Using Activities

This chapter contains the following sections:

Activities

Activities provide a layer of abstraction to workflow input variables. The abstraction helps you to efficiently execute any administration scenario (such as tenant onboarding or application deployment) by separating the specification of a workflow from its actual implementation. Using activities, you can do the following:

- Define the input properties for a workflow and associate those properties with one or more workflows. Then, depending upon a matching condition, the activity triggers the correct workflow.
- Use an activity as a workflow task, making the task usable in multiple similar but differently implemented use case scenarios.
- An activity can be either triggered programmatically or by providing inputs dynamically.

Creating an Activity

You create an activity by defining inputs and outputs. To create an activity:

Step 1 On the menu bar, choose **Policies** > **Orchestration**.

Step 2 Click the **Activities** tab.

Step 3 Click **Add**.

Step 4 In the **Add Activity** dialog box, complete the following fields:

Name	Description
Name field	The activity name.
Label field	The label for the activity.
Description field	A description of the activity.

Step 5 Click **Next**.

Step 6 In the **Add User Inputs** screen, click the + icon to add workflow input properties.

a) In the **Add Entry to Input Fields** dialog box, complete the following fields:

Name	Description
Input Name field	The name of the activity workflow input.
Input Label field	The label for the activity workflow input.
Optional check box	Check the check box to make the input optional during workflow execution.
Input Type field	Click **Select**. In the **Select** dialog box, choose the input type.

b) Click **Submit**.

Step 7 Click **Next**.

Step 8 In the **Add User Outputs** screen, click the + icon to add workflow output properties.

a) In the **Add Entry to Output Fields** dialog box, complete the following fields:

Name	Description
Output Name field	The name of the activity workflow output.
Output Label field	The label for the activity workflow output.

Name	Description
Output Type field	Click **Select**. In the **Select** dialog box, choose the output type.

b) Click **Submit**.

Step 9 Click **Submit**.

Associating an Activity with a Workflow

You can associate an activity with one or more workflows to run the activity as part of the workflow. The associated activity is displayed as a custom workflow task in the System Activity Tasks folder of the Workflow Designer.

Before You Begin

You have an activity and at least one workflow that is to include the activity. For more information about how to create an activity, see Creating an Activity, on page 2.

Step 1 On the menu bar, choose **Policies** > **Orchestration**.

Step 2 Click the **Workflows** tab.

Step 3 Click **Add Workflow**.

Step 4 In the **Add Workflow** dialog box, complete the following fields:

Name	Description
Workflow Name field	The workflow name. **Note** Workflow names cannot contain the following characters: \, ", %, &, ', *, +, ,, ., /, :, ;, <, =, >, ?, ^, |.
Description field	A description of the workflow.
Workflow Context drop-down list	Choose the context in which the workflow can be used. Orchestrator supports the following options: • **Any**—Enables you to use the workflow in any context. • **Selected VM**—Enables you to execute the workflow only when you choose a VM.

Name	Description
Save as Compound Task check box	Check the check box to define the workflow as a compound task.
Place in New Folder check box	Check the check box to assign the workflow to a new folder. The **Folder Name** field replaces the **Select Folder** drop-down list. Type a name for the new folder.
Select Folder drop-down list	Choose the folder into which you want to place the workflow.
Notify status of execution to initiating user check box	Check the check box to notify the user through email of the execution status of the workflow. If checked, enter the additional email addresses in the **Additional User(s) to send Email Notification** field. The execution status for the workflow can be one of the following: • **Completed status** • **Failed execution status** • **Cancelled execution status**

Step 5 Click **Next**.

Step 6 In the **Add User Inputs** screen, check the **Associate to Activity** check box.

Step 7 From the **Activity** drop-down list, choose an activity.
The user input table is updated based on the selected activity.

Step 8 Click **Next**.
In the **Add User Outputs** screen, the user outputs are displayed based on the selected activity.

Step 9 Click **Submit**.
A workflow is created and is available in the **Workflows** tab.

Adding an Activity to a Workflow

The activity that is associated with one or more workflows is displayed as a custom workflow task in the **System Activity Tasks** folder of the Workflow Designer. Drag-and-drop the selected activity onto the **Workflow Designer** window to add it to a workflow. Define the condition for controlling execution of workflows associated with an activity in the **Context Input** table of the workflow.

Before You Begin

Associate an activity with a workflow so that the activity is displayed as a custom workflow task in the **System Activity Tasks** folder of the **Workflow Designer**. For more information about how to associate an activity with a workflow, see Creating an Activity, on page 2.

Open the workflow in the **Workflow Designer**.

Step 1 Choose the activity from the **System Activity Tasks** folder.

Step 2 Drag-and-drop the selected activity onto the **Workflow Designer** window.
The **Add Task** dialog box appears.

Step 3 In the **Task Information** screen, complete the following fields:

Name	Description
Task Name field	The name of the task.
Task Category field	The name of the task category (preselected information).
Task Type field	The name of the type of task (preselected information).
Comments field	Enter more task information.
Retry Execution check box	Check the check box to retry a task (later) if the task fails. This feature is useful when the state of a resource is not available and a retrial of the task depends on the state.
Retry Count drop-down list	Choose the number of retry attempts.
Retry Frequency drop-down list	Choose the duration between retry attempts. The workflow remains on the failed task until the task succeeds or until it fails Retry Frequency number of times. It then proceeds to the next task or completion of the workflow.

Step 4 Click **Next**.
The **User Input Mapping** screen displays the inputs that are defined for the activity.

Step 5 Check the **Map to User Input** check box to use the corresponding input in the workflow.

Step 6 In the **Context Input** table, click the + icon to add a contextual input:

a) In the **Add Entry to Input Fields** dialog box, complete the following fields:

Name	Description
User Inputs drop-down list	Choose an input to which to apply the condition.
Minimum Condition drop-down list	Choose the condition that you want to apply to the input.
Value field	The value set for the condition.
Associated Workflow drop-down list	Choose a workflow to execute when the input satisfies the selected condition.

b) Click **Next**.

Step 7 Click **Revalidate** to validate the current values.

Step 8 Click **Next**.
The **User Output Mapping** screen displays the outputs that are defined for the activity.

Step 9 Check the **Map to User Output** check box to use the corresponding output in the workflow.

Step 10 Click **Submit**.

Importing and Exporting Activities

You can import and export activities using the **Import** and **Export** actions you use to import and export workflows, custom tasks, and script modules.

To import an activity, see Importing Workflows, Custom Tasks, Script Modules, and Activities.

To export an activity, see Exporting Workflows, Custom Tasks, Script Modules, and Activities.

Deleting an Activity

You can delete an activity.

Step 1 On the menu bar, choose **Policies** > **Orchestration**.

Step 2 Click the **Activities** tab.

Step 3 Select the activity to delete.

Step 4 Click **Delete**.
The **Activity** dialog box appears to confirm deletion of the activity.

Step 5 Click **Delete**.