# AWS Step Functions API Reference API Version 2016-11-23

# **AWS Step Functions: API Reference**

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# Welcome

AWS Step Functions is a web service that enables you to coordinate the components of distributed applications and microservices using visual workflows. You build applications from individual components that each perform a discrete function, or *task*, allowing you to scale and change applications quickly. Step Functions provides a graphical console to visualize the components of your application as a series of steps. It automatically triggers and tracks each step, and retries when there are errors, so your application executes in order and as expected, every time. Step Functions logs the state of each step, so when things do go wrong, you can diagnose and debug problems quickly.

Step Functions manages the operations and underlying infrastructure for you to ensure your application is available at any scale. You can run tasks on the AWS cloud, on your own servers, or an any system that has access to AWS. Step Functions can be accessed and used with the Step Functions console, the AWS SDKs, or an HTTP API (the subject of this document).

This documentation serves as a reference only. For a broader overview of the Step Functions programming model, see the AWS Step Functions Developer Guide.

This document was last published on March 30, 2017.

# **Actions**

## The following actions are supported:

- CreateActivity (p. 3)
- CreateStateMachine (p. 5)
- DeleteActivity (p. 8)
- DeleteStateMachine (p. 9)
- DescribeActivity (p. 10)
- DescribeExecution (p. 12)
- DescribeStateMachine (p. 14)
- GetActivityTask (p. 16)
- GetExecutionHistory (p. 18)
- ListActivities (p. 22)
- ListExecutions (p. 24)
- ListStateMachines (p. 27)
- SendTaskFailure (p. 29)
- SendTaskHeartbeat (p. 31)
- SendTaskSuccess (p. 33)
- StartExecution (p. 35)
- StopExecution (p. 37)

# CreateActivity

Creates an activity. An Activity is a task which you write, in any language and hosted on any machine which has access to AWS Step Functions. Activities must poll Step Functions using the *GetActivityTask* and respond using *SendTask\** API calls. This function lets Step Functions know the existence of your activity and returns an identifier for use in a state machine and when polling from the activity.

# Request Syntax

```
{
    "name": "string"
}
```

# Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 65).

The request accepts the following data in JSON format.

## name (p. 3)

The name of the activity to create. This name must be unique for your AWS account and region.

Type: String

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

Required: Yes

# Response Syntax

```
{
    "activityArn": "string",
    "creationDate": number
}
```

# 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.

## activityArn (p. 3)

The Amazon Resource Name (ARN) that identifies the created activity.

Type: String

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

## creationDate (p. 3)

The date the activity was created.

Type: Timestamp

# **Errors**

For information about the errors that are common to all actions, see Common Errors (p. 67).

## ActivityLimitExceeded

The maximum number of activities has been reached. Existing activities must be deleted before a new activity can be created.

## AWS Step Functions API Reference See Also

HTTP Status Code: 400

## InvalidName

The provided name is invalid. HTTP Status Code: 400

# See Also

- 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

# CreateStateMachine

Creates a state machine. A state machine consists of a collection of states that can do work (*Task* states), determine which states to transition to next (*Choice* states), stop an execution with an error (*Fail* states), and so on. State machines are specified using a JSON-based, structured language.

# Request Syntax

```
{
   "definition": "string",
   "name": "string",
   "roleArn": "string"
}
```

# Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 65).

The request accepts the following data in JSON format.

## definition (p. 5)

The Amazon States Language definition of the state machine.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1048576.

Required: Yes

#### name (p. 5)

The name of the state machine. This name must be unique for your AWS account and region.

State machine names must NOT contain:

```
    whitespace
```

```
• brackets < > { } [ ]
```

- wildcard characters ? \*
- special characters " # % \ ^ | ~ ` \$ & , ; : /
- control characters (U+0000..001F, U+007F..009F)

Type: String

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

Required: Yes

## roleArn (p. 5)

The Amazon Resource Name (ARN) of the IAM role to use for this state machine.

Type: String

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

Required: Yes

# Response Syntax

```
{
  "creationDate": number,
  "stateMachineArn": "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.

#### creationDate (p. 5)

The date the state machine was created.

Type: Timestamp stateMachineArn (p. 5)

The Amazon Resource Name (ARN) that identifies the created state machine.

Type: String

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

## **Errors**

For information about the errors that are common to all actions, see Common Errors (p. 67).

## InvalidArn

The provided Amazon Resource Name (ARN) is invalid.

HTTP Status Code: 400

#### InvalidDefinition

The provided Amazon States Language definition is invalid.

HTTP Status Code: 400

#### InvalidName

The provided name is invalid. HTTP Status Code: 400

#### **StateMachineAlreadyExists**

A state machine with the same name but a different definition or role ARN already exists.

HTTP Status Code: 400

## StateMachineDeleting

The specified state machine is being deleted.

HTTP Status Code: 400

#### StateMachineLimitExceeded

The maximum number of state machines has been reached. Existing state machines must be deleted before a new state machine can be created.

HTTP Status Code: 400

# See Also

- · 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

AWS Step Functions API Reference See Also
See Also

# **DeleteActivity**

Deletes an activity.

# Request Syntax

```
{
    "activityArn": "string"
}
```

# Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 65).

The request accepts the following data in JSON format.

## activityArn (p. 8)

The Amazon Resource Name (ARN) of the activity to delete.

Type: String

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

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. 67).

#### InvalidArn

The provided Amazon Resource Name (ARN) is invalid.

HTTP Status Code: 400

# See Also

- 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

# **DeleteStateMachine**

Deletes a state machine. This is an asynchronous operation-- it sets the state machine's status to "DELETING" and begins the delete process. Each state machine execution will be deleted the next time it makes a state transition. After all executions have completed or been deleted, the state machine itself will be deleted.

# Request Syntax

```
{
    "stateMachineArn": "string"
}
```

# Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 65).

The request accepts the following data in JSON format.

## stateMachineArn (p. 9)

The Amazon Resource Name (ARN) of the state machine to delete.

Type: String

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

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. 67).

## InvalidArn

The provided Amazon Resource Name (ARN) is invalid.

HTTP Status Code: 400

# See Also

- 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

# **DescribeActivity**

Describes an activity.

# Request Syntax

```
{
    "activityArn": "string"
}
```

# **Request Parameters**

For information about the parameters that are common to all actions, see Common Parameters (p. 65).

The request accepts the following data in JSON format.

## activityArn (p. 10)

The Amazon Resource Name (ARN) of the activity to describe.

Type: String

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

Required: Yes

# Response Syntax

```
{
    "activityArn": "string",
    "creationDate": number,
    "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.

## activityArn (p. 10)

The Amazon Resource Name (ARN) that identifies the activity.

Type: String

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

## creationDate (p. 10)

The date the activity was created.

Type: Timestamp

## name (p. 10)

The name of the activity.

Type: String

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

# **Errors**

For information about the errors that are common to all actions, see Common Errors (p. 67).

## AWS Step Functions API Reference See Also

## ActivityDoesNotExist

The specified activity does not exist.

HTTP Status Code: 400

## InvalidArn

The provided Amazon Resource Name (ARN) is invalid.

HTTP Status Code: 400

# See Also

- 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

# **Describe**Execution

Describes an execution.

# Request Syntax

```
{
    "executionArn": "string"
}
```

# Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 65).

The request accepts the following data in JSON format.

## executionArn (p. 12)

The Amazon Resource Name (ARN) of the execution to describe.

Type: String

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

Required: Yes

# Response Syntax

```
{
  "executionArn": "string",
  "input": "string",
  "name": "string",
  "output": "string",
  "startDate": number,
  "stateMachineArn": "string",
  "status": "string",
  "stopDate": number
}
```

# 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.

## executionArn (p. 12)

The Amazon Resource Name (ARN) that identifies the execution.

Type: String

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

## input (p. 12)

The JSON input data of the execution.

Type: String

Length Constraints: Maximum length of 32768.

## name (p. 12)

The name of the execution.

Type: String

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

## AWS Step Functions API Reference Errors

## output (p. 12)

The JSON output data of the execution.

Type: String

Length Constraints: Maximum length of 32768.

#### startDate (p. 12)

The date the execution was started.

Type: Timestamp stateMachineArn (p. 12)

The Amazon Resource Name (ARN) of the executed stated machine.

Type: String

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

## status (p. 12)

The current status of the execution.

Type: String

Valid Values: RUNNING | SUCCEEDED | FAILED | TIMED\_OUT | ABORTED

## stopDate (p. 12)

If the execution has already ended, the date the execution stopped.

Type: Timestamp

## **Errors**

For information about the errors that are common to all actions, see Common Errors (p. 67).

#### ExecutionDoesNotExist

The specified execution does not exist.

HTTP Status Code: 400

#### InvalidArn

The provided Amazon Resource Name (ARN) is invalid.

HTTP Status Code: 400

# See Also

- 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

# **DescribeStateMachine**

Describes a state machine.

# Request Syntax

```
{
    "stateMachineArn": "string"
}
```

# Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 65).

The request accepts the following data in JSON format.

## stateMachineArn (p. 14)

The Amazon Resource Name (ARN) of the state machine to describe.

Type: String

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

Required: Yes

# Response Syntax

```
{
  "creationDate": number,
  "definition": "string",
  "name": "string",
  "roleArn": "string",
  "stateMachineArn": "string",
  "status": "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.

## creationDate (p. 14)

The date the state machine was created.

Type: Timestamp

## definition (p. 14)

The Amazon States Language definition of the state machine.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1048576.

#### name (p. 14)

The name of the state machine.

Type: String

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

#### roleArn (p. 14)

The Amazon Resource Name (ARN) of the IAM role used when creating this state machine. (The IAM role maintains security by granting Step Functions access to AWS resources.)

## AWS Step Functions API Reference Errors

Type: String

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

## stateMachineArn (p. 14)

The Amazon Resource Name (ARN) that identifies the state machine.

Type: String

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

## status (p. 14)

The current status of the state machine.

Type: String

Valid Values: ACTIVE | DELETING

# **Errors**

For information about the errors that are common to all actions, see Common Errors (p. 67).

#### InvalidArn

The provided Amazon Resource Name (ARN) is invalid.

HTTP Status Code: 400

## **StateMachineDoesNotExist**

The specified state machine does not exist.

HTTP Status Code: 400

# See Also

- 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

# GetActivityTask

Used by workers to retrieve a task (with the specified activity ARN) which has been scheduled for execution by a running state machine. This initiates a long poll, where the service holds the HTTP connection open and responds as soon as a task becomes available (i.e. an execution of a task of this type is needed.) The maximum time the service holds on to the request before responding is 60 seconds. If no task is available within 60 seconds, the poll will return an empty result, that is, the taskToken returned is an empty string.

## **Important**

Workers should set their client side socket timeout to at least 65 seconds (5 seconds higher than the maximum time the service may hold the poll request).

# Request Syntax

```
{
    "activityArn": "string",
    "workerName": "string"
}
```

# Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 65).

The request accepts the following data in JSON format.

## activityArn (p. 16)

The Amazon Resource Name (ARN) of the activity to retrieve tasks from (assigned when you create the task using CreateActivity (p. 3).)

Type: String

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

Required: Yes workerName (p. 16)

You can provide an arbitrary name in order to identify the worker that the task is assigned to. This name will be used when it is logged in the execution history.

Type: String

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

Required: No

# Response Syntax

```
{
  "input": "string",
  "taskToken": "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.

## input (p. 16)

The JSON input data for the task.

Type: String

## AWS Step Functions API Reference Errors

Length Constraints: Maximum length of 32768.

#### taskToken (p. 16)

A token that identifies the scheduled task. This token must be copied and included in subsequent calls to SendTaskHeartbeat (p. 31), SendTaskSuccess (p. 33) or SendTaskFailure (p. 29) in order to report the progress or completion of the task.

Type: String

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

## **Errors**

For information about the errors that are common to all actions, see Common Errors (p. 67).

## ActivityDoesNotExist

The specified activity does not exist.

HTTP Status Code: 400

## ActivityWorkerLimitExceeded

The maximum number of workers concurrently polling for activity tasks has been reached.

HTTP Status Code: 400

#### InvalidArn

The provided Amazon Resource Name (ARN) is invalid.

HTTP Status Code: 400

# See Also

- 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

# GetExecutionHistory

Returns the history of the specified execution as a list of events. By default, the results are returned in ascending order of the timeStamp of the events. Use the reverseOrder parameter to get the latest events first. The results may be split into multiple pages. To retrieve subsequent pages, make the call again using the nextToken returned by the previous call.

# Request Syntax

```
{
  "executionArn": "string",
  "maxResults": number,
  "nextToken": "string",
  "reverseOrder": boolean
}
```

# Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 65).

The request accepts the following data in JSON format.

## executionArn (p. 18)

The Amazon Resource Name (ARN) of the execution.

Type: String

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

Required: Yes maxResults (p. 18)

The maximum number of results that will be returned per call. nextToken can be used to obtain further pages of results. The default is 100 and the maximum allowed page size is 100. A value of 0 means to use the default.

This is an upper limit only; the actual number of results returned per call may be fewer than the specified maximum.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 1000.

Required: No nextToken (p. 18)

If a <code>nextToken</code> was returned by a previous call, there are more results available. To retrieve the next page of results, make the call again using the returned token in <code>nextToken</code>. Keep all other arguments unchanged.

The configured maxResults determines how many results can be returned in a single call.

Type: String

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

Required: No reverseOrder (p. 18)

Lists events in descending order of their timeStamp.

Type: Boolean Required: No

# Response Syntax

{

```
"events": [
  {
      "activityFailedEventDetails": {
         "cause": "string",
         "error": "string"
      "activityScheduledEventDetails": {
         "heartbeatInSeconds": number,
         "input": "string",
         "resource": "string",
         "timeoutInSeconds": number
      "activityScheduleFailedEventDetails": {
         "cause": "string",
         "error": "string"
      "activityStartedEventDetails": {
         "workerName": "string"
      "activitySucceededEventDetails": {
         "output": "string"
      "activityTimedOutEventDetails": {
         "cause": "string",
         "error": "string"
      },
      "executionAbortedEventDetails": {
         "cause": "string",
         "error": "string"
      },
      "executionFailedEventDetails": {
        "cause": "string",
         "error": "string"
      "executionStartedEventDetails": {
        "input": "string",
         "roleArn": "string"
      "executionSucceededEventDetails": {
         "output": "string"
      "executionTimedOutEventDetails": {
        "cause": "string",
         "error": "string"
      "id": number,
      "lambdaFunctionFailedEventDetails": {
         "cause": "string",
         "error": "string"
      "lambdaFunctionScheduledEventDetails": {
         "input": "string",
         "resource": "string",
         "timeoutInSeconds": number
      "lambdaFunctionScheduleFailedEventDetails": {
         "cause": "string",
         "error": "string"
      "lambdaFunctionStartFailedEventDetails": {
         "cause": "string",
         "error": "string"
      },
      "lambdaFunctionSucceededEventDetails": {
         "output": "string"
      },
```

```
"lambdaFunctionTimedOutEventDetails": {
    "cause": "string",
    "error": "string"
},
    "previousEventId": number,
    "stateEnteredEventDetails": {
        "input": "string",
        "name": "string"
},
    "stateExitedEventDetails": {
        "name": "string",
        "output": "string"
},
    "timestamp": number,
    "type": "string"
},
    "nextToken": "string"
}
```

# Response Elements

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

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

## events (p. 18)

The list of events that occurred in the execution.

Type: array of HistoryEvent (p. 53) objects

## nextToken (p. 18)

If a nextToken is returned, there are more results available. To retrieve the next page of results, make the call again using the returned token in nextToken. Keep all other arguments unchanged.

The configured maxResults determines how many results can be returned in a single call.

Type: String

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

# **Errors**

For information about the errors that are common to all actions, see Common Errors (p. 67).

#### **ExecutionDoesNotExist**

The specified execution does not exist.

HTTP Status Code: 400

## InvalidArn

The provided Amazon Resource Name (ARN) is invalid.

HTTP Status Code: 400

## InvalidToken

The provided token is invalid.

HTTP Status Code: 400

# See Also

- AWS Command Line Interface
- · AWS SDK for .NET

## AWS Step Functions API Reference See Also

- 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

# ListActivities

Lists the existing activities. The results may be split into multiple pages. To retrieve subsequent pages, make the call again using the nextToken returned by the previous call.

# Request Syntax

```
{
    "maxResults": number,
    "nextToken": "string"
}
```

# Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 65).

The request accepts the following data in JSON format.

## maxResults (p. 22)

The maximum number of results that will be returned per call. nextToken can be used to obtain further pages of results. The default is 100 and the maximum allowed page size is 100. A value of 0 means to use the default.

This is an upper limit only; the actual number of results returned per call may be fewer than the specified maximum.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 1000.

Required: No

## nextToken (p. 22)

If a <code>nextToken</code> was returned by a previous call, there are more results available. To retrieve the next page of results, make the call again using the returned token in <code>nextToken</code>. Keep all other arguments unchanged.

The configured maxResults determines how many results can be returned in a single call.

Type: String

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

Required: No

# Response Syntax

# 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.

## AWS Step Functions API Reference Errors

## activities (p. 22)

The list of activities.

Type: array of ActivityListItem (p. 41) objects

## nextToken (p. 22)

If a nextToken is returned, there are more results available. To retrieve the next page of results, make the call again using the returned token in nextToken. Keep all other arguments unchanged.

The configured maxResults determines how many results can be returned in a single call.

Type: String

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

# **Errors**

For information about the errors that are common to all actions, see Common Errors (p. 67).

## InvalidToken

The provided token is invalid. HTTP Status Code: 400

# See Also

- 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

# ListExecutions

Lists the executions of a state machine that meet the filtering criteria. The results may be split into multiple pages. To retrieve subsequent pages, make the call again using the <code>nextToken</code> returned by the previous call.

# Request Syntax

```
{
  "maxResults": number,
  "nextToken": "string",
  "stateMachineArn": "string",
  "statusFilter": "string"
}
```

# Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 65).

The request accepts the following data in JSON format.

## maxResults (p. 24)

The maximum number of results that will be returned per call. <code>nextToken</code> can be used to obtain further pages of results. The default is 100 and the maximum allowed page size is 100. A value of 0 means to use the default.

This is an upper limit only; the actual number of results returned per call may be fewer than the specified maximum.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 1000.

Required: No

## nextToken (p. 24)

If a <code>nextToken</code> was returned by a previous call, there are more results available. To retrieve the next page of results, make the call again using the returned token in <code>nextToken</code>. Keep all other arguments unchanged.

The configured maxResults determines how many results can be returned in a single call.

Type: String

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

Required: No

## stateMachineArn (p. 24)

The Amazon Resource Name (ARN) of the state machine whose executions will be listed.

Type: String

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

Required: Yes statusFilter (p. 24)

If specified, only list the executions whose current execution status matches the given filter.

Type: String

Valid Values: running | succeeded | failed | timed\_out | aborted

Required: No

# Response Syntax

# 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.

## executions (p. 25)

The list of matching executions.

Type: array of ExecutionListItem (p. 49) objects

#### nextToken (p. 25)

If a nextToken is returned, there are more results available. To retrieve the next page of results, make the call again using the returned token in nextToken. Keep all other arguments unchanged.

The configured maxResults determines how many results can be returned in a single call.

Type: String

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

# **Errors**

For information about the errors that are common to all actions, see Common Errors (p. 67).

## InvalidArn

The provided Amazon Resource Name (ARN) is invalid.

HTTP Status Code: 400

#### InvalidToken

The provided token is invalid.

HTTP Status Code: 400

## **StateMachineDoesNotExist**

The specified state machine does not exist.

HTTP Status Code: 400

# See Also

- AWS Command Line Interface
- · AWS SDK for .NET
- AWS SDK for C++
- · AWS SDK for Go

## AWS Step Functions API Reference See Also

- AWS SDK for Java
- AWS SDK for JavaScript
- AWS SDK for PHP V3
- AWS SDK for Python
- AWS SDK for Ruby V2

# ListStateMachines

Lists the existing state machines. The results may be split into multiple pages. To retrieve subsequent pages, make the call again using the <code>nextToken</code> returned by the previous call.

# Request Syntax

```
{
    "maxResults": number,
    "nextToken": "string"
}
```

# Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 65).

The request accepts the following data in JSON format.

## maxResults (p. 27)

The maximum number of results that will be returned per call. nextToken can be used to obtain further pages of results. The default is 100 and the maximum allowed page size is 100. A value of 0 means to use the default.

This is an upper limit only; the actual number of results returned per call may be fewer than the specified maximum.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 1000.

Required: No

## nextToken (p. 27)

If a <code>nextToken</code> was returned by a previous call, there are more results available. To retrieve the next page of results, make the call again using the returned token in <code>nextToken</code>. Keep all other arguments unchanged.

The configured maxResults determines how many results can be returned in a single call.

Type: String

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

Required: No

# Response Syntax

# 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.

## AWS Step Functions API Reference Errors

## nextToken (p. 27)

If a <code>nextToken</code> is returned, there are more results available. To retrieve the next page of results, make the call again using the returned token in <code>nextToken</code>. Keep all other arguments unchanged.

The configured maxResults determines how many results can be returned in a single call.

Type: String

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

## stateMachines (p. 27)

Type: array of StateMachineListItem (p. 64) objects

# **Errors**

For information about the errors that are common to all actions, see Common Errors (p. 67).

#### InvalidToken

The provided token is invalid.

HTTP Status Code: 400

# See Also

- 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

# SendTaskFailure

Used by workers to report that the task identified by the taskToken failed.

# Request Syntax

```
{
    "cause": "string",
    "error": "string",
    "taskToken": "string"
}
```

# Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 65).

The request accepts the following data in JSON format.

```
cause (p. 29)
```

A more detailed explanation of the cause of the failure.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 32768.

Required: No

## error (p. 29)

An arbitrary error code that identifies the cause of the failure.

Type: String

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

Required: No

taskToken (p. 29)

The token that represents this task. Task tokens are generated by the service when the tasks are assigned to a worker (see GetActivityTask::taskToken).

Type: String

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

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. 67).

## InvalidToken

The provided token is invalid.

HTTP Status Code: 400

## **TaskDoesNotExist**

HTTP Status Code: 400

## **TaskTimedOut**

HTTP Status Code: 400

# See Also

- 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

# SendTaskHeartbeat

Used by workers to report to the service that the task represented by the specified <code>taskToken</code> is still making progress. This action resets the <code>Heartbeat</code> clock. The <code>Heartbeat</code> threshold is specified in the state machine's Amazon States Language definition. This action does not in itself create an event in the execution history. However, if the task times out, the execution history will contain an <code>ActivityTimedOut</code> event.

### Note

The Timeout of a task, defined in the state machine's Amazon States Language definition, is its maximum allowed duration, regardless of the number of SendTaskHeartbeat (p. 31) requests received.

### **Note**

This operation is only useful for long-lived tasks to report the liveliness of the task.

# Request Syntax

```
{
    "taskToken": "string"
}
```

# Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 65).

The request accepts the following data in JSON format.

### taskToken (p. 31)

The token that represents this task. Task tokens are generated by the service when the tasks are assigned to a worker (see GetActivityTask::taskToken).

Type: String

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

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. 67).

## InvalidToken

The provided token is invalid.

HTTP Status Code: 400

### **TaskDoesNotExist**

HTTP Status Code: 400

**TaskTimedOut** 

HTTP Status Code: 400

# See Also

## AWS Step Functions API Reference See Also

- 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

# SendTaskSuccess

Used by workers to report that the task identified by the taskToken completed successfully.

# Request Syntax

```
{
    "output": "string",
    "taskToken": "string"
}
```

# Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 65).

The request accepts the following data in JSON format.

### output (p. 33)

The JSON output of the task.

Type: String

Length Constraints: Maximum length of 32768.

Required: Yes taskToken (p. 33)

The token that represents this task. Task tokens are generated by the service when the tasks are assigned to a worker (see GetActivityTask::taskToken).

Type: String

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

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. 67).

### InvalidOutput

The provided JSON output data is invalid.

HTTP Status Code: 400

### InvalidToken

The provided token is invalid.

HTTP Status Code: 400

## **TaskDoesNotExist**

HTTP Status Code: 400

#### **TaskTimedOut**

HTTP Status Code: 400

# See Also

## AWS Step Functions API Reference See Also

- 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

# **StartExecution**

Starts a state machine execution.

# Request Syntax

```
{
    "input": "string",
    "name": "string",
    "stateMachineArn": "string"
}
```

# Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 65).

The request accepts the following data in JSON format.

```
input (p. 35)
```

The JSON input data for the execution.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

#### name (p. 35)

The name of the execution. This name must be unique for your AWS account and region.

Type: String

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

Required: No

### stateMachineArn (p. 35)

The Amazon Resource Name (ARN) of the state machine to execute.

Type: String

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

Required: Yes

# Response Syntax

```
{
    "executionArn": "string",
    "startDate": number
}
```

# 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.

### executionArn (p. 35)

The Amazon Resource Name (ARN) that identifies the execution.

Type: String

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

## startDate (p. 35)

The date the execution was started.

Type: Timestamp

## **Errors**

For information about the errors that are common to all actions, see Common Errors (p. 67).

### **ExecutionAlreadyExists**

An execution with the same name already exists.

HTTP Status Code: 400

### ExecutionLimitExceeded

The maximum number of running executions has been reached. Running executions must end or be stopped before a new execution can be started.

HTTP Status Code: 400

#### InvalidArn

The provided Amazon Resource Name (ARN) is invalid.

HTTP Status Code: 400

### InvalidExecutionInput

The provided JSON input data is invalid.

HTTP Status Code: 400

### InvalidName

The provided name is invalid.

HTTP Status Code: 400

## **StateMachineDeleting**

The specified state machine is being deleted.

HTTP Status Code: 400

### **StateMachineDoesNotExist**

The specified state machine does not exist.

HTTP Status Code: 400

## See Also

- 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

# **StopExecution**

Stops an execution.

# Request Syntax

```
{
    "cause": "string",
    "error": "string",
    "executionArn": "string"
}
```

# Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 65).

The request accepts the following data in JSON format.

```
cause (p. 37)
```

A more detailed explanation of the cause of the termination.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 32768.

Required: No

## error (p. 37)

An arbitrary error code that identifies the cause of the termination.

Type: String

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

Required: No executionArn (p. 37)

The Amazon Resource Name (ARN) of the execution to stop.

Type: String

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

Required: Yes

# Response Syntax

```
{
    "stopDate": number
}
```

# 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.

### stopDate (p. 37)

The date the execution was stopped.

Type: Timestamp

## **Errors**

For information about the errors that are common to all actions, see Common Errors (p. 67).

## AWS Step Functions API Reference See Also

### ExecutionDoesNotExist

The specified execution does not exist.

HTTP Status Code: 400

## InvalidArn

The provided Amazon Resource Name (ARN) is invalid.

HTTP Status Code: 400

# See Also

- 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 Step Functions 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:

- ActivityFailedEventDetails (p. 40)
- ActivityListItem (p. 41)
- ActivityScheduledEventDetails (p. 42)
- ActivityScheduleFailedEventDetails (p. 43)
- ActivityStartedEventDetails (p. 44)
- ActivitySucceededEventDetails (p. 45)
- ActivityTimedOutEventDetails (p. 46)
- ExecutionAbortedEventDetails (p. 47)
- ExecutionFailedEventDetails (p. 48)
- ExecutionListItem (p. 49)
- ExecutionStartedEventDetails (p. 50)
- ExecutionSucceededEventDetails (p. 51)
- ExecutionTimedOutEventDetails (p. 52)
- HistoryEvent (p. 53)
- LambdaFunctionFailedEventDetails (p. 56)
- LambdaFunctionScheduledEventDetails (p. 57)
- LambdaFunctionScheduleFailedEventDetails (p. 58)
- LambdaFunctionStartFailedEventDetails (p. 59)
- LambdaFunctionSucceededEventDetails (p. 60)
- LambdaFunctionTimedOutEventDetails (p. 61)
- StateEnteredEventDetails (p. 62)
- StateExitedEventDetails (p. 63)
- StateMachineListItem (p. 64)

# ActivityFailedEventDetails

Contains details about an activity which failed during an execution.

## **Contents**

### cause

A more detailed explanation of the cause of the failure.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 32768.

Required: No

### error

The error code of the failure.

Type: String

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

Required: No

# See Also

- AWS SDK for C++
- · AWS SDK for Go
- AWS SDK for Java
- AWS SDK for Ruby V2

# ActivityListItem

Contains details about an activity.

## Contents

## activityArn

The Amazon Resource Name (ARN) that identifies the activity.

Type: String

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

Required: Yes

## creationDate

The date the activity was created.

Type: Timestamp Required: Yes

### name

The name of the activity.

Type: String

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

Required: Yes

## See Also

- AWS SDK for C++
- · AWS SDK for Go
- AWS SDK for Java
- AWS SDK for Ruby V2

# ActivityScheduledEventDetails

Contains details about an activity scheduled during an execution.

## Contents

## heartbeatInSeconds

The maximum allowed duration between two heartbeats for the activity task.

Type: Long Required: No

## input

The JSON data input to the activity task.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

#### resource

The Amazon Resource Name (ARN) of the scheduled activity.

Type: String

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

Required: Yes

## timeoutInSeconds

The maximum allowed duration of the activity task.

Type: Long Required: No

# See Also

- AWS SDK for C++
- · AWS SDK for Go
- · AWS SDK for Java
- AWS SDK for Ruby V2

# ActivityScheduleFailedEventDetails

Contains details about an activity schedule failure which occurred during an execution.

## **Contents**

### cause

A more detailed explanation of the cause of the failure.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 32768.

Required: No

### error

The error code of the failure.

Type: String

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

Required: No

# See Also

- AWS SDK for C++
- · AWS SDK for Go
- AWS SDK for Java
- AWS SDK for Ruby V2

# ActivityStartedEventDetails

Contains details about the start of an activity during an execution.

## **Contents**

## workerName

The name of the worker that the task was assigned to. These names are provided by the workers when calling GetActivityTask (p. 16).

Type: String

Length Constraints: Maximum length of 256.

Required: No

## See Also

- AWS SDK for C++
- · AWS SDK for Go
- · AWS SDK for Java
- AWS SDK for Ruby V2

# ActivitySucceededEventDetails

Contains details about an activity which successfully terminated during an execution.

## **Contents**

### output

The JSON data output by the activity task.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

# See Also

- AWS SDK for C++
- AWS SDK for Go
- · AWS SDK for Java
- AWS SDK for Ruby V2

# ActivityTimedOutEventDetails

Contains details about an activity timeout which occurred during an execution.

## **Contents**

### cause

A more detailed explanation of the cause of the timeout.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 32768.

Required: No

### error

The error code of the failure.

Type: String

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

Required: No

# See Also

- AWS SDK for C++
- · AWS SDK for Go
- AWS SDK for Java
- AWS SDK for Ruby V2

# ExecutionAbortedEventDetails

Contains details about an abort of an execution.

## Contents

### cause

A more detailed explanation of the cause of the failure.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 32768.

Required: No

### error

The error code of the failure.

Type: String

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

Required: No

# See Also

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- AWS SDK for Ruby V2

# ExecutionFailedEventDetails

Contains details about an execution failure event.

## Contents

### cause

A more detailed explanation of the cause of the failure.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 32768.

Required: No

### error

The error code of the failure.

Type: String

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

Required: No

# See Also

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- AWS SDK for Ruby V2

# ExecutionListItem

Contains details about an execution.

## Contents

### executionArn

The Amazon Resource Name (ARN) that identifies the execution.

Type: String

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

Required: Yes

### name

The name of the execution.

Type: String

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

Required: Yes

### startDate

The date the execution started.

Type: Timestamp Required: Yes

#### stateMachineArn

The Amazon Resource Name (ARN) of the executed state machine.

Type: String

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

Required: Yes

### status

The current status of the execution.

Type: String

Valid Values: RUNNING | SUCCEEDED | FAILED | TIMED\_OUT | ABORTED

Required: Yes

## stopDate

If the execution already ended, the date the execution stopped.

Type: Timestamp Required: No

# See Also

- AWS SDK for C++
- · AWS SDK for Go
- · AWS SDK for Java
- AWS SDK for Ruby V2

# **ExecutionStartedEventDetails**

Contains details about the start of the execution.

## **Contents**

### input

The JSON data input to the execution.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

### roleArn

The Amazon Resource Name (ARN) of the IAM role used for executing AWS Lambda tasks.

Type: String

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

Required: No

# See Also

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- AWS SDK for Ruby V2

# ExecutionSucceededEventDetails

Contains details about the successful termination of the execution.

## **Contents**

## output

The JSON data output by the execution.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

# See Also

- AWS SDK for C++
- AWS SDK for Go
- · AWS SDK for Java
- AWS SDK for Ruby V2

# ExecutionTimedOutEventDetails

Contains details about the execution timeout which occurred during the execution.

## **Contents**

### cause

A more detailed explanation of the cause of the timeout.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 32768.

Required: No

### error

The error code of the failure.

Type: String

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

Required: No

# See Also

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- AWS SDK for Ruby V2

# HistoryEvent

Contains details about the events of an execution.

## Contents

### activityFailedEventDetails

Type: ActivityFailedEventDetails (p. 40) object

Required: No

### activityScheduledEventDetails

Type: ActivityScheduledEventDetails (p. 42) object

Required: No

### activityScheduleFailedEventDetails

Contains details about an activity schedule event which failed during an execution.

Type: ActivityScheduleFailedEventDetails (p. 43) object

Required: No

## activityStartedEventDetails

Type: ActivityStartedEventDetails (p. 44) object

Required: No

## activitySucceededEventDetails

Type: ActivitySucceededEventDetails (p. 45) object

Required: No

## activityTimedOutEventDetails

Type: ActivityTimedOutEventDetails (p. 46) object

Required: No

## executionAbortedEventDetails

Type: ExecutionAbortedEventDetails (p. 47) object

Required: No

### executionFailedEventDetails

Type: ExecutionFailedEventDetails (p. 48) object

Required: No

### executionStartedEventDetails

Type: ExecutionStartedEventDetails (p. 50) object

Required: No

## executionSucceededEventDetails

Type: ExecutionSucceededEventDetails (p. 51) object

Required: No

### executionTimedOutEventDetails

Type: ExecutionTimedOutEventDetails (p. 52) object

Required: No

id

The id of the event. Events are numbered sequentially, starting at one.

Type: Long Required: Yes

## lambdaFunctionFailedEventDetails

Type: LambdaFunctionFailedEventDetails (p. 56) object

Required: No

## lambda Function Scheduled Event Details

Type: LambdaFunctionScheduledEventDetails (p. 57) object

Required: No

### lambdaFunctionScheduleFailedEventDetails

Type: LambdaFunctionScheduleFailedEventDetails (p. 58) object

Required: No

### lambdaFunctionStartFailedEventDetails

Contains details about a lambda function which failed to start during an execution.

Type: LambdaFunctionStartFailedEventDetails (p. 59) object

Required: No

#### lambdaFunctionSucceededEventDetails

Contains details about a lambda function which terminated successfully during an execution.

Type: LambdaFunctionSucceededEventDetails (p. 60) object

Required: No

### lambdaFunctionTimedOutEventDetails

Type: LambdaFunctionTimedOutEventDetails (p. 61) object

Required: No previousEventId

The id of the previous event.

Type: Long Required: No

### stateEnteredEventDetails

Type: StateEnteredEventDetails (p. 62) object

Required: No

### stateExitedEventDetails

Type: StateExitedEventDetails (p. 63) object

Required: No

## timestamp

The date the event occurred.

Type: Timestamp Required: Yes

## type

The type of the event.

Type: String

```
Valid Values: ActivityFailed | ActivityScheduleFailed | ActivityScheduled |
ActivityStarted | ActivitySucceeded | ActivityTimedOut | ChoiceStateEntered |
ChoiceStateExited | ExecutionFailed | ExecutionStarted | ExecutionSucceeded |
ExecutionAborted | ExecutionTimedOut | FailStateEntered | LambdaFunctionFailed |
LambdaFunctionScheduleFailed | LambdaFunctionScheduled | LambdaFunctionStartFailed |
LambdaFunctionStarted | LambdaFunctionSucceeded | LambdaFunctionTimedOut |
SucceedStateEntered | SucceedStateExited | TaskStateEntered | TaskStateExited |
PassStateEntered | PassStateExited | ParallelStateEntered | ParallelStateExited |
WaitStateEntered | WaitStateExited
```

Required: Yes

# See Also

- AWS SDK for C++
- · AWS SDK for Go
- · AWS SDK for Java

## AWS Step Functions API Reference See Also



# LambdaFunctionFailedEventDetails

Contains details about a lambda function which failed during an execution.

## **Contents**

### cause

A more detailed explanation of the cause of the failure.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 32768.

Required: No

### error

The error code of the failure.

Type: String

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

Required: No

# See Also

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- AWS SDK for Ruby V2

# LambdaFunctionScheduledEventDetails

Contains details about a lambda function scheduled during an execution.

## Contents

### input

The JSON data input to the lambda function.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

### resource

The Amazon Resource Name (ARN) of the scheduled lambda function.

Type: String

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

Required: Yes timeoutInSeconds

The maximum allowed duration of the lambda function.

Type: Long Required: No

## See Also

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- AWS SDK for Ruby V2

# LambdaFunctionScheduleFailedEventDetails

Contains details about a failed lambda function schedule event which occurred during an execution.

## Contents

### cause

A more detailed explanation of the cause of the failure.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 32768.

Required: No

### error

The error code of the failure.

Type: String

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

Required: No

# See Also

- AWS SDK for C++
- · AWS SDK for Go
- AWS SDK for Java
- AWS SDK for Ruby V2

# LambdaFunctionStartFailedEventDetails

Contains details about a lambda function which failed to start during an execution.

## **Contents**

### cause

A more detailed explanation of the cause of the failure.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 32768.

Required: No

### error

The error code of the failure.

Type: String

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

Required: No

# See Also

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- AWS SDK for Ruby V2

# LambdaFunctionSucceededEventDetails

Contains details about a lambda function which successfully terminated during an execution.

## **Contents**

### output

The JSON data output by the lambda function.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

# See Also

- AWS SDK for C++
- AWS SDK for Go
- · AWS SDK for Java
- AWS SDK for Ruby V2

# LambdaFunctionTimedOutEventDetails

Contains details about a lambda function timeout which occurred during an execution.

## **Contents**

### cause

A more detailed explanation of the cause of the timeout.

Type: String

Length Constraints: Minimum length of 0. Maximum length of 32768.

Required: No

### error

The error code of the failure.

Type: String

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

Required: No

# See Also

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- AWS SDK for Ruby V2

# StateEnteredEventDetails

Contains details about a state entered during an execution.

## **Contents**

### input

The JSON input data to the state.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

### name

The name of the state.

Type: String

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

Required: Yes

# See Also

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- AWS SDK for Ruby V2

# StateExitedEventDetails

Contains details about an exit from a state during an execution.

## **Contents**

### name

The name of the state.

Type: String

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

Required: Yes

## output

The JSON output data of the state.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

# See Also

- AWS SDK for C++
- AWS SDK for Go
- AWS SDK for Java
- AWS SDK for Ruby V2

# StateMachineListItem

Contains details about the state machine.

## Contents

## creationDate

The date the state machine was created.

Type: Timestamp Required: Yes

#### name

The name of the state machine.

Type: String

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

Required: Yes stateMachineArn

#### TI A (AD

The Amazon Resource Name (ARN) that identifies the state machine.

Type: String

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

Required: Yes

## See Also

- 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