

AWS-SWF

SWF Component

Available as of Camel 2.13

The Simple Workflow component supports managing workflows from [Amazon's Simple Workflow](#) service.

Prerequisites

 You must have a valid Amazon Web Services developer account, and be signed up to use Amazon Simple Workflow. More information are available at [Amazon Simple Workflow](#).

URI Format

```
aws-swf://<workflow|activity>[?options]
```

You can append query options to the URI in the following format, ?options=value&option2=value&...

URI Options

Name	Default Value	Context	Description
amazonSWClient	null	All	A reference to a com.amazonaws.services.simpleworkflow.AmazonSimpleWorkflowClient in the Registry .
accessKey	null	All	Amazon AWS Access Key.
secretKey	null	All	Amazon AWS Secret Key.
sWClient.XXX	null	All	Properties to set on AmazonSimpleWorkflowClient in use.
clientConfiguration.XXX	null	All	Properties to set on ClientConfiguration in use.
startWorkflowOptions.XXX	null	Workflow /Producer	Properties to set on useStartWorkflowOptions in use.
operation	START	Workflow /Producer	The operation to perform on the workflow. Supported operations are: SIGNAL, CANCEL, TERMINATE, GET_STATE, START, DESCRIBE, GET_HISTORY.
domainName	null	All	The workflow domain to use.
activityList	null	Activity /Consumer	The list name to consume activities from.
workflowList	null	Workflow /Consumer	The list name to consume workflows from.
eventName	null	All	The workflow or activity event name to use.
version	null	All	The workflow or activity event version to use.
signalName	null	Workflow /Producer	The name of the signal to send to the workflow.
childPolicy	null	Workflow /Producer	The policy to use on child workflows when terminating a workflow.
terminationReason	null	Workflow /Producer	The reason for terminating a workflow.
stateResultType	Object	Workflow /Producer	The type of the result when a workflow state is queried.
terminationDetails	null	Workflow /Producer	Details for terminating a workflow.
dataConverter	JsonDataConverter	All	An instance of com.amazonaws.services.simpleworkflow.flow.DataConverter to use for serializing /deserializing the data.
activitySchedulingOptions	null	Activity /Producer	An instance of ActivitySchedulingOptions used to specify different timeout options.
activityTypeExecutionOptions	null	Activity /Consumer	An instance of ActivityTypeExecutionOptions.
activityTypeRegistrationOptions	null	Activity /Consumer	An instance of ActivityTypeRegistrationOptions.

workflowTypeRegistrationOptions	null	Workflow/Consumer	An instance of WorkflowTypeRegistrationOptions.
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Required SWF component options

 You have to provide the amazonSWClient in the [Registry](#) or your accessKey and secretKey to access the [Amazon's Simple Workflow Service](#).

Usage

Message headers evaluated by the SWF Workflow Producer

A workflow producer allows interacting with a workflow. It can start a new workflow execution, query its state, send signals to a running workflow, or terminate and cancel it.

Header	Type	Description
CamelSWFOperation	String	The operation to perform on the workflow. Supported operations are: SIGNAL, CANCEL, TERMINATE, GET_STATE, START, DESCRIBE, GET_HISTORY.
CamelSWFWorkflowId	String	A workflow ID to use.
CamelAwsDdbKeyCamelSWFRunId	String	A workflow run ID to use.
CamelSWFStateResultType	String	The type of the result when a workflow state is queried.
CamelSWFEventName	String	The workflow or activity event name to use.
CamelSWFVersion	String	The workflow or activity event version to use.
CamelSWFReason	String	The reason for terminating a workflow.
CamelSWFDetails	String	Details for terminating a workflow.
CamelSWFChildPolicy	String	The policy to use on child workflows when terminating a workflow.
CamelSWFTags	List<String>	Camel 2.18.0 : Tags associated with a workflow execution which can be used later to query/filter executions in SWF console

Message headers set by the SWF Workflow Producer

Header	Type	Description
CamelSWFWorkflowId	String	The workflow ID used or newly generated.
CamelAwsDdbKeyCamelSWFRunId	String	The workflow run ID used or generated.

Message headers set by the SWF Workflow Consumer

A workflow consumer represents the workflow logic. When it is started, it will start polling workflow decision tasks and process them. In addition to processing decision tasks, a workflow consumer route, will also receive signals (send from a workflow producer) or state queries. The primary purpose of a workflow consumer is to schedule activity tasks for execution using activity producers. Actually activity tasks can be scheduled only from a thread started by a workflow consumer.

Header	Type	Description
CamelSWFAction	String	Indicates what type is the current event: CamelSWFActionExecute, CamelSWFSignalReceivedAction or CamelSWFGetStateAction.
CamelSWFWorkflowReplaying	boolean	Indicates whether the current decision task is a replay or not.
CamelSWFWorkflowStartTime	long	The time of the start event for this decision task.

Message headers set by the SWF Activity Producer

An activity producer allows scheduling activity tasks. An activity producer can be used only from a thread started by a workflow consumer ie, it can process synchronous exchanges started by a workflow consumer.

Header	Type	Description
CamelSWFEventName	{{String}}	The activity name to schedule.
CamelSWFVersion	String	The activity version to schedule.

Message headers set by the SWF Activity Consumer

Header	Type	Description
CamelSWFTaskToken	String	The task token that is required to report task completion for manually completed tasks.

Advanced amazonSWClient configuration

If you need more control over the AmazonSimpleWorkflowClient instance configuration you can create your own instance and refer to it from the URI:

The #client refers to a AmazonSimpleWorkflowClient in the [Registry](#).

For example if your Camel Application is running behind a firewall:

```
AWSCredentials awsCredentials = new BasicAWSCredentials("myAccessKey", "mySecretKey");
ClientConfiguration clientConfiguration = new ClientConfiguration();
clientConfiguration.setProxyHost("http://myProxyHost");
clientConfiguration.setProxyPort(8080);

AmazonSimpleWorkflowClient client = new AmazonSimpleWorkflowClient(awsCredentials, clientConfiguration);

registry.bind("client", client);
```

Dependencies

Maven users will need to add the following dependency to their pom.xml.

pom.xml

```
<dependency>
  <groupId>org.apache.camel</groupId>
  <artifactId>camel-aws</artifactId>
  <version>${camel-version}</version>
</dependency>
```

where `${camel-version}` must be replaced by the actual version of Camel (2.13 or higher).

See Also

- [Configuring Camel](#)
- [Component](#)
- [Endpoint](#)
- [Getting Started](#)

[AWS Component](#)