
Type: array of [ParameterObject](#) (p. 71) objects
Required: No

parameterValues (p. 60)

The parameter values used with the pipeline.
Type: array of [ParameterValue](#) (p. 72) objects
Required: No

pipelineId (p. 60)

The ID of the pipeline.

Type: String

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

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

Required: Yes

pipelineObjects (p. 60)

The objects that define the pipeline changes to validate against the pipeline.

Type: array of [PipelineObject \(p. 75\)](#) objects

Required: Yes

Response Syntax

```
{
  "errored": boolean,
  "validationErrors": [
    {
      "errors": [ "string" ],
      "id": "string"
    }
  ],
  "validationWarnings": [
    {
      "id": "string",
      "warnings": [ "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.

errored (p. 61)

Indicates whether there were validation errors.

Type: Boolean

validationErrors (p. 61)

Any validation errors that were found.

Type: array of [ValidationError \(p. 80\)](#) objects

validationWarnings (p. 61)

Any validation warnings that were found.

Type: array of [ValidationWarning \(p. 81\)](#) objects

Errors

For information about the errors that are common to all actions, see [Common Errors \(p. 84\)](#).

InternalServerError

An internal service error occurred.

HTTP Status Code: 500

InvalidRequestException

The request was not valid. Verify that your request was properly formatted, that the signature was generated with the correct credentials, and that you haven't exceeded any of the service limits for your account.

HTTP Status Code: 400

PipelineDeletedException

The specified pipeline has been deleted.

HTTP Status Code: 400

PipelineNotFoundException

The specified pipeline was not found. Verify that you used the correct user and account identifiers.

HTTP Status Code: 400

Examples

Example 1

This example sets a valid pipeline configuration and returns success.

Sample Request

```
POST / HTTP/1.1
Content-Type: application/x-amz-json-1.1
X-Amz-Target: DataPipeline.ValidatePipelineDefinition
Content-Length: 936
Host: datapipeline.us-east-1.amazonaws.com
X-Amz-Date: Mon, 12 Nov 2012 17:49:52 GMT
Authorization: AuthParams

{"pipelineId": "df-06372391ZG65EXAMPLE",
 "pipelineObjects":
 [
  {"id": "Default",
   "name": "Default",
   "fields":
   [
    {"key": "workerGroup",
     "stringValue": "MyworkerGroup"}
   ]
  },
  {"id": "Schedule",
   "name": "Schedule",
   "fields":
   [
    {"key": "startDateTime",
     "stringValue": "2012-09-25T17:00:00"},
    {"key": "type",
     "stringValue": "Schedule"},
    {"key": "period",
     "stringValue": "1 hour"},
    {"key": "endDateTime",
     "stringValue": "2012-09-25T18:00:00"}
   ]
  }
 ]
 },
```

```
{ "id": "SayHello",
  "name": "SayHello",
  "fields":
  [
    { "key": "type",
      "stringValue": "ShellCommandActivity" },
    { "key": "command",
      "stringValue": "echo hello" },
    { "key": "parent",
      "refValue": "Default" },
    { "key": "schedule",
      "refValue": "Schedule" }
  ]
}
```

Sample Response

```
x-amzn-RequestId: 92c9f347-0776-11e2-8a14-21bb8a1f50ef
Content-Type: application/x-amz-json-1.1
Content-Length: 18
Date: Mon, 12 Nov 2012 17:50:53 GMT

{"errored": false}
```

Example 2

This example sets an invalid pipeline configuration and returns the associated set of validation errors.

Sample Request

```
POST / HTTP/1.1
Content-Type: application/x-amz-json-1.1
X-Amz-Target: DataPipeline.ValidatePipelineDefinition
Content-Length: 903
Host: datapipeline.us-east-1.amazonaws.com
X-Amz-Date: Mon, 12 Nov 2012 17:49:52 GMT
Authorization: AuthParams

{"pipelineId": "df-06372391ZG65EXAMPLE",
 "pipelineObjects":
 [
  { "id": "Default",
    "name": "Default",
    "fields":
    [
      { "key": "workerGroup",
```

```
        "stringValue": "MyworkerGroup"}
    ]
  },
  {"id": "Schedule",
   "name": "Schedule",
   "fields":
   [
     {"key": "startDateTime",
      "stringValue": "bad-time"},
     {"key": "type",
      "stringValue": "Schedule"},
     {"key": "period",
      "stringValue": "1 hour"},
     {"key": "endDateTime",
      "stringValue": "2012-09-25T18:00:00"}
   ]
  },
  {"id": "SayHello",
   "name": "SayHello",
   "fields":
   [
     {"key": "type",
      "stringValue": "ShellCommandActivity"},
     {"key": "command",
      "stringValue": "echo hello"},
     {"key": "parent",
      "refValue": "Default"},
     {"key": "schedule",
      "refValue": "Schedule"}
   ]
  }
 ]
}
```

Sample Response

```
x-amzn-RequestId: 496alf5a-0e6a-11e2-a61c-bd6312c92ddd
Content-Type: application/x-amz-json-1.1
Content-Length: 278
Date: Mon, 12 Nov 2012 17:50:53 GMT

{"errored": true,
 "validationErrors":
 [
  {"errors":
   ["INVALID_FIELD_VALUE: 'startDateTime' value must be a literal
   datetime value."],
   "id": "Schedule"}
 ]
}
```

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

Data Types

The AWS Data Pipeline 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:

- [Field](#) (p. 67)
- [InstanceIdentity](#) (p. 68)
- [Operator](#) (p. 69)
- [ParameterAttribute](#) (p. 70)
- [ParameterObject](#) (p. 71)
- [ParameterValue](#) (p. 72)
- [PipelineDescription](#) (p. 73)
- [PipelineIdName](#) (p. 74)
- [PipelineObject](#) (p. 75)
- [Query](#) (p. 76)
- [Selector](#) (p. 77)
- [Tag](#) (p. 78)
- [TaskObject](#) (p. 79)
- [ValidationError](#) (p. 80)
- [ValidationWarning](#) (p. 81)

Field

A key-value pair that describes a property of a pipeline object. The value is specified as either a string value (`StringValue`) or a reference to another object (`RefValue`) but not as both.

Contents

key

The field identifier.

Type: String

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

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

Required: Yes

refValue

The field value, expressed as the identifier of another object.

Type: String

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

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

Required: No

stringValue

The field value, expressed as a String.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10240.

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

Required: No

See Also

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

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

InstanceIdentity

Identity information for the EC2 instance that is hosting the task runner. You can get this value by calling a metadata URI from the EC2 instance. For more information, see [Instance Metadata](#) in the *Amazon Elastic Compute Cloud User Guide*. Passing in this value proves that your task runner is running on an EC2 instance, and ensures the proper AWS Data Pipeline service charges are applied to your pipeline.

Contents

document

A description of an EC2 instance that is generated when the instance is launched and exposed to the instance via the instance metadata service in the form of a JSON representation of an object.

Type: String

Required: No

signature

A signature which can be used to verify the accuracy and authenticity of the information provided in the instance identity document.

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

Operator

Contains a logical operation for comparing the value of a field with a specified value.

Contents

type

The logical operation to be performed: equal (`EQ`), equal reference (`REF_EQ`), less than or equal (`LE`), greater than or equal (`GE`), or between (`BETWEEN`). Equal reference (`REF_EQ`) can be used only with reference fields. The other comparison types can be used only with String fields. The comparison types you can use apply only to certain object fields, as detailed below.

The comparison operators `EQ` and `REF_EQ` act on the following fields:

- `name`
- `@sphere`
- `parent`
- `@componentParent`
- `@instanceParent`
- `@status`
- `@scheduledStartTime`
- `@scheduledEndTime`
- `@actualStartTime`
- `@actualEndTime`

The comparison operators `GE`, `LE`, and `BETWEEN` act on the following fields:

- `@scheduledStartTime`
- `@scheduledEndTime`
- `@actualStartTime`
- `@actualEndTime`

Note that fields beginning with the at sign (`@`) are read-only and set by the web service. When you name fields, you should choose names containing only alpha-numeric values, as symbols may be reserved by AWS Data Pipeline. User-defined fields that you add to a pipeline should prefix their name with the string "my".

Type: String

Valid Values: `EQ` | `REF_EQ` | `LE` | `GE` | `BETWEEN`

Required: No

values

The value that the actual field value will be compared with.

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

ParameterAttribute

The attributes allowed or specified with a parameter object.

Contents

key

The field identifier.

Type: String

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

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

Required: Yes

stringValue

The field value, expressed as a String.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10240.

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

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

ParameterObject

Contains information about a parameter object.

Contents

attributes

The attributes of the parameter object.

Type: array of [ParameterAttribute \(p. 70\)](#) objects

Required: Yes

id

The ID of the parameter object.

Type: String

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

Pattern: [\u0020-\uD7FF\uE000-\uFFFF\uD800\uDC00-\uDBFF\uDF00-\uDFFF\u0020-\u0020]*

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

ParameterValue

A value or list of parameter values.

Contents

id

The ID of the parameter value.

Type: String

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

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

Required: Yes

stringValue

The field value, expressed as a String.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 10240.

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

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

PipelineDescription

Contains pipeline metadata.

Contents

description

Description of the pipeline.

Type: String

Required: No

fields

A list of read-only fields that contain metadata about the pipeline: @userId, @accountId, and @pipelineState.

Type: array of [Field \(p. 67\)](#) objects

Required: Yes

name

The name of the pipeline.

Type: String

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

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

Required: Yes

pipelineId

The pipeline identifier that was assigned by AWS Data Pipeline. This is a string of the form df-297EG78HU43EEXAMPLE.

Type: String

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

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

Required: Yes

tags

A list of tags to associated with a pipeline. Tags let you control access to pipelines. For more information, see [Controlling User Access to Pipelines](#) in the *AWS Data Pipeline Developer Guide*.

Type: array of [Tag \(p. 78\)](#) objects

Array Members: Minimum number of 0 items. Maximum number of 10 items.

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

PipelineIdName

Contains the name and identifier of a pipeline.

Contents

id

The ID of the pipeline that was assigned by AWS Data Pipeline. This is a string of the form `df-297EG78HU43EEXAMPLE`.

Type: String

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

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

Required: No

name

The name of the pipeline.

Type: String

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

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

Required: No

See Also

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

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

PipelineObject

Contains information about a pipeline object. This can be a logical, physical, or physical attempt pipeline object. The complete set of components of a pipeline defines the pipeline.

Contents

fields

Key-value pairs that define the properties of the object.

Type: array of [Field \(p. 67\)](#) objects

Required: Yes

id

The ID of the object.

Type: String

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

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

Required: Yes

name

The name of the object.

Type: String

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

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

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

Query

Defines the query to run against an object.

Contents

selectors

List of selectors that define the query. An object must satisfy all of the selectors to match the query.

Type: array of [Selector \(p. 77\)](#) 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 Java](#)
- [AWS SDK for Ruby V2](#)

Selector

A comparison that is used to determine whether a query should return this object.

Contents

fieldName

The name of the field that the operator will be applied to. The field name is the "key" portion of the field definition in the pipeline definition syntax that is used by the AWS Data Pipeline API. If the field is not set on the object, the condition fails.

Type: String

Required: No

operator

Contains a logical operation for comparing the value of a field with a specified value.

Type: [Operator \(p. 69\)](#) 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](#)
- [AWS SDK for Ruby V2](#)

Tag

Tags are key/value pairs defined by a user and associated with a pipeline to control access. AWS Data Pipeline allows you to associate ten tags per pipeline. For more information, see [Controlling User Access to Pipelines](#) in the *AWS Data Pipeline Developer Guide*.

Contents

key

The key name of a tag defined by a user. For more information, see [Controlling User Access to Pipelines](#) in the *AWS Data Pipeline Developer Guide*.

Type: String

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

Required: Yes

value

The optional value portion of a tag defined by a user. For more information, see [Controlling User Access to Pipelines](#) in the *AWS Data Pipeline Developer Guide*.

Type: String

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

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

TaskObject

Contains information about a pipeline task that is assigned to a task runner.

Contents

attemptId

The ID of the pipeline task attempt object. AWS Data Pipeline uses this value to track how many times a task is attempted.

Type: String

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

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

Required: No

objects

Connection information for the location where the task runner will publish the output of the task.

Type: String to [PipelineObject \(p. 75\)](#) object map

Required: No

pipelineId

The ID of the pipeline that provided the task.

Type: String

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

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

Required: No

taskId

An internal identifier for the task. This ID is passed to the [SetTaskStatus \(p. 57\)](#) and [ReportTaskProgress \(p. 48\)](#) actions.

Type: String

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

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

Required: No

See Also

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

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

ValidationError

Defines a validation error. Validation errors prevent pipeline activation. The set of validation errors that can be returned are defined by AWS Data Pipeline.

Contents

errors

A description of the validation error.

Type: array of Strings

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: [`\u0020-\u007F\u00E0-\u00FF\u0080-\u00DC\u00DB-\u00FF\u00r\u00n\u00t`]*

Required: No

id

The identifier of the object that contains the validation error.

Type: String

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

Pattern: [`\u0020-\u007F\u00E0-\u00FF\u0080-\u00DC\u00DB-\u00FF\u00r\u00n\u00t`]*

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

ValidationWarning

Defines a validation warning. Validation warnings do not prevent pipeline activation. The set of validation warnings that can be returned are defined by AWS Data Pipeline.

Contents

id

The identifier of the object that contains the validation warning.

Type: String

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

Pattern: [`\u0020-\u007F\u0000-\u00FF\u0080\u00DC\u00-\u00BF\u00FF\r\n\t`]*

Required: No

warnings

A description of the validation warning.

Type: array of Strings

Length Constraints: Minimum length of 0. Maximum length of 10000.

Pattern: [`\u0020-\u007F\u0000-\u00FF\u0080\u00DC\u00-\u00BF\u00FF\r\n\t`]*

Required: No

See Also

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

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

Common Parameters

The following table lists the parameters that all actions use for signing Signature Version 4 requests. Any action-specific parameters are listed in the topic for that action. To view sample requests, see [Examples of Signed Signature Version 4 Requests](#) or [Signature Version 4 Test Suite](#) 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'T'HHMMSS'Z'). For example, the following date time is a valid X-Amz-Date value: 20120325T120000Z.

Condition: X-Amz-Date is optional for all requests; it can be used to override the date used for signing requests. If the Date header is specified in the ISO 8601 basic format, X-Amz-Date is not required. When X-Amz-Date is used, it always overrides the value of the Date header. For more information, see [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. For a list of services that support AWS Security Token Service, go to [Using Temporary Security Credentials to Access AWS](#) in *Using Temporary Security Credentials*.

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 common errors that all actions return. Any action-specific errors are listed in the topic for the action.

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

Throttling

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