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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 June 18, 2018.
### Actions

The following actions are supported:

- `CountClosedWorkflowExecutions` (p. 3)
- `CountOpenWorkflowExecutions` (p. 8)
- `CountPendingActivityTasks` (p. 12)
- `CountPendingDecisionTasks` (p. 15)
- `DeprecateActivityType` (p. 18)
- `DeprecateDomain` (p. 21)
- `DeprecateWorkflowType` (p. 24)
- `DescribeActivityType` (p. 27)
- `DescribeDomain` (p. 31)
- `DescribeWorkflowExecution` (p. 34)
- `DescribeWorkflowType` (p. 39)
- `GetWorkflowExecutionHistory` (p. 43)
- `ListActivityTypes` (p. 55)
- `ListClosedWorkflowExecutions` (p. 59)
- `ListDomains` (p. 65)
- `ListOpenWorkflowExecutions` (p. 69)
- `ListWorkflowTypes` (p. 74)
- `PollForActivityTask` (p. 78)
- `PollForDecisionTask` (p. 83)
- `RecordActivityTaskHeartbeat` (p. 96)
- `RegisterActivityType` (p. 100)
- `RegisterDomain` (p. 105)
- `RegisterWorkflowType` (p. 108)
- `RequestCancelWorkflowExecution` (p. 113)
- `RespondActivityTaskCanceled` (p. 116)
- `RespondActivityTaskCompleted` (p. 119)
- `RespondActivityTaskFailed` (p. 122)
- `RespondDecisionTaskCompleted` (p. 125)
- `SignalWorkflowExecution` (p. 130)
- `StartWorkflowExecution` (p. 134)
- `TerminateWorkflowExecution` (p. 141)
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**

```json
{
  "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.
Example

CountClosedWorkflowExecutions Example

Sample Request

```plaintext
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=jFS74utjeATV7vj72CWdLToPCKW0RQse60EDkafB+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

```plaintext
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
See Also

- 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**

```json
{
  "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
evaluationFilter, 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=3v6sh1GzWukq4KiX/5HFMlU/F/w5qajhW4dp+6ARyOtY=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 150
```
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

```
{
}
```
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**

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

HTTP Status Code: 400

**UnknownResourceFault**

Return when the named resource cannot be found within 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=eCNiyyl5qmP0gGQ0hM8LqeRzxEvVZ0LAjE4oxYzzk9w=
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


```json
{
    "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

```json
{
}
```
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

API Version 2012-01-25
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

See Also

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/T6BOymajCtwArAll6Stuhlx2C4dbsE=
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"}
}
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**

```json
{
  "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

**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.
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,Signature=iX/mNMtNH6IaSNwf2g9hHOHdLnp7buuj9t093kR1rQ=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 95
Pragma: no-cache
Cache-Control: no-cache
```


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**

```json
{
   "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 within 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

```plaintext
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
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

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

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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 within 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

```plaintext
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-Target: SimpleWorkflowService.DeprecateWorkflowType
Content-Encoding: amz-1.0
AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE, Algorithm=HmacSHA256, SignedHeaders=Host;X-Amz-Date;X-Amz-Target;Content-Encoding, Signature=BGrr1djQvp+YLq3ci2ffpK8KWhZm/PakHL2fHhc3zds=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 102
Pragma: no-cache
Cache-Control: no-cache
```

API Version 2012-01-25
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

typelInfo (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 DeactivateActivityType (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 within 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+ic3VBwv11RGdcFcrJYSE8J7zyZLU3oXg=
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",
            "defaultTaskScheduleToCloseTime": "900",
            "defaultTaskScheduleToStartTime": "300",
            "defaultTaskStartToCloseTime": "600"
    }
}
```
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 within 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

```plaintext
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
```

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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**

```json
{
  "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

```json
{
    "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
```
Example

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=ufQVcSkfUyGPLiS8kbkENGq2PwEYJb9Krhyoz58=
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

```json
{
  "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 within 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=iGt8t83OmrURqu0pKYbcW6mNdjXbFomevCBPUPQfEbaM=
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**

```json
{
    "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 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

**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",
  "startToCloseTimeout": "string",
  "taskList": {
    "name": "string"
  }
},
"startToCloseTimeout": "string",
"taskList": {
  "name": "string"
},
"decisionTaskCompletedEventId": number,
"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"
},

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"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"
    }
},
"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,
  "startTimestamp": 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"}
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-Amzn-Authorization: AWS3
  AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-Amz-Target;Content-Encoding,Signature=90GENeUWJbEAMWuVI0dcWatHjltMWd6XfLj10MbNOzM=
```
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-948b0adc2d0b"
  },
  "reverseOrder": true
}

Sample Response

HTTP/1.1 200 OK
Content-Length: 2942
Content-Type: application/json

x-amzn-RequestId: 5385723f-3ff4-11e1-b118-3bfa5e87fc3

{
  "nextPageToken": "AAAAKgAAAAEAAAAAAAAAAAAEAd7dTAyv7qL34ctbGh5ngl0Mjzyk0bChf0g4EO4b1QFku70ukjPgrAHy7Tnp7FaZ0okF8EEWnkF8g
WvRxXYxQaas25SD11cQIowyXZ1CKxR6SQ0JobB70S8HVvQvF7yjLGH1hrRGZUCb2geEuV4Rp/yW
+kBo6J341TvqQmW6Z+ssG6atT3yX26u1gIDuspj133u2a4EL0PD0M0b0Ac6He33xX1KMTd/B4ithem68Wm6Jb1/
UF71mFtMccUVElIty1kXt/YrclD92Bjkt1FST4v6pgt0njAh4F4KRg9nyhVvLmbvqtQXEIQz8hdbfjw3xExE+90cyWOCAhVkeRs3h3D6F8KbIkLkfdwig4Rz1jLX0h4lm
"++W9eBQXqXy/XHTXxNoMnyySZl0yPyU59gLSrRj39frInbK4XZmWrI+18+eRGH04nBQpMz064dM
+A/KfVGCh59rAMML1d5wEE9rHRuZ03Wkm9yrYvjr18/6358nBTMB80Ch0gILkMCAXYhIppnFlm
+NXVQxalHLKOrnRzEZM6q0s23Qj3HV1cpy9F7fznS9QAXXgsAYBoDmd0AaFsk3ktAkRa0Sle8STfHi4zKbf1G87rg==",
  "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
    }
  ]
}
Example

```
{
    "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": {
```
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

```json
{
  "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 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

**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**

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

---

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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.

**typInfos (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**

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

**Sample Response**

```
HTTP/1.1 200 OK
```
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**

```json
{
   "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 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

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**

```json
{
    "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 within 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+1oGVgL0/o7cExQw=
Referer: http://swf.us-east-1.amazonaws.com/explorer/index.html
Content-Length: 150
Pragma: no-cache
Cache-Control: no-cache

```json
{
"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

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

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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 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

**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

```json
{
    "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 Common Errors (p. 290).

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/tbwKZ81BQn0jaA4X03jgDF0ugM1=
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"},
]
```
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 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

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.
Errors

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-Amzn-Authorization: AWS3
AWSAccessKeyId=AKIAIOSFODNN7EXAMPLE,Algorithm=HmacSHA256,SignedHeaders=Host;X-Amz-Date;X-
Amz-Target;Content-Encoding,Signature=4kUhpZUp37PgteOKHlWTSZi+Pq3Egw4mTkPN1EUgp28=
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: 9eффf4b-3f0a-11e1-9e8f-57bb03e21482

{
  "executionInfos": [
    {
      "cancelRequested": false,
      "execution": {
        "runId": "f5ebb9c6-941c-4342-ad69-7df2f8be6889",
        "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 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

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 within 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
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](https://docs.aws.amazon.com/AmazonSWF/latest/dg/using-iam-to-manage-access.html) in the **Amazon SWF Developer Guide**.

**Request Syntax**

```json
{
  "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


**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
```
Sample Response

HTTP/1.1 200 OK
Content-Length: 837
Content-Type: application/json
x-amzn-RequestId: b48f6b6b-3ff5-11e1-a23a-99d60383ae71

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

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
See Also

- 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

```json
{
   "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 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.

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"
Amazon Simple Workflow Service API Reference

Response Syntax

```json
{
    "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",
            "definition": {
                "category": "string",
                "input": "string",
                "output": "string",
                "resource": "string",
                "version": "string"
            }
        },
        "cause": "string",
        "control": "string",
        "decisionTaskCompletedEventId": number
    }
}
```
"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,
"taskId": "string"}
Response Syntax

```
{
  "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",
```
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


**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 within 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

```json
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=R3CJ2HMLSVpc2p6eafeztECZWCgza+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

```json
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": "AAAAKgAAAAEAAAAAAAATZDvCYwk/hP/XZGdhJhb
+T6Ow2czkZ2DPhsIi5HF4aQQI40xRDE7Ny3U4+aiAhGmeNyVAa4yHIIBQuoOZuJA5G
+BoaB0JUHFBOyNHD7mm7ayNH43KHeKfdrDG4elHySx3m/
EtboLmFqseAar+3NKDG66x4sT9g3cZp0tSguSx05yi1X3Atsc8ATCclB2Y3AubYOnN/
|i/xS7voca/GFsSiwSz3AAnJj1IPFvrujgj1j9KUVchWjRCPCSET7d33XJoR5
+gHYz5zAbLbVbAeRvVEyAp2ICALn4YRjQy+dfXCNp0a4H108pccCBFUBgUq+5wv0BSaa/
xMq2pAdBKnupPp0w8Wk1k+5Z5bdD2Zn82g5gYKflLlms/xD00xugGGUE5Z10aH5kTWGxZj/
G32P7cMoGcrACFPPdxt1ILNNYRe7YGiVjyGnfW2t5mW7V9KdP28vcXdbdpH4JNEB90Ub1xqL8NlfPVtc2ux81i9XEdg/8rkXas5Exw
fUkGucUXQP2hhB+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
See Also

- 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 an 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**

```json
{
  "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


Required: Yes

Response Syntax

```json
{
  "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 within 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.
Amazon Simple Workﬂow Service API Reference
Example

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;XAmz-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": "AAAAKgAAAAEAAAAAAAAAAX9p3pcp3857oLXFUuwdxRU5/
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
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• 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.
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
```
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

```json
{
    "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

ame (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 \texttt{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


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

\begin{verbatim}
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, */*
\end{verbatim}
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

```json
{
    "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


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
```
### 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**

```json
{
  "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

rulld (p. 113)

The runld 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/20110926
   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
```
Sample Response

HTTP/1.1 200 OK
Content-Length: 0
Content-Type: application/json
x-amzn-RequestId: 6bd0627e-3fffd-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

```json
{
  "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


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

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=
```
Sample Response

HTTP/1.1 200 OK
Content-Length: 0
Content-Type: application/json
x-amzn-RequestId: b1a001a6-3ffbb11-9b11-7182192d0b57

details: "customer canceled transaction"

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


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 within 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,Signature=M+ygHbMHSHJiVrsAQTW/BfkgHoNzLPnPD+dVywJiFXE=
```

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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.
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
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

```json
{
  "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"
      }
    }
  ]
}
```

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"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"
},
"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


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

```json
{
    "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": "AAAAKgAAAAEAAAAAAAAAAAAAQLPoqDSLcx4ksNCEQ2CyEBqeqHHDQGZoYR0f3Gwn9Y9IlhMx45o3O+4QeMsNk1zBF53lX4bD7PPz335z/oBzNzGnO0FU3IQAeAAAnQEMsdjFwOZQjEwQmOcFnuXw3v90cIg5B75Svi5bXsI76M2RfVeH/5/tvQkYQma990Yv0m57eJL001n267bw32Mg5nO04rmI6o9/dWv5D3YX
        +cAvuJny17MCX591AJr/b5rLcYkh4A4BqQY48E61dC+gde/UEVWmpy/wT7qu6G6o62PquHs5pED4WY/ YnoVllpoZo9z21ANyv7u3ChhRBlDuJ2O9FpqP9ZQjOueF0PQOVpFm1d5c0ahw6EdETc1G +KDXV8kAax7wKHI71lTVXc15x0h3XPHO46LDeEipv98EpZaMIVtgGSDrJlU0jNWEL2zowZByitileI5bdvxZdga1AXXXEnbYE6/ rflGRaJXdkh2n0dmTI+tK7uux1WX6F4ocqS1Ixb2x5z"}
```
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**

```json
{
  "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 within 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+17S0zwjOENCeRyImoyfX+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](https://docs.aws.amazon.com/amazonswf/latest/developerguide/lambda-task.html) in the *Amazon SWF Developer Guide*.

Type: String
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 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 (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 within 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+ah8FWxQasQRN2i5ZUGDcGjUO=
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-flea-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**

```json
{
  "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.
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 within 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=JHMRAjN6JGPawEuh1ANHfimCil9KOGfDF/cuXYmues9S4=
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:

- ActivityTask (p. 148)
- ActivityTaskCanceledEventAttributes (p. 150)
- ActivityTaskCancelRequestedEventAttributes (p. 151)
- ActivityTaskCompletedEventAttributes (p. 152)
- ActivityTaskFailedEventAttributes (p. 153)
- ActivityTaskScheduledEventAttributes (p. 154)
- ActivityTaskStartedEventAttributes (p. 157)
- ActivityTaskTimedOutEventAttributes (p. 158)
- ActivityType (p. 159)
- ActivityTypeInfo (p. 160)
- CancelTimerDecisionAttributes (p. 163)
- CancelTimerFailedEventAttributes (p. 164)
- CancelWorkflowExecutionDecisionAttributes (p. 165)
- CancelWorkflowExecutionFailedEventAttributes (p. 166)
- ChildWorkflowExecutionCanceledEventAttributes (p. 167)
- ChildWorkflowExecutionCompletedEventAttributes (p. 169)
- ChildWorkflowExecutionFailedEventAttributes (p. 171)
- ChildWorkflowExecutionStartedEventAttributes (p. 173)
- ChildWorkflowExecutionTerminatedEventAttributes (p. 174)
- ChildWorkflowExecutionTimedOutEventAttributes (p. 175)
- CloseStatusFilter (p. 177)
- CompleteWorkflowExecutionDecisionAttributes (p. 178)
- CompleteWorkflowExecutionFailedEventAttributes (p. 179)
- ContinueAsNewWorkflowExecutionDecisionAttributes (p. 180)
- ContinueAsNewWorkflowExecutionFailedEventAttributes (p. 183)
- Decision (p. 184)
- DecisionTask (p. 189)
- DecisionTaskCompletedEventAttributes (p. 191)
- DecisionTaskScheduledEventAttributes (p. 192)
- DecisionTaskStartedEventAttributes (p. 193)
- DecisionTaskTimedOutEventAttributes (p. 194)
- DomainConfiguration (p. 195)
- DomainInfo (p. 196)
- ExecutionTimeFilter (p. 197)
• ExternalWorkflowExecutionCancelRequestedEventAttributes (p. 198)
• ExternalWorkflowExecutionSignaledEventAttributes (p. 199)
• FailWorkflowExecutionDecisionAttributes (p. 200)
• FailWorkflowExecutionFailedEventAttributes (p. 201)
• HistoryEvent (p. 202)
• LambdaFunctionCompletedEventAttributes (p. 212)
• LambdaFunctionFailedEventAttributes (p. 213)
• LambdaFunctionScheduledEventAttributes (p. 214)
• LambdaFunctionStartedEventAttributes (p. 216)
• LambdaFunctionTimedOutEventAttributes (p. 217)
• MarkerRecordedEventAttributes (p. 218)
• RecordMarkerDecisionAttributes (p. 219)
• RecordMarkerFailedEventAttributes (p. 220)
• RequestCancelActivityTaskDecisionAttributes (p. 221)
• RequestCancelActivityTaskFailedEventAttributes (p. 222)
• RequestCancelExternalWorkflowExecutionDecisionAttributes (p. 223)
• RequestCancelExternalWorkflowExecutionFailedEventAttributes (p. 225)
• RequestCancelExternalWorkflowExecutionInitiatedEventAttributes (p. 227)
• ScheduleActivityTaskDecisionAttributes (p. 228)
• ScheduleActivityTaskFailedEventAttributes (p. 231)
• ScheduleLambdaFunctionDecisionAttributes (p. 233)
• ScheduleLambdaFunctionFailedEventAttributes (p. 235)
• SignalExternalWorkflowExecutionDecisionAttributes (p. 237)
• SignalExternalWorkflowExecutionFailedEventAttributes (p. 239)
• SignalExternalWorkflowExecutionInitiatedEventAttributes (p. 241)
• StartChildWorkflowExecutionDecisionAttributes (p. 243)
• StartChildWorkflowExecutionFailedEventAttributes (p. 247)
• StartChildWorkflowExecutionInitiatedEventAttributes (p. 249)
• StartLambdaFunctionFailedEventAttributes (p. 252)
• StartTimerDecisionAttributes (p. 253)
• StartTimerFailedEventAttributes (p. 255)
• TagFilter (p. 256)
• TaskList (p. 257)
• TimerCanceledEventAttributes (p. 258)
• TimerFiredEventAttributes (p. 259)
• TimerStartedEventAttributes (p. 260)
• WorkflowExecution (p. 261)
• WorkflowExecutionCanceledEventAttributes (p. 262)
• WorkflowExecutionCancelRequestedEventAttributes (p. 263)
• WorkflowExecutionCompletedEventAttributes (p. 264)
• WorkflowExecutionConfiguration (p. 265)
• WorkflowExecutionContinuedAsNewEventAttributes (p. 267)
• WorkflowExecutionFailedEventAttributes (p. 270)
• WorkflowExecutionFilter (p. 271)
• WorkflowExecutionInfo (p. 272)
• WorkflowExecutionOpenCounts (p. 274)
• 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
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

countrol

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 within 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 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**

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 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
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
- 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

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See Also

- 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
See Also

- 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
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
taskStartToCloseTimeout

Specifies the maximum duration of decision tasks for the new 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 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.

 workflowTypeVersion

The version of the workflow to start.

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

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 `maxPageSize` 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


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

taskId

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


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
ExternalWorkflowExecutionCancelRequestedEventAttributes

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: [ActivityTaskCanceledEventAttributes](p. 150) 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: [ActivityTaskCancelRequestedEventAttributes](p. 151) 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 within 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 |

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`
**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 thecaller 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
RequestCancelExternalWorkflowExecutionDecisionAttributes

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
RequestCancelExternalWorkflowExecutionFailedEventAttributes

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
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_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:
See Also

- 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 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:
See Also

- 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
SignalExternalWorkflowExecutionInitiatedEventAttributes

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


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
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


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:
See Also

- 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
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


Required: Yes

lambdaRole

The IAM role attached to the child workflow execution.

Type: String


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
Required: Yes

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

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

exectionStartToCloseTimeout

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

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:
See Also

- 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 if 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 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
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 | REQUESTANCEL | 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:
See Also

- 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 within 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 within 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](https://docs.aws.amazon.com/amazonswf/latest/developerguide/lambda-task.html) in the *Amazon SWF Developer Guide*.

Type: String


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)`.

**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 `StartChildWorkflowExecutionDecision (p. 184)`.

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.

**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't 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 `StartChildWorkflowExecutionDecision (p. 184)`.

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

**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.

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