Amazon Simple Workflow Service

API Reference

API Version 2012-01-25

aws

Amazon Simple Workflow Service: API Reference

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Welcome

The Amazon Simple Workflow Service (Amazon SWF) makes it easy to build applications that use Amazon's cloud to coordinate work across distributed components. In Amazon SWF, a *task* represents a logical unit of work that is performed by a component of your workflow. Coordinating tasks in a workflow involves managing intertask dependencies, scheduling, and concurrency in accordance with the logical flow of the application.

Amazon SWF gives you full control over implementing tasks and coordinating them without worrying about underlying complexities such as tracking their progress and maintaining their state.

This documentation serves as reference only. For a broader overview of the Amazon SWF programming model, see the *Amazon SWF Developer Guide* .

This document was last published on November 19, 2018.

Actions

The following actions are supported:

CountClosedWorkflowExecutions

Returns the number of closed workflow executions within the given domain that meet the specified filtering criteria.

> **Note**
> This operation is eventually consistent. The results are best effort and may not exactly reflect recent updates and changes.

Access Control

You can use IAM policies to control this action's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- Constrain the following parameters by using a `Condition` element with the appropriate keys.
  - `tagFilter.tag`: String constraint. The key is `swf:tagFilter.tag`.
  - `typeFilter.name`: String constraint. The key is `swf:typeFilter.name`.
  - `typeFilter.version`: String constraint. The key is `swf:typeFilter.version`.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

```
{
    "closeStatusFilter": {
        "status": "string"
    },
    "closeTimeFilter": {
        "latestDate": number,
        "oldestDate": number
    },
    "domain": "string",
    "executionFilter": {
        "workflowId": "string"
    },
    "startTimeFilter": {
        "latestDate": number,
        "oldestDate": number
    },
    "tagFilter": {
        "tag": "string"
    },
    "typeFilter": {
        "name": "string",
        "version": "string"
    }
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 288).

The request accepts the following data in JSON format.

closeStatusFilter (p. 3)

If specified, only workflow executions that match this close status are counted. This filter has an affect only if `executionStatus` is specified as `CLOSED`.

> **Note**
> `closeStatusFilter`, `executionFilter`, `typeFilter` and `tagFilter` are mutually exclusive. You can specify at most one of these in a request.

Type: CloseStatusFilter (p. 177) object

Required: No

closeTimeFilter (p. 3)

If specified, only workflow executions that meet the close time criteria of the filter are counted.

> **Note**
> `startTimeFilter` and `closeTimeFilter` are mutually exclusive. You must specify one of these in a request but not both.

Type: ExecutionTimeFilter (p. 197) object

Required: No

domain (p. 3)

The name of the domain containing the workflow executions to count.

Type: String

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

Required: Yes

executionFilter (p. 3)

If specified, only workflow executions matching the `WorkflowId` in the filter are counted.

> **Note**
> `closeStatusFilter`, `executionFilter`, `typeFilter` and `tagFilter` are mutually exclusive. You can specify at most one of these in a request.

Type: WorkflowExecutionFilter (p. 271) object

Required: No

startTimeFilter (p. 3)

If specified, only workflow executions that meet the start time criteria of the filter are counted.

> **Note**
> `startTimeFilter` and `closeTimeFilter` are mutually exclusive. You must specify one of these in a request but not both.

Type: ExecutionTimeFilter (p. 197) object

Required: No

tagFilter (p. 3)

If specified, only executions that have a tag that matches the filter are counted.

> **Note**
> `closeStatusFilter`, `executionFilter`, `typeFilter` and `tagFilter` are mutually exclusive. You can specify at most one of these in a request.

Type: TagFilter (p. 256) object

Required: No

typeFilter (p. 3)

If specified, indicates the type of the workflow executions to be counted.

> **Note**
> `closeStatusFilter`, `executionFilter`, `typeFilter` and `tagFilter` are mutually exclusive. You can specify at most one of these in a request.

Type: WorkflowTypeFilter (p. 286) object

Required: No

Response Syntax

```
{
    "count": number,
    "truncated": 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.

count (p. 5)

The number of workflow executions.

Type: Integer

Valid Range: Minimum value of 0.

truncated (p. 5)

If set to true, indicates that the actual count was more than the maximum supported by this API and the count returned is the truncated value.

Type: Boolean

Errors

For information about the errors that are common to all actions, see Common Errors (p. 290).

OperationNotPermittedFault

Returned when the caller doesn't have sufficient permissions to invoke the action.

HTTP Status Code: 400

UnknownResourceFault

Returned when the named resource cannot be found with in the scope of this operation (region or domain). This could happen if the named resource was never created or is no longer available for this operation.

HTTP Status Code: 400

Example

CountClosedWorkflowExecutions Example

Sample Request

```
POST / HTTP/1.1
Host: swf.us-east-1.amazonaws.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.2.25) Gecko/20111212
 Firefox/3.6.25 ( .NET CLR 3.5.30729; .NET4.0E)
Accept: application/json, text/javascript, */*
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
Content-Type: application/x-amz-json-1.0
X-Requested-With: XMLHttpRequest
X-Amz-Date: Sun, 15 Jan 2012 02:42:47 GMT
X-Amz-Target: SimpleWorkflowService.CountClosedWorkflowExecutions
Content-Encoding: amz-1.0
X-Amzn-Authorization: AWS3
 AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=jFS74utjeATV7vj72CWdLToPCKW0RQse6OEDkafB+SA=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 157
Pragma: no-cache
Cache-Control: no-cache

{
  "domain": "867530901",
  "activityType": {
  "version": "1.0",
  "name": "activityVerify"
  }
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 29
Content-Type: application/json
x-amzn-RequestId: 9bfad387-3f22-11e1-9914-a356b6ea8bdf

{ "count":3, "truncated":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

CountOpenWorkflowExecutions

Returns the number of open workflow executions within the given domain that meet the specified filtering criteria.

> **Note**
> This operation is eventually consistent. The results are best effort and may not exactly reflect recent updates and changes.

Access Control

You can use IAM policies to control this action's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- Constrain the following parameters by using a `Condition` element with the appropriate keys.
  - `tagFilter.tag`: String constraint. The key is `swf:tagFilter.tag`.
  - `typeFilter.name`: String constraint. The key is `swf:typeFilter.name`.
  - `typeFilter.version`: String constraint. The key is `swf:typeFilter.version`.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

```
{
    "domain": "string",
    "executionFilter": {
        "workflowId": "string"
    },
    "startTimeFilter": {
        "latestDate": number,
        "oldestDate": number
    },
    "tagFilter": {
        "tag": "string"
    },
    "typeFilter": {
        "name": "string",
        "version": "string"
    }
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 288).

The request accepts the following data in JSON format.

domain (p. 8)

The name of the domain containing the workflow executions to count.

Type: String

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

Required: Yes

executionFilter (p. 8)

If specified, only workflow executions matching the `WorkflowId` in the filter are counted.

> **Note**
> `executionFilter`, `typeFilter` and `tagFilter` are mutually exclusive. You can specify at most one of these in a request.

Type: WorkflowExecutionFilter (p. 271) object

Required: No

startTimeFilter (p. 8)

Specifies the start time criteria that workflow executions must meet in order to be counted.

Type: ExecutionTimeFilter (p. 197) object

Required: Yes

tagFilter (p. 8)

If specified, only executions that have a tag that matches the filter are counted.

> **Note**
> `executionFilter`, `typeFilter` and `tagFilter` are mutually exclusive. You can specify at most one of these in a request.

Type: TagFilter (p. 256) object

Required: No

typeFilter (p. 8)

Specifies the type of the workflow executions to be counted.

> **Note**
> `executionFilter`, `typeFilter` and `tagFilter` are mutually exclusive. You can specify at most one of these in a request.

Type: WorkflowTypeFilter (p. 286) object

Required: No

Response Syntax

```
{
    "count": number,
    "truncated": 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.

count (p. 9)

The number of workflow executions.

Type: Integer

Valid Range: Minimum value of 0.

truncated (p. 9)

If set to true, indicates that the actual count was more than the maximum supported by this API and the count returned is the truncated value.

Type: Boolean

Errors

For information about the errors that are common to all actions, see Common Errors (p. 290).

OperationNotPermittedFault

Returned when the caller doesn't have sufficient permissions to invoke the action.

HTTP Status Code: 400

UnknownResourceFault

Returned when the named resource cannot be found with in the scope of this operation (region or domain). This could happen if the named resource was never created or is no longer available for this operation.

HTTP Status Code: 400

Example

CountOpenWorkflowExecutions Example

Sample Request

```
POST / HTTP/1.1
Host: swf.us-east-1.amazonaws.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.2.25) Gecko/20111212
 Firefox/3.6.25 ( .NET CLR 3.5.30729; .NET4.0E)
Accept: application/json, text/javascript, */*
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
Content-Type: application/x-amz-json-1.0
X-Requested-With: XMLHttpRequest
X-Amz-Date: Sat, 14 Jan 2012 23:13:29 GMT
X-Amz-Target: SimpleWorkflowService.CountOpenWorkflowExecutions
Content-Encoding: amz-1.0
X-Amzn-Authorization: AWS3
 AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=3v6shiGzWukq4KiX/5HFMIUF/w5qajhW4dp+6AKyOtY=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 150
```

```
Pragma: no-cache
Cache-Control: no-cache

{"domain": "867530901",
"startTimeFilter":
{"oldestDate": 1325376070,
"latestDate": 1356998399},
"tagFilter":
{"tag": "ricoh-the-dog"}
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 29
Content-Type: application/json
x-amzn-RequestId: 5ea6789e-3f05-11e1-9e8f-57bb03e21482

{"count":1,"truncated":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

CountPendingActivityTasks

Returns the estimated number of activity tasks in the specified task list. The count returned is an approximation and isn't guaranteed to be exact. If you specify a task list that no activity task was ever scheduled in then `0` is returned.

Access Control

You can use IAM policies to control this action's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- Constrain the `taskList.name` parameter by using a `Condition` element with the `swf:taskList.name` key to allow the action to access only certain task lists.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

```
{
   "domain": "string",
   "taskList": {
      "name": "string"
   }
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 288).

The request accepts the following data in JSON format.

domain (p. 12)

The name of the domain that contains the task list.

Type: String

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

Required: Yes

taskList (p. 12)

The name of the task list.

Type: TaskList (p. 257) object

Required: Yes

Response Syntax

```
{
```

```
    "count": number,
    "truncated": 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.

count (p. 12)

> The number of tasks in the task list.
>
> Type: Integer
>
> Valid Range: Minimum value of 0.

truncated (p. 12)

> If set to true, indicates that the actual count was more than the maximum supported by this API and the count returned is the truncated value.
>
> Type: Boolean

Errors

For information about the errors that are common to all actions, see Common Errors (p. 290).

OperationNotPermittedFault

> Returned when the caller doesn't have sufficient permissions to invoke the action.
>
> HTTP Status Code: 400

UnknownResourceFault

> Returned when the named resource cannot be found with in the scope of this operation (region or domain). This could happen if the named resource was never created or is no longer available for this operation.
>
> HTTP Status Code: 400

Example

CountPendingActivityTasks Example

Sample Request

```
POST / HTTP/1.1
Host: swf.us-east-1.amazonaws.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.2.25) Gecko/20111212
 Firefox/3.6.25 ( .NET CLR 3.5.30729; .NET4.0E)
Accept: application/json, text/javascript, */*
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
```

```
Keep-Alive: 115
Connection: keep-alive
Content-Type: application/x-amz-json-1.0
X-Requested-With: XMLHttpRequest
X-Amz-Date: Mon, 16 Jan 2012 03:29:28 GMT
X-Amz-Target: SimpleWorkflowService.CountPendingActivityTasks
Content-Encoding: amz-1.0
X-Amzn-Authorization: AWS3
 AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=eCNiyyl5qmP0gGQ0hM8LqeRzxEvVZ0LAjE4oxVzzk9w=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 70
Pragma: no-cache
Cache-Control: no-cache

{"domain": "867530901",
"taskList":
{"name": "specialTaskList"}
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 29
Content-Type: application/json
x-amzn-RequestId: 4b977c76-3ff2-11e1-a23a-99d60383ae71

{"count":1,"truncated":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

CountPendingDecisionTasks

Returns the estimated number of decision tasks in the specified task list. The count returned is an approximation and isn't guaranteed to be exact. If you specify a task list that no decision task was ever scheduled in then `0` is returned.

Access Control

You can use IAM policies to control this action's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- Constrain the `taskList.name` parameter by using a `Condition` element with the `swf:taskList.name` key to allow the action to access only certain task lists.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

```
{
   "domain": "string",
   "taskList": {
      "name": "string"
   }
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 288).

The request accepts the following data in JSON format.

domain (p. 15)

The name of the domain that contains the task list.

Type: String

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

Required: Yes

taskList (p. 15)

The name of the task list.

Type: TaskList (p. 257) object

Required: Yes

Response Syntax

```
{
```

```
    "count": number,
    "truncated": 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.

count (p. 15)

The number of tasks in the task list.

Type: Integer

Valid Range: Minimum value of 0.

truncated (p. 15)

If set to true, indicates that the actual count was more than the maximum supported by this API and the count returned is the truncated value.

Type: Boolean

Errors

For information about the errors that are common to all actions, see Common Errors (p. 290).

OperationNotPermittedFault

Returned when the caller doesn't have sufficient permissions to invoke the action.

HTTP Status Code: 400

UnknownResourceFault

Returned when the named resource cannot be found with in the scope of this operation (region or domain). This could happen if the named resource was never created or is no longer available for this operation.

HTTP Status Code: 400

Example

CountPendingDecisionTasks Example

Sample Request

```
POST / HTTP/1.1
Host: swf.us-east-1.amazonaws.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.2.25) Gecko/20111212
 Firefox/3.6.25 ( .NET CLR 3.5.30729; .NET4.0E)
Accept: application/json, text/javascript, */*
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
```

```
Keep-Alive: 115
Connection: keep-alive
Content-Type: application/x-amz-json-1.0
X-Requested-With: XMLHttpRequest
X-Amz-Date: Sun, 15 Jan 2012 23:25:57 GMT
X-Amz-Target: SimpleWorkflowService.CountPendingDecisionTasks
Content-Encoding: amz-1.0
X-Amzn-Authorization: AWS3
 AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=i9tUkWnZBLfn/T6BOymajCtwArAll6Stuh1x2C4dbsE=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 70
Pragma: no-cache
Cache-Control: no-cache

{"domain": "867530901",
"taskList":
{"name": "specialTaskList"}
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 29
Content-Type: application/json
x-amzn-RequestId: 4718a364-3fd0-11e1-9914-a356b6ea8bdf

{"count": 2,
"truncated": 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

DeprecateActivityType

Deprecates the specified *activity type*. After an activity type has been deprecated, you cannot create new tasks of that activity type. Tasks of this type that were scheduled before the type was deprecated continue to run.

> **Note**
> This operation is eventually consistent. The results are best effort and may not exactly reflect recent updates and changes.

Access Control

You can use IAM policies to control this action's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- Constrain the following parameters by using a `Condition` element with the appropriate keys.
  - `activityType.name`: String constraint. The key is `swf:activityType.name`.
  - `activityType.version`: String constraint. The key is `swf:activityType.version`.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

```
{
    "activityType": {
        "name": "string",
        "version": "string"
    },
    "domain": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 288).

The request accepts the following data in JSON format.

activityType (p. 18)

The activity type to deprecate.

Type: ActivityType (p. 159) object

Required: Yes

domain (p. 18)

The name of the domain in which the activity type is registered.

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. 290).

OperationNotPermittedFault

Returned when the caller doesn't have sufficient permissions to invoke the action.

HTTP Status Code: 400

TypeDeprecatedFault

Returned when the specified activity or workflow type was already deprecated.

HTTP Status Code: 400

UnknownResourceFault

Returned when the named resource cannot be found with in the scope of this operation (region or domain). This could happen if the named resource was never created or is no longer available for this operation.

HTTP Status Code: 400

Example

DeprecateActivityType Example

Sample Request

```
POST / HTTP/1.1
Host: swf.us-east-1.amazonaws.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.2.25) Gecko/20111212
 Firefox/3.6.25 ( .NET CLR 3.5.30729; .NET4.0E)
Accept: application/json, text/javascript, */*
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
Content-Type: application/x-amz-json-1.0
X-Requested-With: XMLHttpRequest
X-Amz-Date: Mon, 16 Jan 2012 05:01:06 GMT
X-Amz-Target: SimpleWorkflowService.DeprecateActivityType
Content-Encoding: amz-1.0
X-Amzn-Authorization: AWS3
 AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=iX/mNMtNH6IaSNwfZq9hHOhDlLnp7buuj9tO93kRIrQ=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 95
Pragma: no-cache
Cache-Control: no-cache
```

```
{"domain": "867530901",
"activityType":
{"name": "activityVerify",
"version": "1.0"}
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 0
Content-Type: application/json
x-amzn-RequestId: 191ee17e-3fff-11e1-a23a-99d60383ae71
```

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

DeprecateDomain

Deprecates the specified domain. After a domain has been deprecated it cannot be used to create new workflow executions or register new types. However, you can still use visibility actions on this domain. Deprecating a domain also deprecates all activity and workflow types registered in the domain. Executions that were started before the domain was deprecated continues to run.

> **Note**
> This operation is eventually consistent. The results are best effort and may not exactly reflect recent updates and changes.

Access Control

You can use IAM policies to control this action's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- You cannot use an IAM policy to constrain this action's parameters.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 288).

The request accepts the following data in JSON format.

name (p. 21)

The name of the domain to deprecate.

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. 290).

DomainDeprecatedFault

Returned when the specified domain has been deprecated.

HTTP Status Code: 400

OperationNotPermittedFault

Returned when the caller doesn't have sufficient permissions to invoke the action.

HTTP Status Code: 400

UnknownResourceFault

Returned when the named resource cannot be found with in the scope of this operation (region or domain). This could happen if the named resource was never created or is no longer available for this operation.

HTTP Status Code: 400

Example

DeprecateDomain Example

Sample Request

```
POST / HTTP/1.1
Host: swf.us-east-1.amazonaws.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.2.25) Gecko/20111212
 Firefox/3.6.25 ( .NET CLR 3.5.30729; .NET4.0E)
Accept: application/json, text/javascript, */*
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
Content-Type: application/x-amz-json-1.0
X-Requested-With: XMLHttpRequest
X-Amz-Date: Mon, 16 Jan 2012 05:07:47 GMT
X-Amz-Target: SimpleWorkflowService.DeprecateDomain
Content-Encoding: amz-1.0
X-Amzn-Authorization: AWS3
 AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=BkJDtbH9uZvrarqXTkBEYuYHO7PPygRI8ykV29Dz/5M=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 21
Pragma: no-cache
Cache-Control: no-cache

{"name": "867530901"}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 0
Content-Type: application/json
x-amzn-RequestId: 0800c01a-4000-11e1-9914-a356b6ea8bdf
```

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](#)

DeprecateWorkflowType

Deprecates the specified *workflow type*. After a workflow type has been deprecated, you cannot create new executions of that type. Executions that were started before the type was deprecated continues to run. A deprecated workflow type may still be used when calling visibility actions.

Note
This operation is eventually consistent. The results are best effort and may not exactly reflect recent updates and changes.

Access Control

You can use IAM policies to control this action's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- Constrain the following parameters by using a `Condition` element with the appropriate keys.
  - `workflowType.name`: String constraint. The key is `swf:workflowType.name`.
  - `workflowType.version`: String constraint. The key is `swf:workflowType.version`.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

```
{
    "domain": "string",
    "workflowType": {
        "name": "string",
        "version": "string"
    }
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 288).

The request accepts the following data in JSON format.

domain (p. 24)

The name of the domain in which the workflow type is registered.

Type: String

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

Required: Yes

workflowType (p. 24)

The workflow type to deprecate.

Type: WorkflowType (p. 283) object

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. 290).

OperationNotPermittedFault

Returned when the caller doesn't have sufficient permissions to invoke the action.

HTTP Status Code: 400

TypeDeprecatedFault

Returned when the specified activity or workflow type was already deprecated.

HTTP Status Code: 400

UnknownResourceFault

Returned when the named resource cannot be found with in the scope of this operation (region or domain). This could happen if the named resource was never created or is no longer available for this operation.

HTTP Status Code: 400

Example

DeprecateWorkflowType Example

Sample Request

```
POST / HTTP/1.1
Host: swf.us-east-1.amazonaws.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.2.25) Gecko/20111212
 Firefox/3.6.25 ( .NET CLR 3.5.30729; .NET4.0E)
Accept: application/json, text/javascript, */*
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
Content-Type: application/x-amz-json-1.0
X-Requested-With: XMLHttpRequest
X-Amz-Date: Mon, 16 Jan 2012 05:04:47 GMT
X-Amz-Target: SimpleWorkflowService.DeprecateWorkflowType
Content-Encoding: amz-1.0
X-Amzn-Authorization: AWS3
 AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=BGrr1djQvp+YLq3ci2ffpK8KWhZm/PakBL2fFhc3zds=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 102
Pragma: no-cache
Cache-Control: no-cache
```

```
{"domain": "867530901",
"workflowType":
{"name": "customerOrderWorkflow",
"version": "1.0"}
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 0
Content-Type: application/json
x-amzn-RequestId: 9c8d6d3b-3fff-11e1-9e8f-57bb03e21482
```

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

DescribeActivityType

Returns information about the specified activity type. This includes configuration settings provided when the type was registered and other general information about the type.

Access Control

You can use IAM policies to control this action's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- Constrain the following parameters by using a `Condition` element with the appropriate keys.
  - `activityType.name`: String constraint. The key is `swf:activityType.name`.
  - `activityType.version`: String constraint. The key is `swf:activityType.version`.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

```
{
   "activityType": {
      "name": "string",
      "version": "string"
   },
   "domain": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 288).

The request accepts the following data in JSON format.

activityType (p. 27)

The activity type to get information about. Activity types are identified by the `name` and `version` that were supplied when the activity was registered.

Type: ActivityType (p. 159) object

Required: Yes

domain (p. 27)

The name of the domain in which the activity type is registered.

Type: String

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

Required: Yes

Response Syntax

```
{
    "configuration": {
        "defaultTaskHeartbeatTimeout": "string",
        "defaultTaskList": {
            "name": "string"
        },
        "defaultTaskPriority": "string",
        "defaultTaskScheduleToCloseTimeout": "string",
        "defaultTaskScheduleToStartTimeout": "string",
        "defaultTaskStartToCloseTimeout": "string"
    },
    "typeInfo": {
        "activityType": {
            "name": "string",
            "version": "string"
        },
        "creationDate": number,
        "deprecationDate": number,
        "description": "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.

configuration (p. 28)

The configuration settings registered with the activity type.

Type: ActivityTypeConfiguration (p. 160) object

typeInfo (p. 28)

General information about the activity type.

The status of activity type (returned in the ActivityTypeInfo structure) can be one of the following.

- REGISTERED – The type is registered and available. Workers supporting this type should be running.
- DEPRECATED – The type was deprecated using DeprecateActivityType (p. 18), but is still in use. You should keep workers supporting this type running. You cannot create new tasks of this type.

Type: ActivityTypeInfo (p. 162) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 290).

OperationNotPermittedFault

Returned when the caller doesn't have sufficient permissions to invoke the action.

HTTP Status Code: 400

UnknownResourceFault

Returned when the named resource cannot be found with in the scope of this operation (region or domain). This could happen if the named resource was never created or is no longer available for this operation.

HTTP Status Code: 400

Example

DescribeActivityType Example

Sample Request

```
POST / HTTP/1.1
Host: swf.us-east-1.amazonaws.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.2.25) Gecko/20111212
 Firefox/3.6.25 ( .NET CLR 3.5.30729; .NET4.0E)
Accept: application/json, text/javascript, */*
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
Content-Type: application/x-amz-json-1.0
X-Requested-With: XMLHttpRequest
X-Amz-Date: Sun, 15 Jan 2012 03:04:10 GMT
X-Amz-Target: SimpleWorkflowService.DescribeActivityType
Content-Encoding: amz-1.0
X-Amzn-Authorization: AWS3
 AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=XiGRwOZNLt+ic3VBWvIlRGdcFcRJVSE8J7zyZLU3oXg=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 95
Pragma: no-cache
Cache-Control: no-cache

{
  "domain": "867530901",
  "activityType": {
  "version": "1.0",
  "name": "activityVerify"
  }
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 387
Content-Type: application/json
x-amzn-RequestId: 98d56ff5-3f25-11e1-9b11-7182192d0b57

{
  "configuration": {
  "defaultTaskHeartbeatTimeout": "120",
  "defaultTaskList": {"name": "mainTaskList"},
  "defaultTaskPriority", "100",
  "defaultTaskScheduleToCloseTimeout": "900",
  "defaultTaskScheduleToStartTimeout": "300",
  "defaultTaskStartToCloseTimeout": "600"
```

```
  },
  "typeInfo": {
  "activityType": {"name": "activityVerify", "version": "1.0"},
  "creationDate": 1326586446.471,
  "description": "Verify the customer credit",
  "status": "REGISTERED"
  }
}
```

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

DescribeDomain

Returns information about the specified domain, including description and status.

Access Control

You can use IAM policies to control this action's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- You cannot use an IAM policy to constrain this action's parameters.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 288).

The request accepts the following data in JSON format.

name (p. 31)

The name of the domain to describe.

Type: String

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

Required: Yes

Response Syntax

```
{
    "configuration": {
        "workflowExecutionRetentionPeriodInDays": "string"
    },
    "domainInfo": {
        "description": "string",
        "name": "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.

configuration (p. 31)

> The domain configuration. Currently, this includes only the domain's retention period.
>
> Type: DomainConfiguration (p. 195) object

domainInfo (p. 31)

> The basic information about a domain, such as its name, status, and description.
>
> Type: DomainInfo (p. 196) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 290).

OperationNotPermittedFault

> Returned when the caller doesn't have sufficient permissions to invoke the action.
>
> HTTP Status Code: 400

UnknownResourceFault

> Returned when the named resource cannot be found with in the scope of this operation (region or domain). This could happen if the named resource was never created or is no longer available for this operation.
>
> HTTP Status Code: 400

Example

DescribeDomain Example

Sample Request

```
POST / HTTP/1.1
Host: swf.us-east-1.amazonaws.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.2.25) Gecko/20111212
 Firefox/3.6.25 ( .NET CLR 3.5.30729; .NET4.0E)
Accept: application/json, text/javascript, */*
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
Content-Type: application/x-amz-json-1.0
X-Requested-With: XMLHttpRequest
X-Amz-Date: Sun, 15 Jan 2012 03:13:33 GMT
X-Amz-Target: SimpleWorkflowService.DescribeDomain
Content-Encoding: amz-1.0
```

```
X-Amzn-Authorization: AWS3
 AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=IFJtq3M366CHqMlTpyqYqd9zOChCoKDC5SCJBsLifu4=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 21
Pragma: no-cache
Cache-Control: no-cache

{"name": "867530901"}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 137
Content-Type: application/json
x-amzn-RequestId: e86a6779-3f26-11e1-9a27-0760db01a4a8

{"configuration":
  {"workflowExecutionRetentionPeriodInDays": "60"},
 "domainInfo":
  {"description": "music",
  "name": "867530901",
  "status": "REGISTERED"}
}
```

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

DescribeWorkflowExecution

Returns information about the specified workflow execution including its type and some statistics.

> **Note**
> This operation is eventually consistent. The results are best effort and may not exactly reflect recent updates and changes.

Access Control

You can use IAM policies to control this action's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- You cannot use an IAM policy to constrain this action's parameters.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

```
{
   "domain": "string",
   "execution": {
      "runId": "string",
      "workflowId": "string"
   }
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 288).

The request accepts the following data in JSON format.

domain (p. 34)

The name of the domain containing the workflow execution.

Type: String

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

Required: Yes

execution (p. 34)

The workflow execution to describe.

Type: WorkflowExecution (p. 261) object

Required: Yes

Response Syntax

```
{
    "executionConfiguration": {
        "childPolicy": "string",
        "executionStartToCloseTimeout": "string",
        "lambdaRole": "string",
        "taskList": {
            "name": "string"
        },
        "taskPriority": "string",
        "taskStartToCloseTimeout": "string"
    },
    "executionInfo": {
        "cancelRequested": boolean,
        "closeStatus": "string",
        "closeTimestamp": number,
        "execution": {
            "runId": "string",
            "workflowId": "string"
        },
        "executionStatus": "string",
        "parent": {
            "runId": "string",
            "workflowId": "string"
        },
        "startTimestamp": number,
        "tagList": [ "string" ],
        "workflowType": {
            "name": "string",
            "version": "string"
        }
    },
    "latestActivityTaskTimestamp": number,
    "latestExecutionContext": "string",
    "openCounts": {
        "openActivityTasks": number,
        "openChildWorkflowExecutions": number,
        "openDecisionTasks": number,
        "openLambdaFunctions": number,
        "openTimers": 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.

executionConfiguration (p. 35)

The configuration settings for this workflow execution including timeout values, tasklist etc.

Type: WorkflowExecutionConfiguration (p. 265) object

executionInfo (p. 35)

Information about the workflow execution.

Type: WorkflowExecutionInfo (p. 272) object

latestActivityTaskTimestamp (p. 35)

The time when the last activity task was scheduled for this workflow execution. You can use this information to determine if the workflow has not made progress for an unusually long period of time and might require a corrective action.

Type: Timestamp

latestExecutionContext (p. 35)

The latest executionContext provided by the decider for this workflow execution. A decider can provide an executionContext (a free-form string) when closing a decision task using RespondDecisionTaskCompleted (p. 125).

Type: String

Length Constraints: Maximum length of 32768.

openCounts (p. 35)

The number of tasks for this workflow execution. This includes open and closed tasks of all types.

Type: WorkflowExecutionOpenCounts (p. 274) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 290).

OperationNotPermittedFault

Returned when the caller doesn't have sufficient permissions to invoke the action.

HTTP Status Code: 400

UnknownResourceFault

Returned when the named resource cannot be found with in the scope of this operation (region or domain). This could happen if the named resource was never created or is no longer available for this operation.

HTTP Status Code: 400

Example

DescribeWorkflowExecution Example

Sample Request

```
POST / HTTP/1.1
Host: swf.us-east-1.amazonaws.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.2.25) Gecko/20111212
 Firefox/3.6.25 ( .NET CLR 3.5.30729; .NET4.0E)
Accept: application/json, text/javascript, */*
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
```

```
Connection: keep-alive
Content-Type: application/x-amz-json-1.0
X-Requested-With: XMLHttpRequest
X-Amz-Date: Sun, 15 Jan 2012 02:05:18 GMT
X-Amz-Target: SimpleWorkflowService.DescribeWorkflowExecution
Content-Encoding: amz-1.0
X-Amzn-Authorization: AWS3
 AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=ufQVcSkfUyGPLiS8xbkEBqEc2PmEEE/3Lb9Kr8yozs8=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 127
Pragma: no-cache
Cache-Control: no-cache

{
  "domain": "867530901",
  "execution": {
  "workflowId": "20110927-T-1",
  "runId": "06b8f87a-24b3-40b6-9ceb-9676f28e9493"
  }
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 577
Content-Type: application/json
x-amzn-RequestId: 5f85ef79-3f1d-11e1-9e8f-57bb03e21482

{
  "executionConfiguration": {
  "executionStartToCloseTimeout": "3600",
  "childPolicy": "TERMINATE",
  "taskPriority": "100",
  "taskStartToCloseTimeout": "600",
  "taskList": {
    "name": "specialTaskList"
  }
  },
  "openCounts": {
  "openTimers": 0,
  "openDecisionTasks": 1,
  "openActivityTasks": 0,
  "openChildWorkflowExecutions": 0
  },
  "executionInfo": {
  "execution": {
    "workflowId": "20110927-T-1",
    "runId": "06b8f87a-24b3-40b6-9ceb-9676f28e9493"
  },
  "startTimestamp": 1326592619.474,
  "executionStatus": "OPEN",
  "workflowType": {
    "version": "1.0",
    "name": "customerOrderWorkflow"
  },
  "cancelRequested": false,
  "tagList": [
    "music purchase",
    "digital",
    "ricoh-the-dog"
  ]
  }
}
```

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

DescribeWorkflowType

Returns information about the specified *workflow type*. This includes configuration settings specified when the type was registered and other information such as creation date, current status, etc.

Access Control

You can use IAM policies to control this action's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- Constrain the following parameters by using a `Condition` element with the appropriate keys.
  - `workflowType.name`: String constraint. The key is `swf:workflowType.name`.
  - `workflowType.version`: String constraint. The key is `swf:workflowType.version`.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

```
{
    "domain": "string",
    "workflowType": {
        "name": "string",
        "version": "string"
    }
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 288).

The request accepts the following data in JSON format.

domain (p. 39)

The name of the domain in which this workflow type is registered.

Type: String

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

Required: Yes

workflowType (p. 39)

The workflow type to describe.

Type: WorkflowType (p. 283) object

Required: Yes

Response Syntax

```
{
    "configuration": {
        "defaultChildPolicy": "string",
        "defaultExecutionStartToCloseTimeout": "string",
        "defaultLambdaRole": "string",
        "defaultTaskList": {
            "name": "string"
        },
        "defaultTaskPriority": "string",
        "defaultTaskStartToCloseTimeout": "string"
    },
    "typeInfo": {
        "creationDate": number,
        "deprecationDate": number,
        "description": "string",
        "status": "string",
        "workflowType": {
            "name": "string",
            "version": "string"
        }
    }
}
```

Response Elements

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

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

configuration (p. 40)

Configuration settings of the workflow type registered through RegisterWorkflowType (p. 108)

Type: WorkflowTypeConfiguration (p. 284) object

typeInfo (p. 40)

General information about the workflow type.

The status of the workflow type (returned in the WorkflowTypeInfo structure) can be one of the following.

- `REGISTERED` – The type is registered and available. Workers supporting this type should be running.
- `DEPRECATED` – The type was deprecated using DeprecateWorkflowType (p. 24), but is still in use. You should keep workers supporting this type running. You cannot create new workflow executions of this type.

Type: WorkflowTypeInfo (p. 287) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 290).

OperationNotPermittedFault

Returned when the caller doesn't have sufficient permissions to invoke the action.

HTTP Status Code: 400

UnknownResourceFault

Returned when the named resource cannot be found with in the scope of this operation (region or domain). This could happen if the named resource was never created or is no longer available for this operation.

HTTP Status Code: 400

Example

DescribeWorkflowType Example

Sample Request

```
POST / HTTP/1.1
Host: swf.us-east-1.amazonaws.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.2.25) Gecko/20111212
 Firefox/3.6.25 ( .NET CLR 3.5.30729; .NET4.0E)
Accept: application/json, text/javascript, */*
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
Content-Type: application/x-amz-json-1.0
X-Requested-With: XMLHttpRequest
X-Amz-Date: Sun, 15 Jan 2012 22:40:40 GMT
X-Amz-Target: SimpleWorkflowService.DescribeWorkflowType
Content-Encoding: amz-1.0
X-Amzn-Authorization: AWS3
 AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=iGt8t83OmrURqu0pKYbcW6mNdjXbFomevCBPUPQEbaM=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 102
Pragma: no-cache
Cache-Control: no-cache

{
  "domain": "867530901",
  "workflowType": {
  "version": "1.0",
  "name": "customerOrderWorkflow"
  }
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 348
Content-Type: application/json
x-amzn-RequestId: f35a8e7f-3fc9-11e1-a23a-99d60383ae71

{
  "configuration": {
  "defaultExecutionStartToCloseTimeout": "3600",
  "defaultTaskStartToCloseTimeout": "600",
  "defaultTaskList": {"name": "mainTaskList"},
  "defaultTaskPriority": "10"
```

```
  "defaultChildPolicy": "TERMINATE"
  },
  "typeInfo": {
  "status": "REGISTERED",
  "creationDate": 1326481174.027,
  "description": "Handle customer orders",
  "workflowType": {
    "version": "1.0",
    "name": "customerOrderWorkflow"
  }
  }
}
```

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

GetWorkflowExecutionHistory

Returns the history of the specified workflow execution. The results may be split into multiple pages. To retrieve subsequent pages, make the call again using the `nextPageToken` returned by the initial call.

> **Note**
> This operation is eventually consistent. The results are best effort and may not exactly reflect recent updates and changes.

Access Control

You can use IAM policies to control this action's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- You cannot use an IAM policy to constrain this action's parameters.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

```
{
    "domain": "string",
    "execution": {
        "runId": "string",
        "workflowId": "string"
    },
    "maximumPageSize": number,
    "nextPageToken": "string",
    "reverseOrder": boolean
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 288).

The request accepts the following data in JSON format.

domain (p. 43)

The name of the domain containing the workflow execution.

Type: String

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

Required: Yes

execution (p. 43)

Specifies the workflow execution for which to return the history.

Type: WorkflowExecution (p. 261) object

Required: Yes

maximumPageSize (p. 43)

The maximum number of results that are returned per call. Use `nextPageToken` to obtain further pages of results.

Type: Integer

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

Required: No

nextPageToken (p. 43)

If `NextPageToken` is returned there are more results available. The value of `NextPageToken` is a unique pagination token for each page. Make the call again using the returned token to retrieve the next page. Keep all other arguments unchanged. Each pagination token expires after 60 seconds. Using an expired pagination token will return a `400` error: "`Specified token has exceeded its maximum lifetime`".

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

Type: String

Length Constraints: Maximum length of 2048.

Required: No

reverseOrder (p. 43)

When set to `true`, returns the events in reverse order. By default the results are returned in ascending order of the `eventTimeStamp` of the events.

Type: Boolean

Required: No

Response Syntax

```
{
   "events": [
      {
         "activityTaskCanceledEventAttributes": {
            "details": "string",
            "latestCancelRequestedEventId": number,
            "scheduledEventId": number,
            "startedEventId": number
         },
         "activityTaskCancelRequestedEventAttributes": {
            "activityId": "string",
            "decisionTaskCompletedEventId": number
         },
         "activityTaskCompletedEventAttributes": {
            "result": "string",
            "scheduledEventId": number,
            "startedEventId": number
         },
         "activityTaskFailedEventAttributes": {
            "details": "string",
            "reason": "string",
            "scheduledEventId": number,
            "startedEventId": number
```

```
      },
      "activityTaskScheduledEventAttributes": {
         "activityId": "string",
         "activityType": {
            "name": "string",
            "version": "string"
         },
         "control": "string",
         "decisionTaskCompletedEventId": number,
         "heartbeatTimeout": "string",
         "input": "string",
         "scheduleToCloseTimeout": "string",
         "scheduleToStartTimeout": "string",
         "startToCloseTimeout": "string",
         "taskList": {
            "name": "string"
         },
         "taskPriority": "string"
      },
      "activityTaskStartedEventAttributes": {
         "identity": "string",
         "scheduledEventId": number
      },
      "activityTaskTimedOutEventAttributes": {
         "details": "string",
         "scheduledEventId": number,
         "startedEventId": number,
         "timeoutType": "string"
      },
      "cancelTimerFailedEventAttributes": {
         "cause": "string",
         "decisionTaskCompletedEventId": number,
         "timerId": "string"
      },
      "cancelWorkflowExecutionFailedEventAttributes": {
         "cause": "string",
         "decisionTaskCompletedEventId": number
      },
      "childWorkflowExecutionCanceledEventAttributes": {
         "details": "string",
         "initiatedEventId": number,
         "startedEventId": number,
         "workflowExecution": {
            "runId": "string",
            "workflowId": "string"
         },
         "workflowType": {
            "name": "string",
            "version": "string"
         }
      },
      "childWorkflowExecutionCompletedEventAttributes": {
         "initiatedEventId": number,
         "result": "string",
         "startedEventId": number,
         "workflowExecution": {
            "runId": "string",
            "workflowId": "string"
         },
         "workflowType": {
            "name": "string",
            "version": "string"
         }
      },
      "childWorkflowExecutionFailedEventAttributes": {
         "details": "string",
```

```
            "initiatedEventId": number,
            "reason": "string",
            "startedEventId": number,
            "workflowExecution": {
                "runId": "string",
                "workflowId": "string"
            },
            "workflowType": {
                "name": "string",
                "version": "string"
            }
        },
        "childWorkflowExecutionStartedEventAttributes": {
            "initiatedEventId": number,
            "workflowExecution": {
                "runId": "string",
                "workflowId": "string"
            },
            "workflowType": {
                "name": "string",
                "version": "string"
            }
        },
        "childWorkflowExecutionTerminatedEventAttributes": {
            "initiatedEventId": number,
            "startedEventId": number,
            "workflowExecution": {
                "runId": "string",
                "workflowId": "string"
            },
            "workflowType": {
                "name": "string",
                "version": "string"
            }
        },
        "childWorkflowExecutionTimedOutEventAttributes": {
            "initiatedEventId": number,
            "startedEventId": number,
            "timeoutType": "string",
            "workflowExecution": {
                "runId": "string",
                "workflowId": "string"
            },
            "workflowType": {
                "name": "string",
                "version": "string"
            }
        },
        "completeWorkflowExecutionFailedEventAttributes": {
            "cause": "string",
            "decisionTaskCompletedEventId": number
        },
        "continueAsNewWorkflowExecutionFailedEventAttributes": {
            "cause": "string",
            "decisionTaskCompletedEventId": number
        },
        "decisionTaskCompletedEventAttributes": {
            "executionContext": "string",
            "scheduledEventId": number,
            "startedEventId": number
        },
        "decisionTaskScheduledEventAttributes": {
            "startToCloseTimeout": "string",
            "taskList": {
                "name": "string"
            },
```

```
            "taskPriority": "string"
        },
        "decisionTaskStartedEventAttributes": {
            "identity": "string",
            "scheduledEventId": number
        },
        "decisionTaskTimedOutEventAttributes": {
            "scheduledEventId": number,
            "startedEventId": number,
            "timeoutType": "string"
        },
        "eventId": number,
        "eventTimestamp": number,
        "eventType": "string",
        "externalWorkflowExecutionCancelRequestedEventAttributes": {
            "initiatedEventId": number,
            "workflowExecution": {
                "runId": "string",
                "workflowId": "string"
            }
        },
        "externalWorkflowExecutionSignaledEventAttributes": {
            "initiatedEventId": number,
            "workflowExecution": {
                "runId": "string",
                "workflowId": "string"
            }
        },
        "failWorkflowExecutionFailedEventAttributes": {
            "cause": "string",
            "decisionTaskCompletedEventId": number
        },
        "lambdaFunctionCompletedEventAttributes": {
            "result": "string",
            "scheduledEventId": number,
            "startedEventId": number
        },
        "lambdaFunctionFailedEventAttributes": {
            "details": "string",
            "reason": "string",
            "scheduledEventId": number,
            "startedEventId": number
        },
        "lambdaFunctionScheduledEventAttributes": {
            "control": "string",
            "decisionTaskCompletedEventId": number,
            "id": "string",
            "input": "string",
            "name": "string",
            "startToCloseTimeout": "string"
        },
        "lambdaFunctionStartedEventAttributes": {
            "scheduledEventId": number
        },
        "lambdaFunctionTimedOutEventAttributes": {
            "scheduledEventId": number,
            "startedEventId": number,
            "timeoutType": "string"
        },
        "markerRecordedEventAttributes": {
            "decisionTaskCompletedEventId": number,
            "details": "string",
            "markerName": "string"
        },
        "recordMarkerFailedEventAttributes": {
            "cause": "string",
```

```
            "decisionTaskCompletedEventId": number,
            "markerName": "string"
         },
         "requestCancelActivityTaskFailedEventAttributes": {
            "activityId": "string",
            "cause": "string",
            "decisionTaskCompletedEventId": number
         },
         "requestCancelExternalWorkflowExecutionFailedEventAttributes": {
            "cause": "string",
            "control": "string",
            "decisionTaskCompletedEventId": number,
            "initiatedEventId": number,
            "runId": "string",
            "workflowId": "string"
         },
         "requestCancelExternalWorkflowExecutionInitiatedEventAttributes": {
            "control": "string",
            "decisionTaskCompletedEventId": number,
            "runId": "string",
            "workflowId": "string"
         },
         "scheduleActivityTaskFailedEventAttributes": {
            "activityId": "string",
            "activityType": {
               "name": "string",
               "version": "string"
            },
            "cause": "string",
            "decisionTaskCompletedEventId": number
         },
         "scheduleLambdaFunctionFailedEventAttributes": {
            "cause": "string",
            "decisionTaskCompletedEventId": number,
            "id": "string",
            "name": "string"
         },
         "signalExternalWorkflowExecutionFailedEventAttributes": {
            "cause": "string",
            "control": "string",
            "decisionTaskCompletedEventId": number,
            "initiatedEventId": number,
            "runId": "string",
            "workflowId": "string"
         },
         "signalExternalWorkflowExecutionInitiatedEventAttributes": {
            "control": "string",
            "decisionTaskCompletedEventId": number,
            "input": "string",
            "runId": "string",
            "signalName": "string",
            "workflowId": "string"
         },
         "startChildWorkflowExecutionFailedEventAttributes": {
            "cause": "string",
            "control": "string",
            "decisionTaskCompletedEventId": number,
            "initiatedEventId": number,
            "workflowId": "string",
            "workflowType": {
               "name": "string",
               "version": "string"
            }
         },
         "startChildWorkflowExecutionInitiatedEventAttributes": {
            "childPolicy": "string",
```

```
        "control": "string",
        "decisionTaskCompletedEventId": number,
        "executionStartToCloseTimeout": "string",
        "input": "string",
        "lambdaRole": "string",
        "tagList": [ "string" ],
        "taskList": {
            "name": "string"
        },
        "taskPriority": "string",
        "taskStartToCloseTimeout": "string",
        "workflowId": "string",
        "workflowType": {
            "name": "string",
            "version": "string"
        }
    },
    "startLambdaFunctionFailedEventAttributes": {
        "cause": "string",
        "message": "string",
        "scheduledEventId": number
    },
    "startTimerFailedEventAttributes": {
        "cause": "string",
        "decisionTaskCompletedEventId": number,
        "timerId": "string"
    },
    "timerCanceledEventAttributes": {
        "decisionTaskCompletedEventId": number,
        "startedEventId": number,
        "timerId": "string"
    },
    "timerFiredEventAttributes": {
        "startedEventId": number,
        "timerId": "string"
    },
    "timerStartedEventAttributes": {
        "control": "string",
        "decisionTaskCompletedEventId": number,
        "startToFireTimeout": "string",
        "timerId": "string"
    },
    "workflowExecutionCanceledEventAttributes": {
        "decisionTaskCompletedEventId": number,
        "details": "string"
    },
    "workflowExecutionCancelRequestedEventAttributes": {
        "cause": "string",
        "externalInitiatedEventId": number,
        "externalWorkflowExecution": {
            "runId": "string",
            "workflowId": "string"
        }
    },
    "workflowExecutionCompletedEventAttributes": {
        "decisionTaskCompletedEventId": number,
        "result": "string"
    },
    "workflowExecutionContinuedAsNewEventAttributes": {
        "childPolicy": "string",
        "decisionTaskCompletedEventId": number,
        "executionStartToCloseTimeout": "string",
        "input": "string",
        "lambdaRole": "string",
        "newExecutionRunId": "string",
        "tagList": [ "string" ],
```

```
            "taskList": {
                "name": "string"
            },
            "taskPriority": "string",
            "taskStartToCloseTimeout": "string",
            "workflowType": {
                "name": "string",
                "version": "string"
            }
        },
        "workflowExecutionFailedEventAttributes": {
            "decisionTaskCompletedEventId": number,
            "details": "string",
            "reason": "string"
        },
        "workflowExecutionSignaledEventAttributes": {
            "externalInitiatedEventId": number,
            "externalWorkflowExecution": {
                "runId": "string",
                "workflowId": "string"
            },
            "input": "string",
            "signalName": "string"
        },
        "workflowExecutionStartedEventAttributes": {
            "childPolicy": "string",
            "continuedExecutionRunId": "string",
            "executionStartToCloseTimeout": "string",
            "input": "string",
            "lambdaRole": "string",
            "parentInitiatedEventId": number,
            "parentWorkflowExecution": {
                "runId": "string",
                "workflowId": "string"
            },
            "tagList": [ "string" ],
            "taskList": {
                "name": "string"
            },
            "taskPriority": "string",
            "taskStartToCloseTimeout": "string",
            "workflowType": {
                "name": "string",
                "version": "string"
            }
        },
        "workflowExecutionTerminatedEventAttributes": {
            "cause": "string",
            "childPolicy": "string",
            "details": "string",
            "reason": "string"
        },
        "workflowExecutionTimedOutEventAttributes": {
            "childPolicy": "string",
            "timeoutType": "string"
        }
    }
  ],
  "nextPageToken": "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. 44)

> The list of history events.

> Type: Array of HistoryEvent (p. 202) objects

nextPageToken (p. 44)

> If a `NextPageToken` 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 `nextPageToken`. Keep all other arguments unchanged.

> The configured `maximumPageSize` determines how many results can be returned in a single call.

> Type: String

> Length Constraints: Maximum length of 2048.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 290).

OperationNotPermittedFault

> Returned when the caller doesn't have sufficient permissions to invoke the action.

> HTTP Status Code: 400

UnknownResourceFault

> Returned when the named resource cannot be found with in the scope of this operation (region or domain). This could happen if the named resource was never created or is no longer available for this operation.

> HTTP Status Code: 400

Example

GetWorkflowExecutionHistory Example

Sample Request

```
POST / HTTP/1.1
Host: swf.us-east-1.amazonaws.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.2.25) Gecko/20111212
 Firefox/3.6.25 ( .NET CLR 3.5.30729; .NET4.0E)
Accept: application/json, text/javascript, */*
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
Content-Type: application/x-amz-json-1.0
X-Requested-With: XMLHttpRequest
X-Amz-Date: Mon, 16 Jan 2012 03:44:00 GMT
X-Amz-Target: SimpleWorkflowService.GetWorkflowExecutionHistory
Content-Encoding: amz-1.0
```

```
X-Amzn-Authorization: AWS3
 AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=90GENeUWJbEAMWuVI0dcWatHjltMWddXfLjl0MbNOzM=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 175
Pragma: no-cache
Cache-Control: no-cache

{
  "maximumPageSize": 10,
  "domain": "867530901",
  "execution": {
  "workflowId": "20110927-T-1",
  "runId": "d29e60b5-fa71-4276-a4be-948b0adcd20b"
  },
  "reverseOrder": true
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 2942
Content-Type: application/json
x-amzn-RequestId: 5385723f-3ff4-11e1-b118-3bfa5e8e7fc3

{
  "nextPageToken":
 "AAAAKgAAAAEAAAAAAAAAATeTvAyvqlQz34ctbGhM5nglWmjzk0hGuHf0g4EO4CblQFku70ukjPgrAHy7Tnp7FaZ0okP8EEWnkfg8g
WVrXyxQaa525D31cIq1owXK21CKR6SQ0Job87G8SHvvqvP7yjLGHlHrRGZUCbJgeEuV4Rp/yW
+vKhc8dJ54x7wvpQMwZ+ssG6stTyX26vu1gIDuspk13UrDZa4TbLOFdM0aAocHe3xklKMtD/B4ithem6BWm6CBl/
UF7lMfNccwUYEityp1Kht/
YrcD9zbJkt1FSt4Y6pgt0njAh4FKRO9nyRyvLmbvgtQXEIQz8hdbjwj3xE1+9ocYwXOCAhVkRsh3OD6F8KHilKfdwg4Xz1jtLXOh4ls
++W9sRQXqqX/HTX5kNomHySZloylPuY5gL5zRj39frInfZk4EXWHwrI+18+erGIHO4nBQpMzO64dMP
+A/KtVGCn59rAMmilD6wEE9rH8RuZ03Wkvm9yrJvjrI8/6358n8TMB8OcHoqILkMCAXYiIppnFlm
+NWXVqxalHLKOrrNzEZM6qsz3Qj3HV1cpy9P7fnS9QAxrgsAYBoDmdOaFkS3ktAkRa0Sle8STfHi4zKbfIGS7rg==",
  "events": [
  {
    "eventId": 11,
    "eventType": "WorkflowExecutionTimedOut",
    "eventTimestamp": 1326671603.102,
    "workflowExecutionTimedOutEventAttributes": {
    "timeoutType": "START_TO_CLOSE",
    "childPolicy": "TERMINATE"
    }
  },
  {
    "eventId": 10,
    "eventType": "DecisionTaskScheduled",
    "decisionTaskScheduledEventAttributes": {
    "startToCloseTimeout": "600",
    "taskList": {
      "name": "specialTaskList"
    }
    },
    "eventTimestamp": 1326670566.124
  },
  {
    "eventId": 9,
    "eventType": "ActivityTaskTimedOut",
    "activityTaskTimedOutEventAttributes": {
    "startedEventId": 0,
    "scheduledEventId": 8,
    "timeoutType": "SCHEDULE_TO_START",
    "latestHeartbeatRecordedEventId": 0
```

```
      },
      "eventTimestamp": 1326670566.124
    },
    {
      "activityTaskScheduledEventAttributes": {
      "activityId": "verification-27",
      "activityType": {
        "version": "1.0",
        "name": "activityVerify"
      },
      "control": "digital music",
      "decisionTaskCompletedEventId": 7,
      "heartbeatTimeout": "120",
      "input": "5634-0056-4367-0923,12/12,437",
      "scheduleToStartTimeout": "300",
      "scheduleToCloseTimeout": "900",
      "startToCloseTimeout": "600",
      "taskList": {
        "name": "specialTaskList"
      },
      "taskPriority": "50"
      },
      "eventId": 8,
      "eventTimestamp": 1326670266.115,
      "eventType": "ActivityTaskScheduled"
    },
    {
      "eventId": 7,
      "eventType": "DecisionTaskCompleted",
      "decisionTaskCompletedEventAttributes": {
      "startedEventId": 6,
      "executionContext": "Black Friday",
      "scheduledEventId": 5
      },
      "eventTimestamp": 1326670266.103
    },
    {
      "eventId": 6,
      "decisionTaskStartedEventAttributes": {
      "scheduledEventId": 5,
      "identity": "Decider01"
      },
      "eventTimestamp": 1326670161.497,
      "eventType": "DecisionTaskStarted"
    },
    {
      "eventId": 5,
      "eventType": "DecisionTaskScheduled",
      "decisionTaskScheduledEventAttributes": {
      "startToCloseTimeout": "600",
      "taskList": {
        "name": "specialTaskList"
      }
      },
      "eventTimestamp": 1326668752.66
    },
    {
      "eventId": 4,
      "eventType": "DecisionTaskTimedOut",
      "eventTimestamp": 1326668752.66,
      "decisionTaskTimedOutEventAttributes": {
      "startedEventId": 3,
      "timeoutType": "START_TO_CLOSE",
      "scheduledEventId": 2
      }
    },
```

```
  {
    "eventId": 3,
    "decisionTaskStartedEventAttributes": {
    "scheduledEventId": 2,
    "identity": "Decider01"
    },
    "eventTimestamp": 1326668152.648,
    "eventType": "DecisionTaskStarted"
  },
  {
    "eventId": 2,
    "eventType": "DecisionTaskScheduled",
    "decisionTaskScheduledEventAttributes": {
    "startToCloseTimeout": "600",
    "taskList": {
      "name": "specialTaskList"
    }
    },
    "eventTimestamp": 1326668003.094
  }
  ]
}
```

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

ListActivityTypes

Returns information about all activities registered in the specified domain that match the specified name and registration status. The result includes information like creation date, current status of the activity, etc. The results may be split into multiple pages. To retrieve subsequent pages, make the call again using the `nextPageToken` returned by the initial call.

Access Control

You can use IAM policies to control this action's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- You cannot use an IAM policy to constrain this action's parameters.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

```
{
    "domain": "string",
    "maximumPageSize": number,
    "name": "string",
    "nextPageToken": "string",
    "registrationStatus": "string",
    "reverseOrder": boolean
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 288).

The request accepts the following data in JSON format.

domain (p. 55)

The name of the domain in which the activity types have been registered.

Type: String

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

Required: Yes

maximumPageSize (p. 55)

The maximum number of results that are returned per call. Use `nextPageToken` to obtain further pages of results.

Type: Integer

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

Required: No

name (p. 55)

If specified, only lists the activity types that have this name.

Type: String

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

Required: No

nextPageToken (p. 55)

If `NextPageToken` is returned there are more results available. The value of `NextPageToken` is a unique pagination token for each page. Make the call again using the returned token to retrieve the next page. Keep all other arguments unchanged. Each pagination token expires after 60 seconds. Using an expired pagination token will return a `400` error: "`Specified token has exceeded its maximum lifetime`".

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

Type: String

Length Constraints: Maximum length of 2048.

Required: No

registrationStatus (p. 55)

Specifies the registration status of the activity types to list.

Type: String

Valid Values: `REGISTERED | DEPRECATED`

Required: Yes

reverseOrder (p. 55)

When set to `true`, returns the results in reverse order. By default, the results are returned in ascending alphabetical order by `name` of the activity types.

Type: Boolean

Required: No

Response Syntax

```
{
   "nextPageToken": "string",
   "typeInfos": [
      {
         "activityType": {
            "name": "string",
            "version": "string"
         },
         "creationDate": number,
         "deprecationDate": number,
         "description": "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.

nextPageToken (p. 56)

If a `NextPageToken` 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 `nextPageToken`. Keep all other arguments unchanged.

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

Type: String

Length Constraints: Maximum length of 2048.

typeInfos (p. 56)

List of activity type information.

Type: Array of ActivityTypeInfo (p. 162) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 290).

OperationNotPermittedFault

Returned when the caller doesn't have sufficient permissions to invoke the action.

HTTP Status Code: 400

UnknownResourceFault

Returned when the named resource cannot be found with in the scope of this operation (region or domain). This could happen if the named resource was never created or is no longer available for this operation.

HTTP Status Code: 400

Example

ListActivityTypes Example

Sample Request

```
{"domain": "867530901",
"registrationStatus": "REGISTERED",
"maximumPageSize": 50,
"reverseOrder": false}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 171
Content-Type: application/json
x-amzn-RequestId: 11b6fbeb-3f25-11e1-9e8f-57bb03e21482

{"typeInfos":
[
{"activityType":
{"name": "activityVerify",
"version": "1.0"},
"creationDate": 1326586446.471,
"description": "Verify the customer credit",
"status": "REGISTERED"}
]
}
```

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

ListClosedWorkflowExecutions

Returns a list of closed workflow executions in the specified domain that meet the filtering criteria. The results may be split into multiple pages. To retrieve subsequent pages, make the call again using the nextPageToken returned by the initial call.

> **Note**
> This operation is eventually consistent. The results are best effort and may not exactly reflect recent updates and changes.

Access Control

You can use IAM policies to control this action's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- Constrain the following parameters by using a `Condition` element with the appropriate keys.
  - `tagFilter.tag`: String constraint. The key is `swf:tagFilter.tag`.
  - `typeFilter.name`: String constraint. The key is `swf:typeFilter.name`.
  - `typeFilter.version`: String constraint. The key is `swf:typeFilter.version`.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

```
{
    "closeStatusFilter": {
        "status": "string"
    },
    "closeTimeFilter": {
        "latestDate": number,
        "oldestDate": number
    },
    "domain": "string",
    "executionFilter": {
        "workflowId": "string"
    },
    "maximumPageSize": number,
    "nextPageToken": "string",
    "reverseOrder": boolean,
    "startTimeFilter": {
        "latestDate": number,
        "oldestDate": number
    },
    "tagFilter": {
        "tag": "string"
    },
    "typeFilter": {
        "name": "string",
        "version": "string"
    }
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common
Parameters (p. 288).

The request accepts the following data in JSON format.

closeStatusFilter (p. 59)

>   If specified, only workflow executions that match this *close status* are listed. For example, if
>   TERMINATED is specified, then only TERMINATED workflow executions are listed.
>
>   > **Note**
>   > `closeStatusFilter`, `executionFilter`, `typeFilter` and `tagFilter` are mutually
>   > exclusive. You can specify at most one of these in a request.
>
>   Type: CloseStatusFilter (p. 177) object
>
>   Required: No

closeTimeFilter (p. 59)

>   If specified, the workflow executions are included in the returned results based on whether their
>   close times are within the range specified by this filter. Also, if this parameter is specified, the
>   returned results are ordered by their close times.
>
>   > **Note**
>   > `startTimeFilter` and `closeTimeFilter` are mutually exclusive. You must specify one
>   > of these in a request but not both.
>
>   Type: ExecutionTimeFilter (p. 197) object
>
>   Required: No

domain (p. 59)

>   The name of the domain that contains the workflow executions to list.
>
>   Type: String
>
>   Length Constraints: Minimum length of 1. Maximum length of 256.
>
>   Required: Yes

executionFilter (p. 59)

>   If specified, only workflow executions matching the workflow ID specified in the filter are returned.
>
>   > **Note**
>   > `closeStatusFilter`, `executionFilter`, `typeFilter` and `tagFilter` are mutually
>   > exclusive. You can specify at most one of these in a request.
>
>   Type: WorkflowExecutionFilter (p. 271) object
>
>   Required: No

maximumPageSize (p. 59)

>   The maximum number of results that are returned per call. Use `nextPageToken` to obtain further
>   pages of results.
>
>   Type: Integer
>
>   Valid Range: Minimum value of 0. Maximum value of 1000.

Required: No

nextPageToken (p. 59)

If `NextPageToken` is returned there are more results available. The value of `NextPageToken` is a unique pagination token for each page. Make the call again using the returned token to retrieve the next page. Keep all other arguments unchanged. Each pagination token expires after 60 seconds. Using an expired pagination token will return a `400` error: "`Specified token has exceeded its maximum lifetime`".

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

Type: String

Length Constraints: Maximum length of 2048.

Required: No

reverseOrder (p. 59)

When set to `true`, returns the results in reverse order. By default the results are returned in descending order of the start or the close time of the executions.

Type: Boolean

Required: No

startTimeFilter (p. 59)

If specified, the workflow executions are included in the returned results based on whether their start times are within the range specified by this filter. Also, if this parameter is specified, the returned results are ordered by their start times.

> **Note**
> `startTimeFilter` and `closeTimeFilter` are mutually exclusive. You must specify one of these in a request but not both.

Type: ExecutionTimeFilter (p. 197) object

Required: No

tagFilter (p. 59)

If specified, only executions that have the matching tag are listed.

> **Note**
> `closeStatusFilter`, `executionFilter`, `typeFilter` and `tagFilter` are mutually exclusive. You can specify at most one of these in a request.

Type: TagFilter (p. 256) object

Required: No

typeFilter (p. 59)

If specified, only executions of the type specified in the filter are returned.

> **Note**
> `closeStatusFilter`, `executionFilter`, `typeFilter` and `tagFilter` are mutually exclusive. You can specify at most one of these in a request.

Type: WorkflowTypeFilter (p. 286) object

Required: No

Response Syntax

```
{
    "executionInfos": [
        {
            "cancelRequested": boolean,
            "closeStatus": "string",
            "closeTimestamp": number,
            "execution": {
                "runId": "string",
                "workflowId": "string"
            },
            "executionStatus": "string",
            "parent": {
                "runId": "string",
                "workflowId": "string"
            },
            "startTimestamp": number,
            "tagList": [ "string" ],
            "workflowType": {
                "name": "string",
                "version": "string"
            }
        }
    ],
    "nextPageToken": "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.

executionInfos (p. 62)

>   The list of workflow information structures.

>   Type: Array of WorkflowExecutionInfo (p. 272) objects

nextPageToken (p. 62)

>   If a `NextPageToken` 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 `nextPageToken`. Keep all other arguments unchanged.

>   The configured `maximumPageSize` determines how many results can be returned in a single call.

>   Type: String

>   Length Constraints: Maximum length of 2048.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 290).

OperationNotPermittedFault

>   Returned when the caller doesn't have sufficient permissions to invoke the action.

HTTP Status Code: 400

UnknownResourceFault

Returned when the named resource cannot be found with in the scope of this operation (region or domain). This could happen if the named resource was never created or is no longer available for this operation.

HTTP Status Code: 400

Example

ListClosedWorkflowExecutions Example

Sample Request

```
POST / HTTP/1.1
Host: swf.us-east-1.amazonaws.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.2.25) Gecko/20111212
 Firefox/3.6.25 ( .NET CLR 3.5.30729; .NET4.0E)
Accept: application/json, text/javascript, */*
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
Content-Type: application/x-amz-json-1.0
X-Requested-With: XMLHttpRequest
X-Amz-Date: Sun, 15 Jan 2012 02:51:01 GMT
X-Amz-Target: SimpleWorkflowService.ListClosedWorkflowExecutions
Content-Encoding: amz-1.0
X-Amzn-Authorization: AWS3
 AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=WY9jGbf5E3F9smGJHANhEXz9VL+1oGVgNL0/o7cBxQw=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 150
Pragma: no-cache
Cache-Control: no-cache

{"domain": "867530901",
"closeTimeFilter":
{"oldestDate": 1325376070,
"latestDate": 1356998399},
"tagFilter":
{"tag": "ricoh-the-dog"}
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 1084
Content-Type: application/json
x-amzn-RequestId: c28b4df4-3f23-11e1-9e8f-57bb03e21482

{"executionInfos":
[
{"cancelRequested": false,
"closeStatus": "TIMED_OUT",
"closeTimestamp": 1326590754.654,
"execution":
```

```
{"runId": "c724e07a-b966-441f-a1c0-4831acbda1cd",
"workflowId": "20110927-T-1"},
"executionStatus": "CLOSED",
"startTimestamp": 1326587154.626,
"tagList":
["music purchase", "digital", "ricoh-the-dog"],
"workflowType":
{"name": "customerOrderWorkflow",
"version": "1.0"}
},
{"cancelRequested": false,
"closeStatus": "TIMED_OUT",
"closeTimestamp": 1326586831.628,
"execution":
{"runId": "f5ebbac6-941c-4342-ad69-dfd2f8be6689",
"workflowId": "20110927-T-1"},
"executionStatus": "CLOSED",
"startTimestamp": 1326585031.619,
"tagList":
["music purchase", "digital", "ricoh-the-dog"],
"workflowType":
{"name": "customerOrderWorkflow",
"version": "1.0"}
},
{"cancelRequested": false,
"closeStatus": "TIMED_OUT",
"closeTimestamp": 1326582914.031,
"execution":
{"runId": "1e536162-f1ea-48b0-85f3-aade88eef2f7",
"workflowId": "20110927-T-1"},
"executionStatus": "CLOSED",
"startTimestamp": 1326581114.02,
"tagList":
["music purchase", "digital", "ricoh-the-dog"],
"workflowType":
{"name": "customerOrderWorkflow",
"version": "1.0"}
}
]
}
```

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

ListDomains

Returns the list of domains registered in the account. The results may be split into multiple pages. To retrieve subsequent pages, make the call again using the nextPageToken returned by the initial call.

Note
This operation is eventually consistent. The results are best effort and may not exactly reflect recent updates and changes.

Access Control

You can use IAM policies to control this action's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains. The element must be set to `arn:aws:swf::AccountID:domain/*`, where *AccountID* is the account ID, with no dashes.
- Use an `Action` element to allow or deny permission to call this action.
- You cannot use an IAM policy to constrain this action's parameters.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

```
{
    "maximumPageSize": number,
    "nextPageToken": "string",
    "registrationStatus": "string",
    "reverseOrder": boolean
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 288).

The request accepts the following data in JSON format.

maximumPageSize (p. 65)

The maximum number of results that are returned per call. Use `nextPageToken` to obtain further pages of results.

Type: Integer

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

Required: No

nextPageToken (p. 65)

If `NextPageToken` is returned there are more results available. The value of `NextPageToken` is a unique pagination token for each page. Make the call again using the returned token to retrieve the next page. Keep all other arguments unchanged. Each pagination token expires after 60 seconds.

Using an expired pagination token will return a `400` error: `"Specified token has exceeded its maximum lifetime"`.

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

Type: String

Length Constraints: Maximum length of 2048.

Required: No

registrationStatus (p. 65)

Specifies the registration status of the domains to list.

Type: String

Valid Values: `REGISTERED | DEPRECATED`

Required: Yes

reverseOrder (p. 65)

When set to `true`, returns the results in reverse order. By default, the results are returned in ascending alphabetical order by `name` of the domains.

Type: Boolean

Required: No

Response Syntax

```
{
   "domainInfos": [
      {
         "description": "string",
         "name": "string",
         "status": "string"
      }
   ],
   "nextPageToken": "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.

domainInfos (p. 66)

A list of DomainInfo structures.

Type: Array of DomainInfo (p. 196) objects

nextPageToken (p. 66)

If a `NextPageToken` 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 `nextPageToken`. Keep all other arguments unchanged.

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

Type: String

Length Constraints: Maximum length of 2048.

Errors

For information about the errors that are common to all actions, see .

OperationNotPermittedFault

Returned when the caller doesn't have sufficient permissions to invoke the action.

HTTP Status Code: 400

Example

ListDomains Example

Sample Request

```
POST / HTTP/1.1
Host: swf.us-east-1.amazonaws.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.2.25) Gecko/20111212
 Firefox/3.6.25 ( .NET CLR 3.5.30729; .NET4.0E)
Accept: application/json, text/javascript, */*
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
Content-Type: application/x-amz-json-1.0
X-Requested-With: XMLHttpRequest
X-Amz-Date: Sun, 15 Jan 2012 03:09:58 GMT
X-Amz-Target: SimpleWorkflowService.ListDomains
Content-Encoding: amz-1.0
X-Amzn-Authorization: AWS3
 AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=ZCprC72dUxF9ca3w/tbwKZ8lBQn0jaA4xOJqDF0uqMI=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 86
Pragma: no-cache
Cache-Control: no-cache

{"registrationStatus": "REGISTERED",
 "maximumPageSize": 50,
 "reverseOrder": false}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 568
Content-Type: application/json
x-amzn-RequestId: 67e874cc-3f26-11e1-9b11-7182192d0b57

{"domainInfos":
```

```
  [
  {"description": "music", "name": "867530901", "status": "REGISTERED"},
  {"description": "music", "name": "867530902", "status": "REGISTERED"},
  {"description": "", "name": "Demo", "status": "REGISTERED"},
  {"description": "", "name": "DemoDomain", "status": "REGISTERED"},
  {"description": "", "name": "Samples", "status": "REGISTERED"},
  {"description": "", "name": "testDomain2", "status": "REGISTERED"},
  {"description": "", "name": "testDomain3", "status": "REGISTERED"},
  {"description": "", "name": "testDomain4", "status": "REGISTERED"},
  {"description": "", "name": "zsxfvgsxcv", "status": "REGISTERED"}
  ]
}
```

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

ListOpenWorkflowExecutions

Returns a list of open workflow executions in the specified domain that meet the filtering criteria. The results may be split into multiple pages. To retrieve subsequent pages, make the call again using the nextPageToken returned by the initial call.

> **Note**
> This operation is eventually consistent. The results are best effort and may not exactly reflect recent updates and changes.

Access Control

You can use IAM policies to control this action's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- Constrain the following parameters by using a `Condition` element with the appropriate keys.
  - `tagFilter.tag`: String constraint. The key is `swf:tagFilter.tag`.
  - `typeFilter.name`: String constraint. The key is `swf:typeFilter.name`.
  - `typeFilter.version`: String constraint. The key is `swf:typeFilter.version`.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

```
{
    "domain": "string",
    "executionFilter": {
        "workflowId": "string"
    },
    "maximumPageSize": number,
    "nextPageToken": "string",
    "reverseOrder": boolean,
    "startTimeFilter": {
        "latestDate": number,
        "oldestDate": number
    },
    "tagFilter": {
        "tag": "string"
    },
    "typeFilter": {
        "name": "string",
        "version": "string"
    }
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 288).

The request accepts the following data in JSON format.

domain (p. 69)

The name of the domain that contains the workflow executions to list.

Type: String

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

Required: Yes

executionFilter (p. 69)

If specified, only workflow executions matching the workflow ID specified in the filter are returned.

> **Note**
> `executionFilter`, `typeFilter` and `tagFilter` are mutually exclusive. You can specify at most one of these in a request.

Type: WorkflowExecutionFilter (p. 271) object

Required: No

maximumPageSize (p. 69)

The maximum number of results that are returned per call. Use `nextPageToken` to obtain further pages of results.

Type: Integer

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

Required: No

nextPageToken (p. 69)

If `NextPageToken` is returned there are more results available. The value of `NextPageToken` is a unique pagination token for each page. Make the call again using the returned token to retrieve the next page. Keep all other arguments unchanged. Each pagination token expires after 60 seconds. Using an expired pagination token will return a `400` error: "`Specified token has exceeded its maximum lifetime`".

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

Type: String

Length Constraints: Maximum length of 2048.

Required: No

reverseOrder (p. 69)

When set to `true`, returns the results in reverse order. By default the results are returned in descending order of the start time of the executions.

Type: Boolean

Required: No

startTimeFilter (p. 69)

Workflow executions are included in the returned results based on whether their start times are within the range specified by this filter.

Type: ExecutionTimeFilter (p. 197) object

Required: Yes

tagFilter (p. 69)

>   If specified, only executions that have the matching tag are listed.
>
> >   **Note**
> >   `executionFilter`, `typeFilter` and `tagFilter` are mutually exclusive. You can specify
> >   at most one of these in a request.
>
>   Type: TagFilter (p. 256) object
>
>   Required: No

typeFilter (p. 69)

>   If specified, only executions of the type specified in the filter are returned.
>
> >   **Note**
> >   `executionFilter`, `typeFilter` and `tagFilter` are mutually exclusive. You can specify
> >   at most one of these in a request.
>
>   Type: WorkflowTypeFilter (p. 286) object
>
>   Required: No

Response Syntax

```
{
   "executionInfos": [
      {
         "cancelRequested": boolean,
         "closeStatus": "string",
         "closeTimestamp": number,
         "execution": {
            "runId": "string",
            "workflowId": "string"
         },
         "executionStatus": "string",
         "parent": {
            "runId": "string",
            "workflowId": "string"
         },
         "startTimestamp": number,
         "tagList": [ "string" ],
         "workflowType": {
            "name": "string",
            "version": "string"
         }
      }
   ],
   "nextPageToken": "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.

executionInfos (p. 71)

>   The list of workflow information structures.

Type: Array of WorkflowExecutionInfo (p. 272) objects

nextPageToken (p. 71)

If a `NextPageToken` 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 `nextPageToken`. Keep all other arguments unchanged.

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

Type: String

Length Constraints: Maximum length of 2048.

Errors

For information about the errors that are common to all actions, see Common Errors (p. 290).

OperationNotPermittedFault

Returned when the caller doesn't have sufficient permissions to invoke the action.

HTTP Status Code: 400

UnknownResourceFault

Returned when the named resource cannot be found with in the scope of this operation (region or domain). This could happen if the named resource was never created or is no longer available for this operation.

HTTP Status Code: 400

Example

ListOpenWorkflowExecutions

Sample Request

```
POST / HTTP/1.1
Host: swf.us-east-1.amazonaws.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.2.25) Gecko/20111212
 Firefox/3.6.25 ( .NET CLR 3.5.30729; .NET4.0E)
Accept: application/json, text/javascript, */*
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
Content-Type: application/x-amz-json-1.0
X-Requested-With: XMLHttpRequest
X-Amz-Date: Sat, 14 Jan 2012 23:51:04 GMT
X-Amz-Target: SimpleWorkflowService.ListOpenWorkflowExecutions
Content-Encoding: amz-1.0
X-Amzn-Authorization: AWS3
 AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=4kUhpZUp37PgpeOKHlWTsZi+Pq3Egw4mTkPNiEUgp28=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 151
Pragma: no-cache
```

```
Cache-Control: no-cache

{"domain": "867530901",
"startTimeFilter":
{"oldestDate": 1325376070,
"latestDate": 1356998399},
"tagFilter":
{"tag": "music purchase"}
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 313
Content-Type: application/json
x-amzn-RequestId: 9efeff4b-3f0a-11e1-9e8f-57bb03e21482

{ "executionInfos": [
{ "cancelRequested": false,
  "execution": {
  "runId": "f5ebbac6-941c-4342-ad69-dfd2f8be6689",
  "workflowId": "20110927-T-1"
  },
  "executionStatus": "OPEN",
  "startTimestamp": 1326585031.619,
  "tagList": [
  "music purchase", "digital", "ricoh-the-dog"
  ],
  "workflowType": {
  "name": "customerOrderWorkflow",
  "version": "1.0"
  }
} ]
}
```

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

ListWorkflowTypes

Returns information about workflow types in the specified domain. The results may be split into multiple pages that can be retrieved by making the call repeatedly.

Access Control

You can use IAM policies to control this action's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- You cannot use an IAM policy to constrain this action's parameters.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

```
{
    "domain": "string",
    "maximumPageSize": number,
    "name": "string",
    "nextPageToken": "string",
    "registrationStatus": "string",
    "reverseOrder": boolean
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 288).

The request accepts the following data in JSON format.

domain (p. 74)

The name of the domain in which the workflow types have been registered.

Type: String

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

Required: Yes

maximumPageSize (p. 74)

The maximum number of results that are returned per call. Use `nextPageToken` to obtain further pages of results.

Type: Integer

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

Required: No

name (p. 74)

If specified, lists the workflow type with this name.

Type: String

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

Required: No

nextPageToken (p. 74)

If `NextPageToken` is returned there are more results available. The value of `NextPageToken` is a unique pagination token for each page. Make the call again using the returned token to retrieve the next page. Keep all other arguments unchanged. Each pagination token expires after 60 seconds. Using an expired pagination token will return a `400` error: "`Specified token has exceeded its maximum lifetime`".

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

Type: String

Length Constraints: Maximum length of 2048.

Required: No

registrationStatus (p. 74)

Specifies the registration status of the workflow types to list.

Type: String

Valid Values: `REGISTERED | DEPRECATED`

Required: Yes

reverseOrder (p. 74)

When set to `true`, returns the results in reverse order. By default the results are returned in ascending alphabetical order of the `name` of the workflow types.

Type: Boolean

Required: No

Response Syntax

```
{
   "nextPageToken": "string",
   "typeInfos": [
      {
         "creationDate": number,
         "deprecationDate": number,
         "description": "string",
         "status": "string",
         "workflowType": {
            "name": "string",
            "version": "string"
         }
      }
   ]
}
```

Response Elements

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

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

nextPageToken (p. 75)

If a `NextPageToken` 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 `nextPageToken`. Keep all other arguments unchanged.

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

Type: String

Length Constraints: Maximum length of 2048.

typeInfos (p. 75)

The list of workflow type information.

Type: Array of WorkflowTypeInfo (p. 287) objects

Errors

For information about the errors that are common to all actions, see Common Errors (p. 290).

OperationNotPermittedFault

Returned when the caller doesn't have sufficient permissions to invoke the action.

HTTP Status Code: 400

UnknownResourceFault

Returned when the named resource cannot be found with in the scope of this operation (region or domain). This could happen if the named resource was never created or is no longer available for this operation.

HTTP Status Code: 400

Example

ListWorkflowTypes Example

Sample Request

```
POST / HTTP/1.1
Host: swf.us-east-1.amazonaws.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.2.25) Gecko/20111212
 Firefox/3.6.25 ( .NET CLR 3.5.30729; .NET4.0E)
Accept: application/json, text/javascript, */*
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
```

```
Connection: keep-alive
Content-Type: application/x-amz-json-1.0
X-Requested-With: XMLHttpRequest
X-Amz-Date: Sun, 15 Jan 2012 22:25:43 GMT
X-Amz-Target: SimpleWorkflowService.ListWorkflowTypes
Content-Encoding: amz-1.0
X-Amzn-Authorization: AWS3
 AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=uleWQSyVVf0+aG50IoBJG5h0hzxNFNT97Mkn/FSCQ+Q=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 110
Pragma: no-cache
Cache-Control: no-cache

{"domain": "867530901",
"registrationStatus": "REGISTERED",
"maximumPageSize": 50,
"reverseOrder": true}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 174
Content-Type: application/json
x-amzn-RequestId: dcde6719-3fc7-11e1-9e8f-57bb03e21482

{"typeInfos":
[
{"creationDate": 1326481174.027,
"description": "Handle customer orders",
"status": "REGISTERED",
"workflowType":
{"name": "customerOrderWorkflow",
"version": "1.0"}
}
]
}
```

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

PollForActivityTask

Used by workers to get an ActivityTask (p. 148) from the specified activity `taskList`. This initiates a long poll, where the service holds the HTTP connection open and responds as soon as a task becomes available. 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 returns an empty result. An empty result, in this context, means that an ActivityTask is returned, but that the value of taskToken is an empty string. If a task is returned, the worker should use its type to identify and process it correctly.

> **Important**
> Workers should set their client side socket timeout to at least 70 seconds (10 seconds higher than the maximum time service may hold the poll request).

Access Control

You can use IAM policies to control this action's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- Constrain the `taskList.name` parameter by using a `Condition` element with the `swf:taskList.name` key to allow the action to access only certain task lists.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

```
{
   "domain": "string",
   "identity": "string",
   "taskList": {
      "name": "string"
   }
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 288).

The request accepts the following data in JSON format.

domain (p. 78)

 The name of the domain that contains the task lists being polled.

 Type: String

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

 Required: Yes

identity (p. 78)

Identity of the worker making the request, recorded in the `ActivityTaskStarted` event in the workflow history. This enables diagnostic tracing when problems arise. The form of this identity is user defined.

Type: String

Length Constraints: Maximum length of 256.

Required: No

taskList (p. 78)

Specifies the task list to poll for activity tasks.

The specified string must not start or end with whitespace. It must not contain a `:` (colon), `/` (slash), `|` (vertical bar), or any control characters (`\u0000-\u001f` | `\u007f-\u009f`). Also, it must not contain the literal string `arn`.

Type: TaskList (p. 257) object

Required: Yes

Response Syntax

```
{
    "activityId": "string",
    "activityType": {
        "name": "string",
        "version": "string"
    },
    "input": "string",
    "startedEventId": number,
    "taskToken": "string",
    "workflowExecution": {
        "runId": "string",
        "workflowId": "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.

activityId (p. 79)

The unique ID of the task.

Type: String

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

activityType (p. 79)

The type of this activity task.

Type: ActivityType (p. 159) object

input (p. 79)

> The inputs provided when the activity task was scheduled. The form of the input is user defined and should be meaningful to the activity implementation.
>
> Type: String
>
> Length Constraints: Maximum length of 32768.

startedEventId (p. 79)

> The ID of the `ActivityTaskStarted` event recorded in the history.
>
> Type: Long

taskToken (p. 79)

> The opaque string used as a handle on the task. This token is used by workers to communicate progress and response information back to the system about the task.
>
> Type: String
>
> Length Constraints: Minimum length of 1. Maximum length of 1024.

workflowExecution (p. 79)

> The workflow execution that started this activity task.
>
> Type: WorkflowExecution (p. 261) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 290).

LimitExceededFault

> Returned by any operation if a system imposed limitation has been reached. To address this fault you should either clean up unused resources or increase the limit by contacting AWS.
>
> HTTP Status Code: 400

OperationNotPermittedFault

> Returned when the caller doesn't have sufficient permissions to invoke the action.
>
> HTTP Status Code: 400

UnknownResourceFault

> Returned when the named resource cannot be found with in the scope of this operation (region or domain). This could happen if the named resource was never created or is no longer available for this operation.
>
> HTTP Status Code: 400

Example

PollForActivityTask Example

Sample Request

```
POST / HTTP/1.1
```

```
Host: swf.us-east-1.amazonaws.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.2.25) Gecko/20111212
 Firefox/3.6.25 ( .NET CLR 3.5.30729; .NET4.0E)
Accept: application/json, text/javascript, */*
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
Content-Type: application/x-amz-json-1.0
X-Requested-With: XMLHttpRequest
X-Amz-Date: Mon, 16 Jan 2012 03:53:52 GMT
X-Amz-Target: SimpleWorkflowService.PollForActivityTask
Content-Encoding: amz-1.0
X-Amzn-Authorization: AWS3
 AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=dv0H1RPYucoIcRckspWO0f8xG120MWZRKmj3O5/A4rY=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 108
Pragma: no-cache
Cache-Control: no-cache

{"domain": "867530901",
"taskList":
{"name": "mainTaskList"},
"identity": "VerifyCreditCardWorker01"}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 837
Content-Type: application/json
x-amzn-RequestId: b48fb6b5-3ff5-11e1-a23a-99d60383ae71

{"activityId": "verification-27",
"activityType":
{"name": "activityVerify",
"version": "1.0"},
"input": "5634-0056-4367-0923,12/12,437",
"startedEventId": 11,
"taskToken": "AAAAKgAAAAEAAAAAAAAAAAAX9p3pcp3857oLXFUuwdxRU5/
zmn9f40XaMF7VohAH4jOtjXpZu7GdOzEi0b3cWYHbG5b5dpdcTXHUDPVMHXiUxCgr+Nc/wUW9016W4YxJGs/
jmxzPln8qLftU+SW135Q0UuKp5XRGoRTJp3tbHn2pY1vC8gDB/K69J6q668U1pd4Cd9o43//
lGgOIjN0/Ihg+DO+83HNcOuVEQMM28kNMXf7yePh31M4dMKJwQaQZG13huJXDwzJOoZQz+XFuqFly
+lPnCE4XvsnhfAvTsh50EtNDEtQzPCFJoUeld9g64V/FS/39PHL3M93PBUuroPyHuCwHsNC6fZ7gM/
XOKmW4kKnXPoQweEUkFV/J6E6+M1reBO7nJADTrLSnajg6MY/viWsEYmMw/
DS5FlquFaDIhFkLhWUWN+V2KqiKS23GYwpzgZ7fgcWHQF2NLEY3zrjam4LW/
UW5VLCyM3FpVD3erCTi9IvUgslPzyVGuWNAoTmgJEWvimgwiHxJMxxc9JBDR390iMmImxVl3eeSDUWx8reQltiviadPDjyRmVhYP8",
"workflowExecution":
{"runId": "cfa2bd33-31b0-4b75-b131-255bb0d97b3f",
"workflowId": "20110927-T-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

PollForDecisionTask

Used by deciders to get a DecisionTask (p. 189) from the specified decision `taskList`. A decision task may be returned for any open workflow execution that is using the specified task list. The task includes a paginated view of the history of the workflow execution. The decider should use the workflow type and the history to determine how to properly handle the task.

This action initiates a long poll, where the service holds the HTTP connection open and responds as soon a task becomes available. If no decision task is available in the specified task list before the timeout of 60 seconds expires, an empty result is returned. An empty result, in this context, means that a DecisionTask is returned, but that the value of taskToken is an empty string.

> **Important**
> Deciders should set their client side socket timeout to at least 70 seconds (10 seconds higher than the timeout).

> **Important**
> Because the number of workflow history events for a single workflow execution might be very large, the result returned might be split up across a number of pages. To retrieve subsequent pages, make additional calls to `PollForDecisionTask` using the `nextPageToken` returned by the initial call. Note that you do *not* call `GetWorkflowExecutionHistory` with this `nextPageToken`. Instead, call `PollForDecisionTask` again.

Access Control

You can use IAM policies to control this action's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- Constrain the `taskList.name` parameter by using a `Condition` element with the `swf:taskList.name` key to allow the action to access only certain task lists.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

```
{
   "domain": "string",
   "identity": "string",
   "maximumPageSize": number,
   "nextPageToken": "string",
   "reverseOrder": boolean,
   "taskList": {
      "name": "string"
   }
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 288).

The request accepts the following data in JSON format.

domain (p. 83)

The name of the domain containing the task lists to poll.

Type: String

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

Required: Yes

identity (p. 83)

Identity of the decider making the request, which is recorded in the DecisionTaskStarted event in the workflow history. This enables diagnostic tracing when problems arise. The form of this identity is user defined.

Type: String

Length Constraints: Maximum length of 256.

Required: No

maximumPageSize (p. 83)

The maximum number of results that are returned per call. Use `nextPageToken` to obtain further pages of results.

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

nextPageToken (p. 83)

If `NextPageToken` is returned there are more results available. The value of `NextPageToken` is a unique pagination token for each page. Make the call again using the returned token to retrieve the next page. Keep all other arguments unchanged. Each pagination token expires after 60 seconds. Using an expired pagination token will return a `400` error: "`Specified token has exceeded its maximum lifetime`".

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

> **Note**
> The `nextPageToken` returned by this action cannot be used with
> GetWorkflowExecutionHistory (p. 43) to get the next page. You must call
> PollForDecisionTask (p. 83) again (with the `nextPageToken`) to retrieve the next page
> of history records. Calling PollForDecisionTask (p. 83) with a `nextPageToken` doesn't
> return a new decision task.

Type: String

Length Constraints: Maximum length of 2048.

Required: No

reverseOrder (p. 83)

When set to `true`, returns the events in reverse order. By default the results are returned in ascending order of the `eventTimestamp` of the events.

Type: Boolean

Required: No

taskList (p. 83)

Specifies the task list to poll for decision tasks.

The specified string must not start or end with whitespace. It must not contain a : (colon), / (slash),
| (vertical bar), or any control characters (\u0000-\u001f | \u007f-\u009f). Also, it must not
contain the literal string arn.

Type: TaskList (p. 257) object

Required: Yes

Response Syntax

```
{
   "events": [
      {
         "activityTaskCanceledEventAttributes": {
            "details": "string",
            "latestCancelRequestedEventId": number,
            "scheduledEventId": number,
            "startedEventId": number
         },
         "activityTaskCancelRequestedEventAttributes": {
            "activityId": "string",
            "decisionTaskCompletedEventId": number
         },
         "activityTaskCompletedEventAttributes": {
            "result": "string",
            "scheduledEventId": number,
            "startedEventId": number
         },
         "activityTaskFailedEventAttributes": {
            "details": "string",
            "reason": "string",
            "scheduledEventId": number,
            "startedEventId": number
         },
         "activityTaskScheduledEventAttributes": {
            "activityId": "string",
            "activityType": {
               "name": "string",
               "version": "string"
            },
            "control": "string",
            "decisionTaskCompletedEventId": number,
            "heartbeatTimeout": "string",
            "input": "string",
            "scheduleToCloseTimeout": "string",
            "scheduleToStartTimeout": "string",
            "startToCloseTimeout": "string",
            "taskList": {
               "name": "string"
            },
            "taskPriority": "string"
         },
         "activityTaskStartedEventAttributes": {
            "identity": "string",
            "scheduledEventId": number
         },
         "activityTaskTimedOutEventAttributes": {
            "details": "string",
            "scheduledEventId": number,
```

```
            "startedEventId": number,
            "timeoutType": "string"
        },
        "cancelTimerFailedEventAttributes": {
            "cause": "string",
            "decisionTaskCompletedEventId": number,
            "timerId": "string"
        },
        "cancelWorkflowExecutionFailedEventAttributes": {
            "cause": "string",
            "decisionTaskCompletedEventId": number
        },
        "childWorkflowExecutionCanceledEventAttributes": {
            "details": "string",
            "initiatedEventId": number,
            "startedEventId": number,
            "workflowExecution": {
                "runId": "string",
                "workflowId": "string"
            },
            "workflowType": {
                "name": "string",
                "version": "string"
            }
        },
        "childWorkflowExecutionCompletedEventAttributes": {
            "initiatedEventId": number,
            "result": "string",
            "startedEventId": number,
            "workflowExecution": {
                "runId": "string",
                "workflowId": "string"
            },
            "workflowType": {
                "name": "string",
                "version": "string"
            }
        },
        "childWorkflowExecutionFailedEventAttributes": {
            "details": "string",
            "initiatedEventId": number,
            "reason": "string",
            "startedEventId": number,
            "workflowExecution": {
                "runId": "string",
                "workflowId": "string"
            },
            "workflowType": {
                "name": "string",
                "version": "string"
            }
        },
        "childWorkflowExecutionStartedEventAttributes": {
            "initiatedEventId": number,
            "workflowExecution": {
                "runId": "string",
                "workflowId": "string"
            },
            "workflowType": {
                "name": "string",
                "version": "string"
            }
        },
        "childWorkflowExecutionTerminatedEventAttributes": {
            "initiatedEventId": number,
            "startedEventId": number,
```

```
      "workflowExecution": {
         "runId": "string",
         "workflowId": "string"
      },
      "workflowType": {
         "name": "string",
         "version": "string"
      }
   },
   "childWorkflowExecutionTimedOutEventAttributes": {
      "initiatedEventId": number,
      "startedEventId": number,
      "timeoutType": "string",
      "workflowExecution": {
         "runId": "string",
         "workflowId": "string"
      },
      "workflowType": {
         "name": "string",
         "version": "string"
      }
   },
   "completeWorkflowExecutionFailedEventAttributes": {
      "cause": "string",
      "decisionTaskCompletedEventId": number
   },
   "continueAsNewWorkflowExecutionFailedEventAttributes": {
      "cause": "string",
      "decisionTaskCompletedEventId": number
   },
   "decisionTaskCompletedEventAttributes": {
      "executionContext": "string",
      "scheduledEventId": number,
      "startedEventId": number
   },
   "decisionTaskScheduledEventAttributes": {
      "startToCloseTimeout": "string",
      "taskList": {
         "name": "string"
      },
      "taskPriority": "string"
   },
   "decisionTaskStartedEventAttributes": {
      "identity": "string",
      "scheduledEventId": number
   },
   "decisionTaskTimedOutEventAttributes": {
      "scheduledEventId": number,
      "startedEventId": number,
      "timeoutType": "string"
   },
   "eventId": number,
   "eventTimestamp": number,
   "eventType": "string",
   "externalWorkflowExecutionCancelRequestedEventAttributes": {
      "initiatedEventId": number,
      "workflowExecution": {
         "runId": "string",
         "workflowId": "string"
      }
   },
   "externalWorkflowExecutionSignaledEventAttributes": {
      "initiatedEventId": number,
      "workflowExecution": {
         "runId": "string",
         "workflowId": "string"
```

```
            }
        },
        "failWorkflowExecutionFailedEventAttributes": {
            "cause": "string",
            "decisionTaskCompletedEventId": number
        },
        "lambdaFunctionCompletedEventAttributes": {
            "result": "string",
            "scheduledEventId": number,
            "startedEventId": number
        },
        "lambdaFunctionFailedEventAttributes": {
            "details": "string",
            "reason": "string",
            "scheduledEventId": number,
            "startedEventId": number
        },
        "lambdaFunctionScheduledEventAttributes": {
            "control": "string",
            "decisionTaskCompletedEventId": number,
            "id": "string",
            "input": "string",
            "name": "string",
            "startToCloseTimeout": "string"
        },
        "lambdaFunctionStartedEventAttributes": {
            "scheduledEventId": number
        },
        "lambdaFunctionTimedOutEventAttributes": {
            "scheduledEventId": number,
            "startedEventId": number,
            "timeoutType": "string"
        },
        "markerRecordedEventAttributes": {
            "decisionTaskCompletedEventId": number,
            "details": "string",
            "markerName": "string"
        },
        "recordMarkerFailedEventAttributes": {
            "cause": "string",
            "decisionTaskCompletedEventId": number,
            "markerName": "string"
        },
        "requestCancelActivityTaskFailedEventAttributes": {
            "activityId": "string",
            "cause": "string",
            "decisionTaskCompletedEventId": number
        },
        "requestCancelExternalWorkflowExecutionFailedEventAttributes": {
            "cause": "string",
            "control": "string",
            "decisionTaskCompletedEventId": number,
            "initiatedEventId": number,
            "runId": "string",
            "workflowId": "string"
        },
        "requestCancelExternalWorkflowExecutionInitiatedEventAttributes": {
            "control": "string",
            "decisionTaskCompletedEventId": number,
            "runId": "string",
            "workflowId": "string"
        },
        "scheduleActivityTaskFailedEventAttributes": {
            "activityId": "string",
            "activityType": {
                "name": "string",
```

```
            "version": "string"
        },
        "cause": "string",
        "decisionTaskCompletedEventId": number
    },
    "scheduleLambdaFunctionFailedEventAttributes": {
        "cause": "string",
        "decisionTaskCompletedEventId": number,
        "id": "string",
        "name": "string"
    },
    "signalExternalWorkflowExecutionFailedEventAttributes": {
        "cause": "string",
        "control": "string",
        "decisionTaskCompletedEventId": number,
        "initiatedEventId": number,
        "runId": "string",
        "workflowId": "string"
    },
    "signalExternalWorkflowExecutionInitiatedEventAttributes": {
        "control": "string",
        "decisionTaskCompletedEventId": number,
        "input": "string",
        "runId": "string",
        "signalName": "string",
        "workflowId": "string"
    },
    "startChildWorkflowExecutionFailedEventAttributes": {
        "cause": "string",
        "control": "string",
        "decisionTaskCompletedEventId": number,
        "initiatedEventId": number,
        "workflowId": "string",
        "workflowType": {
            "name": "string",
            "version": "string"
        }
    },
    "startChildWorkflowExecutionInitiatedEventAttributes": {
        "childPolicy": "string",
        "control": "string",
        "decisionTaskCompletedEventId": number,
        "executionStartToCloseTimeout": "string",
        "input": "string",
        "lambdaRole": "string",
        "tagList": [ "string" ],
        "taskList": {
            "name": "string"
        },
        "taskPriority": "string",
        "taskStartToCloseTimeout": "string",
        "workflowId": "string",
        "workflowType": {
            "name": "string",
            "version": "string"
        }
    },
    "startLambdaFunctionFailedEventAttributes": {
        "cause": "string",
        "message": "string",
        "scheduledEventId": number
    },
    "startTimerFailedEventAttributes": {
        "cause": "string",
        "decisionTaskCompletedEventId": number,
        "timerId": "string"
```

```
      },
      "timerCanceledEventAttributes": {
         "decisionTaskCompletedEventId": number,
         "startedEventId": number,
         "timerId": "string"
      },
      "timerFiredEventAttributes": {
         "startedEventId": number,
         "timerId": "string"
      },
      "timerStartedEventAttributes": {
         "control": "string",
         "decisionTaskCompletedEventId": number,
         "startToFireTimeout": "string",
         "timerId": "string"
      },
      "workflowExecutionCanceledEventAttributes": {
         "decisionTaskCompletedEventId": number,
         "details": "string"
      },
      "workflowExecutionCancelRequestedEventAttributes": {
         "cause": "string",
         "externalInitiatedEventId": number,
         "externalWorkflowExecution": {
            "runId": "string",
            "workflowId": "string"
         }
      },
      "workflowExecutionCompletedEventAttributes": {
         "decisionTaskCompletedEventId": number,
         "result": "string"
      },
      "workflowExecutionContinuedAsNewEventAttributes": {
         "childPolicy": "string",
         "decisionTaskCompletedEventId": number,
         "executionStartToCloseTimeout": "string",
         "input": "string",
         "lambdaRole": "string",
         "newExecutionRunId": "string",
         "tagList": [ "string" ],
         "taskList": {
            "name": "string"
         },
         "taskPriority": "string",
         "taskStartToCloseTimeout": "string",
         "workflowType": {
            "name": "string",
            "version": "string"
         }
      },
      "workflowExecutionFailedEventAttributes": {
         "decisionTaskCompletedEventId": number,
         "details": "string",
         "reason": "string"
      },
      "workflowExecutionSignaledEventAttributes": {
         "externalInitiatedEventId": number,
         "externalWorkflowExecution": {
            "runId": "string",
            "workflowId": "string"
         },
         "input": "string",
         "signalName": "string"
      },
      "workflowExecutionStartedEventAttributes": {
         "childPolicy": "string",
```

```
                    "continuedExecutionRunId": "string",
                    "executionStartToCloseTimeout": "string",
                    "input": "string",
                    "lambdaRole": "string",
                    "parentInitiatedEventId": number,
                    "parentWorkflowExecution": {
                        "runId": "string",
                        "workflowId": "string"
                    },
                    "tagList": [ "string" ],
                    "taskList": {
                        "name": "string"
                    },
                    "taskPriority": "string",
                    "taskStartToCloseTimeout": "string",
                    "workflowType": {
                        "name": "string",
                        "version": "string"
                    }
                },
                "workflowExecutionTerminatedEventAttributes": {
                    "cause": "string",
                    "childPolicy": "string",
                    "details": "string",
                    "reason": "string"
                },
                "workflowExecutionTimedOutEventAttributes": {
                    "childPolicy": "string",
                    "timeoutType": "string"
                }
            }
        ],
        "nextPageToken": "string",
        "previousStartedEventId": number,
        "startedEventId": number,
        "taskToken": "string",
        "workflowExecution": {
            "runId": "string",
            "workflowId": "string"
        },
        "workflowType": {
            "name": "string",
            "version": "string"
        }
}
```

Response Elements

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

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

events (p. 85)

A paginated list of history events of the workflow execution. The decider uses this during the
processing of the decision task.

Type: Array of HistoryEvent (p. 202) objects

nextPageToken (p. 85)

If a `NextPageToken` 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 `nextPageToken`. Keep all
other arguments unchanged.

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

Type: String

Length Constraints: Maximum length of 2048.

previousStartedEventId (p. 85)

The ID of the DecisionTaskStarted event of the previous decision task of this workflow execution that was processed by the decider. This can be used to determine the events in the history new since the last decision task received by the decider.

Type: Long

startedEventId (p. 85)

The ID of the `DecisionTaskStarted` event recorded in the history.

Type: Long

taskToken (p. 85)

The opaque string used as a handle on the task. This token is used by workers to communicate progress and response information back to the system about the task.

Type: String

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

workflowExecution (p. 85)

The workflow execution for which this decision task was created.

Type: WorkflowExecution (p. 261) object

workflowType (p. 85)

The type of the workflow execution for which this decision task was created.

Type: WorkflowType (p. 283) object

Errors

For information about the errors that are common to all actions, see Common Errors (p. 290).

LimitExceededFault

Returned by any operation if a system imposed limitation has been reached. To address this fault you should either clean up unused resources or increase the limit by contacting AWS.

HTTP Status Code: 400

OperationNotPermittedFault

Returned when the caller doesn't have sufficient permissions to invoke the action.

HTTP Status Code: 400

UnknownResourceFault

Returned when the named resource cannot be found with in the scope of this operation (region or domain). This could happen if the named resource was never created or is no longer available for this operation.

HTTP Status Code: 400

Example

PollForDecisionTask Example

Sample Request

```
POST / HTTP/1.1
Host: swf.us-east-1.amazonaws.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.2.25) Gecko/20111212
 Firefox/3.6.25 ( .NET CLR 3.5.30729; .NET4.0E)
Accept: application/json, text/javascript, */*
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
Content-Type: application/x-amz-json-1.0
X-Requested-With: XMLHttpRequest
X-Amz-Date: Sun, 15 Jan 2012 02:09:54 GMT
X-Amz-Target: SimpleWorkflowService.PollForDecisionTask
Content-Encoding: amz-1.0
X-Amzn-Authorization: AWS3
 AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=R3CJ2HMLSVpc2p6eafeztZCZWcgza+h61gSUuWx15gw=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 171
Pragma: no-cache
Cache-Control: no-cache

{
  "maximumPageSize": 50,
  "domain": "867530901",
  "taskList": {
  "name": "specialTaskList"
  },
  "reverseOrder": true,
  "identity": "Decider01"
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 1639
Content-Type: application/json
x-amzn-RequestId: 03db54cf-3f1e-11e1-b118-3bfa5e8e7fc3

{
  "previousStartedEventId": 0,
  "workflowExecution": {
  "workflowId": "20110927-T-1",
  "runId": "06b8f87a-24b3-40b6-9ceb-9676f28e9493"
  },
  "startedEventId": 3,
  "workflowType": {
  "version": "1.0",
  "name": "customerOrderWorkflow"
  },
  "events": [
  {
    "eventId": 3,
    "decisionTaskStartedEventAttributes": {
```

```
      "scheduledEventId": 2,
      "identity": "Decider01"
      },
      "eventTimestamp": 1326593394.566,
      "eventType": "DecisionTaskStarted"
    },
    {
      "eventId": 2,
      "eventType": "DecisionTaskScheduled",
      "decisionTaskScheduledEventAttributes": {
      "startToCloseTimeout": "600",
      "taskList": {
        "name": "specialTaskList"
      },
      "taskPriority": "100"
      },
      "eventTimestamp": 1326592619.474
    },
    {
      "eventId": 1,
      "eventType": "WorkflowExecutionStarted",
      "workflowExecutionStartedEventAttributes": {
      "taskList": {
        "name": "specialTaskList"
      },
      "parentInitiatedEventId": 0,
      "taskStartToCloseTimeout": "600",
      "childPolicy": "TERMINATE",
      "executionStartToCloseTimeout": "3600",
      "input": "arbitrary-string-that-is-meaningful-to-the-workflow",
      "workflowType": {
        "version": "1.0",
        "name": "customerOrderWorkflow"
      },
      "tagList": [
        "music purchase",
        "digital",
        "ricoh-the-dog"
      ]
      },
      "eventTimestamp": 1326592619.474
    }
  ],
  "taskToken": "AAAAKgAAAAEAAAAAAAAAATZDvCYwk/hP/X1ZGdJhb
+T6OWzcBx2DPhsIi5HF4aGQI4OXrDE7Ny3uM+aiAhGrmeNyVAa4yNIBQuoZuJA5G
+BoaB0JuHFBOynHDTnm7ayNH43KhMkfdrDG4elfHSz3m/
EtbLnFGueAr7+3NKDG6x4sTKg3cZpOtSguSx05yI1X3AtscS8ATcLB2Y3Aub1YonN/
i/k67voca/GFsSiwSz3AAnJj1IPvrujgIj9KUvckwRPC5ET7d33XJcRp
+gHYzZsBLVBaRmV3gEYAnp2ICslFn4YSjGy+dFXCNpOa4G1O8pczCbFUGbQ3+5wf0RSaa/
xMq2pfdBKnuFp0wp8kw1k+5ZsbtDZeZn8g5GyKCLiLms/xD0OxugGGUe5ZlAoHEkTWGxZj/
G32P7cMoCgrcACfFPdx1LNYYEre7YiGiyjGnfW2t5mW7VK9Np28vcXVbdpH4JNEB9OuB1xqL8N8ifPVtc72uxB1i9XEdq/8rkXasSEw
fUkGucTUXQP2hhB+Gz"
}
```

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

RecordActivityTaskHeartbeat

Used by activity workers to report to the service that the ActivityTask (p. 148) represented by the specified `taskToken` is still making progress. The worker can also specify details of the progress, for example percent complete, using the `details` parameter. This action can also be used by the worker as a mechanism to check if cancellation is being requested for the activity task. If a cancellation is being attempted for the specified task, then the boolean `cancelRequested` flag returned by the service is set to `true`.

This action resets the `taskHeartbeatTimeout` clock. The `taskHeartbeatTimeout` is specified in RegisterActivityType (p. 100).

This action doesn't in itself create an event in the workflow execution history. However, if the task times out, the workflow execution history contains a `ActivityTaskTimedOut` event that contains the information from the last heartbeat generated by the activity worker.

> **Note**
> The `taskStartToCloseTimeout` of an activity type is the maximum duration of an activity task, regardless of the number of RecordActivityTaskHeartbeat (p. 96) requests received. The `taskStartToCloseTimeout` is also specified in RegisterActivityType (p. 100).

> **Note**
> This operation is only useful for long-lived activities to report liveliness of the task and to determine if a cancellation is being attempted.

> **Important**
> If the `cancelRequested` flag returns `true`, a cancellation is being attempted. If the worker can cancel the activity, it should respond with RespondActivityTaskCanceled (p. 116). Otherwise, it should ignore the cancellation request.

Access Control

You can use IAM policies to control this action's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- You cannot use an IAM policy to constrain this action's parameters.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 288).

The request accepts the following data in JSON format.

details (p. 96)

If specified, contains details about the progress of the task.

Type: String

Length Constraints: Maximum length of 2048.

Required: No

taskToken (p. 96)

The `taskToken` of the ActivityTask (p. 148).

> **Important**
> `taskToken` is generated by the service and should be treated as an opaque value. If the
> task is passed to another process, its `taskToken` must also be passed. This enables it to
> provide its progress and respond with results.

Type: String

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

Required: Yes

Response Syntax

```
{
    "cancelRequested": 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.

cancelRequested (p. 97)

Set to `true` if cancellation of the task is requested.

Type: Boolean

Errors

For information about the errors that are common to all actions, see Common Errors (p. 290).

OperationNotPermittedFault

Returned when the caller doesn't have sufficient permissions to invoke the action.

HTTP Status Code: 400

UnknownResourceFault

Returned when the named resource cannot be found with in the scope of this operation (region or
domain). This could happen if the named resource was never created or is no longer available for this
operation.

HTTP Status Code: 400

Example

RecordActivityTaskHeartbeat Example

Sample Request

```
POST / HTTP/1.1
Host: swf.us-east-1.amazonaws.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.2.25) Gecko/20111212
 Firefox/3.6.25 ( .NET CLR 3.5.30729; .NET4.0E)
Accept: application/json, text/javascript, */*
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
Content-Type: application/x-amz-json-1.0
X-Requested-With: XMLHttpRequest
X-Amz-Date: Mon, 16 Jan 2012 03:55:06 GMT
X-Amz-Target: SimpleWorkflowService.RecordActivityTaskHeartbeat
Content-Encoding: amz-1.0
X-Amzn-Authorization: AWS3
 AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=DEA8rw5TqtpqCeTljl7eotZkuWTgmGZ1PWyDNZPehT0=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 623
Pragma: no-cache
Cache-Control: no-cache

{"taskToken": "AAAAKgAAAAEAAAAAAAAAAAX9p3pcp3857oLXFUuwdxRU5/
zmn9f40XaMF7VohAH4jOtjXpZu7GdOzEi0b3cWYHbG5b5dpdcTXHUDPVMHXiUxCgr+Nc/wUW9016W4YxJGs/
jmxzPln8qLftU+SW135Q0UuKp5XRGoRTJp3tbHn2pY1vC8gDB/K69J6q668U1pd4Cd9o43//
lGgOIjN0/Ihg+DO+83HNcOuVEQMM28kNMXf7yePh31M4dMKJwQaQZG13huJXDwzJOoZQz+XFuqFly
+lPnCE4XvsnhfAvTsh50EtNDEtQzPCFJoUeld9g64V/FS/39PHL3M93PBUuroPyHuCwHsNC6fZ7gM/
XOKmW4kKnXPoQweEUkFV/J6E6+M1reBO7nJADTrLSnajg6MY/viWsEYmMw/
DS5FlquFaDIhFkLhWUWN+V2KqiKS23GYwpzgZ7fgcWHQF2NLEY3zrjam4LW/
UW5VLCyM3FpVD3erCTi9IvUgslPzyVGuWNAoTmgJEWvimgwiHxJMxxc9JBDR390iMmImxVl3eeSDUWx8reQltiviadPDjyRmVhYP8",
"details": "starting task"}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 25
Content-Type: application/json
x-amzn-RequestId: e08622cd-3ff5-11e1-9b11-7182192d0b57

{"cancelRequested":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

RegisterActivityType

Registers a new *activity type* along with its configuration settings in the specified domain.

Important
A `TypeAlreadyExists` fault is returned if the type already exists in the domain. You cannot change any configuration settings of the type after its registration, and it must be registered as a new version.

Access Control

You can use IAM policies to control this action's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- Constrain the following parameters by using a `Condition` element with the appropriate keys.
  - `defaultTaskList.name`: String constraint. The key is `swf:defaultTaskList.name`.
  - `name`: String constraint. The key is `swf:name`.
  - `version`: String constraint. The key is `swf:version`.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

```
{
    "defaultTaskHeartbeatTimeout": "string",
    "defaultTaskList": {
        "name": "string"
    },
    "defaultTaskPriority": "string",
    "defaultTaskScheduleToCloseTimeout": "string",
    "defaultTaskScheduleToStartTimeout": "string",
    "defaultTaskStartToCloseTimeout": "string",
    "description": "string",
    "domain": "string",
    "name": "string",
    "version": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 288).

The request accepts the following data in JSON format.

defaultTaskHeartbeatTimeout (p. 100)

If set, specifies the default maximum time before which a worker processing a task of this type must report progress by calling RecordActivityTaskHeartbeat (p. 96). If the timeout is exceeded, the activity task is automatically timed out. This default can be overridden when scheduling an activity task using the `ScheduleActivityTask` Decision (p. 184). If the activity worker

subsequently attempts to record a heartbeat or returns a result, the activity worker receives an `UnknownResource` fault. In this case, Amazon SWF no longer considers the activity task to be valid; the activity worker should clean up the activity task.

The duration is specified in seconds, an integer greater than or equal to `0`. You can use `NONE` to specify unlimited duration.

Type: String

Length Constraints: Maximum length of 8.

Required: No

defaultTaskList (p. 100)

If set, specifies the default task list to use for scheduling tasks of this activity type. This default task list is used if a task list isn't provided when a task is scheduled through the `ScheduleActivityTask` Decision (p. 184).

Type: TaskList (p. 257) object

Required: No

defaultTaskPriority (p. 100)

The default task priority to assign to the activity type. If not assigned, then `0` is used. Valid values are integers that range from Java's `Integer.MIN_VALUE` (-2147483648) to `Integer.MAX_VALUE` (2147483647). Higher numbers indicate higher priority.

For more information about setting task priority, see Setting Task Priority in the *in the* Amazon SWF Developer Guide..

Type: String

Required: No

defaultTaskScheduleToCloseTimeout (p. 100)

If set, specifies the default maximum duration for a task of this activity type. This default can be overridden when scheduling an activity task using the `ScheduleActivityTask` Decision (p. 184).

The duration is specified in seconds, an integer greater than or equal to `0`. You can use `NONE` to specify unlimited duration.

Type: String

Length Constraints: Maximum length of 8.

Required: No

defaultTaskScheduleToStartTimeout (p. 100)

If set, specifies the default maximum duration that a task of this activity type can wait before being assigned to a worker. This default can be overridden when scheduling an activity task using the `ScheduleActivityTask` Decision (p. 184).

The duration is specified in seconds, an integer greater than or equal to `0`. You can use `NONE` to specify unlimited duration.

Type: String

Length Constraints: Maximum length of 8.

Required: No

defaultTaskStartToCloseTimeout (p. 100)

If set, specifies the default maximum duration that a worker can take to process tasks of this activity type. This default can be overridden when scheduling an activity task using the `ScheduleActivityTask` Decision (p. 184).

The duration is specified in seconds, an integer greater than or equal to `0`. You can use `NONE` to specify unlimited duration.

Type: String

Length Constraints: Maximum length of 8.

Required: No

description (p. 100)

A textual description of the activity type.

Type: String

Length Constraints: Maximum length of 1024.

Required: No

domain (p. 100)

The name of the domain in which this activity is to be registered.

Type: String

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

Required: Yes

name (p. 100)

The name of the activity type within the domain.

The specified string must not start or end with whitespace. It must not contain a `:` (colon), `/` (slash), `|` (vertical bar), or any control characters (`\u0000-\u001f` | `\u007f-\u009f`). Also, it must not contain the literal string `arn`.

Type: String

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

Required: Yes

version (p. 100)

The version of the activity type.

> **Note**
> The activity type consists of the name and version, the combination of which must be unique within the domain.

The specified string must not start or end with whitespace. It must not contain a `:` (colon), `/` (slash), `|` (vertical bar), or any control characters (`\u0000-\u001f` | `\u007f-\u009f`). Also, it must not contain the literal string `arn`.

Type: String

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

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. 290).

LimitExceededFault

Returned by any operation if a system imposed limitation has been reached. To address this fault you should either clean up unused resources or increase the limit by contacting AWS.

HTTP Status Code: 400

OperationNotPermittedFault

Returned when the caller doesn't have sufficient permissions to invoke the action.

HTTP Status Code: 400

TypeAlreadyExistsFault

Returned if the type already exists in the specified domain. You get this fault even if the existing type is in deprecated status. You can specify another version if the intent is to create a new distinct version of the type.

HTTP Status Code: 400

UnknownResourceFault

Returned when the named resource cannot be found with in the scope of this operation (region or domain). This could happen if the named resource was never created or is no longer available for this operation.

HTTP Status Code: 400

Example

RegisterActivityType Example

Sample Request

```
POST / HTTP/1.1
Host: swf.us-east-1.amazonaws.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.2.25) Gecko/20111212
 Firefox/3.6.25 ( .NET CLR 3.5.30729; .NET4.0E)
Accept: application/json, text/javascript, */*
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
Content-Type: application/x-amz-json-1.0
X-Requested-With: XMLHttpRequest
X-Amz-Date: Sun, 15 Jan 2012 00:14:06 GMT
```

```
X-Amz-Target: SimpleWorkflowService.RegisterActivityType
Content-Encoding: amz-1.0
X-Amzn-Authorization: AWS3
 AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=F9cptqaGWa2H7LW3dpctF9J5svsB6FRZ4krghCRnml0=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 343
Pragma: no-cache
Cache-Control: no-cache

{
  "domain": "867530901",
  "defaultTaskScheduleToStartTimeout": "300",
  "name": "activityVerify",
  "defaultTaskHeartbeatTimeout": "120",
  "defaultTaskPriority": "10",
  "defaultTaskStartToCloseTimeout": "600",
  "defaultTaskScheduleToCloseTimeout": "900",
  "version": "1.0",
  "defaultTaskList": {
  "name": "mainTaskList"
  },
  "description": "Verify the customer credit card"
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 0
Content-Type: application/json
x-amzn-RequestId: d68969c7-3f0d-11e1-9b11-7182192d0b57
```

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

RegisterDomain

Registers a new domain.

Access Control

You can use IAM policies to control this action's access to Amazon SWF resources as follows:

- You cannot use an IAM policy to control domain access for this action. The name of the domain being registered is available as the resource of this action.
- Use an `Action` element to allow or deny permission to call this action.
- You cannot use an IAM policy to constrain this action's parameters.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

```
{
    "description": "string",
    "name": "string",
    "workflowExecutionRetentionPeriodInDays": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 288).

The request accepts the following data in JSON format.

description (p. 105)

A text description of the domain.

Type: String

Length Constraints: Maximum length of 1024.

Required: No

name (p. 105)

Name of the domain to register. The name must be unique in the region that the domain is registered in.

The specified string must not start or end with whitespace. It must not contain a `:` (colon), `/` (slash), `|` (vertical bar), or any control characters (`\u0000-\u001f` | `\u007f-\u009f`). Also, it must not contain the literal string `arn`.

Type: String

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

Required: Yes

workflowExecutionRetentionPeriodInDays (p. 105)

The duration (in days) that records and histories of workflow executions on the domain should be kept by the service. After the retention period, the workflow execution isn't available in the results of visibility calls.

If you pass the value NONE or 0 (zero), then the workflow execution history isn't retained. As soon as the workflow execution completes, the execution record and its history are deleted.

The maximum workflow execution retention period is 90 days. For more information about Amazon SWF service limits, see: Amazon SWF Service Limits in the *Amazon SWF Developer Guide*.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 8.

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. 290).

DomainAlreadyExistsFault

Returned if the specified domain already exists. You get this fault even if the existing domain is in deprecated status.

HTTP Status Code: 400

LimitExceededFault

Returned by any operation if a system imposed limitation has been reached. To address this fault you should either clean up unused resources or increase the limit by contacting AWS.

HTTP Status Code: 400

OperationNotPermittedFault

Returned when the caller doesn't have sufficient permissions to invoke the action.

HTTP Status Code: 400

Example

RegisterDomain Example

Sample Request

```
POST / HTTP/1.1
Host: swf.us-east-1.amazonaws.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.2.25) Gecko/20111212
 Firefox/3.6.25 ( .NET CLR 3.5.30729; .NET4.0E)
Accept: application/json, text/javascript, */*
```

```
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
Content-Type: application/x-amz-json-1.0
X-Requested-With: XMLHttpRequest
X-Amz-Date: Fri, 13 Jan 2012 18:42:12 GMT
X-Amz-Target: SimpleWorkflowService.RegisterDomain
Content-Encoding: amz-1.0
X-Amzn-Authorization: AWS3
 AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=tzjkF55lxAxPhzp/BRGFYQRQRq6CqrM254dTDE/EncI=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 91
Pragma: no-cache
Cache-Control: no-cache

{"name": "867530902",
 "description": "music",
 "workflowExecutionRetentionPeriodInDays": "60"}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 0
Content-Type: application/json
x-amzn-RequestId: 4ec4ac3f-3e16-11e1-9b11-7182192d0b57
```

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

RegisterWorkflowType

Registers a new *workflow type* and its configuration settings in the specified domain.

The retention period for the workflow history is set by the RegisterDomain (p. 105) action.

> **Important**
> If the type already exists, then a `TypeAlreadyExists` fault is returned. You cannot change the configuration settings of a workflow type once it is registered and it must be registered as a new version.

Access Control

You can use IAM policies to control this action's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- Constrain the following parameters by using a `Condition` element with the appropriate keys.
  - `defaultTaskList.name`: String constraint. The key is `swf:defaultTaskList.name`.
  - `name`: String constraint. The key is `swf:name`.
  - `version`: String constraint. The key is `swf:version`.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

```
{
   "defaultChildPolicy": "string",
   "defaultExecutionStartToCloseTimeout": "string",
   "defaultLambdaRole": "string",
   "defaultTaskList": {
      "name": "string"
   },
   "defaultTaskPriority": "string",
   "defaultTaskStartToCloseTimeout": "string",
   "description": "string",
   "domain": "string",
   "name": "string",
   "version": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 288).

The request accepts the following data in JSON format.

defaultChildPolicy (p. 108)

   If set, specifies the default policy to use for the child workflow executions when a workflow execution of this type is terminated, by calling the TerminateWorkflowExecution (p. 141)

action explicitly or due to an expired timeout. This default can be overridden when starting a workflow execution using the StartWorkflowExecution (p. 134) action or the `StartChildWorkflowExecution` Decision (p. 184).

The supported child policies are:

- `TERMINATE` – The child executions are terminated.
- `REQUEST_CANCEL` – A request to cancel is attempted for each child execution by recording a `WorkflowExecutionCancelRequested` event in its history. It is up to the decider to take appropriate actions when it receives an execution history with this event.
- `ABANDON` – No action is taken. The child executions continue to run.

Type: String

Valid Values: `TERMINATE | REQUEST_CANCEL | ABANDON`

Required: No

defaultExecutionStartToCloseTimeout (p. 108)

If set, specifies the default maximum duration for executions of this workflow type. You can override this default when starting an execution through the StartWorkflowExecution (p. 134) Action or `StartChildWorkflowExecution` Decision (p. 184).

The duration is specified in seconds; an integer greater than or equal to 0. Unlike some of the other timeout parameters in Amazon SWF, you cannot specify a value of "NONE" for `defaultExecutionStartToCloseTimeout`; there is a one-year max limit on the time that a workflow execution can run. Exceeding this limit always causes the workflow execution to time out.

Type: String

Length Constraints: Maximum length of 8.

Required: No

defaultLambdaRole (p. 108)

The default IAM role attached to this workflow type.

> **Note**
> Executions of this workflow type need IAM roles to invoke Lambda functions. If you don't specify an IAM role when you start this workflow type, the default Lambda role is attached to the execution. For more information, see https://docs.aws.amazon.com/amazonswf/latest/developerguide/lambda-task.html in the *Amazon SWF Developer Guide*.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1600.

Required: No

defaultTaskList (p. 108)

If set, specifies the default task list to use for scheduling decision tasks for executions of this workflow type. This default is used only if a task list isn't provided when starting the execution through the StartWorkflowExecution (p. 134) Action or `StartChildWorkflowExecution` Decision (p. 184).

Type: TaskList (p. 257) object

Required: No

defaultTaskPriority (p. 108)

The default task priority to assign to the workflow type. If not assigned, then `0` is used. Valid values are integers that range from Java's `Integer.MIN_VALUE` (-2147483648) to `Integer.MAX_VALUE` (2147483647). Higher numbers indicate higher priority.

For more information about setting task priority, see Setting Task Priority in the *Amazon SWF Developer Guide*.

Type: String

Required: No

defaultTaskStartToCloseTimeout (p. 108)

If set, specifies the default maximum duration of decision tasks for this workflow type. This default can be overridden when starting a workflow execution using the StartWorkflowExecution (p. 134) action or the `StartChildWorkflowExecution` Decision (p. 184).

The duration is specified in seconds, an integer greater than or equal to `0`. You can use `NONE` to specify unlimited duration.

Type: String

Length Constraints: Maximum length of 8.

Required: No

description (p. 108)

Textual description of the workflow type.

Type: String

Length Constraints: Maximum length of 1024.

Required: No

domain (p. 108)

The name of the domain in which to register the workflow type.

Type: String

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

Required: Yes

name (p. 108)

The name of the workflow type.

The specified string must not start or end with whitespace. It must not contain a `:` (colon), `/` (slash), `|` (vertical bar), or any control characters (`\u0000-\u001f` | `\u007f-\u009f`). Also, it must not contain the literal string `arn`.

Type: String

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

Required: Yes

version (p. 108)

The version of the workflow type.

Note
The workflow type consists of the name and version, the combination of which must be
unique within the domain. To get a list of all currently registered workflow types, use the
ListWorkflowTypes (p. 74) action.

The specified string must not start or end with whitespace. It must not contain a `:` (colon), `/` (slash),
`|` (vertical bar), or any control characters (`\u0000-\u001f` | `\u007f-\u009f`). Also, it must not
contain the literal string `arn`.

Type: String

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

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. 290).

LimitExceededFault

Returned by any operation if a system imposed limitation has been reached. To address this fault
you should either clean up unused resources or increase the limit by contacting AWS.

HTTP Status Code: 400

OperationNotPermittedFault

Returned when the caller doesn't have sufficient permissions to invoke the action.

HTTP Status Code: 400

TypeAlreadyExistsFault

Returned if the type already exists in the specified domain. You get this fault even if the existing
type is in deprecated status. You can specify another version if the intent is to create a new distinct
version of the type.

HTTP Status Code: 400

UnknownResourceFault

Returned when the named resource cannot be found with in the scope of this operation (region or
domain). This could happen if the named resource was never created or is no longer available for this
operation.

HTTP Status Code: 400

Example

RegisterWorkflowType Example

Sample Request

```
POST / HTTP/1.1
```

```
Host: swf.us-east-1.amazonaws.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.2.25) Gecko/20111212
 Firefox/3.6.25 ( .NET CLR 3.5.30729; .NET4.0E)
Accept: application/json, text/javascript, */*
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
Content-Type: application/x-amz-json-1.0
X-Requested-With: XMLHttpRequest
X-Amz-Date: Fri, 13 Jan 2012 18:59:33 GMT
X-Amz-Target: SimpleWorkflowService.RegisterWorkflowType
Content-Encoding: amz-1.0
X-Amzn-Authorization: AWS3
 AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=p5FUOoV3QXAafb7aK5z79Ztu5v0w9NeEqLu0ei+P9FA=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 300
Pragma: no-cache
Cache-Control: no-cache

{
  "defaultExecutionStartToCloseTimeout": "3600",
  "domain": "867530901",
  "name": "customerOrderWorkflow",
  "defaultChildPolicy": "TERMINATE",
  "defaultTaskPriority": "10",
  "defaultTaskStartToCloseTimeout": "600",
  "version": "1.0",
  "defaultTaskList": {
  "name": "mainTaskList"
  },
  "description": "Handle customer orders"
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 0
Content-Type: application/json
x-amzn-RequestId: bb469e67-3e18-11e1-9914-a356b6ea8bdf
```

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

RequestCancelWorkflowExecution

Records a `WorkflowExecutionCancelRequested` event in the currently running workflow execution identified by the given domain, workflowId, and runId. This logically requests the cancellation of the workflow execution as a whole. It is up to the decider to take appropriate actions when it receives an execution history with this event.

> **Note**
> If the runId isn't specified, the `WorkflowExecutionCancelRequested` event is recorded in the history of the current open workflow execution with the specified workflowId in the domain.

> **Note**
> Because this action allows the workflow to properly clean up and gracefully close, it should be used instead of TerminateWorkflowExecution (p. 141) when possible.

Access Control

You can use IAM policies to control this action's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- You cannot use an IAM policy to constrain this action's parameters.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

```
{
    "domain": "string",
    "runId": "string",
    "workflowId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 288).

The request accepts the following data in JSON format.

domain (p. 113)

The name of the domain containing the workflow execution to cancel.

Type: String

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

Required: Yes

runId (p. 113)

The runId of the workflow execution to cancel.

Type: String

Length Constraints: Maximum length of 64.

Required: No

workflowId (p. 113)

The workflowId of the workflow execution to cancel.

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. 290).

OperationNotPermittedFault

Returned when the caller doesn't have sufficient permissions to invoke the action.

HTTP Status Code: 400

UnknownResourceFault

Returned when the named resource cannot be found with in the scope of this operation (region or domain). This could happen if the named resource was never created or is no longer available for this operation.

HTTP Status Code: 400

Example

RequestCancelWorkflowExecution Example

Sample Request

```
POST / HTTP/1.1
Host: swf.us-east-1.amazonaws.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.2.25) Gecko/20111212
 Firefox/3.6.25 ( .NET CLR 3.5.30729; .NET4.0E)
Accept: application/json, text/javascript, */*
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
Content-Type: application/x-amz-json-1.0
X-Requested-With: XMLHttpRequest
X-Amz-Date: Mon, 16 Jan 2012 04:49:06 GMT
X-Amz-Target: SimpleWorkflowService.RequestCancelWorkflowExecution
```

```
Content-Encoding: amz-1.0
X-Amzn-Authorization: AWS3
 AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=xODwV3kbpJbWVa6bQiV2zQAw9euGI3uXI82urc+bVeo=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 106
Pragma: no-cache
Cache-Control: no-cache

{"domain": "867530901",
"workflowId": "20110927-T-1",
"runId": "94861fda-a714-4126-95d7-55ba847da8ab"}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 0
Content-Type: application/json
x-amzn-RequestId: 6bd0627e-3ffd-11e1-9b11-7182192d0b57
```

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

RespondActivityTaskCanceled

Used by workers to tell the service that the ActivityTask (p. 148) identified by the `taskToken` was successfully canceled. Additional `details` can be provided using the `details` argument.

These `details` (if provided) appear in the `ActivityTaskCanceled` event added to the workflow history.

Important
Only use this operation if the `canceled` flag of a RecordActivityTaskHeartbeat (p. 96) request returns `true` and if the activity can be safely undone or abandoned.

A task is considered open from the time that it is scheduled until it is closed. Therefore a task is reported as open while a worker is processing it. A task is closed after it has been specified in a call to RespondActivityTaskCompleted (p. 119), RespondActivityTaskCanceled, RespondActivityTaskFailed (p. 122), or the task has timed out.

Access Control

You can use IAM policies to control this action's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- You cannot use an IAM policy to constrain this action's parameters.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 288).

The request accepts the following data in JSON format.

details (p. 116)

Information about the cancellation.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

taskToken (p. 116)

The `taskToken` of the ActivityTask (p. 148).

> **Important**
> `taskToken` is generated by the service and should be treated as an opaque value. If the task is passed to another process, its `taskToken` must also be passed. This enables it to provide its progress and respond with results.

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 .

OperationNotPermittedFault

Returned when the caller doesn't have sufficient permissions to invoke the action.

HTTP Status Code: 400

UnknownResourceFault

Returned when the named resource cannot be found with in the scope of this operation (region or domain). This could happen if the named resource was never created or is no longer available for this operation.

HTTP Status Code: 400

Example

RespondActivityTaskCanceled Example

Sample Request

```
POST / HTTP/1.1
Host: swf.us-east-1.amazonaws.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.2.25) Gecko/20111212
 Firefox/3.6.25 ( .NET CLR 3.5.30729; .NET4.0E)
Accept: application/json, text/javascript, */*
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
Content-Type: application/x-amz-json-1.0
X-Requested-With: XMLHttpRequest
X-Amz-Date: Mon, 16 Jan 2012 04:36:44 GMT
X-Amz-Target: SimpleWorkflowService.RespondActivityTaskCanceled
Content-Encoding: amz-1.0
X-Amzn-Authorization: AWS3
 AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=7ZMb0Np0OyXw6hrFSBFDAfBnSaEP1TH7cAG29DL5BUI=
```

```
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 640
Pragma: no-cache
Cache-Control: no-cache

{"taskToken": "AAAAKgAAAEAAAAAAAAAAQlFok8Ay875ki85gos/
Okm9kWg1Jm6DbwiBZgxyCrW2OS+DQQtrCTMr+KH1ouxrCVOkTXPOUY/M4Ujfr1CrsMi6S0DMD8/
N6yxzd34+PIIvRY8w9M5z89PbPQKjKHKbz2ocbTnHgRThaBO4ZmeadNyZWSeQyZXmsQFmFuHfaH9P2ibzrDS1dU+s/
iw/R9RBrRWArsph/FIfWdRUJfu/
FH9IFPSb3KYKMVaJAOyWhcR1KrRGywIGxPC7m9tQjapXqitoRYj42qgABydT4NVR5cLCkeYW0LKxUGVU46+gNvRaUfYzP31JVARQh5d
ERi10m6bamPJ3UcZfLFbM42mIINywmcTORMpQ/nPGLU1iECYrtnAV0YTlGZfGm
+Vi6Gcgwyi4hEjg7TCBjc6WBw3JuAfFvUPU5cfvAoX7quUZRA7JUnYGObE0y9zYuTnCx6C1GL7Ks2MEA0coIiAl4JZx6qsGYfeKjIGr
"details": "customer canceled transaction"}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 0
Content-Type: application/json
x-amzn-RequestId: b1a001a6-3ffb-11e1-9b11-7182192d0b57
```

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

RespondActivityTaskCompleted

Used by workers to tell the service that the ActivityTask (p. 148) identified by the `taskToken` completed successfully with a `result` (if provided). The `result` appears in the `ActivityTaskCompleted` event in the workflow history.

> **Important**
> If the requested task doesn't complete successfully, use RespondActivityTaskFailed (p. 122) instead. If the worker finds that the task is canceled through the `canceled` flag returned by RecordActivityTaskHeartbeat (p. 96), it should cancel the task, clean up and then call RespondActivityTaskCanceled (p. 116).

A task is considered open from the time that it is scheduled until it is closed. Therefore a task is reported as open while a worker is processing it. A task is closed after it has been specified in a call to RespondActivityTaskCompleted, RespondActivityTaskCanceled (p. 116), RespondActivityTaskFailed (p. 122), or the task has timed out.

Access Control

You can use IAM policies to control this action's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- You cannot use an IAM policy to constrain this action's parameters.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

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

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 288).

The request accepts the following data in JSON format.

result (p. 119)

The result of the activity task. It is a free form string that is implementation specific.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

taskToken (p. 119)

The `taskToken` of the ActivityTask (p. 148).

Important

`taskToken` is generated by the service and should be treated as an opaque value. If the task is passed to another process, its `taskToken` must also be passed. This enables it to provide its progress and respond with results.

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. 290).

OperationNotPermittedFault

Returned when the caller doesn't have sufficient permissions to invoke the action.

HTTP Status Code: 400

UnknownResourceFault

Returned when the named resource cannot be found with in the scope of this operation (region or domain). This could happen if the named resource was never created or is no longer available for this operation.

HTTP Status Code: 400

Example

RespondActivityTaskCompleted Example

Sample Request

```
POST / HTTP/1.1
Host: swf.us-east-1.amazonaws.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.2.25) Gecko/20111212
 Firefox/3.6.25 ( .NET CLR 3.5.30729; .NET4.0E)
Accept: application/json, text/javascript, */*
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
Content-Type: application/x-amz-json-1.0
X-Requested-With: XMLHttpRequest
X-Amz-Date: Mon, 16 Jan 2012 03:56:15 GMT
X-Amz-Target: SimpleWorkflowService.RespondActivityTaskCompleted
Content-Encoding: amz-1.0
X-Amzn-Authorization: AWS3
 AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=M+ygHbMHSHJiVrsAQTW/BfkgHoNzLPnPD+dVywJiPXE=
```

```
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 638
Pragma: no-cache
Cache-Control: no-cache

{"taskToken": "AAAAKgAAAAEAAAAAAAAAAX9p3pcp3857oLXFUuwdxRU5/
zmn9f40XaMF7VohAH4jOtjXpZu7GdOzEi0b3cWYHbG5b5dpdcTXHUDPVMHXiUxCgr+Nc/wUW9016W4YxJGs/
jmxzPln8qLftU+SW135Q0UuKp5XRGoRTJp3tbHn2pY1vC8gDB/K69J6q668U1pd4Cd9o43//
lGgOIjN0/Ihg+DO+83HNcOuVEQMM28kNMXf7yePh31M4dMKJwQaQZG13huJXDwzJOoZQz+XFuqFly
+lPnCE4XvsnhfAvTsh50EtNDEtQzPCFJoUeld9g64V/FS/39PHL3M93PBUuroPyHuCwHsNC6fZ7gM/
XOKmW4kKnXPoQweEUkFV/J6E6+M1reBO7nJADTrLSnajg6MY/viWsEYmMw/
DS5FlquFaDIhFkLhWUWN+V2KqiKS23GYwpzgZ7fgcWHQF2NLEY3zrjam4LW/
UW5VLCyM3FpVD3erCTi9IvUgslPzyVGuWNAoTmgJEWvimgwiHxJMxxc9JBDR390iMmImxVl3eeSDUWx8reQltiviadPDjyRmVhYP8",
"result": "customer credit card verified"}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 0
Content-Type: application/json
x-amzn-RequestId: 0976f0f4-3ff6-11e1-9a27-0760db01a4a8
```

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

RespondActivityTaskFailed

Used by workers to tell the service that the ActivityTask (p. 148) identified by the `taskToken` has failed with `reason` (if specified). The `reason` and `details` appear in the `ActivityTaskFailed` event added to the workflow history.

A task is considered open from the time that it is scheduled until it is closed. Therefore a task is reported as open while a worker is processing it. A task is closed after it has been specified in a call to RespondActivityTaskCompleted (p. 119), RespondActivityTaskCanceled (p. 116), RespondActivityTaskFailed, or the task has timed out.

Access Control

You can use IAM policies to control this action's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- You cannot use an IAM policy to constrain this action's parameters.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

```
{
   "details": "string",
   "reason": "string",
   "taskToken": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 288).

The request accepts the following data in JSON format.

details (p. 122)

Detailed information about the failure.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

reason (p. 122)

Description of the error that may assist in diagnostics.

Type: String

Length Constraints: Maximum length of 256.

Required: No

taskToken (p. 122)

The `taskToken` of the [ActivityTask (p. 148)](#).

> **Important**
> `taskToken` is generated by the service and should be treated as an opaque value. If the task is passed to another process, its `taskToken` must also be passed. This enables it to provide its progress and respond with results.

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. 290)](#).

OperationNotPermittedFault

Returned when the caller doesn't have sufficient permissions to invoke the action.

HTTP Status Code: 400

UnknownResourceFault

Returned when the named resource cannot be found with in the scope of this operation (region or domain). This could happen if the named resource was never created or is no longer available for this operation.

HTTP Status Code: 400

Example

RespondActivityTaskFailed Example

Sample Request

```
POST / HTTP/1.1
Host: swf.us-east-1.amazonaws.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.2.25) Gecko/20111212
 Firefox/3.6.25 ( .NET CLR 3.5.30729; .NET4.0E)
Accept: application/json, text/javascript, */*
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
Content-Type: application/x-amz-json-1.0
X-Requested-With: XMLHttpRequest
X-Amz-Date: Mon, 16 Jan 2012 04:17:24 GMT
```

```
X-Amz-Target: SimpleWorkflowService.RespondActivityTaskFailed
Content-Encoding: amz-1.0
X-Amzn-Authorization: AWS3
 AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=JC+/uds/mFEq8qca2WFs5kfp2eAEONc70IqFgHErhpc=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 682
Pragma: no-cache
Cache-Control: no-cache

{"taskToken":
 "AAAAKgAAAAEAAAAAAAAAAdG7j7YFEl9pfKdXRL3Cy3Q3c1Z8QwdOSX53bKiUV6MMGXvf3Lrinmmzj1HFFl5lcwHzEFxLbMaSZ/
lMt/RFJPumHXAnUqlYjZLODhrBqsIzDQFKcbCFMq7y4jm0EFzsV2Suv8iu/obcZ/
idU8qjd9uG/82zumG2xz1Z4IbOFwOTlpj2++5YVH4ftyycIcjlDw58r0O1vAo4PEondkqjyn
+YxBxyZLy1z1fvMi0zeO8Lh16w96y6v+KdVc/
ECoez1Og8sROaXG0l8ptW5YR733LIuUBK4sxWa12egF5i4e8AV8JloojOaq0jy4iFsIscRazOSQErjo15Guz89BK2XW911P3I
+X7nJjH0wwW55XGCs0jezvsEC8M6D9Ob7CgWr6RrnK3g1AKemcby2XqgQRN52DMIYxzV+lMS/
QBYKOqtkLoMY0NKeuRVwm9f1zCY00v6kxqK9m2zFvaxqlJ5/JVCWMNWEWJfQZVtC3GzMWmzeCt7Auq8A5/Caq/
DKyOhTIhY/Go00iiDA6ecP8taTYiVzb8VR5xEiQ1uCxnECkwW",
"reason": "could not verify customer credit card",
"details": "card number invalid"}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 0
Content-Type: application/json
x-amzn-RequestId: feadaedd-3ff8-11e1-9e8f-57bb03e21482
```

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

RespondDecisionTaskCompleted

Used by deciders to tell the service that the DecisionTask (p. 189) identified by the `taskToken` has successfully completed. The `decisions` argument specifies the list of decisions made while processing the task.

A `DecisionTaskCompleted` event is added to the workflow history. The `executionContext` specified is attached to the event in the workflow execution history.

Access Control

If an IAM policy grants permission to use `RespondDecisionTaskCompleted`, it can express permissions for the list of decisions in the `decisions` parameter. Each of the decisions has one or more parameters, much like a regular API call. To allow for policies to be as readable as possible, you can express permissions on decisions as if they were actual API calls, including applying conditions to some parameters. For more information, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

```
{
    "decisions": [
        {
            "cancelTimerDecisionAttributes": {
                "timerId": "string"
            },
            "cancelWorkflowExecutionDecisionAttributes": {
                "details": "string"
            },
            "completeWorkflowExecutionDecisionAttributes": {
                "result": "string"
            },
            "continueAsNewWorkflowExecutionDecisionAttributes": {
                "childPolicy": "string",
                "executionStartToCloseTimeout": "string",
                "input": "string",
                "lambdaRole": "string",
                "tagList": [ "string" ],
                "taskList": {
                    "name": "string"
                },
                "taskPriority": "string",
                "taskStartToCloseTimeout": "string",
                "workflowTypeVersion": "string"
            },
            "decisionType": "string",
            "failWorkflowExecutionDecisionAttributes": {
                "details": "string",
                "reason": "string"
            },
            "recordMarkerDecisionAttributes": {
                "details": "string",
                "markerName": "string"
            },
            "requestCancelActivityTaskDecisionAttributes": {
                "activityId": "string"
            },
            "requestCancelExternalWorkflowExecutionDecisionAttributes": {
                "control": "string",
                "runId": "string",
                "workflowId": "string"
            },
```

```
            "scheduleActivityTaskDecisionAttributes": {
                "activityId": "string",
                "activityType": {
                    "name": "string",
                    "version": "string"
                },
                "control": "string",
                "heartbeatTimeout": "string",
                "input": "string",
                "scheduleToCloseTimeout": "string",
                "scheduleToStartTimeout": "string",
                "startToCloseTimeout": "string",
                "taskList": {
                    "name": "string"
                },
                "taskPriority": "string"
            },
            "scheduleLambdaFunctionDecisionAttributes": {
                "control": "string",
                "id": "string",
                "input": "string",
                "name": "string",
                "startToCloseTimeout": "string"
            },
            "signalExternalWorkflowExecutionDecisionAttributes": {
                "control": "string",
                "input": "string",
                "runId": "string",
                "signalName": "string",
                "workflowId": "string"
            },
            "startChildWorkflowExecutionDecisionAttributes": {
                "childPolicy": "string",
                "control": "string",
                "executionStartToCloseTimeout": "string",
                "input": "string",
                "lambdaRole": "string",
                "tagList": [ "string" ],
                "taskList": {
                    "name": "string"
                },
                "taskPriority": "string",
                "taskStartToCloseTimeout": "string",
                "workflowId": "string",
                "workflowType": {
                    "name": "string",
                    "version": "string"
                }
            },
            "startTimerDecisionAttributes": {
                "control": "string",
                "startToFireTimeout": "string",
                "timerId": "string"
            }
        }
    ],
    "executionContext": "string",
    "taskToken": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common
Parameters (p. 288).

The request accepts the following data in JSON format.

decisions (p. 125)

The list of decisions (possibly empty) made by the decider while processing this decision task. See the docs for the Decision (p. 184) structure for details.

Type: Array of Decision (p. 184) objects

Required: No

executionContext (p. 125)

User defined context to add to workflow execution.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

taskToken (p. 125)

The `taskToken` from the DecisionTask (p. 189).

> **Important**
> `taskToken` is generated by the service and should be treated as an opaque value. If the task is passed to another process, its `taskToken` must also be passed. This enables it to provide its progress and respond with results.

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. 290).

OperationNotPermittedFault

Returned when the caller doesn't have sufficient permissions to invoke the action.

HTTP Status Code: 400

UnknownResourceFault

Returned when the named resource cannot be found with in the scope of this operation (region or domain). This could happen if the named resource was never created or is no longer available for this operation.

HTTP Status Code: 400

Example

RespondDecisionTaskCompleted Example

Sample Request

```
POST / HTTP/1.1
Host: swf.us-east-1.amazonaws.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.2.25) Gecko/20111212
 Firefox/3.6.25 ( .NET CLR 3.5.30729; .NET4.0E)
Accept: application/json, text/javascript, */*
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
Content-Type: application/x-amz-json-1.0
X-Requested-With: XMLHttpRequest
X-Amz-Date: Sun, 15 Jan 2012 23:31:06 GMT
X-Amz-Target: SimpleWorkflowService.RespondDecisionTaskCompleted
Content-Encoding: amz-1.0
X-Amzn-Authorization: AWS3
 AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=FL4ouCb8n6j5egcKOXoa+5Vctc8WmA91B2ekKnks2J8=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 1184
Pragma: no-cache
Cache-Control: no-cache

{
  "executionContext": "Black Friday",
  "decisions": [
  {
    "scheduleActivityTaskDecisionAttributes": {
    "control": "digital music",
    "taskList": {
      "name": "specialTaskList"
    },
    "scheduleToCloseTimeout": "900",
    "activityType": {
      "version": "1.0",
      "name": "activityVerify"
    },
    "heartbeatTimeout": "120",
    "activityId": "verification-27",
    "scheduleToStartTimeout": "300",
    "startToCloseTimeout": "600",
    "taskPriority": "100",
    "input": "5634-0056-4367-0923,12/12,437"
    },
    "decisionType": "ScheduleActivityTask"
  }
  ],
  "taskToken": "AAAAKgAAAEAAAAAAAAAAQLPoqDSLcx4ksNCEQZCyEBqpKhE
+FgFSOvHd9zlCROacKYHh640MkANx2y9YM3CQnec0kEb1oRvB6DxKesTY3U/
UQhvBqPY7E4BYE6hkDj/NmSbt9EwEJ/a+WD+oc2sDNfeVz2x+6wjb5vQdFKwBoQ6MDWLFbAhcgK
+ymoRjoBHrPsrNLX3IA6sQaPmQRZQs3FRZonoVzP6uXMCZPnCZQULFjU1kTM8VHzH7ywqWKVmmdvnqyREOCT9VqmYbhLntJXsDj
+scAvuNy17MCX9M9AJ7V/5qrLCeYdWA4FBQgY4Ew6IC+dge/UZdVMmpW/uB7nvSk6owQIhapPh5pEUwwY/
yNnoVLTiPOz9KzZlANyw7uDchBRLvUJORFtpP9ZQIouNP8QOvFWm7Idc50ahwGEdTCiG
+KDXV8kAzx7wKHs7l1TXYkC15x0h3XPH0MdLeEjipv98EpZaMIVtgGSdRjluOjNWEL2zowZByitleI5bdvxZdgalAXXKEnbYE6/
rfLGReAJKdh2n0dmTMI+tK7uuxIWX6F4ocqSI1Xb2x5zZ"
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 0
Content-Type: application/json
x-amzn-RequestId: feef79b5-3fd0-11e1-9a27-0760db01a4a8
```

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

SignalWorkflowExecution

Records a `WorkflowExecutionSignaled` event in the workflow execution history and creates a decision task for the workflow execution identified by the given domain, workflowId and runId. The event is recorded with the specified user defined signalName and input (if provided).

> **Note**
> If a runId isn't specified, then the `WorkflowExecutionSignaled` event is recorded in the history of the current open workflow with the matching workflowId in the domain.

> **Note**
> If the specified workflow execution isn't open, this method fails with `UnknownResource`.

Access Control

You can use IAM policies to control this action's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- You cannot use an IAM policy to constrain this action's parameters.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

```
{
   "domain": "string",
   "input": "string",
   "runId": "string",
   "signalName": "string",
   "workflowId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 288).

The request accepts the following data in JSON format.

domain (p. 130)

> The name of the domain containing the workflow execution to signal.
>
> Type: String
>
> Length Constraints: Minimum length of 1. Maximum length of 256.
>
> Required: Yes

input (p. 130)

> Data to attach to the `WorkflowExecutionSignaled` event in the target workflow execution's history.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

runId (p. 130)

The runId of the workflow execution to signal.

Type: String

Length Constraints: Maximum length of 64.

Required: No

signalName (p. 130)

The name of the signal. This name must be meaningful to the target workflow.

Type: String

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

Required: Yes

workflowId (p. 130)

The workflowId of the workflow execution to signal.

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. 290).

OperationNotPermittedFault

Returned when the caller doesn't have sufficient permissions to invoke the action.

HTTP Status Code: 400

UnknownResourceFault

Returned when the named resource cannot be found with in the scope of this operation (region or domain). This could happen if the named resource was never created or is no longer available for this operation.

HTTP Status Code: 400

Example

SignalWorkflowExecution Example

Sample Request

```
POST / HTTP/1.1
Host: swf.us-east-1.amazonaws.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.2.25) Gecko/20111212
 Firefox/3.6.25 ( .NET CLR 3.5.30729; .NET4.0E)
Accept: application/json, text/javascript, */*
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
Content-Type: application/x-amz-json-1.0
X-Requested-With: XMLHttpRequest
X-Amz-Date: Sun, 15 Jan 2012 00:06:18 GMT
X-Amz-Target: SimpleWorkflowService.SignalWorkflowExecution
Content-Encoding: amz-1.0
X-Amzn-Authorization: AWS3
 AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=lQpBZezK7JNQrXeWuJE+l7S0ZwjOEONCeRyImoyfX+E=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 162
Pragma: no-cache
Cache-Control: no-cache

{"domain": "867530901",
"workflowId": "20110927-T-1",
"runId": "f5ebbac6-941c-4342-ad69-dfd2f8be6689",
"signalName": "CancelOrder",
"input": "order 3553"}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 0
Content-Type: application/json
x-amzn-RequestId: bf78ae15-3f0c-11e1-9914-a356b6ea8bdf
```

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

StartWorkflowExecution

Starts an execution of the workflow type in the specified domain using the provided `workflowId` and input data.

This action returns the newly started workflow execution.

Access Control

You can use IAM policies to control this action's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- Constrain the following parameters by using a `Condition` element with the appropriate keys.
  - `tagList.member.0`: The key is `swf:tagList.member.0`.
  - `tagList.member.1`: The key is `swf:tagList.member.1`.
  - `tagList.member.2`: The key is `swf:tagList.member.2`.
  - `tagList.member.3`: The key is `swf:tagList.member.3`.
  - `tagList.member.4`: The key is `swf:tagList.member.4`.
  - `taskList`: String constraint. The key is `swf:taskList.name`.
  - `workflowType.name`: String constraint. The key is `swf:workflowType.name`.
  - `workflowType.version`: String constraint. The key is `swf:workflowType.version`.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

```
{
    "childPolicy": "string",
    "domain": "string",
    "executionStartToCloseTimeout": "string",
    "input": "string",
    "lambdaRole": "string",
    "tagList": [ "string" ],
    "taskList": {
        "name": "string"
    },
    "taskPriority": "string",
    "taskStartToCloseTimeout": "string",
    "workflowId": "string",
    "workflowType": {
        "name": "string",
        "version": "string"
    }
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 288).

The request accepts the following data in JSON format.

childPolicy (p. 134)

If set, specifies the policy to use for the child workflow executions of this workflow execution if it is terminated, by calling the TerminateWorkflowExecution (p. 141) action explicitly or due to an expired timeout. This policy overrides the default child policy specified when registering the workflow type using RegisterWorkflowType (p. 108).

The supported child policies are:

- `TERMINATE` – The child executions are terminated.
- `REQUEST_CANCEL` – A request to cancel is attempted for each child execution by recording a `WorkflowExecutionCancelRequested` event in its history. It is up to the decider to take appropriate actions when it receives an execution history with this event.
- `ABANDON` – No action is taken. The child executions continue to run.

    Note
    A child policy for this workflow execution must be specified either as a default for the workflow type or through this parameter. If neither this parameter is set nor a default child policy was specified at registration time then a fault is returned.

Type: String

Valid Values: `TERMINATE | REQUEST_CANCEL | ABANDON`

Required: No

domain (p. 134)

The name of the domain in which the workflow execution is created.

Type: String

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

Required: Yes

executionStartToCloseTimeout (p. 134)

The total duration for this workflow execution. This overrides the defaultExecutionStartToCloseTimeout specified when registering the workflow type.

The duration is specified in seconds; an integer greater than or equal to `0`. Exceeding this limit causes the workflow execution to time out. Unlike some of the other timeout parameters in Amazon SWF, you cannot specify a value of "NONE" for this timeout; there is a one-year max limit on the time that a workflow execution can run.

    Note
    An execution start-to-close timeout must be specified either through this parameter or as a default when the workflow type is registered. If neither this parameter nor a default execution start-to-close timeout is specified, a fault is returned.

Type: String

Length Constraints: Maximum length of 8.

Required: No

input (p. 134)

The input for the workflow execution. This is a free form string which should be meaningful to the workflow you are starting. This `input` is made available to the new workflow execution in the `WorkflowExecutionStarted` history event.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

lambdaRole (p. 134)

The IAM role to attach to this workflow execution.

> **Note**
> Executions of this workflow type need IAM roles to invoke Lambda functions. If you
> don't attach an IAM role, any attempt to schedule a Lambda task fails. This results in a
> `ScheduleLambdaFunctionFailed` history event. For more information, see https://
> docs.aws.amazon.com/amazonswf/latest/developerguide/lambda-task.html in the *Amazon
> SWF Developer Guide*.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1600.

Required: No

tagList (p. 134)

The list of tags to associate with the workflow execution. You can specify a maximum of 5 tags. You
can list workflow executions with a specific tag by calling ListOpenWorkflowExecutions (p. 69) or
ListClosedWorkflowExecutions (p. 59) and specifying a TagFilter (p. 256).

Type: Array of strings

Array Members: Maximum number of 5 items.

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

Required: No

taskList (p. 134)

The task list to use for the decision tasks generated for this workflow execution. This overrides the
`defaultTaskList` specified when registering the workflow type.

> **Note**
> A task list for this workflow execution must be specified either as a default for the workflow
> type or through this parameter. If neither this parameter is set nor a default task list was
> specified at registration time then a fault is returned.

The specified string must not start or end with whitespace. It must not contain a `:` (colon), `/` (slash),
`|` (vertical bar), or any control characters (`\u0000-\u001f` | `\u007f-\u009f`). Also, it must not
contain the literal string `arn`.

Type: TaskList (p. 257) object

Required: No

taskPriority (p. 134)

The task priority to use for this workflow execution. This overrides any default priority that was
assigned when the workflow type was registered. If not set, then the default task priority for the
workflow type is used. Valid values are integers that range from Java's `Integer.MIN_VALUE`
(-2147483648) to `Integer.MAX_VALUE` (2147483647). Higher numbers indicate higher priority.

For more information about setting task priority, see Setting Task Priority in the *Amazon SWF
Developer Guide*.

Type: String

Required: No

taskStartToCloseTimeout (p. 134)

Specifies the maximum duration of decision tasks for this workflow execution. This parameter overrides the `defaultTaskStartToCloseTimout` specified when registering the workflow type using RegisterWorkflowType (p. 108).

The duration is specified in seconds, an integer greater than or equal to `0`. You can use `NONE` to specify unlimited duration.

> **Note**
> A task start-to-close timeout for this workflow execution must be specified either as a default for the workflow type or through this parameter. If neither this parameter is set nor a default task start-to-close timeout was specified at registration time then a fault is returned.

Type: String

Length Constraints: Maximum length of 8.

Required: No

workflowId (p. 134)

The user defined identifier associated with the workflow execution. You can use this to associate a custom identifier with the workflow execution. You may specify the same identifier if a workflow execution is logically a *restart* of a previous execution. You cannot have two open workflow executions with the same `workflowId` at the same time.

The specified string must not start or end with whitespace. It must not contain a `:` (colon), `/` (slash), `|` (vertical bar), or any control characters (`\u0000-\u001f` | `\u007f-\u009f`). Also, it must not contain the literal string `arn`.

Type: String

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

Required: Yes

workflowType (p. 134)

The type of the workflow to start.

Type: WorkflowType (p. 283) object

Required: Yes

Response Syntax

```
{
    "runId": "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.

runId (p. 137)

The `runId` of a workflow execution. This ID is generated by the service and can be used to uniquely identify the workflow execution within a domain.

Type: String

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

Errors

For information about the errors that are common to all actions, see Common Errors (p. 290).

DefaultUndefinedFault

The `StartWorkflowExecution` API action was called without the required parameters set.

Some workflow execution parameters, such as the decision `taskList`, must be set to start the execution. However, these parameters might have been set as defaults when the workflow type was registered. In this case, you can omit these parameters from the `StartWorkflowExecution` call and Amazon SWF uses the values defined in the workflow type.

> **Note**
> If these parameters aren't set and no default parameters were defined in the workflow type, this error is displayed.

HTTP Status Code: 400

LimitExceededFault

Returned by any operation if a system imposed limitation has been reached. To address this fault you should either clean up unused resources or increase the limit by contacting AWS.

HTTP Status Code: 400

OperationNotPermittedFault

Returned when the caller doesn't have sufficient permissions to invoke the action.

HTTP Status Code: 400

TypeDeprecatedFault

Returned when the specified activity or workflow type was already deprecated.

HTTP Status Code: 400

UnknownResourceFault

Returned when the named resource cannot be found with in the scope of this operation (region or domain). This could happen if the named resource was never created or is no longer available for this operation.

HTTP Status Code: 400

WorkflowExecutionAlreadyStartedFault

Returned by StartWorkflowExecution (p. 134) when an open execution with the same workflowId is already running in the specified domain.

HTTP Status Code: 400

Example

StartWorkflowExecution Example

Sample Request

```
POST / HTTP/1.1
Host: swf.us-east-1.amazonaws.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.2.25) Gecko/20111212
 Firefox/3.6.25 ( .NET CLR 3.5.30729; .NET4.0E)
Accept: application/json, text/javascript, */*
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
Content-Type: application/x-amz-json-1.0
X-Requested-With: XMLHttpRequest
X-Amz-Date: Sat, 14 Jan 2012 22:45:13 GMT
X-Amz-Target: SimpleWorkflowService.StartWorkflowExecution
Content-Encoding: amz-1.0
X-Amzn-Authorization: AWS3
 AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=aYxuqLX+TO91kPVg+jh+aA8PWxQazQRN2+SZUGdOgU0=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 417
Pragma: no-cache
Cache-Control: no-cache

{
  "domain": "867530901",
  "taskList": {
  "name": "specialTaskList"
  },
  "taskPriority": "100",
  "taskStartToCloseTimeout": "600",
  "workflowId": "20110927-T-1",
  "childPolicy": "TERMINATE",
  "executionStartToCloseTimeout": "1800",
  "input": "arbitrary-string-that-is-meaningful-to-the-workflow",
  "workflowType": {
  "version": "1.0",
  "name": "customerOrderWorkflow"
  },
  "tagList": [
  "music purchase",
  "digital",
  "ricoh-the-dog"
  ]
}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 48
Content-Type: application/json
x-amzn-RequestId: 6c25f6e6-3f01-11e1-9a27-0760db01a4a8

{
  "runId": "1e536162-f1ea-48b0-85f3-aade88eef2f7"
}
```

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

TerminateWorkflowExecution

Records a `WorkflowExecutionTerminated` event and forces closure of the workflow execution identified by the given domain, runId, and workflowId. The child policy, registered with the workflow type or specified when starting this execution, is applied to any open child workflow executions of this workflow execution.

> **Important**
> If the identified workflow execution was in progress, it is terminated immediately.

> **Note**
> If a runId isn't specified, then the `WorkflowExecutionTerminated` event is recorded in the history of the current open workflow with the matching workflowId in the domain.

> **Note**
> You should consider using RequestCancelWorkflowExecution (p. 113) action instead because it allows the workflow to gracefully close while TerminateWorkflowExecution (p. 141) doesn't.

Access Control

You can use IAM policies to control this action's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- You cannot use an IAM policy to constrain this action's parameters.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Request Syntax

```
{
   "childPolicy": "string",
   "details": "string",
   "domain": "string",
   "reason": "string",
   "runId": "string",
   "workflowId": "string"
}
```

Request Parameters

For information about the parameters that are common to all actions, see Common Parameters (p. 288).

The request accepts the following data in JSON format.

childPolicy (p. 141)

If set, specifies the policy to use for the child workflow executions of the workflow execution being terminated. This policy overrides the child policy specified for the workflow execution at registration time or when starting the execution.

The supported child policies are:

- `TERMINATE` – The child executions are terminated.
- `REQUEST_CANCEL` – A request to cancel is attempted for each child execution by recording a `WorkflowExecutionCancelRequested` event in its history. It is up to the decider to take appropriate actions when it receives an execution history with this event.
- `ABANDON` – No action is taken. The child executions continue to run.

   Note
   A child policy for this workflow execution must be specified either as a default for the workflow type or through this parameter. If neither this parameter is set nor a default child policy was specified at registration time then a fault is returned.

   Type: String

   Valid Values: `TERMINATE | REQUEST_CANCEL | ABANDON`

   Required: No

details (p. 141)

   Details for terminating the workflow execution.

   Type: String

   Length Constraints: Maximum length of 32768.

   Required: No

domain (p. 141)

   The domain of the workflow execution to terminate.

   Type: String

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

   Required: Yes

reason (p. 141)

   A descriptive reason for terminating the workflow execution.

   Type: String

   Length Constraints: Maximum length of 256.

   Required: No

runId (p. 141)

   The runId of the workflow execution to terminate.

   Type: String

   Length Constraints: Maximum length of 64.

   Required: No

workflowId (p. 141)

   The workflowId of the workflow execution to terminate.

   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. 290).

OperationNotPermittedFault

Returned when the caller doesn't have sufficient permissions to invoke the action.

HTTP Status Code: 400

UnknownResourceFault

Returned when the named resource cannot be found with in the scope of this operation (region or domain). This could happen if the named resource was never created or is no longer available for this operation.

HTTP Status Code: 400

Example

TerminateWorkflowExecution Example

Sample Request

```
POST / HTTP/1.1
Host: swf.us-east-1.amazonaws.com
User-Agent: Mozilla/5.0 (Windows; U; Windows NT 6.1; en-US; rv:1.9.2.25) Gecko/20111212
 Firefox/3.6.25 ( .NET CLR 3.5.30729; .NET4.0E)
Accept: application/json, text/javascript, */*
Accept-Language: en-us,en;q=0.5
Accept-Encoding: gzip,deflate
Accept-Charset: ISO-8859-1,utf-8;q=0.7,*;q=0.7
Keep-Alive: 115
Connection: keep-alive
Content-Type: application/x-amz-json-1.0
X-Requested-With: XMLHttpRequest
X-Amz-Date: Mon, 16 Jan 2012 04:56:34 GMT
X-Amz-Target: SimpleWorkflowService.TerminateWorkflowExecution
Content-Encoding: amz-1.0
X-Amzn-Authorization: AWS3
 AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=JHMRAjN6JGPawEuhiANHfiCil9KOGfDF/cuXYmuu9S4=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 218
Pragma: no-cache
Cache-Control: no-cache

{"domain": "867530901",
 "workflowId": "20110927-T-1",
 "runId": "94861fda-a714-4126-95d7-55ba847da8ab",
 "reason": "transaction canceled",
 "details": "customer credit card declined",
```

```
  "childPolicy": "TERMINATE"}
```

Sample Response

```
HTTP/1.1 200 OK
Content-Length: 0
Content-Type: application/json
x-amzn-RequestId: 76d68a47-3ffe-11e1-b118-3bfa5e8e7fc3
```

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 Amazon Simple Workflow Service API contains several data types that various actions use. This section describes each data type in detail.

> **Note**
> The order of each element in a data type structure is not guaranteed. Applications should not assume a particular order.

The following data types are supported:

- WorkflowExecutionSignaledEventAttributes (p. 276)
- WorkflowExecutionStartedEventAttributes (p. 277)
- WorkflowExecutionTerminatedEventAttributes (p. 280)
- WorkflowExecutionTimedOutEventAttributes (p. 282)
- WorkflowType (p. 283)
- WorkflowTypeConfiguration (p. 284)
- WorkflowTypeFilter (p. 286)
- WorkflowTypeInfo (p. 287)

ActivityTask

Unit of work sent to an activity worker.

Contents

activityId

The unique ID of the task.

Type: String

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

Required: Yes

activityType

The type of this activity task.

Type: ActivityType (p. 159) object

Required: Yes

input

The inputs provided when the activity task was scheduled. The form of the input is user defined and should be meaningful to the activity implementation.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

startedEventId

The ID of the `ActivityTaskStarted` event recorded in the history.

Type: Long

Required: Yes

taskToken

The opaque string used as a handle on the task. This token is used by workers to communicate progress and response information back to the system about the task.

Type: String

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

Required: Yes

workflowExecution

The workflow execution that started this activity task.

Type: WorkflowExecution (p. 261) object

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

ActivityTaskCanceledEventAttributes

Provides the details of the `ActivityTaskCanceled` event.

Contents

details

Details of the cancellation.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

latestCancelRequestedEventId

If set, contains the ID of the last `ActivityTaskCancelRequested` event recorded for this activity task. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: No

scheduledEventId

The ID of the `ActivityTaskScheduled` event that was recorded when this activity task was scheduled. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

startedEventId

The ID of the `ActivityTaskStarted` event recorded when this activity task was started. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

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

ActivityTaskCancelRequestedEventAttributes

Provides the details of the `ActivityTaskCancelRequested` event.

Contents

activityId

The unique ID of the task.

Type: String

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

Required: Yes

decisionTaskCompletedEventId

The ID of the `DecisionTaskCompleted` event corresponding to the decision task that resulted in the `RequestCancelActivityTask` decision for this cancellation request. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

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

ActivityTaskCompletedEventAttributes

Provides the details of the `ActivityTaskCompleted` event.

Contents

result

The results of the activity task.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

scheduledEventId

The ID of the `ActivityTaskScheduled` event that was recorded when this activity task was scheduled. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

startedEventId

The ID of the `ActivityTaskStarted` event recorded when this activity task was started. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

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

ActivityTaskFailedEventAttributes

Provides the details of the `ActivityTaskFailed` event.

Contents

details

The details of the failure.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

reason

The reason provided for the failure.

Type: String

Length Constraints: Maximum length of 256.

Required: No

scheduledEventId

The ID of the `ActivityTaskScheduled` event that was recorded when this activity task was scheduled. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

startedEventId

The ID of the `ActivityTaskStarted` event recorded when this activity task was started. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

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

ActivityTaskScheduledEventAttributes

Provides the details of the `ActivityTaskScheduled` event.

Contents

activityId

The unique ID of the activity task.

Type: String

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

Required: Yes

activityType

The type of the activity task.

Type: ActivityType (p. 159) object

Required: Yes

control

Data attached to the event that can be used by the decider in subsequent workflow tasks. This data isn't sent to the activity.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

decisionTaskCompletedEventId

The ID of the `DecisionTaskCompleted` event corresponding to the decision that resulted in the scheduling of this activity task. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

heartbeatTimeout

The maximum time before which the worker processing this task must report progress by calling RecordActivityTaskHeartbeat (p. 96). If the timeout is exceeded, the activity task is automatically timed out. If the worker subsequently attempts to record a heartbeat or return a result, it is ignored.

Type: String

Length Constraints: Maximum length of 8.

Required: No

input

The input provided to the activity task.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

scheduleToCloseTimeout

The maximum amount of time for this activity task.

Type: String

Length Constraints: Maximum length of 8.

Required: No

scheduleToStartTimeout

The maximum amount of time the activity task can wait to be assigned to a worker.

Type: String

Length Constraints: Maximum length of 8.

Required: No

startToCloseTimeout

The maximum amount of time a worker may take to process the activity task.

Type: String

Length Constraints: Maximum length of 8.

Required: No

taskList

The task list in which the activity task has been scheduled.

Type: TaskList (p. 257) object

Required: Yes

taskPriority

The priority to assign to the scheduled activity task. If set, this overrides any default priority value that was assigned when the activity type was registered.

Valid values are integers that range from Java's `Integer.MIN_VALUE` (-2147483648) to `Integer.MAX_VALUE` (2147483647). Higher numbers indicate higher priority.

For more information about setting task priority, see Setting Task Priority in the *Amazon SWF Developer Guide*.

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

ActivityTaskStartedEventAttributes

Provides the details of the `ActivityTaskStarted` event.

Contents

identity

Identity of the worker that was assigned this task. This aids diagnostics when problems arise. The form of this identity is user defined.

Type: String

Length Constraints: Maximum length of 256.

Required: No

scheduledEventId

The ID of the `ActivityTaskScheduled` event that was recorded when this activity task was scheduled. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

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

ActivityTaskTimedOutEventAttributes

Provides the details of the `ActivityTaskTimedOut` event.

Contents

details

Contains the content of the `details` parameter for the last call made by the activity to `RecordActivityTaskHeartbeat`.

Type: String

Length Constraints: Maximum length of 2048.

Required: No

scheduledEventId

The ID of the `ActivityTaskScheduled` event that was recorded when this activity task was scheduled. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

startedEventId

The ID of the `ActivityTaskStarted` event recorded when this activity task was started. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

timeoutType

The type of the timeout that caused this event.

Type: String

Valid Values: `START_TO_CLOSE | SCHEDULE_TO_START | SCHEDULE_TO_CLOSE | HEARTBEAT`

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

ActivityType

Represents an activity type.

Contents

name

The name of this activity.

> **Note**
> The combination of activity type name and version must be unique within a domain.

Type: String

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

Required: Yes

version

The version of this activity.

> **Note**
> The combination of activity type name and version must be unique with in a domain.

Type: String

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

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

ActivityTypeConfiguration

Configuration settings registered with the activity type.

Contents

defaultTaskHeartbeatTimeout

The default maximum time, in seconds, before which a worker processing a task must report progress by calling RecordActivityTaskHeartbeat (p. 96).

You can specify this value only when *registering* an activity type. The registered default value can be overridden when you schedule a task through the ScheduleActivityTask Decision (p. 184). If the activity worker subsequently attempts to record a heartbeat or returns a result, the activity worker receives an UnknownResource fault. In this case, Amazon SWF no longer considers the activity task to be valid; the activity worker should clean up the activity task.

The duration is specified in seconds, an integer greater than or equal to 0. You can use NONE to specify unlimited duration.

Type: String

Length Constraints: Maximum length of 8.

Required: No

defaultTaskList

The default task list specified for this activity type at registration. This default is used if a task list isn't provided when a task is scheduled through the ScheduleActivityTask Decision (p. 184). You can override the default registered task list when scheduling a task through the ScheduleActivityTask Decision (p. 184).

Type: TaskList (p. 257) object

Required: No

defaultTaskPriority

The default task priority for tasks of this activity type, specified at registration. If not set, then 0 is used as the default priority. This default can be overridden when scheduling an activity task.

Valid values are integers that range from Java's Integer.MIN_VALUE (-2147483648) to Integer.MAX_VALUE (2147483647). Higher numbers indicate higher priority.

For more information about setting task priority, see Setting Task Priority in the *Amazon SWF Developer Guide*.

Type: String

Required: No

defaultTaskScheduleToCloseTimeout

The default maximum duration, specified when registering the activity type, for tasks of this activity type. You can override this default when scheduling a task through the ScheduleActivityTask Decision (p. 184).

The duration is specified in seconds, an integer greater than or equal to 0. You can use NONE to specify unlimited duration.

Type: String

Length Constraints: Maximum length of 8.

Required: No

defaultTaskScheduleToStartTimeout

The default maximum duration, specified when registering the activity type, that a task of an activity type can wait before being assigned to a worker. You can override this default when scheduling a task through the `ScheduleActivityTask` .

The duration is specified in seconds, an integer greater than or equal to `0`. You can use `NONE` to specify unlimited duration.

Type: String

Length Constraints: Maximum length of 8.

Required: No

defaultTaskStartToCloseTimeout

The default maximum duration for tasks of an activity type specified when registering the activity type. You can override this default when scheduling a task through the `ScheduleActivityTask` .

The duration is specified in seconds, an integer greater than or equal to `0`. You can use `NONE` to specify unlimited duration.

Type: String

Length Constraints: Maximum length of 8.

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

ActivityTypeInfo

Detailed information about an activity type.

Contents

activityType

The ActivityType (p. 159) type structure representing the activity type.

Type: ActivityType (p. 159) object

Required: Yes

creationDate

The date and time this activity type was created through RegisterActivityType (p. 100).

Type: Timestamp

Required: Yes

deprecationDate

If DEPRECATED, the date and time DeprecateActivityType (p. 18) was called.

Type: Timestamp

Required: No

description

The description of the activity type provided in RegisterActivityType (p. 100).

Type: String

Length Constraints: Maximum length of 1024.

Required: No

status

The current status of the activity type.

Type: String

Valid Values: `REGISTERED | DEPRECATED`

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

CancelTimerDecisionAttributes

Provides the details of the `CancelTimer` decision.

Access Control

You can use IAM policies to control this decision's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- You cannot use an IAM policy to constrain this action's parameters.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Contents

timerId

The unique ID of the timer to cancel.

Type: String

Length Constraints: Minimum length of 1. 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

CancelTimerFailedEventAttributes

Provides the details of the `CancelTimerFailed` event.

Contents

cause

The cause of the failure. This information is generated by the system and can be useful for diagnostic purposes.

> **Note**
> If `cause` is set to `OPERATION_NOT_PERMITTED`, the decision failed because it lacked sufficient permissions. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Type: String

Valid Values: `TIMER_ID_UNKNOWN | OPERATION_NOT_PERMITTED`

Required: Yes

decisionTaskCompletedEventId

The ID of the `DecisionTaskCompleted` event corresponding to the decision task that resulted in the `CancelTimer` decision to cancel this timer. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

timerId

The timerId provided in the `CancelTimer` decision that failed.

Type: String

Length Constraints: Minimum length of 1. 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

CancelWorkflowExecutionDecisionAttributes

Provides the details of the `CancelWorkflowExecution` decision.

Access Control

You can use IAM policies to control this decision's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- You cannot use an IAM policy to constrain this action's parameters.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Contents

details

Details of the cancellation.

Type: String

Length Constraints: Maximum length of 32768.

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

CancelWorkflowExecutionFailedEventAttributes

Provides the details of the `CancelWorkflowExecutionFailed` event.

Contents

cause

The cause of the failure. This information is generated by the system and can be useful for diagnostic purposes.

> **Note**
> If `cause` is set to `OPERATION_NOT_PERMITTED`, the decision failed because it lacked sufficient permissions. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Type: String

Valid Values: `UNHANDLED_DECISION | OPERATION_NOT_PERMITTED`

Required: Yes

decisionTaskCompletedEventId

The ID of the `DecisionTaskCompleted` event corresponding to the decision task that resulted in the `CancelWorkflowExecution` decision for this cancellation request. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

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

ChildWorkflowExecutionCanceledEventAttributes

Provide details of the `ChildWorkflowExecutionCanceled` event.

Contents

details

Details of the cancellation (if provided).

Type: String

Length Constraints: Maximum length of 32768.

Required: No

initiatedEventId

The ID of the `StartChildWorkflowExecutionInitiated` event corresponding to the `StartChildWorkflowExecution` Decision (p. 184) to start this child workflow execution. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

startedEventId

The ID of the `ChildWorkflowExecutionStarted` event recorded when this child workflow execution was started. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

workflowExecution

The child workflow execution that was canceled.

Type: WorkflowExecution (p. 261) object

Required: Yes

workflowType

The type of the child workflow execution.

Type: WorkflowType (p. 283) object

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](#)

ChildWorkflowExecutionCompletedEventAttributes

Provides the details of the `ChildWorkflowExecutionCompleted` event.

Contents

initiatedEventId

The ID of the `StartChildWorkflowExecutionInitiated` event corresponding to the `StartChildWorkflowExecution` Decision (p. 184) to start this child workflow execution. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

result

The result of the child workflow execution.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

startedEventId

The ID of the `ChildWorkflowExecutionStarted` event recorded when this child workflow execution was started. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

workflowExecution

The child workflow execution that was completed.

Type: WorkflowExecution (p. 261) object

Required: Yes

workflowType

The type of the child workflow execution.

Type: WorkflowType (p. 283) object

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

ChildWorkflowExecutionFailedEventAttributes

Provides the details of the `ChildWorkflowExecutionFailed` event.

Contents

details

The details of the failure (if provided).

Type: String

Length Constraints: Maximum length of 32768.

Required: No

initiatedEventId

The ID of the `StartChildWorkflowExecutionInitiated` event corresponding to the `StartChildWorkflowExecution` Decision (p. 184) to start this child workflow execution. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

reason

The reason for the failure (if provided).

Type: String

Length Constraints: Maximum length of 256.

Required: No

startedEventId

The ID of the `ChildWorkflowExecutionStarted` event recorded when this child workflow execution was started. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

workflowExecution

The child workflow execution that failed.

Type: WorkflowExecution (p. 261) object

Required: Yes

workflowType

The type of the child workflow execution.

Type: WorkflowType (p. 283) object

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

ChildWorkflowExecutionStartedEventAttributes

Provides the details of the `ChildWorkflowExecutionStarted` event.

Contents

initiatedEventId

The ID of the `StartChildWorkflowExecutionInitiated` event corresponding to the `StartChildWorkflowExecution` Decision (p. 184) to start this child workflow execution. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

workflowExecution

The child workflow execution that was started.

Type: WorkflowExecution (p. 261) object

Required: Yes

workflowType

The type of the child workflow execution.

Type: WorkflowType (p. 283) object

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

ChildWorkflowExecutionTerminatedEventAttributes

Provides the details of the `ChildWorkflowExecutionTerminated` event.

Contents

initiatedEventId

The ID of the `StartChildWorkflowExecutionInitiated` event corresponding to the `StartChildWorkflowExecution` Decision (p. 184) to start this child workflow execution. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

startedEventId

The ID of the `ChildWorkflowExecutionStarted` event recorded when this child workflow execution was started. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

workflowExecution

The child workflow execution that was terminated.

Type: WorkflowExecution (p. 261) object

Required: Yes

workflowType

The type of the child workflow execution.

Type: WorkflowType (p. 283) object

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

ChildWorkflowExecutionTimedOutEventAttributes

Provides the details of the `ChildWorkflowExecutionTimedOut` event.

Contents

initiatedEventId

The ID of the `StartChildWorkflowExecutionInitiated` event corresponding to the `StartChildWorkflowExecution` Decision (p. 184) to start this child workflow execution. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

startedEventId

The ID of the `ChildWorkflowExecutionStarted` event recorded when this child workflow execution was started. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

timeoutType

The type of the timeout that caused the child workflow execution to time out.

Type: String

Valid Values: `START_TO_CLOSE`

Required: Yes

workflowExecution

The child workflow execution that timed out.

Type: WorkflowExecution (p. 261) object

Required: Yes

workflowType

The type of the child workflow execution.

Type: WorkflowType (p. 283) object

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](#)

CloseStatusFilter

Used to filter the closed workflow executions in visibility APIs by their close status.

Contents

status

The close status that must match the close status of an execution for it to meet the criteria of this filter.

Type: String

Valid Values: `COMPLETED | FAILED | CANCELED | TERMINATED | CONTINUED_AS_NEW | TIMED_OUT`

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

CompleteWorkflowExecutionDecisionAttributes

Provides the details of the `CompleteWorkflowExecution` decision.

Access Control

You can use IAM policies to control this decision's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- You cannot use an IAM policy to constrain this action's parameters.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Contents

result

The result of the workflow execution. The form of the result is implementation defined.

Type: String

Length Constraints: Maximum length of 32768.

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

CompleteWorkflowExecutionFailedEventAttributes

Provides the details of the `CompleteWorkflowExecutionFailed` event.

Contents

cause

The cause of the failure. This information is generated by the system and can be useful for diagnostic purposes.

> **Note**
> If `cause` is set to `OPERATION_NOT_PERMITTED`, the decision failed because it lacked sufficient permissions. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Type: String

Valid Values: `UNHANDLED_DECISION | OPERATION_NOT_PERMITTED`

Required: Yes

decisionTaskCompletedEventId

The ID of the `DecisionTaskCompleted` event corresponding to the decision task that resulted in the `CompleteWorkflowExecution` decision to complete this execution. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

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

ContinueAsNewWorkflowExecutionDecisionAttributes

Provides the details of the `ContinueAsNewWorkflowExecution` decision.

Access Control

You can use IAM policies to control this decision's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- Constrain the following parameters by using a `Condition` element with the appropriate keys.
  - `tag` – A tag used to identify the workflow execution
  - `taskList` – String constraint. The key is `swf:taskList.name`.
  - `workflowType.version` – String constraint. The key is `swf:workflowType.version`.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Contents

childPolicy

If set, specifies the policy to use for the child workflow executions of the new execution if it is terminated by calling the TerminateWorkflowExecution (p. 141) action explicitly or due to an expired timeout. This policy overrides the default child policy specified when registering the workflow type using RegisterWorkflowType (p. 108).

The supported child policies are:

- `TERMINATE` – The child executions are terminated.
- `REQUEST_CANCEL` – A request to cancel is attempted for each child execution by recording a `WorkflowExecutionCancelRequested` event in its history. It is up to the decider to take appropriate actions when it receives an execution history with this event.
- `ABANDON` – No action is taken. The child executions continue to run.

  Note
  A child policy for this workflow execution must be specified either as a default for the workflow type or through this parameter. If neither this parameter is set nor a default child policy was specified at registration time then a fault is returned.

Type: String

Valid Values: `TERMINATE | REQUEST_CANCEL | ABANDON`

Required: No

executionStartToCloseTimeout

If set, specifies the total duration for this workflow execution. This overrides the `defaultExecutionStartToCloseTimeout` specified when registering the workflow type.

The duration is specified in seconds, an integer greater than or equal to `0`. You can use `NONE` to specify unlimited duration.

Note

An execution start-to-close timeout for this workflow execution must be specified either as a default for the workflow type or through this field. If neither this field is set nor a default execution start-to-close timeout was specified at registration time then a fault is returned.

Type: String

Length Constraints: Maximum length of 8.

Required: No

input

The input provided to the new workflow execution.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

lambdaRole

The IAM role to attach to the new (continued) execution.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1600.

Required: No

tagList

The list of tags to associate with the new workflow execution. A maximum of 5 tags can be specified. You can list workflow executions with a specific tag by calling ListOpenWorkflowExecutions (p. 69) or ListClosedWorkflowExecutions (p. 59) and specifying a TagFilter (p. 256).

Type: Array of strings

Array Members: Maximum number of 5 items.

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

Required: No

taskList

The task list to use for the decisions of the new (continued) workflow execution.

Type: TaskList (p. 257) object

Required: No

taskPriority

The task priority that, if set, specifies the priority for the decision tasks for this workflow execution. This overrides the defaultTaskPriority specified when registering the workflow type. Valid values are integers that range from Java's `Integer.MIN_VALUE` (-2147483648) to `Integer.MAX_VALUE` (2147483647). Higher numbers indicate higher priority.

For more information about setting task priority, see Setting Task Priority in the *Amazon SWF Developer Guide*.

Type: String

Required: No

taskStartToCloseTimeout

Specifies the maximum duration of decision tasks for the new workflow execution. This parameter overrides the `defaultTaskStartToCloseTimout` specified when registering the workflow type using RegisterWorkflowType (p. 108).

The duration is specified in seconds, an integer greater than or equal to `0`. You can use `NONE` to specify unlimited duration.

> **Note**
> A task start-to-close timeout for the new workflow execution must be specified either as a default for the workflow type or through this parameter. If neither this parameter is set nor a default task start-to-close timeout was specified at registration time then a fault is returned.

Type: String

Length Constraints: Maximum length of 8.

Required: No

workflowTypeVersion

The version of the workflow to start.

Type: String

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

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

ContinueAsNewWorkflowExecutionFailedEventAttributes

Provides the details of the `ContinueAsNewWorkflowExecutionFailed` event.

Contents

cause

The cause of the failure. This information is generated by the system and can be useful for diagnostic purposes.

> **Note**
> If `cause` is set to `OPERATION_NOT_PERMITTED`, the decision failed because it lacked sufficient permissions. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Type: String

Valid Values: `UNHANDLED_DECISION` | `WORKFLOW_TYPE_DEPRECATED` | `WORKFLOW_TYPE_DOES_NOT_EXIST` | `DEFAULT_EXECUTION_START_TO_CLOSE_TIMEOUT_UNDEFINED` | `DEFAULT_TASK_START_TO_CLOSE_TIMEOUT_UNDEFINED` | `DEFAULT_TASK_LIST_UNDEFINED` | `DEFAULT_CHILD_POLICY_UNDEFINED` | `CONTINUE_AS_NEW_WORKFLOW_EXECUTION_RATE_EXCEEDED` | `OPERATION_NOT_PERMITTED`

Required: Yes

decisionTaskCompletedEventId

The ID of the `DecisionTaskCompleted` event corresponding to the decision task that resulted in the `ContinueAsNewWorkflowExecution` decision that started this execution. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

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

Decision

Specifies a decision made by the decider. A decision can be one of these types:

- `CancelTimer` – Cancels a previously started timer and records a `TimerCanceled` event in the history.
- `CancelWorkflowExecution` – Closes the workflow execution and records a `WorkflowExecutionCanceled` event in the history.
- `CompleteWorkflowExecution` – Closes the workflow execution and records a `WorkflowExecutionCompleted` event in the history .
- `ContinueAsNewWorkflowExecution` – Closes the workflow execution and starts a new workflow execution of the same type using the same workflow ID and a unique run Id. A `WorkflowExecutionContinuedAsNew` event is recorded in the history.
- `FailWorkflowExecution` – Closes the workflow execution and records a `WorkflowExecutionFailed` event in the history.
- `RecordMarker` – Records a `MarkerRecorded` event in the history. Markers can be used for adding custom information in the history for instance to let deciders know that they don't need to look at the history beyond the marker event.
- `RequestCancelActivityTask` – Attempts to cancel a previously scheduled activity task. If the activity task was scheduled but has not been assigned to a worker, then it is canceled. If the activity task was already assigned to a worker, then the worker is informed that cancellation has been requested in the response to RecordActivityTaskHeartbeat (p. 96).
- `RequestCancelExternalWorkflowExecution` – Requests that a request be made to cancel the specified external workflow execution and records a `RequestCancelExternalWorkflowExecutionInitiated` event in the history.
- `ScheduleActivityTask` – Schedules an activity task.
- `SignalExternalWorkflowExecution` – Requests a signal to be delivered to the specified external workflow execution and records a `SignalExternalWorkflowExecutionInitiated` event in the history.
- `StartChildWorkflowExecution` – Requests that a child workflow execution be started and records a `StartChildWorkflowExecutionInitiated` event in the history. The child workflow execution is a separate workflow execution with its own history.
- `StartTimer` – Starts a timer for this workflow execution and records a `TimerStarted` event in the history. This timer fires after the specified delay and record a `TimerFired` event.

Access Control

If you grant permission to use `RespondDecisionTaskCompleted`, you can use IAM policies to express permissions for the list of decisions returned by this action as if they were members of the API. Treating decisions as a pseudo API maintains a uniform conceptual model and helps keep policies readable. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Decision Failure

Decisions can fail for several reasons

- The ordering of decisions should follow a logical flow. Some decisions might not make sense in the current context of the workflow execution and therefore fails.
- A limit on your account was reached.
- The decision lacks sufficient permissions.

One of the following events might be added to the history to indicate an error. The event attribute's `cause` parameter indicates the cause. If `cause` is set to `OPERATION_NOT_PERMITTED`, the decision

failed because it lacked sufficient permissions. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

- `ScheduleActivityTaskFailed` – A `ScheduleActivityTask` decision failed. This could happen if the activity type specified in the decision isn't registered, is in a deprecated state, or the decision isn't properly configured.
- `RequestCancelActivityTaskFailed` – A `RequestCancelActivityTask` decision failed. This could happen if there is no open activity task with the specified activityId.
- `StartTimerFailed` – A `StartTimer` decision failed. This could happen if there is another open timer with the same timerId.
- `CancelTimerFailed` – A `CancelTimer` decision failed. This could happen if there is no open timer with the specified timerId.
- `StartChildWorkflowExecutionFailed` – A `StartChildWorkflowExecution` decision failed. This could happen if the workflow type specified isn't registered, is deprecated, or the decision isn't properly configured.
- `SignalExternalWorkflowExecutionFailed` – A `SignalExternalWorkflowExecution` decision failed. This could happen if the `workflowID` specified in the decision was incorrect.
- `RequestCancelExternalWorkflowExecutionFailed` – A `RequestCancelExternalWorkflowExecution` decision failed. This could happen if the `workflowID` specified in the decision was incorrect.
- `CancelWorkflowExecutionFailed` – A `CancelWorkflowExecution` decision failed. This could happen if there is an unhandled decision task pending in the workflow execution.
- `CompleteWorkflowExecutionFailed` – A `CompleteWorkflowExecution` decision failed. This could happen if there is an unhandled decision task pending in the workflow execution.
- `ContinueAsNewWorkflowExecutionFailed` – A `ContinueAsNewWorkflowExecution` decision failed. This could happen if there is an unhandled decision task pending in the workflow execution or the ContinueAsNewWorkflowExecution decision was not configured correctly.
- `FailWorkflowExecutionFailed` – A `FailWorkflowExecution` decision failed. This could happen if there is an unhandled decision task pending in the workflow execution.

The preceding error events might occur due to an error in the decider logic, which might put the workflow execution in an unstable state The cause field in the event structure for the error event indicates the cause of the error.

> **Note**
> A workflow execution may be closed by the decider by returning one of the following decisions when completing a decision task: `CompleteWorkflowExecution`, `FailWorkflowExecution`, `CancelWorkflowExecution` and `ContinueAsNewWorkflowExecution`. An `UnhandledDecision` fault is returned if a workflow closing decision is specified and a signal or activity event had been added to the history while the decision task was being performed by the decider. Unlike the above situations which are logic issues, this fault is always possible because of race conditions in a distributed system. The right action here is to call RespondDecisionTaskCompleted (p. 125) without any decisions. This would result in another decision task with these new events included in the history. The decider should handle the new events and may decide to close the workflow execution.

How to Code a Decision

You code a decision by first setting the decision type field to one of the above decision values, and then set the corresponding attributes field shown below:

- ScheduleActivityTaskDecisionAttributes (p. 228)
- RequestCancelActivityTaskDecisionAttributes (p. 221)
- CompleteWorkflowExecutionDecisionAttributes (p. 178)

Contents

cancelTimerDecisionAttributes

Provides the details of the `CancelTimer` decision. It isn't set for other decision types.

Type: CancelTimerDecisionAttributes (p. 163) object

Required: No

cancelWorkflowExecutionDecisionAttributes

Provides the details of the `CancelWorkflowExecution` decision. It isn't set for other decision types.

Type: CancelWorkflowExecutionDecisionAttributes (p. 165) object

Required: No

completeWorkflowExecutionDecisionAttributes

Provides the details of the `CompleteWorkflowExecution` decision. It isn't set for other decision types.

Type: CompleteWorkflowExecutionDecisionAttributes (p. 178) object

Required: No

continueAsNewWorkflowExecutionDecisionAttributes

Provides the details of the `ContinueAsNewWorkflowExecution` decision. It isn't set for other decision types.

Type: ContinueAsNewWorkflowExecutionDecisionAttributes (p. 180) object

Required: No

decisionType

Specifies the type of the decision.

Type: String

Valid Values: `ScheduleActivityTask | RequestCancelActivityTask | CompleteWorkflowExecution | FailWorkflowExecution | CancelWorkflowExecution | ContinueAsNewWorkflowExecution | RecordMarker | StartTimer | CancelTimer | SignalExternalWorkflowExecution | RequestCancelExternalWorkflowExecution | StartChildWorkflowExecution | ScheduleLambdaFunction`

Required: Yes

failWorkflowExecutionDecisionAttributes

Provides the details of the `FailWorkflowExecution` decision. It isn't set for other decision types.

Type: FailWorkflowExecutionDecisionAttributes (p. 200) object

Required: No

recordMarkerDecisionAttributes

Provides the details of the `RecordMarker` decision. It isn't set for other decision types.

Type: RecordMarkerDecisionAttributes (p. 219) object

Required: No

requestCancelActivityTaskDecisionAttributes

Provides the details of the `RequestCancelActivityTask` decision. It isn't set for other decision types.

Type: RequestCancelActivityTaskDecisionAttributes (p. 221) object

Required: No

requestCancelExternalWorkflowExecutionDecisionAttributes

Provides the details of the `RequestCancelExternalWorkflowExecution` decision. It isn't set for other decision types.

Type: RequestCancelExternalWorkflowExecutionDecisionAttributes (p. 223) object

Required: No

scheduleActivityTaskDecisionAttributes

Provides the details of the `ScheduleActivityTask` decision. It isn't set for other decision types.

Type: ScheduleActivityTaskDecisionAttributes (p. 228) object

Required: No

scheduleLambdaFunctionDecisionAttributes

Provides the details of the `ScheduleLambdaFunction` decision. It isn't set for other decision types.

Type: ScheduleLambdaFunctionDecisionAttributes (p. 233) object

Required: No

signalExternalWorkflowExecutionDecisionAttributes

Provides the details of the `SignalExternalWorkflowExecution` decision. It isn't set for other decision types.

Type: SignalExternalWorkflowExecutionDecisionAttributes (p. 237) object

Required: No

startChildWorkflowExecutionDecisionAttributes

Provides the details of the `StartChildWorkflowExecution` decision. It isn't set for other decision types.

Type: StartChildWorkflowExecutionDecisionAttributes (p. 243) object

Required: No

startTimerDecisionAttributes

Provides the details of the `StartTimer` decision. It isn't set for other decision types.

Type: StartTimerDecisionAttributes (p. 253) 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

DecisionTask

A structure that represents a decision task. Decision tasks are sent to deciders in order for them to make decisions.

Contents

events

A paginated list of history events of the workflow execution. The decider uses this during the processing of the decision task.

Type: Array of HistoryEvent (p. 202) objects

Required: Yes

nextPageToken

If a NextPageToken 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 nextPageToken. Keep all other arguments unchanged.

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

Type: String

Length Constraints: Maximum length of 2048.

Required: No

previousStartedEventId

The ID of the DecisionTaskStarted event of the previous decision task of this workflow execution that was processed by the decider. This can be used to determine the events in the history new since the last decision task received by the decider.

Type: Long

Required: No

startedEventId

The ID of the DecisionTaskStarted event recorded in the history.

Type: Long

Required: Yes

taskToken

The opaque string used as a handle on the task. This token is used by workers to communicate progress and response information back to the system about the task.

Type: String

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

Required: Yes

workflowExecution

The workflow execution for which this decision task was created.

Type: WorkflowExecution (p. 261) object

Required: Yes

workflowType

The type of the workflow execution for which this decision task was created.

Type: WorkflowType (p. 283) object

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

DecisionTaskCompletedEventAttributes

Provides the details of the `DecisionTaskCompleted` event.

Contents

executionContext

User defined context for the workflow execution.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

scheduledEventId

The ID of the `DecisionTaskScheduled` event that was recorded when this decision task was scheduled. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

startedEventId

The ID of the `DecisionTaskStarted` event recorded when this decision task was started. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

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

DecisionTaskScheduledEventAttributes

Provides details about the `DecisionTaskScheduled` event.

Contents

startToCloseTimeout

The maximum duration for this decision task. The task is considered timed out if it doesn't completed within this duration.

The duration is specified in seconds, an integer greater than or equal to `0`. You can use `NONE` to specify unlimited duration.

Type: String

Length Constraints: Maximum length of 8.

Required: No

taskList

The name of the task list in which the decision task was scheduled.

Type: TaskList (p. 257) object

Required: Yes

taskPriority

A task priority that, if set, specifies the priority for this decision task. Valid values are integers that range from Java's `Integer.MIN_VALUE` (-2147483648) to `Integer.MAX_VALUE` (2147483647). Higher numbers indicate higher priority.

For more information about setting task priority, see Setting Task Priority in the *Amazon SWF Developer Guide*.

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

DecisionTaskStartedEventAttributes

Provides the details of the `DecisionTaskStarted` event.

Contents

identity

Identity of the decider making the request. This enables diagnostic tracing when problems arise. The form of this identity is user defined.

Type: String

Length Constraints: Maximum length of 256.

Required: No

scheduledEventId

The ID of the `DecisionTaskScheduled` event that was recorded when this decision task was scheduled. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

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

DecisionTaskTimedOutEventAttributes

Provides the details of the `DecisionTaskTimedOut` event.

Contents

scheduledEventId

The ID of the `DecisionTaskScheduled` event that was recorded when this decision task was scheduled. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

startedEventId

The ID of the `DecisionTaskStarted` event recorded when this decision task was started. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

timeoutType

The type of timeout that expired before the decision task could be completed.

Type: String

Valid Values: `START_TO_CLOSE`

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

DomainConfiguration

Contains the configuration settings of a domain.

Contents

workflowExecutionRetentionPeriodInDays

The retention period for workflow executions in this domain.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 8.

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

DomainInfo

Contains general information about a domain.

Contents

description

The description of the domain provided through RegisterDomain (p. 105).

Type: String

Length Constraints: Maximum length of 1024.

Required: No

name

The name of the domain. This name is unique within the account.

Type: String

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

Required: Yes

status

The status of the domain:

- `REGISTERED` – The domain is properly registered and available. You can use this domain for registering types and creating new workflow executions.
- `DEPRECATED` – The domain was deprecated using DeprecateDomain (p. 21), but is still in use. You should not create new workflow executions in this domain.

Type: String

Valid Values: `REGISTERED | DEPRECATED`

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

ExecutionTimeFilter

Used to filter the workflow executions in visibility APIs by various time-based rules. Each parameter, if specified, defines a rule that must be satisfied by each returned query result. The parameter values are in the Unix Time format. For example: `"oldestDate": 1325376070.`

Contents

latestDate

Specifies the latest start or close date and time to return.

Type: Timestamp

Required: No

oldestDate

Specifies the oldest start or close date and time to return.

Type: Timestamp

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

ExternalWorkflowExecutionCancelRequestedEventAttribu

Provides the details of the `ExternalWorkflowExecutionCancelRequested` event.

Contents

initiatedEventId

The ID of the `RequestCancelExternalWorkflowExecutionInitiated` event corresponding
to the `RequestCancelExternalWorkflowExecution` decision to cancel this external workflow
execution. This information can be useful for diagnosing problems by tracing back the chain of
events leading up to this event.

Type: Long

Required: Yes

workflowExecution

The external workflow execution to which the cancellation request was delivered.

Type: WorkflowExecution (p. 261) object

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

ExternalWorkflowExecutionSignaledEventAttributes

Provides the details of the `ExternalWorkflowExecutionSignaled` event.

Contents

initiatedEventId

The ID of the `SignalExternalWorkflowExecutionInitiated` event corresponding to the
`SignalExternalWorkflowExecution` decision to request this signal. This information can be
useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

workflowExecution

The external workflow execution that the signal was delivered to.

Type: WorkflowExecution (p. 261) object

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

FailWorkflowExecutionDecisionAttributes

Provides the details of the `FailWorkflowExecution` decision.

Access Control

You can use IAM policies to control this decision's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- You cannot use an IAM policy to constrain this action's parameters.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Contents

details

Details of the failure.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

reason

A descriptive reason for the failure that may help in diagnostics.

Type: String

Length Constraints: Maximum length of 256.

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

FailWorkflowExecutionFailedEventAttributes

Provides the details of the `FailWorkflowExecutionFailed` event.

Contents

cause

The cause of the failure. This information is generated by the system and can be useful for diagnostic purposes.

> **Note**
> If `cause` is set to `OPERATION_NOT_PERMITTED`, the decision failed because it lacked sufficient permissions. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Type: String

Valid Values: `UNHANDLED_DECISION | OPERATION_NOT_PERMITTED`

Required: Yes

decisionTaskCompletedEventId

The ID of the `DecisionTaskCompleted` event corresponding to the decision task that resulted in the `FailWorkflowExecution` decision to fail this execution. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

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

HistoryEvent

Event within a workflow execution. A history event can be one of these types:

- `ActivityTaskCancelRequested` – A `RequestCancelActivityTask` decision was received by the system.
- `ActivityTaskCanceled` – The activity task was successfully canceled.
- `ActivityTaskCompleted` – An activity worker successfully completed an activity task by calling RespondActivityTaskCompleted (p. 119).
- `ActivityTaskFailed` – An activity worker failed an activity task by calling RespondActivityTaskFailed (p. 122).
- `ActivityTaskScheduled` – An activity task was scheduled for execution.
- `ActivityTaskStarted` – The scheduled activity task was dispatched to a worker.
- `ActivityTaskTimedOut` – The activity task timed out.
- `CancelTimerFailed` – Failed to process CancelTimer decision. This happens when the decision isn't configured properly, for example no timer exists with the specified timer Id.
- `CancelWorkflowExecutionFailed` – A request to cancel a workflow execution failed.
- `ChildWorkflowExecutionCanceled` – A child workflow execution, started by this workflow execution, was canceled and closed.
- `ChildWorkflowExecutionCompleted` – A child workflow execution, started by this workflow execution, completed successfully and was closed.
- `ChildWorkflowExecutionFailed` – A child workflow execution, started by this workflow execution, failed to complete successfully and was closed.
- `ChildWorkflowExecutionStarted` – A child workflow execution was successfully started.
- `ChildWorkflowExecutionTerminated` – A child workflow execution, started by this workflow execution, was terminated.
- `ChildWorkflowExecutionTimedOut` – A child workflow execution, started by this workflow execution, timed out and was closed.
- `CompleteWorkflowExecutionFailed` – The workflow execution failed to complete.
- `ContinueAsNewWorkflowExecutionFailed` – The workflow execution failed to complete after being continued as a new workflow execution.
- `DecisionTaskCompleted` – The decider successfully completed a decision task by calling RespondDecisionTaskCompleted (p. 125).
- `DecisionTaskScheduled` – A decision task was scheduled for the workflow execution.
- `DecisionTaskStarted` – The decision task was dispatched to a decider.
- `DecisionTaskTimedOut` – The decision task timed out.
- `ExternalWorkflowExecutionCancelRequested` – Request to cancel an external workflow execution was successfully delivered to the target execution.
- `ExternalWorkflowExecutionSignaled` – A signal, requested by this workflow execution, was successfully delivered to the target external workflow execution.
- `FailWorkflowExecutionFailed` – A request to mark a workflow execution as failed, itself failed.
- `MarkerRecorded` – A marker was recorded in the workflow history as the result of a `RecordMarker` decision.
- `RecordMarkerFailed` – A `RecordMarker` decision was returned as failed.
- `RequestCancelActivityTaskFailed` – Failed to process RequestCancelActivityTask decision. This happens when the decision isn't configured properly.
- `RequestCancelExternalWorkflowExecutionFailed` – Request to cancel an external workflow execution failed.

- `RequestCancelExternalWorkflowExecutionInitiated` – A request was made to request the cancellation of an external workflow execution.
- `ScheduleActivityTaskFailed` – Failed to process ScheduleActivityTask decision. This happens when the decision isn't configured properly, for example the activity type specified isn't registered.
- `SignalExternalWorkflowExecutionFailed` – The request to signal an external workflow execution failed.
- `SignalExternalWorkflowExecutionInitiated` – A request to signal an external workflow was made.
- `StartActivityTaskFailed` – A scheduled activity task failed to start.
- `StartChildWorkflowExecutionFailed` – Failed to process StartChildWorkflowExecution decision. This happens when the decision isn't configured properly, for example the workflow type specified isn't registered.
- `StartChildWorkflowExecutionInitiated` – A request was made to start a child workflow execution.
- `StartTimerFailed` – Failed to process StartTimer decision. This happens when the decision isn't configured properly, for example a timer already exists with the specified timer Id.
- `TimerCanceled` – A timer, previously started for this workflow execution, was successfully canceled.
- `TimerFired` – A timer, previously started for this workflow execution, fired.
- `TimerStarted` – A timer was started for the workflow execution due to a `StartTimer` decision.
- `WorkflowExecutionCancelRequested` – A request to cancel this workflow execution was made.
- `WorkflowExecutionCanceled` – The workflow execution was successfully canceled and closed.
- `WorkflowExecutionCompleted` – The workflow execution was closed due to successful completion.
- `WorkflowExecutionContinuedAsNew` – The workflow execution was closed and a new execution of the same type was created with the same workflowId.
- `WorkflowExecutionFailed` – The workflow execution closed due to a failure.
- `WorkflowExecutionSignaled` – An external signal was received for the workflow execution.
- `WorkflowExecutionStarted` – The workflow execution was started.
- `WorkflowExecutionTerminated` – The workflow execution was terminated.
- `WorkflowExecutionTimedOut` – The workflow execution was closed because a time out was exceeded.

Contents

activityTaskCanceledEventAttributes

If the event is of type `ActivityTaskCanceled` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: object

Required: No

activityTaskCancelRequestedEventAttributes

If the event is of type `ActivityTaskcancelRequested` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: object

Required: No

activityTaskCompletedEventAttributes

If the event is of type `ActivityTaskCompleted` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: ActivityTaskCompletedEventAttributes (p. 152) object

Required: No

activityTaskFailedEventAttributes

If the event is of type `ActivityTaskFailed` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: ActivityTaskFailedEventAttributes (p. 153) object

Required: No

activityTaskScheduledEventAttributes

If the event is of type `ActivityTaskScheduled` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: ActivityTaskScheduledEventAttributes (p. 154) object

Required: No

activityTaskStartedEventAttributes

If the event is of type `ActivityTaskStarted` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: ActivityTaskStartedEventAttributes (p. 157) object

Required: No

activityTaskTimedOutEventAttributes

If the event is of type `ActivityTaskTimedOut` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: ActivityTaskTimedOutEventAttributes (p. 158) object

Required: No

cancelTimerFailedEventAttributes

If the event is of type `CancelTimerFailed` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: CancelTimerFailedEventAttributes (p. 164) object

Required: No

cancelWorkflowExecutionFailedEventAttributes

If the event is of type `CancelWorkflowExecutionFailed` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: CancelWorkflowExecutionFailedEventAttributes (p. 166) object

Required: No

childWorkflowExecutionCanceledEventAttributes

If the event is of type `ChildWorkflowExecutionCanceled` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: ChildWorkflowExecutionCanceledEventAttributes (p. 167) object

Required: No

childWorkflowExecutionCompletedEventAttributes

If the event is of type `ChildWorkflowExecutionCompleted` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: ChildWorkflowExecutionCompletedEventAttributes (p. 169) object

Required: No

childWorkflowExecutionFailedEventAttributes

If the event is of type `ChildWorkflowExecutionFailed` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: ChildWorkflowExecutionFailedEventAttributes (p. 171) object

Required: No

childWorkflowExecutionStartedEventAttributes

If the event is of type `ChildWorkflowExecutionStarted` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: ChildWorkflowExecutionStartedEventAttributes (p. 173) object

Required: No

childWorkflowExecutionTerminatedEventAttributes

If the event is of type `ChildWorkflowExecutionTerminated` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: ChildWorkflowExecutionTerminatedEventAttributes (p. 174) object

Required: No

childWorkflowExecutionTimedOutEventAttributes

If the event is of type `ChildWorkflowExecutionTimedOut` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: ChildWorkflowExecutionTimedOutEventAttributes (p. 175) object

Required: No

completeWorkflowExecutionFailedEventAttributes

If the event is of type `CompleteWorkflowExecutionFailed` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: CompleteWorkflowExecutionFailedEventAttributes (p. 179) object

Required: No

continueAsNewWorkflowExecutionFailedEventAttributes

If the event is of type `ContinueAsNewWorkflowExecutionFailed` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: ContinueAsNewWorkflowExecutionFailedEventAttributes (p. 183) object

Required: No

decisionTaskCompletedEventAttributes

If the event is of type `DecisionTaskCompleted` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: DecisionTaskCompletedEventAttributes (p. 191) object

Required: No

decisionTaskScheduledEventAttributes

If the event is of type `DecisionTaskScheduled` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: DecisionTaskScheduledEventAttributes (p. 192) object

Required: No

decisionTaskStartedEventAttributes

If the event is of type `DecisionTaskStarted` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: DecisionTaskStartedEventAttributes (p. 193) object

Required: No

decisionTaskTimedOutEventAttributes

If the event is of type `DecisionTaskTimedOut` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: DecisionTaskTimedOutEventAttributes (p. 194) object

Required: No

eventId

The system generated ID of the event. This ID uniquely identifies the event with in the workflow execution history.

Type: Long

Required: Yes

eventTimestamp

The date and time when the event occurred.

Type: Timestamp

Required: Yes

eventType

The type of the history event.

Type: String

Valid Values: `WorkflowExecutionStarted` | `WorkflowExecutionCancelRequested`
| `WorkflowExecutionCompleted` | `CompleteWorkflowExecutionFailed`
| `WorkflowExecutionFailed` | `FailWorkflowExecutionFailed`
| `WorkflowExecutionTimedOut` | `WorkflowExecutionCanceled` |
`CancelWorkflowExecutionFailed` | `WorkflowExecutionContinuedAsNew` |
`ContinueAsNewWorkflowExecutionFailed` | `WorkflowExecutionTerminated` |

```
DecisionTaskScheduled | DecisionTaskStarted | DecisionTaskCompleted |
DecisionTaskTimedOut | ActivityTaskScheduled | ScheduleActivityTaskFailed
| ActivityTaskStarted | ActivityTaskCompleted | ActivityTaskFailed |
ActivityTaskTimedOut | ActivityTaskCanceled | ActivityTaskCancelRequested |
RequestCancelActivityTaskFailed | WorkflowExecutionSignaled | MarkerRecorded
| RecordMarkerFailed | TimerStarted | StartTimerFailed | TimerFired |
TimerCanceled | CancelTimerFailed | StartChildWorkflowExecutionInitiated
| StartChildWorkflowExecutionFailed | ChildWorkflowExecutionStarted
| ChildWorkflowExecutionCompleted | ChildWorkflowExecutionFailed |
ChildWorkflowExecutionTimedOut | ChildWorkflowExecutionCanceled |
ChildWorkflowExecutionTerminated | SignalExternalWorkflowExecutionInitiated
| SignalExternalWorkflowExecutionFailed | ExternalWorkflowExecutionSignaled
| RequestCancelExternalWorkflowExecutionInitiated
| RequestCancelExternalWorkflowExecutionFailed |
ExternalWorkflowExecutionCancelRequested | LambdaFunctionScheduled |
LambdaFunctionStarted | LambdaFunctionCompleted | LambdaFunctionFailed
| LambdaFunctionTimedOut | ScheduleLambdaFunctionFailed |
StartLambdaFunctionFailed
```

Required: Yes

externalWorkflowExecutionCancelRequestedEventAttributes

If the event is of type `ExternalWorkflowExecutionCancelRequested` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: ExternalWorkflowExecutionCancelRequestedEventAttributes (p. 198) object

Required: No

externalWorkflowExecutionSignaledEventAttributes

If the event is of type `ExternalWorkflowExecutionSignaled` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: ExternalWorkflowExecutionSignaledEventAttributes (p. 199) object

Required: No

failWorkflowExecutionFailedEventAttributes

If the event is of type `FailWorkflowExecutionFailed` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: FailWorkflowExecutionFailedEventAttributes (p. 201) object

Required: No

lambdaFunctionCompletedEventAttributes

Provides the details of the `LambdaFunctionCompleted` event. It isn't set for other event types.

Type: LambdaFunctionCompletedEventAttributes (p. 212) object

Required: No

lambdaFunctionFailedEventAttributes

Provides the details of the `LambdaFunctionFailed` event. It isn't set for other event types.

Type: LambdaFunctionFailedEventAttributes (p. 213) object

Required: No

lambdaFunctionScheduledEventAttributes

Provides the details of the `LambdaFunctionScheduled` event. It isn't set for other event types.

Type: LambdaFunctionScheduledEventAttributes (p. 214) object

Required: No

lambdaFunctionStartedEventAttributes

Provides the details of the `LambdaFunctionStarted` event. It isn't set for other event types.

Type: LambdaFunctionStartedEventAttributes (p. 216) object

Required: No

lambdaFunctionTimedOutEventAttributes

Provides the details of the `LambdaFunctionTimedOut` event. It isn't set for other event types.

Type: LambdaFunctionTimedOutEventAttributes (p. 217) object

Required: No

markerRecordedEventAttributes

If the event is of type `MarkerRecorded` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: MarkerRecordedEventAttributes (p. 218) object

Required: No

recordMarkerFailedEventAttributes

If the event is of type `DecisionTaskFailed` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: RecordMarkerFailedEventAttributes (p. 220) object

Required: No

requestCancelActivityTaskFailedEventAttributes

If the event is of type `RequestCancelActivityTaskFailed` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: RequestCancelActivityTaskFailedEventAttributes (p. 222) object

Required: No

requestCancelExternalWorkflowExecutionFailedEventAttributes

If the event is of type `RequestCancelExternalWorkflowExecutionFailed` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: RequestCancelExternalWorkflowExecutionFailedEventAttributes (p. 225) object

Required: No

requestCancelExternalWorkflowExecutionInitiatedEventAttributes

If the event is of type `RequestCancelExternalWorkflowExecutionInitiated` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: RequestCancelExternalWorkflowExecutionInitiatedEventAttributes (p. 227) object

Required: No

scheduleActivityTaskFailedEventAttributes

If the event is of type `ScheduleActivityTaskFailed` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: ScheduleActivityTaskFailedEventAttributes (p. 231) object

Required: No

scheduleLambdaFunctionFailedEventAttributes

Provides the details of the `ScheduleLambdaFunctionFailed` event. It isn't set for other event types.

Type: ScheduleLambdaFunctionFailedEventAttributes (p. 235) object

Required: No

signalExternalWorkflowExecutionFailedEventAttributes

If the event is of type `SignalExternalWorkflowExecutionFailed` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: SignalExternalWorkflowExecutionFailedEventAttributes (p. 239) object

Required: No

signalExternalWorkflowExecutionInitiatedEventAttributes

If the event is of type `SignalExternalWorkflowExecutionInitiated` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: SignalExternalWorkflowExecutionInitiatedEventAttributes (p. 241) object

Required: No

startChildWorkflowExecutionFailedEventAttributes

If the event is of type `StartChildWorkflowExecutionFailed` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: StartChildWorkflowExecutionFailedEventAttributes (p. 247) object

Required: No

startChildWorkflowExecutionInitiatedEventAttributes

If the event is of type `StartChildWorkflowExecutionInitiated` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: StartChildWorkflowExecutionInitiatedEventAttributes (p. 249) object

Required: No

startLambdaFunctionFailedEventAttributes

Provides the details of the `StartLambdaFunctionFailed` event. It isn't set for other event types.

Type: StartLambdaFunctionFailedEventAttributes (p. 252) object

Required: No

startTimerFailedEventAttributes

If the event is of type `StartTimerFailed` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: StartTimerFailedEventAttributes (p. 255) object

Required: No

timerCanceledEventAttributes

If the event is of type `TimerCanceled` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: TimerCanceledEventAttributes (p. 258) object

Required: No

timerFiredEventAttributes

If the event is of type `TimerFired` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: TimerFiredEventAttributes (p. 259) object

Required: No

timerStartedEventAttributes

If the event is of type `TimerStarted` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: TimerStartedEventAttributes (p. 260) object

Required: No

workflowExecutionCanceledEventAttributes

If the event is of type `WorkflowExecutionCanceled` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: WorkflowExecutionCanceledEventAttributes (p. 262) object

Required: No

workflowExecutionCancelRequestedEventAttributes

If the event is of type `WorkflowExecutionCancelRequested` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: WorkflowExecutionCancelRequestedEventAttributes (p. 263) object

Required: No

workflowExecutionCompletedEventAttributes

If the event is of type `WorkflowExecutionCompleted` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: WorkflowExecutionCompletedEventAttributes (p. 264) object

Required: No

workflowExecutionContinuedAsNewEventAttributes

If the event is of type `WorkflowExecutionContinuedAsNew` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: WorkflowExecutionContinuedAsNewEventAttributes (p. 267) object

Required: No

workflowExecutionFailedEventAttributes

If the event is of type `WorkflowExecutionFailed` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: WorkflowExecutionFailedEventAttributes (p. 270) object

Required: No

workflowExecutionSignaledEventAttributes

If the event is of type `WorkflowExecutionSignaled` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: WorkflowExecutionSignaledEventAttributes (p. 276) object

Required: No

workflowExecutionStartedEventAttributes

If the event is of type `WorkflowExecutionStarted` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: WorkflowExecutionStartedEventAttributes (p. 277) object

Required: No

workflowExecutionTerminatedEventAttributes

If the event is of type `WorkflowExecutionTerminated` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: WorkflowExecutionTerminatedEventAttributes (p. 280) object

Required: No

workflowExecutionTimedOutEventAttributes

If the event is of type `WorkflowExecutionTimedOut` then this member is set and provides detailed information about the event. It isn't set for other event types.

Type: WorkflowExecutionTimedOutEventAttributes (p. 282) 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

LambdaFunctionCompletedEventAttributes

Provides the details of the `LambdaFunctionCompleted` event. It isn't set for other event types.

Contents

result

The results of the Lambda task.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

scheduledEventId

The ID of the `LambdaFunctionScheduled` event that was recorded when this Lambda task was scheduled. To help diagnose issues, use this information to trace back the chain of events leading up to this event.

Type: Long

Required: Yes

startedEventId

The ID of the `LambdaFunctionStarted` event recorded when this activity task started. To help diagnose issues, use this information to trace back the chain of events leading up to this event.

Type: Long

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

LambdaFunctionFailedEventAttributes

Provides the details of the `LambdaFunctionFailed` event. It isn't set for other event types.

Contents

details

The details of the failure.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

reason

The reason provided for the failure.

Type: String

Length Constraints: Maximum length of 256.

Required: No

scheduledEventId

The ID of the `LambdaFunctionScheduled` event that was recorded when this activity task was scheduled. To help diagnose issues, use this information to trace back the chain of events leading up to this event.

Type: Long

Required: Yes

startedEventId

The ID of the `LambdaFunctionStarted` event recorded when this activity task started. To help diagnose issues, use this information to trace back the chain of events leading up to this event.

Type: Long

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

LambdaFunctionScheduledEventAttributes

Provides the details of the `LambdaFunctionScheduled` event. It isn't set for other event types.

Contents

control

Data attached to the event that the decider can use in subsequent workflow tasks. This data isn't sent to the Lambda task.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

decisionTaskCompletedEventId

The ID of the `LambdaFunctionCompleted` event corresponding to the decision that resulted in scheduling this activity task. To help diagnose issues, use this information to trace back the chain of events leading up to this event.

Type: Long

Required: Yes

id

The unique ID of the Lambda task.

Type: String

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

Required: Yes

input

The input provided to the Lambda task.

Type: String

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

Required: No

name

The name of the Lambda function.

Type: String

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

Required: Yes

startToCloseTimeout

The maximum amount of time a worker can take to process the Lambda task.

Type: String

Length Constraints: Maximum length of 8.

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

LambdaFunctionStartedEventAttributes

Provides the details of the `LambdaFunctionStarted` event. It isn't set for other event types.

Contents

scheduledEventId

The ID of the `LambdaFunctionScheduled` event that was recorded when this activity task was scheduled. To help diagnose issues, use this information to trace back the chain of events leading up to this event.

Type: Long

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

LambdaFunctionTimedOutEventAttributes

Provides details of the `LambdaFunctionTimedOut` event.

Contents

scheduledEventId

The ID of the `LambdaFunctionScheduled` event that was recorded when this activity task was scheduled. To help diagnose issues, use this information to trace back the chain of events leading up to this event.

Type: Long

Required: Yes

startedEventId

The ID of the `ActivityTaskStarted` event that was recorded when this activity task started. To help diagnose issues, use this information to trace back the chain of events leading up to this event.

Type: Long

Required: Yes

timeoutType

The type of the timeout that caused this event.

Type: String

Valid Values: `START_TO_CLOSE`

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

MarkerRecordedEventAttributes

Provides the details of the `MarkerRecorded` event.

Contents

decisionTaskCompletedEventId

The ID of the `DecisionTaskCompleted` event corresponding to the decision task that resulted in the `RecordMarker` decision that requested this marker. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

details

The details of the marker.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

markerName

The name of the marker.

Type: String

Length Constraints: Minimum length of 1. 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

RecordMarkerDecisionAttributes

Provides the details of the `RecordMarker` decision.

Access Control

You can use IAM policies to control this decision's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- You cannot use an IAM policy to constrain this action's parameters.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Contents

details

The details of the marker.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

markerName

The name of the marker.

Type: String

Length Constraints: Minimum length of 1. 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

RecordMarkerFailedEventAttributes

Provides the details of the `RecordMarkerFailed` event.

Contents

cause

The cause of the failure. This information is generated by the system and can be useful for diagnostic purposes.

> **Note**
> If `cause` is set to `OPERATION_NOT_PERMITTED`, the decision failed because it lacked sufficient permissions. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Type: String

Valid Values: `OPERATION_NOT_PERMITTED`

Required: Yes

decisionTaskCompletedEventId

The ID of the `DecisionTaskCompleted` event corresponding to the decision task that resulted in the `RecordMarkerFailed` decision for this cancellation request. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

markerName

The marker's name.

Type: String

Length Constraints: Minimum length of 1. 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

RequestCancelActivityTaskDecisionAttributes

Provides the details of the `RequestCancelActivityTask` decision.

Access Control

You can use IAM policies to control this decision's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- You cannot use an IAM policy to constrain this action's parameters.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Contents

activityId

The `activityId` of the activity task to be canceled.

Type: String

Length Constraints: Minimum length of 1. 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

RequestCancelActivityTaskFailedEventAttributes

Provides the details of the `RequestCancelActivityTaskFailed` event.

Contents

activityId

The activityId provided in the `RequestCancelActivityTask` decision that failed.

Type: String

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

Required: Yes

cause

The cause of the failure. This information is generated by the system and can be useful for diagnostic purposes.

> **Note**
> If `cause` is set to `OPERATION_NOT_PERMITTED`, the decision failed because it lacked sufficient permissions. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Type: String

Valid Values: `ACTIVITY_ID_UNKNOWN | OPERATION_NOT_PERMITTED`

Required: Yes

decisionTaskCompletedEventId

The ID of the `DecisionTaskCompleted` event corresponding to the decision task that resulted in the `RequestCancelActivityTask` decision for this cancellation request. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

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

RequestCancelExternalWorkflowExecutionDecisionAttribu

Provides the details of the `RequestCancelExternalWorkflowExecution` decision.

Access Control

You can use IAM policies to control this decision's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- You cannot use an IAM policy to constrain this action's parameters.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Contents

control

The data attached to the event that can be used by the decider in subsequent workflow tasks.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

runId

The `runId` of the external workflow execution to cancel.

Type: String

Length Constraints: Maximum length of 64.

Required: No

workflowId

The `workflowId` of the external workflow execution to cancel.

Type: String

Length Constraints: Minimum length of 1. 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

RequestCancelExternalWorkflowExecutionFailedEventAtt

Provides the details of the `RequestCancelExternalWorkflowExecutionFailed` event.

Contents

cause

The cause of the failure. This information is generated by the system and can be useful for diagnostic purposes.

> **Note**
> If `cause` is set to `OPERATION_NOT_PERMITTED`, the decision failed because it lacked sufficient permissions. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Type: String

Valid Values: `UNKNOWN_EXTERNAL_WORKFLOW_EXECUTION` | `REQUEST_CANCEL_EXTERNAL_WORKFLOW_EXECUTION_RATE_EXCEEDED` | `OPERATION_NOT_PERMITTED`

Required: Yes

control

The data attached to the event that the decider can use in subsequent workflow tasks. This data isn't sent to the workflow execution.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

decisionTaskCompletedEventId

The ID of the `DecisionTaskCompleted` event corresponding to the decision task that resulted in the `RequestCancelExternalWorkflowExecution` decision for this cancellation request. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

initiatedEventId

The ID of the `RequestCancelExternalWorkflowExecutionInitiated` event corresponding to the `RequestCancelExternalWorkflowExecution` decision to cancel this external workflow execution. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

runId

The `runId` of the external workflow execution.

Type: String

Length Constraints: Maximum length of 64.

Required: No

workflowId

The `workflowId` of the external workflow to which the cancel request was to be delivered.

Type: String

Length Constraints: Minimum length of 1. 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

RequestCancelExternalWorkflowExecutionInitiatedEventA

Provides the details of the `RequestCancelExternalWorkflowExecutionInitiated` event.

Contents

control

Data attached to the event that can be used by the decider in subsequent workflow tasks.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

decisionTaskCompletedEventId

The ID of the `DecisionTaskCompleted` event corresponding to the decision task that resulted in the `RequestCancelExternalWorkflowExecution` decision for this cancellation request. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

runId

The `runId` of the external workflow execution to be canceled.

Type: String

Length Constraints: Maximum length of 64.

Required: No

workflowId

The `workflowId` of the external workflow execution to be canceled.

Type: String

Length Constraints: Minimum length of 1. 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

ScheduleActivityTaskDecisionAttributes

Provides the details of the `ScheduleActivityTask` decision.

Access Control

You can use IAM policies to control this decision's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- Constrain the following parameters by using a `Condition` element with the appropriate keys.
  - `activityType.name` – String constraint. The key is `swf:activityType.name`.
  - `activityType.version` – String constraint. The key is `swf:activityType.version`.
  - `taskList` – String constraint. The key is `swf:taskList.name`.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Contents

activityId

The `activityId` of the activity task.

The specified string must not start or end with whitespace. It must not contain a `:` (colon), `/` (slash), `|` (vertical bar), or any control characters (`\u0000-\u001f` | `\u007f-\u009f`). Also, it must not contain the literal string `arn`.

Type: String

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

Required: Yes

activityType

The type of the activity task to schedule.

Type: ActivityType (p. 159) object

Required: Yes

control

Data attached to the event that can be used by the decider in subsequent workflow tasks. This data isn't sent to the activity.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

heartbeatTimeout

If set, specifies the maximum time before which a worker processing a task of this type must report progress by calling RecordActivityTaskHeartbeat (p. 96). If the timeout is exceeded, the activity task

is automatically timed out. If the worker subsequently attempts to record a heartbeat or returns a result, it is ignored. This overrides the default heartbeat timeout specified when registering the activity type using RegisterActivityType (p. 100).

The duration is specified in seconds, an integer greater than or equal to `0`. You can use `NONE` to specify unlimited duration.

Type: String

Length Constraints: Maximum length of 8.

Required: No

input

The input provided to the activity task.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

scheduleToCloseTimeout

The maximum duration for this activity task.

The duration is specified in seconds, an integer greater than or equal to `0`. You can use `NONE` to specify unlimited duration.

> **Note**
> A schedule-to-close timeout for this activity task must be specified either as a default for the activity type or through this field. If neither this field is set nor a default schedule-to-close timeout was specified at registration time then a fault is returned.

Type: String

Length Constraints: Maximum length of 8.

Required: No

scheduleToStartTimeout

If set, specifies the maximum duration the activity task can wait to be assigned to a worker. This overrides the default schedule-to-start timeout specified when registering the activity type using RegisterActivityType (p. 100).

The duration is specified in seconds, an integer greater than or equal to `0`. You can use `NONE` to specify unlimited duration.

> **Note**
> A schedule-to-start timeout for this activity task must be specified either as a default for the activity type or through this field. If neither this field is set nor a default schedule-to-start timeout was specified at registration time then a fault is returned.

Type: String

Length Constraints: Maximum length of 8.

Required: No

startToCloseTimeout

If set, specifies the maximum duration a worker may take to process this activity task. This overrides the default start-to-close timeout specified when registering the activity type using RegisterActivityType (p. 100).

The duration is specified in seconds, an integer greater than or equal to `0`. You can use `NONE` to specify unlimited duration.

> **Note**
> A start-to-close timeout for this activity task must be specified either as a default for the activity type or through this field. If neither this field is set nor a default start-to-close timeout was specified at registration time then a fault is returned.

Type: String

Length Constraints: Maximum length of 8.

Required: No

taskList

If set, specifies the name of the task list in which to schedule the activity task. If not specified, the `defaultTaskList` registered with the activity type is used.

> **Note**
> A task list for this activity task must be specified either as a default for the activity type or through this field. If neither this field is set nor a default task list was specified at registration time then a fault is returned.

The specified string must not start or end with whitespace. It must not contain a `:` (colon), `/` (slash), `|` (vertical bar), or any control characters (`\u0000-\u001f` | `\u007f-\u009f`). Also, it must not contain the literal string `arn`.

Type: TaskList (p. 257) object

Required: No

taskPriority

If set, specifies the priority with which the activity task is to be assigned to a worker. This overrides the defaultTaskPriority specified when registering the activity type using RegisterActivityType (p. 100). Valid values are integers that range from Java's `Integer.MIN_VALUE` (-2147483648) to `Integer.MAX_VALUE` (2147483647). Higher numbers indicate higher priority.

For more information about setting task priority, see Setting Task Priority in the *Amazon SWF Developer Guide*.

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

ScheduleActivityTaskFailedEventAttributes

Provides the details of the `ScheduleActivityTaskFailed` event.

Contents

activityId

The activityId provided in the `ScheduleActivityTask` decision that failed.

Type: String

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

Required: Yes

activityType

The activity type provided in the `ScheduleActivityTask` decision that failed.

Type: ActivityType (p. 159) object

Required: Yes

cause

The cause of the failure. This information is generated by the system and can be useful for diagnostic purposes.

> **Note**
> If `cause` is set to `OPERATION_NOT_PERMITTED`, the decision failed because it lacked sufficient permissions. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Type: String

Valid Values: `ACTIVITY_TYPE_DEPRECATED` | `ACTIVITY_TYPE_DOES_NOT_EXIST` | `ACTIVITY_ID_ALREADY_IN_USE` | `OPEN_ACTIVITIES_LIMIT_EXCEEDED` | `ACTIVITY_CREATION_RATE_EXCEEDED` | `DEFAULT_SCHEDULE_TO_CLOSE_TIMEOUT_UNDEFINED` | `DEFAULT_TASK_LIST_UNDEFINED` | `DEFAULT_SCHEDULE_TO_START_TIMEOUT_UNDEFINED` | `DEFAULT_START_TO_CLOSE_TIMEOUT_UNDEFINED` | `DEFAULT_HEARTBEAT_TIMEOUT_UNDEFINED` | `OPERATION_NOT_PERMITTED`

Required: Yes

decisionTaskCompletedEventId

The ID of the `DecisionTaskCompleted` event corresponding to the decision that resulted in the scheduling of this activity task. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

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

ScheduleLambdaFunctionDecisionAttributes

Decision attributes specified in `scheduleLambdaFunctionDecisionAttributes` within the list of decisions `decisions` passed to RespondDecisionTaskCompleted (p. 125).

Contents

control

The data attached to the event that the decider can use in subsequent workflow tasks. This data isn't sent to the Lambda task.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

id

A string that identifies the Lambda function execution in the event history.

Type: String

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

Required: Yes

input

The optional input data to be supplied to the Lambda function.

Type: String

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

Required: No

name

The name, or ARN, of the Lambda function to schedule.

Type: String

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

Required: Yes

startToCloseTimeout

The timeout value, in seconds, after which the Lambda function is considered to be failed once it has started. This can be any integer from 1-300 (1s-5m). If no value is supplied, than a default value of 300s is assumed.

Type: String

Length Constraints: Maximum length of 8.

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

ScheduleLambdaFunctionFailedEventAttributes

Provides the details of the `ScheduleLambdaFunctionFailed` event. It isn't set for other event types.

Contents

cause

The cause of the failure. To help diagnose issues, use this information to trace back the chain of events leading up to this event.

> **Note**
> If `cause` is set to `OPERATION_NOT_PERMITTED`, the decision failed because it lacked sufficient permissions. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Type: String

Valid Values: `ID_ALREADY_IN_USE` | `OPEN_LAMBDA_FUNCTIONS_LIMIT_EXCEEDED` | `LAMBDA_FUNCTION_CREATION_RATE_EXCEEDED` | `LAMBDA_SERVICE_NOT_AVAILABLE_IN_REGION`

Required: Yes

decisionTaskCompletedEventId

The ID of the `LambdaFunctionCompleted` event corresponding to the decision that resulted in scheduling this Lambda task. To help diagnose issues, use this information to trace back the chain of events leading up to this event.

Type: Long

Required: Yes

id

The ID provided in the `ScheduleLambdaFunction` decision that failed.

Type: String

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

Required: Yes

name

The name of the Lambda function.

Type: String

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

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

SignalExternalWorkflowExecutionDecisionAttributes

Provides the details of the `SignalExternalWorkflowExecution` decision.

Access Control

You can use IAM policies to control this decision's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- You cannot use an IAM policy to constrain this action's parameters.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Contents

control

The data attached to the event that can be used by the decider in subsequent decision tasks.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

input

The input data to be provided with the signal. The target workflow execution uses the signal name and input data to process the signal.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

runId

The `runId` of the workflow execution to be signaled.

Type: String

Length Constraints: Maximum length of 64.

Required: No

signalName

The name of the signal.The target workflow execution uses the signal name and input to process the signal.

Type: String

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

Required: Yes

workflowId

The `workflowId` of the workflow execution to be signaled.

Type: String

Length Constraints: Minimum length of 1. 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

SignalExternalWorkflowExecutionFailedEventAttributes

Provides the details of the `SignalExternalWorkflowExecutionFailed` event.

Contents

cause

The cause of the failure. This information is generated by the system and can be useful for diagnostic purposes.

> **Note**
> If `cause` is set to `OPERATION_NOT_PERMITTED`, the decision failed because it lacked sufficient permissions. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Type: String

Valid Values: `UNKNOWN_EXTERNAL_WORKFLOW_EXECUTION` | `SIGNAL_EXTERNAL_WORKFLOW_EXECUTION_RATE_EXCEEDED` | `OPERATION_NOT_PERMITTED`

Required: Yes

control

The data attached to the event that the decider can use in subsequent workflow tasks. This data isn't sent to the workflow execution.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

decisionTaskCompletedEventId

The ID of the `DecisionTaskCompleted` event corresponding to the decision task that resulted in the `SignalExternalWorkflowExecution` decision for this signal. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

initiatedEventId

The ID of the `SignalExternalWorkflowExecutionInitiated` event corresponding to the `SignalExternalWorkflowExecution` decision to request this signal. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

runId

The `runId` of the external workflow execution that the signal was being delivered to.

Type: String

Length Constraints: Maximum length of 64.

Required: No

workflowId

The `workflowId` of the external workflow execution that the signal was being delivered to.

Type: String

Length Constraints: Minimum length of 1. 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

SignalExternalWorkflowExecutionInitiatedEventAttribute

Provides the details of the `SignalExternalWorkflowExecutionInitiated` event.

Contents

control

Data attached to the event that can be used by the decider in subsequent decision tasks.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

decisionTaskCompletedEventId

The ID of the `DecisionTaskCompleted` event corresponding to the decision task that resulted in the `SignalExternalWorkflowExecution` decision for this signal. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

input

The input provided to the signal.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

runId

The `runId` of the external workflow execution to send the signal to.

Type: String

Length Constraints: Maximum length of 64.

Required: No

signalName

The name of the signal.

Type: String

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

Required: Yes

workflowId

The `workflowId` of the external workflow execution.

Type: String

Length Constraints: Minimum length of 1. 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

StartChildWorkflowExecutionDecisionAttributes

Provides the details of the `StartChildWorkflowExecution` decision.

Access Control

You can use IAM policies to control this decision's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- Constrain the following parameters by using a `Condition` element with the appropriate keys.
  - `tagList.member.N` – The key is "swf:tagList.N" where N is the tag number from 0 to 4, inclusive.
  - `taskList` – String constraint. The key is `swf:taskList.name`.
  - `workflowType.name` – String constraint. The key is `swf:workflowType.name`.
  - `workflowType.version` – String constraint. The key is `swf:workflowType.version`.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Contents

childPolicy

If set, specifies the policy to use for the child workflow executions if the workflow execution being started is terminated by calling the TerminateWorkflowExecution (p. 141) action explicitly or due to an expired timeout. This policy overrides the default child policy specified when registering the workflow type using RegisterWorkflowType (p. 108).

The supported child policies are:
- `TERMINATE` – The child executions are terminated.
- `REQUEST_CANCEL` – A request to cancel is attempted for each child execution by recording a `WorkflowExecutionCancelRequested` event in its history. It is up to the decider to take appropriate actions when it receives an execution history with this event.
- `ABANDON` – No action is taken. The child executions continue to run.

  > **Note**
  > A child policy for this workflow execution must be specified either as a default for the workflow type or through this parameter. If neither this parameter is set nor a default child policy was specified at registration time then a fault is returned.

Type: String

Valid Values: `TERMINATE | REQUEST_CANCEL | ABANDON`

Required: No

control

The data attached to the event that can be used by the decider in subsequent workflow tasks. This data isn't sent to the child workflow execution.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

executionStartToCloseTimeout

The total duration for this workflow execution. This overrides the defaultExecutionStartToCloseTimeout specified when registering the workflow type.

The duration is specified in seconds, an integer greater than or equal to `0`. You can use `NONE` to specify unlimited duration.

> **Note**
> An execution start-to-close timeout for this workflow execution must be specified either as a default for the workflow type or through this parameter. If neither this parameter is set nor a default execution start-to-close timeout was specified at registration time then a fault is returned.

Type: String

Length Constraints: Maximum length of 8.

Required: No

input

The input to be provided to the workflow execution.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

lambdaRole

The IAM role attached to the child workflow execution.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1600.

Required: No

tagList

The list of tags to associate with the child workflow execution. A maximum of 5 tags can be specified. You can list workflow executions with a specific tag by calling ListOpenWorkflowExecutions (p. 69) or ListClosedWorkflowExecutions (p. 59) and specifying a TagFilter (p. 256).

Type: Array of strings

Array Members: Maximum number of 5 items.

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

Required: No

taskList

The name of the task list to be used for decision tasks of the child workflow execution.

> **Note**
> A task list for this workflow execution must be specified either as a default for the workflow type or through this parameter. If neither this parameter is set nor a default task list was specified at registration time then a fault is returned.

The specified string must not start or end with whitespace. It must not contain a `:` (colon), `/` (slash), `|` (vertical bar), or any control characters (`\u0000-\u001f` | `\u007f-\u009f`). Also, it must not contain the literal string `arn`.

Type: TaskList (p. 257) object

Required: No

taskPriority

A task priority that, if set, specifies the priority for a decision task of this workflow execution. This overrides the defaultTaskPriority specified when registering the workflow type. Valid values are integers that range from Java's `Integer.MIN_VALUE` (-2147483648) to `Integer.MAX_VALUE` (2147483647). Higher numbers indicate higher priority.

For more information about setting task priority, see Setting Task Priority in the *Amazon SWF Developer Guide*.

Type: String

Required: No

taskStartToCloseTimeout

Specifies the maximum duration of decision tasks for this workflow execution. This parameter overrides the `defaultTaskStartToCloseTimeout` specified when registering the workflow type using RegisterWorkflowType (p. 108).

The duration is specified in seconds, an integer greater than or equal to `0`. You can use `NONE` to specify unlimited duration.

> **Note**
> A task start-to-close timeout for this workflow execution must be specified either as a default for the workflow type or through this parameter. If neither this parameter is set nor a default task start-to-close timeout was specified at registration time then a fault is returned.

Type: String

Length Constraints: Maximum length of 8.

Required: No

workflowId

The `workflowId` of the workflow execution.

The specified string must not start or end with whitespace. It must not contain a `:` (colon), `/` (slash), `|` (vertical bar), or any control characters (`\u0000-\u001f` | `\u007f-\u009f`). Also, it must not contain the literal string `arn`.

Type: String

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

Required: Yes

workflowType

The type of the workflow execution to be started.

Type: WorkflowType (p. 283) object

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

StartChildWorkflowExecutionFailedEventAttributes

Provides the details of the `StartChildWorkflowExecutionFailed` event.

Contents

cause

The cause of the failure. This information is generated by the system and can be useful for diagnostic purposes.

> **Note**
> When `cause` is set to `OPERATION_NOT_PERMITTED`, the decision fails because it lacks sufficient permissions. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Type: String

Valid Values: `WORKFLOW_TYPE_DOES_NOT_EXIST` | `WORKFLOW_TYPE_DEPRECATED` | `OPEN_CHILDREN_LIMIT_EXCEEDED` | `OPEN_WORKFLOWS_LIMIT_EXCEEDED` | `CHILD_CREATION_RATE_EXCEEDED` | `WORKFLOW_ALREADY_RUNNING` | `DEFAULT_EXECUTION_START_TO_CLOSE_TIMEOUT_UNDEFINED` | `DEFAULT_TASK_LIST_UNDEFINED` | `DEFAULT_TASK_START_TO_CLOSE_TIMEOUT_UNDEFINED` | `DEFAULT_CHILD_POLICY_UNDEFINED` | `OPERATION_NOT_PERMITTED`

Required: Yes

control

The data attached to the event that the decider can use in subsequent workflow tasks. This data isn't sent to the child workflow execution.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

decisionTaskCompletedEventId

The ID of the `DecisionTaskCompleted` event corresponding to the decision task that resulted in the `StartChildWorkflowExecution` Decision (p. 184) to request this child workflow execution. This information can be useful for diagnosing problems by tracing back the chain of events.

Type: Long

Required: Yes

initiatedEventId

When the `cause` is `WORKFLOW_ALREADY_RUNNING`, `initiatedEventId` is the ID of the `StartChildWorkflowExecutionInitiated` event that corresponds to the `StartChildWorkflowExecution` Decision (p. 184) to start the workflow execution. You can use this information to diagnose problems by tracing back the chain of events leading up to this event.

When the `cause` isn't `WORKFLOW_ALREADY_RUNNING`, `initiatedEventId` is set to `0` because the `StartChildWorkflowExecutionInitiated` event doesn't exist.

Type: Long

Required: Yes

workflowId

The `workflowId` of the child workflow execution.

Type: String

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

Required: Yes

workflowType

The workflow type provided in the `StartChildWorkflowExecution` Decision (p. 184) that failed.

Type: WorkflowType (p. 283) object

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

StartChildWorkflowExecutionInitiatedEventAttributes

Provides the details of the `StartChildWorkflowExecutionInitiated` event.

Contents

childPolicy

The policy to use for the child workflow executions if this execution gets terminated by explicitly calling the TerminateWorkflowExecution (p. 141) action or due to an expired timeout.

The supported child policies are:

- `TERMINATE` – The child executions are terminated.
- `REQUEST_CANCEL` – A request to cancel is attempted for each child execution by recording a `WorkflowExecutionCancelRequested` event in its history. It is up to the decider to take appropriate actions when it receives an execution history with this event.
- `ABANDON` – No action is taken. The child executions continue to run.

Type: String

Valid Values: `TERMINATE | REQUEST_CANCEL | ABANDON`

Required: Yes

control

Data attached to the event that can be used by the decider in subsequent decision tasks. This data isn't sent to the activity.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

decisionTaskCompletedEventId

The ID of the `DecisionTaskCompleted` event corresponding to the decision task that resulted in the `StartChildWorkflowExecution` Decision (p. 184) to request this child workflow execution. This information can be useful for diagnosing problems by tracing back the cause of events.

Type: Long

Required: Yes

executionStartToCloseTimeout

The maximum duration for the child workflow execution. If the workflow execution isn't closed within this duration, it is timed out and force-terminated.

The duration is specified in seconds, an integer greater than or equal to `0`. You can use `NONE` to specify unlimited duration.

Type: String

Length Constraints: Maximum length of 8.

Required: No

input

The inputs provided to the child workflow execution.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

lambdaRole

The IAM role to attach to the child workflow execution.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1600.

Required: No

tagList

The list of tags to associated with the child workflow execution.

Type: Array of strings

Array Members: Maximum number of 5 items.

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

Required: No

taskList

The name of the task list used for the decision tasks of the child workflow execution.

Type: TaskList (p. 257) object

Required: Yes

taskPriority

The priority assigned for the decision tasks for this workflow execution. Valid values are integers that range from Java's `Integer.MIN_VALUE` (-2147483648) to `Integer.MAX_VALUE` (2147483647). Higher numbers indicate higher priority.

For more information about setting task priority, see Setting Task Priority in the *Amazon SWF Developer Guide*.

Type: String

Required: No

taskStartToCloseTimeout

The maximum duration allowed for the decision tasks for this workflow execution.

The duration is specified in seconds, an integer greater than or equal to `0`. You can use `NONE` to specify unlimited duration.

Type: String

Length Constraints: Maximum length of 8.

Required: No

workflowId

The `workflowId` of the child workflow execution.

Type: String

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

Required: Yes

workflowType

The type of the child workflow execution.

Type: WorkflowType (p. 283) object

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

StartLambdaFunctionFailedEventAttributes

Provides the details of the `StartLambdaFunctionFailed` event. It isn't set for other event types.

Contents

cause

The cause of the failure. To help diagnose issues, use this information to trace back the chain of events leading up to this event.

> **Note**
> If `cause` is set to `OPERATION_NOT_PERMITTED`, the decision failed because the IAM role attached to the execution lacked sufficient permissions. For details and example IAM policies, see Lambda Tasks in the *Amazon SWF Developer Guide*.

Type: String

Valid Values: `ASSUME_ROLE_FAILED`

Required: No

message

A description that can help diagnose the cause of the fault.

Type: String

Length Constraints: Maximum length of 1728.

Required: No

scheduledEventId

The ID of the `ActivityTaskScheduled` event that was recorded when this activity task was scheduled. To help diagnose issues, use this information to trace back the chain of events leading up to this event.

Type: Long

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

StartTimerDecisionAttributes

Provides the details of the `StartTimer` decision.

Access Control

You can use IAM policies to control this decision's access to Amazon SWF resources as follows:

- Use a `Resource` element with the domain name to limit the action to only specified domains.
- Use an `Action` element to allow or deny permission to call this action.
- You cannot use an IAM policy to constrain this action's parameters.

If the caller doesn't have sufficient permissions to invoke the action, or the parameter values fall outside the specified constraints, the action fails. The associated event attribute's `cause` parameter is set to `OPERATION_NOT_PERMITTED`. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Contents

control

The data attached to the event that can be used by the decider in subsequent workflow tasks.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

startToFireTimeout

The duration to wait before firing the timer.

The duration is specified in seconds, an integer greater than or equal to `0`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 8.

Required: Yes

timerId

The unique ID of the timer.

The specified string must not start or end with whitespace. It must not contain a `:` (colon), `/` (slash), `|` (vertical bar), or any control characters (`\u0000-\u001f` | `\u007f-\u009f`). Also, it must not contain the literal string `arn`.

Type: String

Length Constraints: Minimum length of 1. 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

StartTimerFailedEventAttributes

Provides the details of the `StartTimerFailed` event.

Contents

cause

The cause of the failure. This information is generated by the system and can be useful for diagnostic purposes.

> **Note**
> If `cause` is set to `OPERATION_NOT_PERMITTED`, the decision failed because it lacked sufficient permissions. For details and example IAM policies, see Using IAM to Manage Access to Amazon SWF Workflows in the *Amazon SWF Developer Guide*.

Type: String

Valid Values: `TIMER_ID_ALREADY_IN_USE | OPEN_TIMERS_LIMIT_EXCEEDED | TIMER_CREATION_RATE_EXCEEDED | OPERATION_NOT_PERMITTED`

Required: Yes

decisionTaskCompletedEventId

The ID of the `DecisionTaskCompleted` event corresponding to the decision task that resulted in the `StartTimer` decision for this activity task. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

timerId

The timerId provided in the `StartTimer` decision that failed.

Type: String

Length Constraints: Minimum length of 1. 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

TagFilter

Used to filter the workflow executions in visibility APIs based on a tag.

Contents

tag

Specifies the tag that must be associated with the execution for it to meet the filter criteria.

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

TaskList

Represents a task list.

Contents

name

The name of the task list.

Type: String

Length Constraints: Minimum length of 1. 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

TimerCanceledEventAttributes

Provides the details of the `TimerCanceled` event.

Contents

decisionTaskCompletedEventId

The ID of the `DecisionTaskCompleted` event corresponding to the decision task that resulted in the `CancelTimer` decision to cancel this timer. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

startedEventId

The ID of the `TimerStarted` event that was recorded when this timer was started. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

timerId

The unique ID of the timer that was canceled.

Type: String

Length Constraints: Minimum length of 1. 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

TimerFiredEventAttributes

Provides the details of the `TimerFired` event.

Contents

startedEventId

The ID of the `TimerStarted` event that was recorded when this timer was started. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

timerId

The unique ID of the timer that fired.

Type: String

Length Constraints: Minimum length of 1. 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

TimerStartedEventAttributes

Provides the details of the `TimerStarted` event.

Contents

control

Data attached to the event that can be used by the decider in subsequent workflow tasks.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

decisionTaskCompletedEventId

The ID of the `DecisionTaskCompleted` event corresponding to the decision task that resulted in the `StartTimer` decision for this activity task. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

startToFireTimeout

The duration of time after which the timer fires.

The duration is specified in seconds, an integer greater than or equal to `0`.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 8.

Required: Yes

timerId

The unique ID of the timer that was started.

Type: String

Length Constraints: Minimum length of 1. 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

WorkflowExecution

Represents a workflow execution.

Contents

runId

A system-generated unique identifier for the workflow execution.

Type: String

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

Required: Yes

workflowId

The user defined identifier associated with the workflow execution.

Type: String

Length Constraints: Minimum length of 1. 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

WorkflowExecutionCanceledEventAttributes

Provides the details of the `WorkflowExecutionCanceled` event.

Contents

decisionTaskCompletedEventId

The ID of the `DecisionTaskCompleted` event corresponding to the decision task that resulted in the `CancelWorkflowExecution` decision for this cancellation request. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

details

The details of the cancellation.

Type: String

Length Constraints: Maximum length of 32768.

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

WorkflowExecutionCancelRequestedEventAttributes

Provides the details of the `WorkflowExecutionCancelRequested` event.

Contents

cause

If set, indicates that the request to cancel the workflow execution was automatically generated, and specifies the cause. This happens if the parent workflow execution times out or is terminated, and the child policy is set to cancel child executions.

Type: String

Valid Values: `CHILD_POLICY_APPLIED`

Required: No

externalInitiatedEventId

The ID of the `RequestCancelExternalWorkflowExecutionInitiated` event corresponding to the `RequestCancelExternalWorkflowExecution` decision to cancel this workflow execution.The source event with this ID can be found in the history of the source workflow execution. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: No

externalWorkflowExecution

The external workflow execution for which the cancellation was requested.

Type: WorkflowExecution (p. 261) 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

WorkflowExecutionCompletedEventAttributes

Provides the details of the `WorkflowExecutionCompleted` event.

Contents

decisionTaskCompletedEventId

The ID of the `DecisionTaskCompleted` event corresponding to the decision task that resulted in the `CompleteWorkflowExecution` decision to complete this execution. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

result

The result produced by the workflow execution upon successful completion.

Type: String

Length Constraints: Maximum length of 32768.

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

WorkflowExecutionConfiguration

The configuration settings for a workflow execution including timeout values, tasklist etc. These configuration settings are determined from the defaults specified when registering the workflow type and those specified when starting the workflow execution.

Contents

childPolicy

The policy to use for the child workflow executions if this workflow execution is terminated, by calling the TerminateWorkflowExecution (p. 141) action explicitly or due to an expired timeout.

The supported child policies are:

- `TERMINATE` – The child executions are terminated.
- `REQUEST_CANCEL` – A request to cancel is attempted for each child execution by recording a `WorkflowExecutionCancelRequested` event in its history. It is up to the decider to take appropriate actions when it receives an execution history with this event.
- `ABANDON` – No action is taken. The child executions continue to run.

Type: String

Valid Values: `TERMINATE | REQUEST_CANCEL | ABANDON`

Required: Yes

executionStartToCloseTimeout

The total duration for this workflow execution.

The duration is specified in seconds, an integer greater than or equal to `0`. You can use `NONE` to specify unlimited duration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 8.

Required: Yes

lambdaRole

The IAM role attached to the child workflow execution.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1600.

Required: No

taskList

The task list used for the decision tasks generated for this workflow execution.

Type: TaskList (p. 257) object

Required: Yes

taskPriority

The priority assigned to decision tasks for this workflow execution. Valid values are integers that range from Java's `Integer.MIN_VALUE` (-2147483648) to `Integer.MAX_VALUE` (2147483647). Higher numbers indicate higher priority.

For more information about setting task priority, see Setting Task Priority in the *Amazon SWF Developer Guide*.

Type: String

Required: No

taskStartToCloseTimeout

The maximum duration allowed for decision tasks for this workflow execution.

The duration is specified in seconds, an integer greater than or equal to `0`. You can use `NONE` to specify unlimited duration.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 8.

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

WorkflowExecutionContinuedAsNewEventAttributes

Provides the details of the `WorkflowExecutionContinuedAsNew` event.

Contents

childPolicy

The policy to use for the child workflow executions of the new execution if it is terminated by calling the TerminateWorkflowExecution (p. 141) action explicitly or due to an expired timeout.

The supported child policies are:

- `TERMINATE` – The child executions are terminated.
- `REQUEST_CANCEL` – A request to cancel is attempted for each child execution by recording a `WorkflowExecutionCancelRequested` event in its history. It is up to the decider to take appropriate actions when it receives an execution history with this event.
- `ABANDON` – No action is taken. The child executions continue to run.

Type: String

Valid Values: `TERMINATE | REQUEST_CANCEL | ABANDON`

Required: Yes

decisionTaskCompletedEventId

The ID of the `DecisionTaskCompleted` event corresponding to the decision task that resulted in the `ContinueAsNewWorkflowExecution` decision that started this execution. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

executionStartToCloseTimeout

The total duration allowed for the new workflow execution.

The duration is specified in seconds, an integer greater than or equal to `0`. You can use `NONE` to specify unlimited duration.

Type: String

Length Constraints: Maximum length of 8.

Required: No

input

The input provided to the new workflow execution.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

lambdaRole

The IAM role to attach to the new (continued) workflow execution.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1600.

Required: No

newExecutionRunId

The `runId` of the new workflow execution.

Type: String

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

Required: Yes

tagList

The list of tags associated with the new workflow execution.

Type: Array of strings

Array Members: Maximum number of 5 items.

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

Required: No

taskList

The task list to use for the decisions of the new (continued) workflow execution.

Type: TaskList (p. 257) object

Required: Yes

taskPriority

The priority of the task to use for the decisions of the new (continued) workflow execution.

Type: String

Required: No

taskStartToCloseTimeout

The maximum duration of decision tasks for the new workflow execution.

The duration is specified in seconds, an integer greater than or equal to `0`. You can use `NONE` to specify unlimited duration.

Type: String

Length Constraints: Maximum length of 8.

Required: No

workflowType

The workflow type of this execution.

Type: WorkflowType (p. 283) object

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

WorkflowExecutionFailedEventAttributes

Provides the details of the `WorkflowExecutionFailed` event.

Contents

decisionTaskCompletedEventId

The ID of the `DecisionTaskCompleted` event corresponding to the decision task that resulted in the `FailWorkflowExecution` decision to fail this execution. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: Yes

details

The details of the failure.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

reason

The descriptive reason provided for the failure.

Type: String

Length Constraints: Maximum length of 256.

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

WorkflowExecutionFilter

Used to filter the workflow executions in visibility APIs by their `workflowId`.

Contents

workflowId

The workflowId to pass of match the criteria of this filter.

Type: String

Length Constraints: Minimum length of 1. 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

WorkflowExecutionInfo

Contains information about a workflow execution.

Contents

cancelRequested

Set to true if a cancellation is requested for this workflow execution.

Type: Boolean

Required: No

closeStatus

If the execution status is closed then this specifies how the execution was closed:

- `COMPLETED` – the execution was successfully completed.
- `CANCELED` – the execution was canceled.Cancellation allows the implementation to gracefully clean up before the execution is closed.
- `TERMINATED` – the execution was force terminated.
- `FAILED` – the execution failed to complete.
- `TIMED_OUT` – the execution did not complete in the alloted time and was automatically timed out.
- `CONTINUED_AS_NEW` – the execution is logically continued. This means the current execution was completed and a new execution was started to carry on the workflow.

Type: String

Valid Values: `COMPLETED | FAILED | CANCELED | TERMINATED | CONTINUED_AS_NEW | TIMED_OUT`

Required: No

closeTimestamp

The time when the workflow execution was closed. Set only if the execution status is CLOSED.

Type: Timestamp

Required: No

execution

The workflow execution this information is about.

Type: WorkflowExecution (p. 261) object

Required: Yes

executionStatus

The current status of the execution.

Type: String

Valid Values: `OPEN | CLOSED`

Required: Yes

parent

> If this workflow execution is a child of another execution then contains the workflow execution that started this execution.

> Type: WorkflowExecution (p. 261) object

> Required: No

startTimestamp

> The time when the execution was started.

> Type: Timestamp

> Required: Yes

tagList

> The list of tags associated with the workflow execution. Tags can be used to identify and list workflow executions of interest through the visibility APIs. A workflow execution can have a maximum of 5 tags.

> Type: Array of strings

> Array Members: Maximum number of 5 items.

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

> Required: No

workflowType

> The type of the workflow execution.

> Type: WorkflowType (p. 283) object

> 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

WorkflowExecutionOpenCounts

Contains the counts of open tasks, child workflow executions and timers for a workflow execution.

Contents

openActivityTasks

The count of activity tasks whose status is `OPEN`.

Type: Integer

Valid Range: Minimum value of 0.

Required: Yes

openChildWorkflowExecutions

The count of child workflow executions whose status is `OPEN`.

Type: Integer

Valid Range: Minimum value of 0.

Required: Yes

openDecisionTasks

The count of decision tasks whose status is OPEN. A workflow execution can have at most one open decision task.

Type: Integer

Valid Range: Minimum value of 0. Maximum value of 1.

Required: Yes

openLambdaFunctions

The count of Lambda tasks whose status is `OPEN`.

Type: Integer

Valid Range: Minimum value of 0.

Required: No

openTimers

The count of timers started by this workflow execution that have not fired yet.

Type: Integer

Valid Range: Minimum value of 0.

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

WorkflowExecutionSignaledEventAttributes

Provides the details of the `WorkflowExecutionSignaled` event.

Contents

externalInitiatedEventId

The ID of the `SignalExternalWorkflowExecutionInitiated` event corresponding to the `SignalExternalWorkflow` decision to signal this workflow execution.The source event with this ID can be found in the history of the source workflow execution. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event. This field is set only if the signal was initiated by another workflow execution.

Type: Long

Required: No

externalWorkflowExecution

The workflow execution that sent the signal. This is set only of the signal was sent by another workflow execution.

Type: WorkflowExecution (p. 261) object

Required: No

input

The inputs provided with the signal. The decider can use the signal name and inputs to determine how to process the signal.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

signalName

The name of the signal received. The decider can use the signal name and inputs to determine how to the process the signal.

Type: String

Length Constraints: Minimum length of 1. 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

WorkflowExecutionStartedEventAttributes

Provides details of `WorkflowExecutionStarted` event.

Contents

childPolicy

The policy to use for the child workflow executions if this workflow execution is terminated, by calling the TerminateWorkflowExecution (p. 141) action explicitly or due to an expired timeout.

The supported child policies are:

- `TERMINATE` – The child executions are terminated.
- `REQUEST_CANCEL` – A request to cancel is attempted for each child execution by recording a `WorkflowExecutionCancelRequested` event in its history. It is up to the decider to take appropriate actions when it receives an execution history with this event.
- `ABANDON` – No action is taken. The child executions continue to run.

Type: String

Valid Values: `TERMINATE | REQUEST_CANCEL | ABANDON`

Required: Yes

continuedExecutionRunId

If this workflow execution was started due to a `ContinueAsNewWorkflowExecution` decision, then it contains the `runId` of the previous workflow execution that was closed and continued as this execution.

Type: String

Length Constraints: Maximum length of 64.

Required: No

executionStartToCloseTimeout

The maximum duration for this workflow execution.

The duration is specified in seconds, an integer greater than or equal to `0`. You can use `NONE` to specify unlimited duration.

Type: String

Length Constraints: Maximum length of 8.

Required: No

input

The input provided to the workflow execution.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

lambdaRole

The IAM role attached to the workflow execution.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1600.

Required: No

parentInitiatedEventId

The ID of the `StartChildWorkflowExecutionInitiated` event corresponding to the `StartChildWorkflowExecution` Decision (p. 184) to start this workflow execution. The source event with this ID can be found in the history of the source workflow execution. This information can be useful for diagnosing problems by tracing back the chain of events leading up to this event.

Type: Long

Required: No

parentWorkflowExecution

The source workflow execution that started this workflow execution. The member isn't set if the workflow execution was not started by a workflow.

Type: WorkflowExecution (p. 261) object

Required: No

tagList

The list of tags associated with this workflow execution. An execution can have up to 5 tags.

Type: Array of strings

Array Members: Maximum number of 5 items.

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

Required: No

taskList

The name of the task list for scheduling the decision tasks for this workflow execution.

Type: TaskList (p. 257) object

Required: Yes

taskPriority

The priority of the decision tasks in the workflow execution.

Type: String

Required: No

taskStartToCloseTimeout

The maximum duration of decision tasks for this workflow type.

The duration is specified in seconds, an integer greater than or equal to `0`. You can use `NONE` to specify unlimited duration.

Type: String

Length Constraints: Maximum length of 8.

Required: No

workflowType

The workflow type of this execution.

Type: WorkflowType (p. 283) object

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

WorkflowExecutionTerminatedEventAttributes

Provides the details of the `WorkflowExecutionTerminated` event.

Contents

cause

If set, indicates that the workflow execution was automatically terminated, and specifies the cause. This happens if the parent workflow execution times out or is terminated and the child policy is set to terminate child executions.

Type: String

Valid Values: `CHILD_POLICY_APPLIED | EVENT_LIMIT_EXCEEDED | OPERATOR_INITIATED`

Required: No

childPolicy

The policy used for the child workflow executions of this workflow execution.

The supported child policies are:

- `TERMINATE` – The child executions are terminated.
- `REQUEST_CANCEL` – A request to cancel is attempted for each child execution by recording a `WorkflowExecutionCancelRequested` event in its history. It is up to the decider to take appropriate actions when it receives an execution history with this event.
- `ABANDON` – No action is taken. The child executions continue to run.

Type: String

Valid Values: `TERMINATE | REQUEST_CANCEL | ABANDON`

Required: Yes

details

The details provided for the termination.

Type: String

Length Constraints: Maximum length of 32768.

Required: No

reason

The reason provided for the termination.

Type: String

Length Constraints: Maximum length of 256.

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

WorkflowExecutionTimedOutEventAttributes

Provides the details of the `WorkflowExecutionTimedOut` event.

Contents

childPolicy

The policy used for the child workflow executions of this workflow execution.

The supported child policies are:

- `TERMINATE` – The child executions are terminated.
- `REQUEST_CANCEL` – A request to cancel is attempted for each child execution by recording a `WorkflowExecutionCancelRequested` event in its history. It is up to the decider to take appropriate actions when it receives an execution history with this event.
- `ABANDON` – No action is taken. The child executions continue to run.

Type: String

Valid Values: `TERMINATE | REQUEST_CANCEL | ABANDON`

Required: Yes

timeoutType

The type of timeout that caused this event.

Type: String

Valid Values: `START_TO_CLOSE`

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

WorkflowType

Represents a workflow type.

Contents

name

The name of the workflow type.

> **Note**
> The combination of workflow type name and version must be unique with in a domain.

Type: String

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

Required: Yes

version

The version of the workflow type.

> **Note**
> The combination of workflow type name and version must be unique with in a domain.

Type: String

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

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

WorkflowTypeConfiguration

The configuration settings of a workflow type.

Contents

defaultChildPolicy

The default policy to use for the child workflow executions when a workflow execution of this type is terminated, by calling the TerminateWorkflowExecution (p. 141) action explicitly or due to an expired timeout. This default can be overridden when starting a workflow execution using the StartWorkflowExecution (p. 134) action or the `StartChildWorkflowExecution` Decision (p. 184).

The supported child policies are:

- `TERMINATE` – The child executions are terminated.
- `REQUEST_CANCEL` – A request to cancel is attempted for each child execution by recording a `WorkflowExecutionCancelRequested` event in its history. It is up to the decider to take appropriate actions when it receives an execution history with this event.
- `ABANDON` – No action is taken. The child executions continue to run.

Type: String

Valid Values: `TERMINATE | REQUEST_CANCEL | ABANDON`

Required: No

defaultExecutionStartToCloseTimeout

The default maximum duration, specified when registering the workflow type, for executions of this workflow type. This default can be overridden when starting a workflow execution using the StartWorkflowExecution (p. 134) action or the `StartChildWorkflowExecution` Decision (p. 184).

The duration is specified in seconds, an integer greater than or equal to `0`. You can use `NONE` to specify unlimited duration.

Type: String

Length Constraints: Maximum length of 8.

Required: No

defaultLambdaRole

The default IAM role attached to this workflow type.

> **Note**
> Executions of this workflow type need IAM roles to invoke Lambda functions. If you don't specify an IAM role when starting this workflow type, the default Lambda role is attached to the execution. For more information, see https://docs.aws.amazon.com/amazonswf/latest/developerguide/lambda-task.html in the *Amazon SWF Developer Guide*.

Type: String

Length Constraints: Minimum length of 1. Maximum length of 1600.

Required: No

defaultTaskList

The default task list, specified when registering the workflow type, for decisions tasks scheduled for workflow executions of this type. This default can be overridden when starting a workflow execution

using the StartWorkflowExecution (p. 134) action or the `StartChildWorkflowExecution Decision` (p. 184).

Type: TaskList (p. 257) object

Required: No

defaultTaskPriority

The default task priority, specified when registering the workflow type, for all decision tasks of this workflow type. This default can be overridden when starting a workflow execution using the StartWorkflowExecution (p. 134) action or the `StartChildWorkflowExecution` decision.

Valid values are integers that range from Java's `Integer.MIN_VALUE` (-2147483648) to `Integer.MAX_VALUE` (2147483647). Higher numbers indicate higher priority.

For more information about setting task priority, see Setting Task Priority in the *Amazon SWF Developer Guide*.

Type: String

Required: No

defaultTaskStartToCloseTimeout

The default maximum duration, specified when registering the workflow type, that a decision task for executions of this workflow type might take before returning completion or failure. If the task doesn'tdo close in the specified time then the task is automatically timed out and rescheduled. If the decider eventually reports a completion or failure, it is ignored. This default can be overridden when starting a workflow execution using the StartWorkflowExecution (p. 134) action or the `StartChildWorkflowExecution` Decision (p. 184).

The duration is specified in seconds, an integer greater than or equal to `0`. You can use `NONE` to specify unlimited duration.

Type: String

Length Constraints: Maximum length of 8.

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

WorkflowTypeFilter

Used to filter workflow execution query results by type. Each parameter, if specified, defines a rule that must be satisfied by each returned result.

Contents

name

Name of the workflow type.

Type: String

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

Required: Yes

version

Version of the workflow type.

Type: String

Length Constraints: Maximum length of 64.

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

WorkflowTypeInfo

Contains information about a workflow type.

Contents

creationDate

The date when this type was registered.

Type: Timestamp

Required: Yes

deprecationDate

If the type is in deprecated state, then it is set to the date when the type was deprecated.

Type: Timestamp

Required: No

description

The description of the type registered through RegisterWorkflowType (p. 108).

Type: String

Length Constraints: Maximum length of 1024.

Required: No

status

The current status of the workflow type.

Type: String

Valid Values: `REGISTERED | DEPRECATED`

Required: Yes

workflowType

The workflow type this information is about.

Type: WorkflowType (p. 283) object

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

Common Parameters

The following list contains the parameters that all actions use for signing Signature Version 4 requests with a query string. Any action-specific parameters are listed in the topic for that action. For more information about Signature Version 4, see Signature Version 4 Signing Process in the *Amazon Web Services General Reference*.

Action

The action to be performed.

Type: string

Required: Yes

Version

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

Type: string

Required: Yes

X-Amz-Algorithm

The hash algorithm that you used to create the request signature.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Valid Values: `AWS4-HMAC-SHA256`

Required: Conditional

X-Amz-Credential

The credential scope value, which is a string that includes your access key, the date, the region you are targeting, the service you are requesting, and a termination string ("aws4_request"). The value is expressed in the following format: *access_key*/*YYYYMMDD*/*region*/*service*/aws4_request.

For more information, see Task 2: Create a String to Sign for Signature Version 4 in the *Amazon Web Services General Reference*.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

X-Amz-Date

The date that is used to create the signature. The format must be ISO 8601 basic format (YYYYMMDD'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 (AWS STS). For a list of services that support temporary security credentials from AWS Security Token Service, go to AWS Services That Work with IAM in the *IAM User Guide*.

Condition: If you're using temporary security credentials from the AWS Security Token Service, you must include the security token.

Type: string

Required: Conditional

X-Amz-Signature

Specifies the hex-encoded signature that was calculated from the string to sign and the derived signing key.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

X-Amz-SignedHeaders

Specifies all the HTTP headers that were included as part of the canonical request. For more information about specifying signed headers, see Task 1: Create a Canonical Request For Signature Version 4 in the *Amazon Web Services General Reference*.

Condition: Specify this parameter when you include authentication information in a query string instead of in the HTTP authorization header.

Type: string

Required: Conditional

Common Errors

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

AccessDeniedException

You do not have sufficient access to perform this action.

HTTP Status Code: 400

IncompleteSignature

The request signature does not conform to AWS standards.

HTTP Status Code: 400

InternalFailure

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

HTTP Status Code: 500

InvalidAction

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

HTTP Status Code: 400

InvalidClientTokenId

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

HTTP Status Code: 403

InvalidParameterCombination

Parameters that must not be used together were used together.

HTTP Status Code: 400

InvalidParameterValue

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

HTTP Status Code: 400

InvalidQueryParameter

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

HTTP Status Code: 400

MalformedQueryString

The query string contains a syntax error.

HTTP Status Code: 404

MissingAction

The request is missing an action or a required parameter.

HTTP Status Code: 400

MissingAuthenticationToken

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

HTTP Status Code: 403

MissingParameter

A required parameter for the specified action is not supplied.

HTTP Status Code: 400

OptInRequired

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

HTTP Status Code: 403

RequestExpired

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

HTTP Status Code: 400

ServiceUnavailable

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

HTTP Status Code: 503

ThrottlingException

The request was denied due to request throttling.

HTTP Status Code: 400

ValidationError

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

HTTP Status Code: 400