Oracle Financial Services Process Modelling Framework Cloud

Using Process Modelling Framework

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Using OFS Process Modelling Framework Cloud

Document Control

Version Number	Revision Date	Change Log
1.0	May 2022	Created document with information about Service name and associated service IDs, to create a process pipeline.

Table of Contents

1 Preface

This preface introduces information sources that can help you use the application.

1.1 Using Oracle Applications

1.1.1 Help

Use the Help Icon to access help in the application. If you don't see any help icons on your page, click your user image or name in the global header and select **Show Help Icons**. Not all pages have help icons. You can also access the Oracle Help Center to find guides and videos.

1.1.2 Watch video

Watch: This video tutorial shows you how to find and use help.

You can also read about it instead.

1.1.3 Additional Resources

- Community: Use Oracle Cloud Customer Connect to get information from experts at Oracle, the partner community, and other users.
- Training: Take courses on Oracle Cloud from Oracle University.

1.1.4 Conventions

The following table explains the text conventions used in this guide.

Convention	Description
Italics	Names of books, chapters, and sections as references Emphasis
Bold	Object of an action (menu names, field names, options, button names) in step-by-step procedures Commands typed at a prompt User input
`Monospace`	Directories and subdirectories File names and extensions Process names Code sample, including keywords and variables within a text and as separate paragraphs, and user-defined program elements within a text
<Variable>	Substitute input value

1.2 Contacting Oracle

1.2.1 Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit My Oracle Support or visit Accessible Oracle Support if you are hearing impaired.

1.2.2 Comments and Suggestions

Please give us feedback about Oracle Applications Help and guides! You can send an e-mail to: My Oracle Support.

2 Introduction

The Process Modelling Framework (PMF) is a design and execution framework that enables Process Pipeline developers to implement various Pipelines modeled by business analysts. Process Pipeline developers use the framework to orchestrate the Business Pipelines within services, and also to design the artifacts that participate in the Pipelines, in order to complete their implementation.

The Process Modelling Framework consists of Process Modelling components for modelling Pipelines and Process Monitor components to monitor instantiated Pipelines of Oracle Financial Services (OFS) Cloud services.

See the Process Flow for more information on how these tools fit into the Pipeline design and implementation.

The Process Modeller aids in representing the various artifacts required for modelling and provides implementation details of the OFS Cloud services process artifacts.

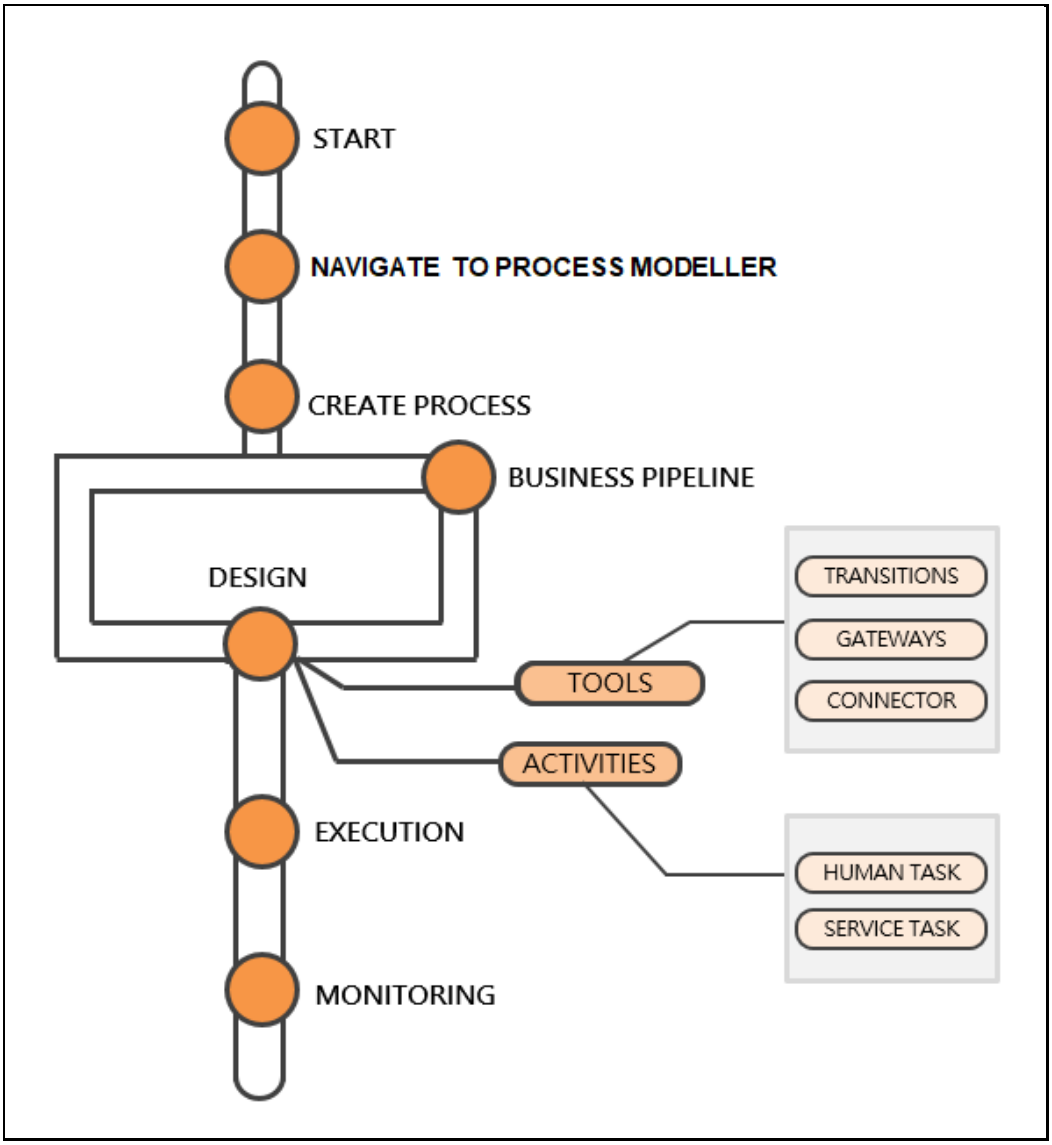
- Process Pipeline
- Process data (Data Fields)
- Implementation of various types of Human Tasks and Service Tasks
- Business Rules (Application Rules)
- Various external services implementations and other artifacts needed for complex implementations
- Configuring Tasks and Notifications

2.1 Key Features of Process Modelling Framework

- Support for visual modelling of the pipelines.
- Support for registration of Process, Activity, and Transition Logic implementation, separated from the modelling itself.
- Published interface for the abstraction of task implementation.
- Reminder, Escalation, and Expiry of tasks.
- Process Monitoring Admin Tool to view the execution of Process Instances.

2.2 Process Pipeline Flow

Figure 1: Description of the Process Pipeline Flow



2.3 User Roles

The user role mapping and access rights for PMF are available in the Users and User Privileges Guide.

2.4 Components of PMF Service

The PMF service consists of the following components:

- Process Modeller
- Process Monitor

2.5 Access PMF Service

To access the Process Modelling Framework, follow these steps:

1. From the OFS Cloud Applications window, select the  Navigation icon.
2. Select one of the following from the Navigation Tree:
   - Transaction Monitoring Administration
   - Compliance Regulatory Reporting Administration
3. Select **Process Modelling Framework** from the menu to display the following submenu options:
   - Process Modeller
   - Process Monitor
4. Click **Process Modeller** to view the summary of available processes or **Process Monitor** to monitor currently running processes.

3 Process Modeller

The Process Modeller helps create and manage Process Pipelines. You can use the Process Modeling components on a canvas to create model Pipelines.

Enter specific terms (keywords from Process ID, Process Name, or Process Description) in the **Search** field to search for matching pipelines. You can sort the pipelines based on Process ID, Process Name, or Application. Click  to go to the Process Monitor window.

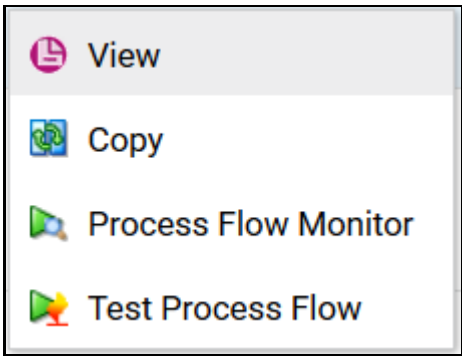
The records table consists of the following user interface elements of existing Business Process Pipelines with the details of Process ID, Process Name, Process Description, Version, Instance, Application, and Last Modified date.

- Click **Add**  to create a new Pipeline. See Create a Process Pipeline for details.
- Click the Process Name link to launch and edit the Process Flow. Edit a Process Pipeline for details.
- Click  to delete a Pipeline.

> **NOTE** Pipeline processes cannot be deleted for the records that are preconfigured in the service. Similarly, pipeline processes which have instances under them cannot be deleted.

- Click to view the following sub-menu:

Figure 2: Description of the Process Modeller More Menu



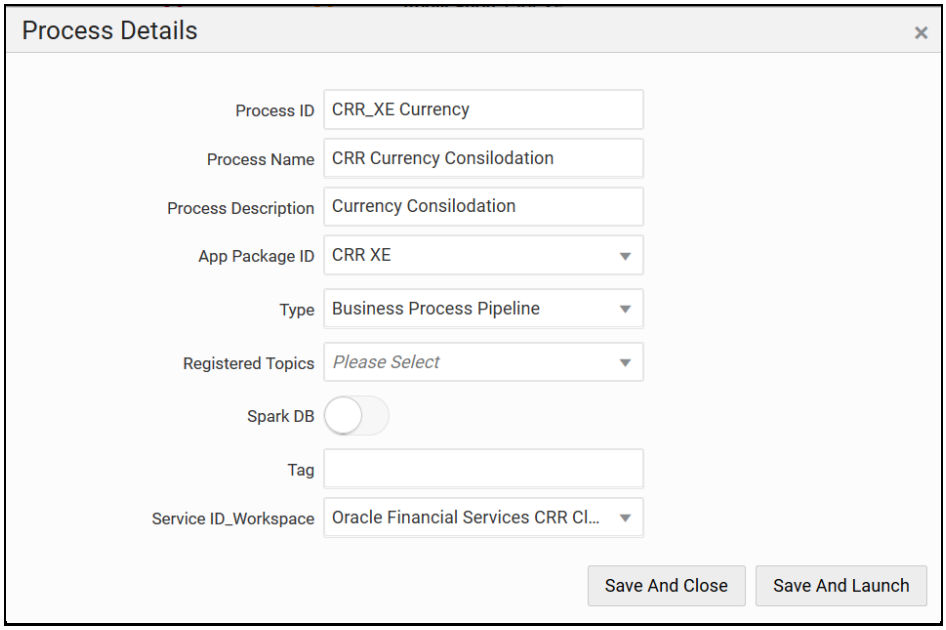
  - Click **View** to see the process flow in the canvas.
  - Click **Copy** to create a new pipeline with the same process flow. The copy is editable.
  - Click **Process Flow Monitor** to monitor the pipeline.
  - Click **Test Process Flow** to test or check whether the Business Pipeline you designed works as expected.

3.1 Create a Process Pipeline

To create a Process Pipeline, follow these steps:

1. Click **Add** to display the **Process Details** context window.

Figure 3: Description of the Process Details Context Window



2. Enter the required details in the **Process ID**, **Process Name**, and **Process Description** fields.
3. Select the required service package from the **App Package ID** drop-down list.
4. Select the required process pipeline type from the **Type** drop-down list.

> **NOTE** The **Registered Topics** drop-down list and the **Spark DB** button are provided for future enhancements and are not functional in this release.

5. Enter any required tags in the **Tag** field.
6. Select the required workspace from the **Service ID_Workspace** drop-down list.

   For Service Names and the Service IDs to be mapped, refer to the following table:

Service Name	Associated Service ID
• Oracle Financial Services Crime and Compliant Management Transaction Cloud Service • Oracle Financial Services Crime and Compliant Management Customer Screening Cloud Service • Oracle Financial Services Crime and Compliant Management Know Your Customer Cloud Service	Common Service_WS001
Oracle Financial Services Crime and Compliant Management Regulatory Reporting Cloud Service	Oracle Financial Services CRR Cloud Service_WS001

7. Click:
   - **Save And Close** to save the process pipeline and close the context window.
   - **Save And Launch** to save the process pipeline and open the Process Flow window in the canvas.
   - **X** to discard the details entered and close the context window.

3.2 Edit a Process Pipeline

To edit a Process Pipeline, click the required active link in a Process ID record to open the Process Flow window in the canvas.

3.3 PMF Canvas Components

The PMF Canvas is built on user-configured data fields and application rules that form the building blocks for the tools and activities in the process flow. You can then create process flows on the canvas. The drawing canvas is accessible when you edit an existing Process ID or when you click Save and Launch in the **Process Details** context window.

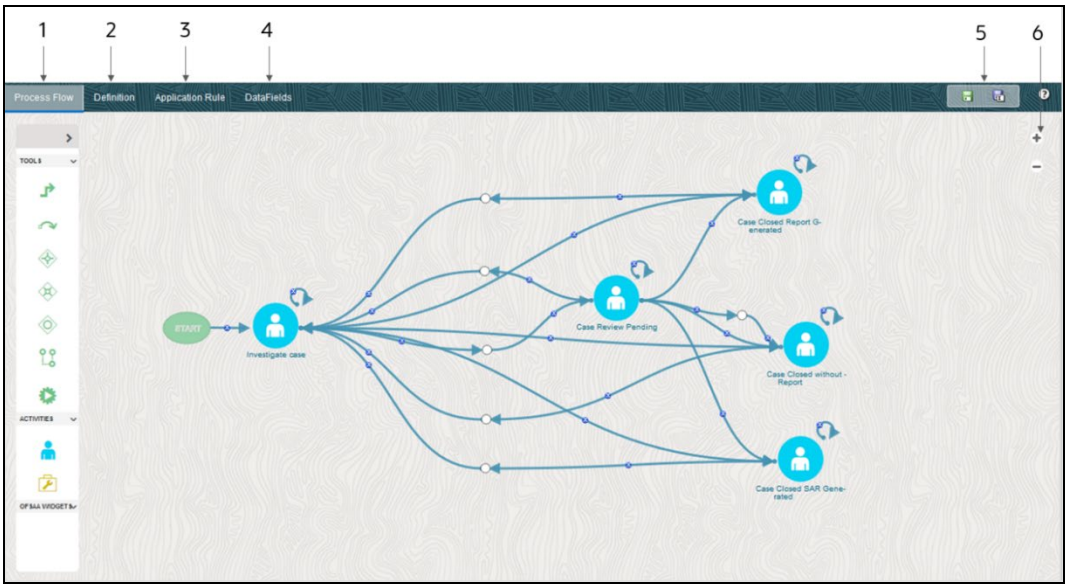
The PMF Canvas consists of the following tabs as shown in the illustration:

Table 1: PMF Canvas Tabs and their Descriptions

Number	Description
1	The Process Flow tab to create Process Pipelines.
2	The Definition tab (provided for future use, not functional in this release)
3	The Application Rule tab to set up parameters.

Number	Description
4	The Data Fields tab to configure access and storage from external applications.
5	The **Save** and **Save as New** buttons.
6	Button controls to zoom-in or zoom-out on the canvas.

Figure 4: PMF Canvas Components



3.4 Process Flow

The Process Flow tab has a dockable toolbar and a drawing canvas. The drawing canvas is used to design the Process flow with the Tools and Activities available in the dockable toolbar. It consists of features as shown in the following illustration:

Figure 5: Description of the Process Flow

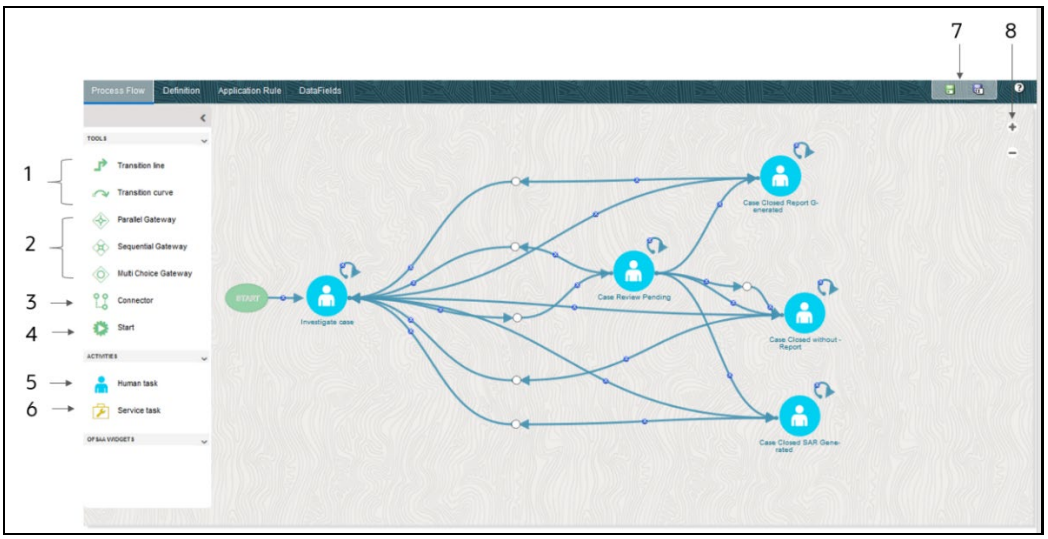


Table 2: Description of the Tools and Activities in Process Flow

Number	Description
1	Transitions: A transition is used to control the flow between various components in the Process flow. It connects two activities and the flow is configured based on a conditional expression or a decision rule. You can use: • Transition Line to use a straight line to connect the activities. • Transition Curve to use curved lines, based on your requirement.
2	Gateways: A Split refers to a condition where an incoming transition is split into multiple transitions. In Merge, multiple incoming transitions are merged into a single transition. The Splitting and Merging of Activities are modeled through Gateways. The Gateway can be Sequential, Parallel, or Multi Choice. • **Parallel Gateway:** A Parallel gateway is used when you want to have multiple transitions or flows which should be executed in parallel. • **Sequential Gateway:** A Sequential gateway is used when you want to have multiple transitions or flows which should be run in sequence. • **Multi Choice Gateway:** A Multi Choice gateway is used when you want to execute multiple transitions or flows based on decision rules. **NOTE:** If you use Parallel or Multi Choice gateways in your pipeline, ensure that after all the activities are added to these gateways, it is merged or closed again with a Parallel or Multi Choice gateway, respectively. If there is no other activity to be performed after the Parallel or Multi Choice gateway, it is mandatory to add an empty service task activity. Otherwise, the status will not be updated correctly and the next activity execution will not happen.
3	Connector: A Connector helps connect two activities with a different path (other than the default), in case the default path is overlapping with some existing flow.
4	Start: The Start tool refers to the starting point in the Process Flow.

Number	Description
5	Human Task: A Human Task requires human intervention to move to the next Activity. For more information on stitching human tasks in your Process flow, see Human Tasks.
6	Service Task: A Service task typically calls a service component (for example, activity to call a business rule to calculate a certain threshold). For more information on stitching service tasks in your Process flow, see Service Tasks.

3.4.1 Tasks

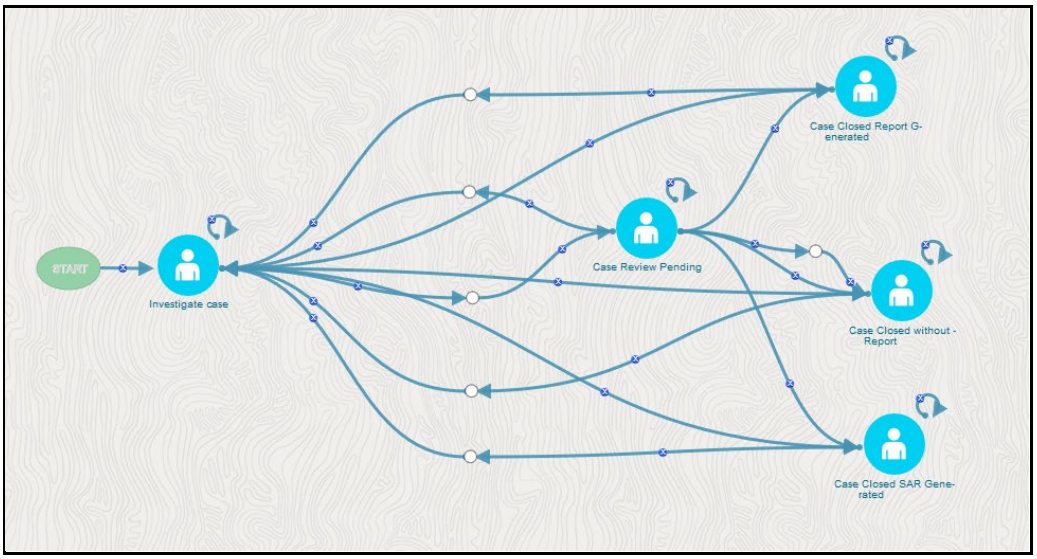
A Task can be either a Human Task or a Service Task.

- Human Tasks
- Service Tasks

3.4.1.1 Human Tasks

A Human Task is used if an activity requires a human intervention to go to the next activity.

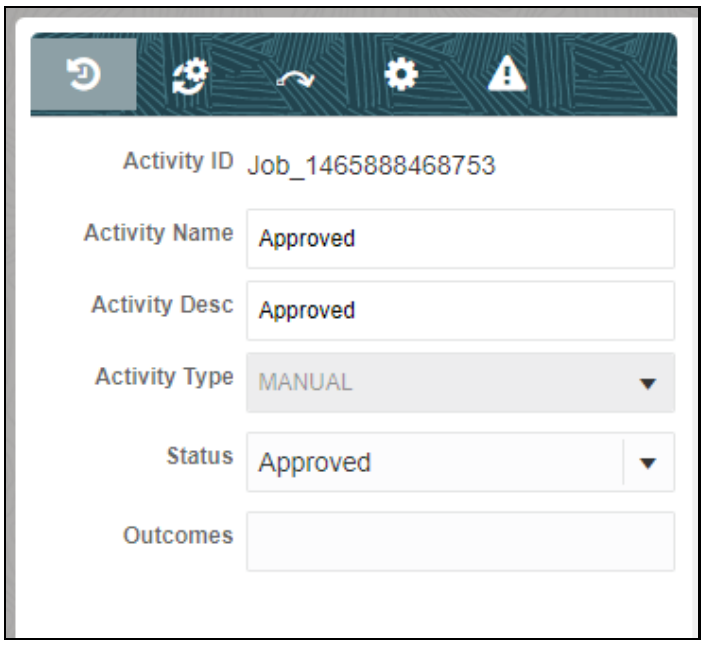
Figure 6: Description of Human Tasks



3.4.1.1.1 Use Human Tasks

1. From the Process Flow tab, click **Human Task** from the *Activities* pane in the floating toolbar and click on the drawing canvas where you want to place it.
2. Double-click icon. The *Activity* drawer window is displayed.

Figure 7: Activity Tab



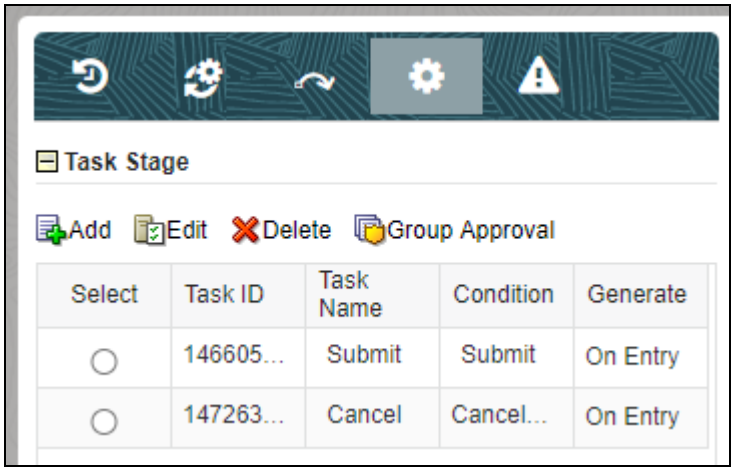
3. **Activity ID** is auto-populated.
4. Enter the **Activity Name** and **Description**.
5. Select the **Status** of the activity from the drop-down list.

3.4.1.1.2 Action Tab to Create Tasks and Notifications

An Action or Task is used to inform the assigned user about an action to be completed in the current stage of the Workflow. You can add multiple tasks for an activity. A task can be assigned to a user, user group, users with a particular role, or users selected by an application rule. The task is sent to the Application Inbox of the assigned users.

1. Click  to define Actions.

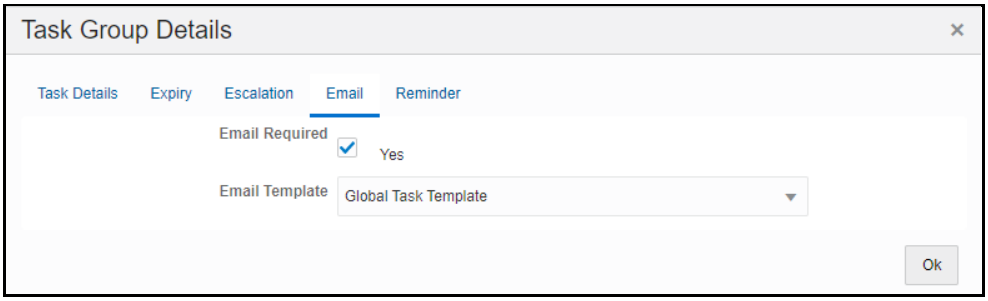
Figure 8: Description of the Action Tab



2. Click **Add** from the *Action* tab to add a new Task.

3.4.1.1.3 Setting Email Notification

Figure 9: Description of Email Notifications



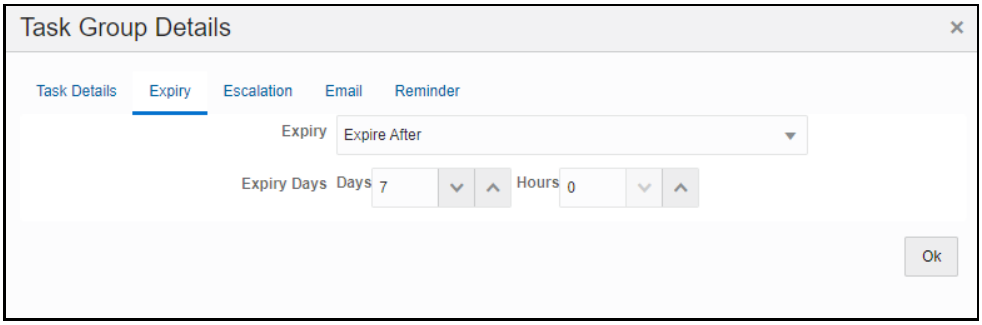
You should have configured Email settings before setting email notification for your tasks.

1. Select the **Yes** checkbox if an email needs to be sent for the task.
2. Select the email template to be used from the drop-down list.

3.4.1.1.4 Additional Functionalities for Human Tasks

Setting Task Expiry

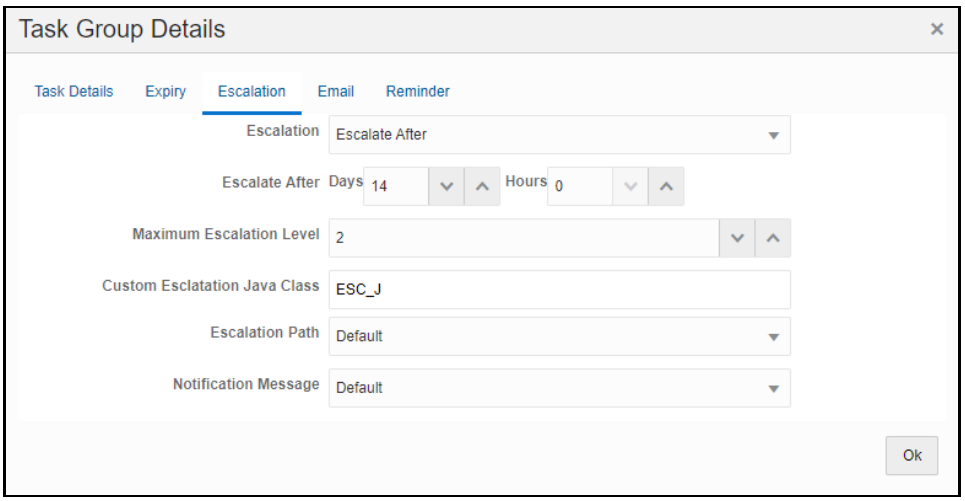
Figure 10: Description of Task Expiry



1. Select the required option from the **Expiry** drop-down list:
   - Global Expiry Setting- To set the task expiry based on a global setting. The global setting can be set from the backend.
   - Never Expire- If the task should not expire.
   - Expire After- If you want to set the task expiry after some days and (or) hours.
   - Dynamic Value – If you want the user assigned to this task to set the task expiry date and time dynamically. This value needs to be entered in the code.
2. If **Expiry** is selected as **Expire After**, enter the number of days and (or) hours after which the task should expire.

Setting Task Escalation

Figure 11: Description of Task Escalations



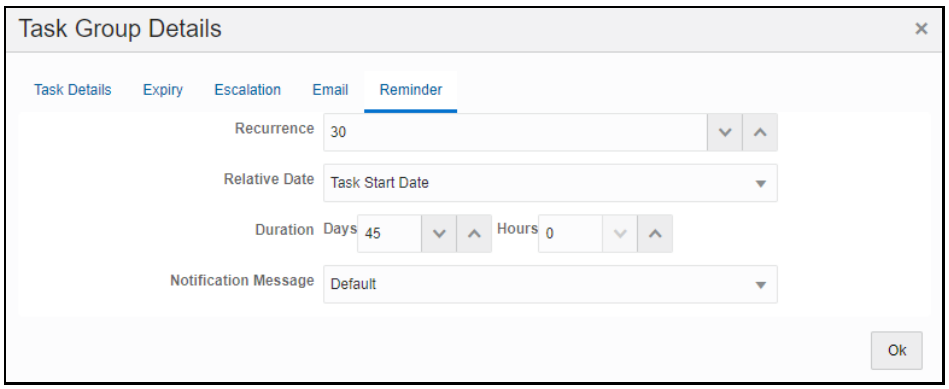
3. Select the **Escalation** criteria:
   - Global Escalation Setting- To set the task escalation based on a global setting. The global setting can be set from the backend.
   - Never Escalate - If an escalation is not required for the task.
   - Escalate After- If you want to escalate when the task is not addressed after pre-configured days and (or) hours.

> **NOTE** Escalation should be set after the expiry of the task. If you have selected the **Never Expire** option for **Expiry**, you cannot set escalation.

4. If **Escalate After** is selected for **Escalation**, enter the number of days and (or) hours after which the escalation should be triggered.
5. Enter the maximum number of escalation levels.
   a. 1 indicates escalation to the immediate manager.
   b. 2 indicates escalation to the manager's manager and so on.
6. Enter the **Custom Escalation Java Class** which you want to call.
7. Select the **Escalation Path** from the drop-down list. The options are **Default**, **People Hierarchy**, and **Custom Rule**.
8. Select the type of notification message from the drop-down list.

Setting Reminder for Your Task

Figure 12: Description of Task Reminders



Reminders will be sent to the assigned user as an open task to their Inbox.

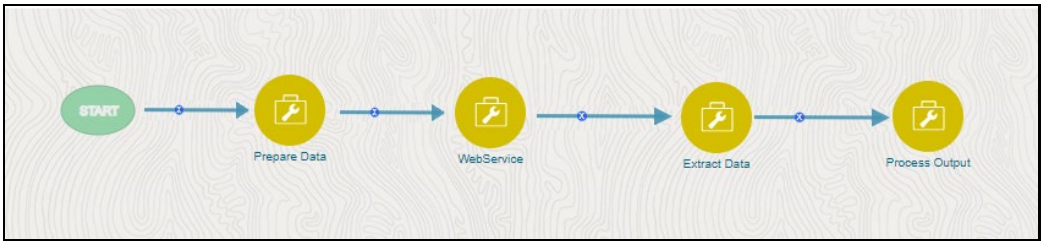
9. Enter the number of times you want to set the reminder from the **Recurrence** field.
10. Select **Task Start Date** if you want to send a reminder after a defined number of days and (or) hours, from the start date of the task. Select **Task Expiration Date** if you want to send a reminder before a defined number of days and (or) hours from the end date or expiry date of the task.
11. Select the number of days and (or) hours from the **Relative Date** after or before which you want to set the reminder.
12. Select the **Notification Message** you want to send, from the drop-down list.
13. Click **OK**.

3.4.1.2 Service Tasks

A Service Task is an automatic task that gets triggered in the Process flow. It is used to execute the Business Logic which is defined through an Application Rule of Execution Rule type. For more information on configuring the Application Rules, see the Application Rule section.

Service Tasks are typically used to call External Model Service through REST APIs, External Java APIs, Stored Procedures, and Functions.

Figure 13: Description of Service Tasks

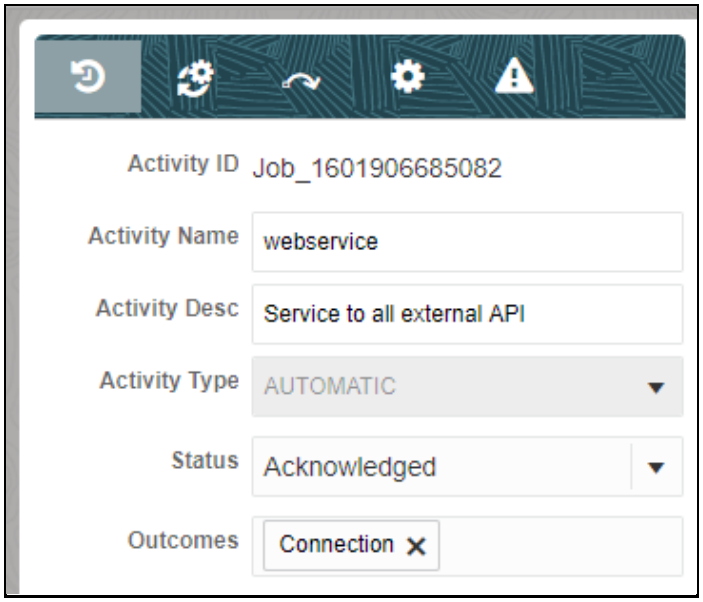


3.4.1.2.1 Use Service Tasks

1. From the *Process Flow* tab, click **Service Task**  from the *Activities* pane in the floating toolbar and click on the drawing canvas where you want to place it.

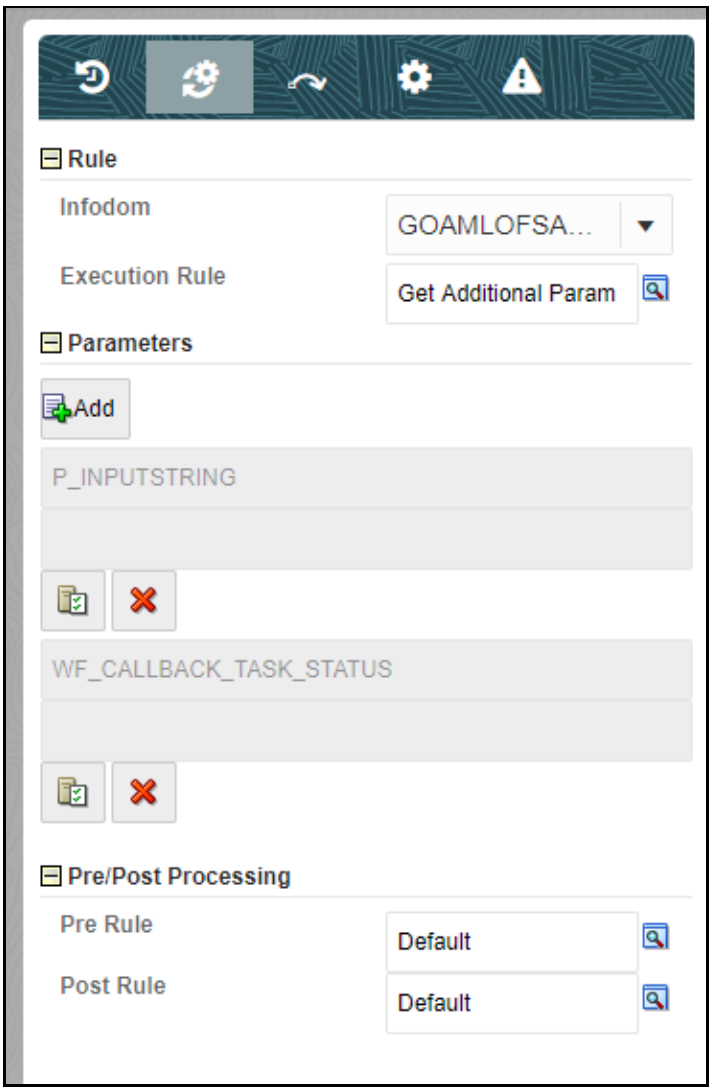
2. Double-click the  icon. The *Activity* drawer window is displayed.

Figure 14: Description of the Activity Tab



3. **Activity ID** is auto-populated.
4. Enter the **Activity Name** and **Activity Description**.
5. Click  . The *Implementation* tab is displayed.

Figure 15: Description of the Implementation Tab



6. Select the information domain where the Execution Rule you want to execute is available, from the **Infodom** drop-down list. The list displays all the Infodoms mapped to the services configured in your OFS Cloud services instance.
7. Select the **Execution Rule** which needs to be executed for this activity. For more information on how to define an Application Rule, see the Application Rules section.
   - Click . The *Participant* Details window is displayed with all Application Rules of Execution Rule types available in your Process.
   - Click the Name link of the Application Rule to view the details.
   - Select the required Rule and click **Ok**.
8. Add the Parameters you want to pass to the Execution Rule using Data Fields. You can pass Static values or Dynamic Values. In the case of Dynamic, the value needs to be entered during the execution of the workflow.

- Click **Add** under **Parameters**. The *Binding Details* window is displayed.
- Select the **Data Field** to which you want to pass the value. The list displays all Data Fields for the current Process or Package.
- Select Static from the **Parameter Type** list to pass a static value to the selected Data Field in the **Value** field or Dynamic to pass the value during execution of the workflow.

> **NOTE** The added parameters are displayed under the Parameters pane. You can click corresponding to a parameter to edit it or click to delete it.

9. Select an application rule which you want to execute before executing the Execution Rule.
   - Click corresponding to **Pre Rule** and select the required application rule.
10. Select an application rule which you want to execute after executing the Execution Rule.
   - Click corresponding to **Post Rule** and select the required application rule.

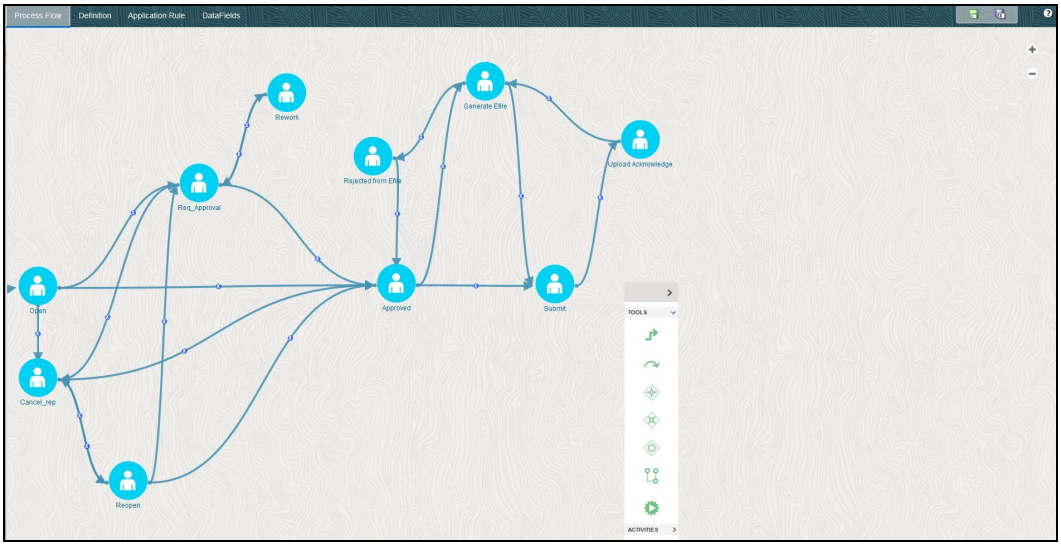
3.4.2 Designing a Pipeline

Business pipelines are defined in OFS Cloud services to design and execute the sequence of tasks which are either OFS Cloud services tasks or external tasks, to derive a well-defined outcome. This flow is defined by using various OFS Cloud services artifacts from the component toolbar and the execution can be defined to be in serial or parallel. Using the Process Modeller, we can Orchestrate a Business pipeline.

3.4.2.1 Orchestration of a Business Pipeline

Business Pipeline is used to design a Business Process that consists of a sequence of tasks either internal or external tasks through well-defined interfaces. Using the designer, you can design the entire business flows consisting of various types of tasks or another business pipeline.

Figure 16: An Example of a Business Pipeline



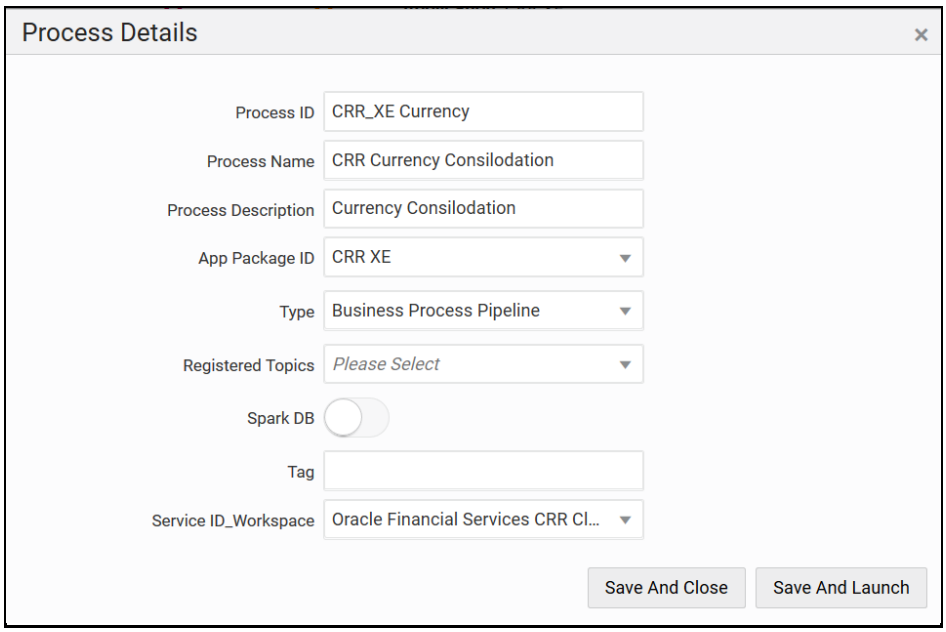
In the example shown, we use various activities such as Human Tasks and Service tasks, which are related to each other through transitions. For executing tasks in parallel, we used Parallel Gateways.

3.4.2.2 Creating a Business Pipeline

To create a Business Pipeline:

1. Click  in the *Process Modeller* window.

Figure 17: Description of the Process Details Context Window



2. Enter a unique Process ID, Process Name, and a description.
3. Select the appropriate App package in which you want to create the process. For more information, see the Application Package section.
4. Select **Business Process Pipeline** from the **Type** drop-down list.
5. Select the information domain in which you want to create the Business Pipeline, from the **Service ID_Workspace** drop-down list. The list displays all the workspaces mapped to the services configured in your OFS Cloud services instance.
6. Click **Save & Launch**. The Process Flow canvas is displayed.
7. Click  **Start** from the Tools pane in the floating toolbar and click on the drawing canvas where you want to place it. This Start activity indicates the beginning of the Process.
8. Design your Process with various components available in the Process Flow tab. For more information on each component, see the Process Modeller topic.

3.4.2.3 Additional Functionalities

This section describes the additional functionalities that can be performed in the Process Modeller window.

Topics:

- Modifying a Pipeline
- Testing a Pipeline
- Viewing a Pipeline
- Copying a Pipeline
- Deleting a Pipeline

3.4.2.3.1 Modifying a Pipeline

This option allows you to modify a Pipeline.

1. From the *Process Modeller* window, search for the Pipeline (Business) and click the Pipeline name. The *Process Flow* tab is displayed.
2. Modify the Process Flow, Definition, Application Rules, and Data Fields, as required.

3.4.2.3.2 Testing a Pipeline

This option allows you to check whether the Process flow you designed works as expected.

To test a Process flow:

1. From the *Process Modeller* window, click to view the sub-menu and select **Test Process Flow**. The Execute Workflow window is displayed.
2. Enter an **Object ID** to identify the Process flow. This will be displayed as Entity ID in the Process Monitor window.
3. Enter the Application Parameters that are required in the Process flow you are testing. Specify parameters in JSON format. This is an optional field.

   For example, `{"WF_RUNSK":"15","WF_MISDATE":"12/31/1999"}`
4. Click **OK**.

3.4.2.3.3 Viewing a Pipeline

This option allows you to view the workflow of an already existing Business Process.

From the *Process Modeller* window, click to view the sub-menu and select **View**. You can view the Process Flow of the Pipeline.

3.4.2.3.4 Copying a Pipeline

This option facilitates you to quickly create a new Business Process based on an existing Process by updating the Process flow or other required details.

To copy a Business Process:

1. From the *Process Modeller* window, click to view the sub-menu and select **Copy**. The *Process Details* window is displayed.

2. Enter a unique **Process ID**, **Process Name,** and **Process Description**. If you select the same App Package ID, then Data Fields and Application Rules also will be copied.
3. Select the newly created Process and click the Process Name. Modify the Process flow and other details if required.

3.4.2.3.5 Deleting a Pipeline

This option allows you to delete a Business Pipeline.

To delete a Pipeline:

1. From the *Process Modeller* window, click  corresponding to the Pipeline you want to delete.
2. A confirmation message is displayed.
3. Click **OK** to confirm the deletion.
4. Click **Delete Anyway** to delete the Pipeline or click **Cancel** to cancel the delete operation.

> **NOTE** Processes cannot be deleted for the records that are preconfigured in the service. Similarly, processes which have instances under them cannot be deleted.

3.5 Artifacts of Process Modelling

Acquaint yourself with the following artifacts of the Process Modelling Framework before designing your Pipeline.

- Application Rules
- Data Fields

3.5.1 Application Rules

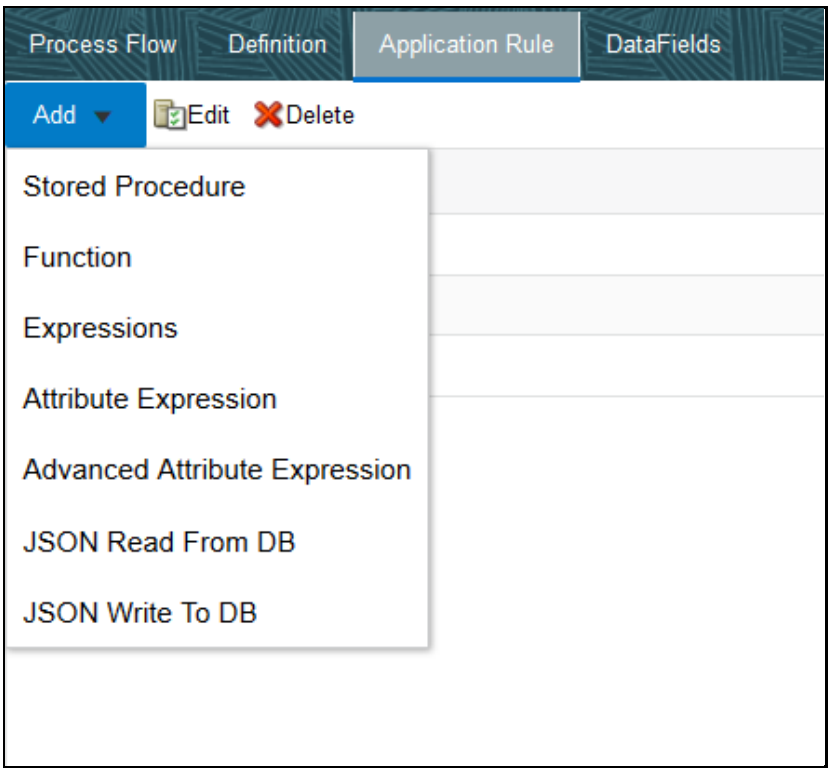
The Application or API Rule is the interface between the process engine and the service, including any parameter to be passed.

Based on their usage these are categorized into three types.

- **Execution Rule**: These are Business Logic executed as Task by an Activity.
- **Decision Rule**: This rule returns a boolean value “True or False”, used in decision making during split or branching of transition.
- **Selection Rule**: This rule fetches some value, useful to get value dynamically from a table or other source.

Click **Add** to display the **Application Rules** menu drop-down list.

Figure 18: Description of the Application Rules Menu f



The following are the available Application Rules:

- Attribute Expression Application Rule
- Advanced Attribute Expression Application Rule

NOTE The following Application Rules displayed in the menu are not yet functional and will be available in future releases:

- Stored Procedure Application Rule
- Function Application Rule
- JSON Read From DB Application Rule
- JSON Write To DB Application Rule

3.5.1.1 Attribute Expression Application Rule

This Application Rule uses attribute expressions in your Process Flow.

Figure 19: Description of Attribute Expression Application Rule Window

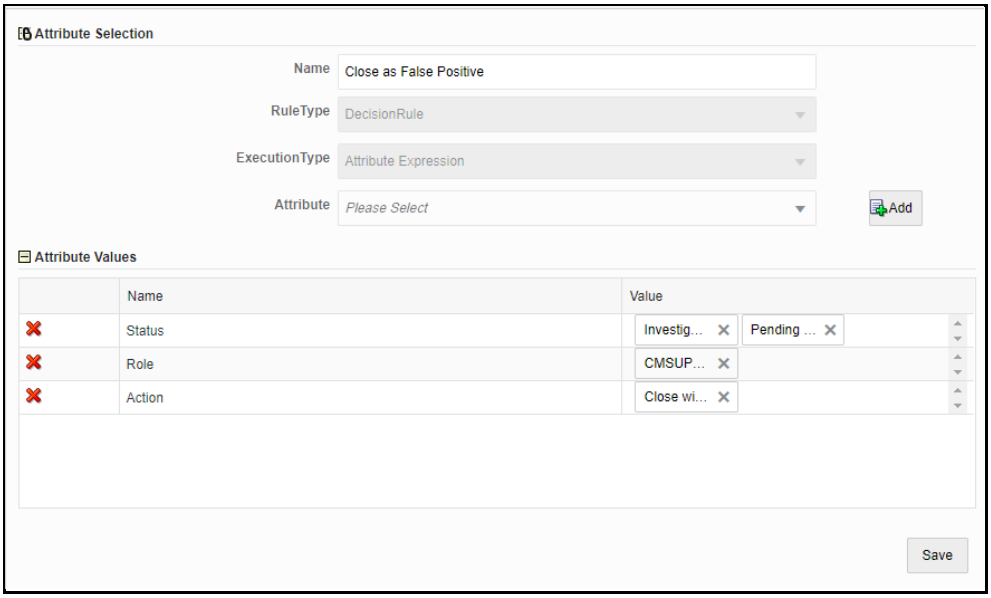


Table 3: Description of the Attribute Expression Application Rule Window

Field Name	Description
Name	Enter a unique name for the Application Rule.
Rule Type	Displays the rule type as DecisionRule. This Rule Execution type supports only the DecisionRule type.
Execution Type	Displays the Application Execution Type as Attribute Expression.
Attribute	Select the attribute for which you want to define the application rule, from the drop-down list. The list displays the attributes configured for the selected service and component. For more information, see the Configuring Application Object Model (AOM) section. Click **Add** to add values to the selected attributes. A row is added in the Attribute Values pane. Click the **Value** column to select the values for the attribute from the drop-down. You can select one or more values. • You can delete a row by clicking ✖. • You can select multiple attributes and click **Add** to assign values to those attributes.

3.5.1.2 Advanced Attribute Expression Application Rule

This is an advanced version of the Attribute Expression Application Rule with additional logical conditions and assignment operators. The expression can be dynamically built and will return True or False values after evaluation. This is used as a DecisionRule in transitions.

You can define this application rule with multiple conditions and nested groups.

Figure 20: Description of the Advanced Attribute Expression Application Rule WIndow

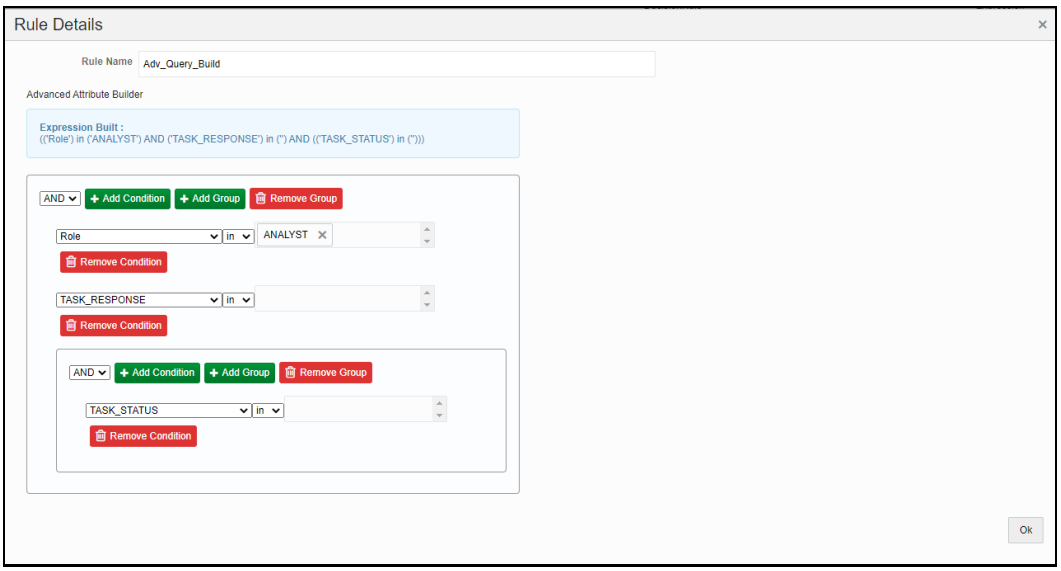


Table 4: Description of the Advanced Attribute Expression Application Rule Window

Field Name	Description
Rule Name	Enter a unique name for the Application Rule.
AND or OR	Select the logical operator to be used for the conditions in a group.
Add Condition	When you click **Add Condition**, a new row gets added. To define a condition, select the attribute, the operator, and the value from the drop-down lists. Multiple values can be selected for each attribute. • Attribute- The drop-down list displays the attributes configured for the selected service and component. For more information, see Configuring Application Object Model (AOM). • Operator- Available options are in,=,<>,<,<=,>,>=. • Value- Displays the values configured for the selected attributes. Select the required value. Click **Remove Condition** to delete an already added condition.
Add Group	Click **Add Group** if you want to have nested conditions. For each group, select the required logical operator as AND or OR. Click **Remove Group** to delete a group of conditions.

3.5.1.3 Configuring Application Object Model (AOM)

This module helps in creating a set of attributes for a given service abstractly so that frameworks like PMF and other modules can leverage retrieving service attributes and their values. Each service is identified using a service package ID.

3.5.1.3.1 Attribute Types

The values of attributes are fetched based on the attribute types. Following are the attribute types with their Ids:

Table 5: Description of the AOM Attribute Types

Attribute Type ID	Description
1001 (Static)	Store attribute values in the AAI_AOM_STATIC table as V_STATIC_ID and V_STATIC_VAL.
1002 (Query)	Enter the SQL query in V_ATTRIBUTE_VALUE1 in the AAI_AOM_APP_COMP_ATTR_MAPPING table, which has to be fired to fetch the attribute values.
1003 (JavaAPI)	Enter the method that is configured for V_ATTRIBUTE_VALUE1 for the required attribute. The configured method in the classpath is called to get the attribute values in this case.
1004 (Hierarchy)	Specify the Hierarchy code to be fetched in V_ATTRIBUTE_VALUE1 in the AAI_AOM_APP_COMP_ATTR_MAPPING table.
1005 (Multi Select Hierarchy)	Specify the Multi Select Hierarchy entries in the AAI_AOM_APP_COMP_ATTR_TL table.
103 (DATE)	This is used for configuring FIC_MIS_DATE. The V_ATTR_CONTROL_TYPE value should be 11.
102 (Text Box)	This is used for the Description field. The V_ATTR_CONTROL_TYPE value should be 7.

> **NOTE** Only Attribute Type Ids 1001 and 1002 are functional in this release. The other Attribute Types in the table are for future use.

3.5.2 Data Fields

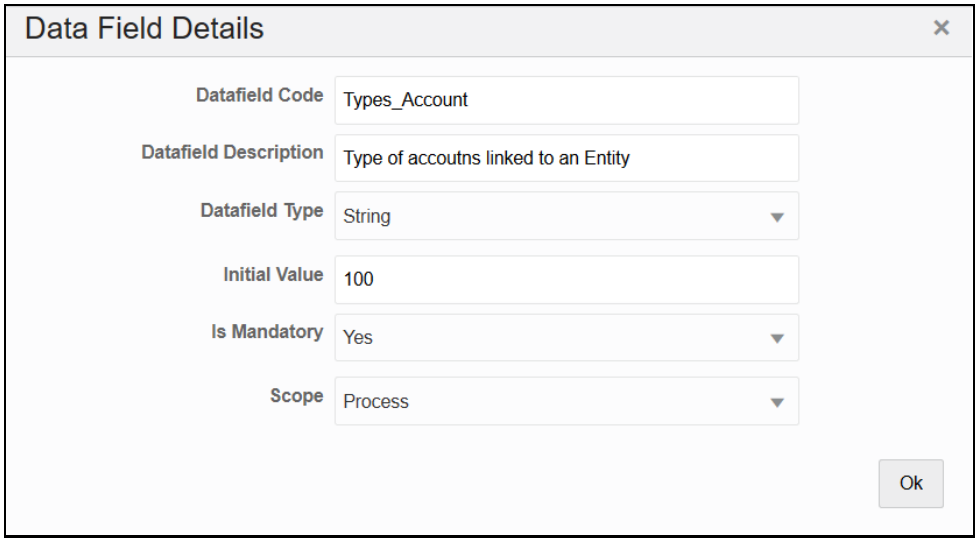
Data Field, which is also known as Process Variable, helps Process Pipelines to access and store information from external applications. Often the process flow is based on the value of this information. In other cases, this information is the result of running the tasks in the Pipeline.

- Adding a Data Field
- System Data Fields

3.5.2.1 Adding a Data Field

1. From the *Process Modeller* window, click the required process name record link for which you want to add a Data Field. The Process Flow tab is displayed.
2. Select the *Data Fields* tab.
3. Click **Add**. The *Data Field Details* window is displayed.

Figure 21: Description of the Data Fields Tab



4. Enter the details as given in the table:

Table 6: Description for Adding a Data Field

Field Name	Description
Data field Code	Enter the Variable Name or Code, which needs to be used by the service to read or write into this variable. This field is non-translatable.
Data field Description	Enter a brief description of the Data field.
Data field Type	Enter the Data Field type. The supported types are String, Integer, Int, Float, and Boolean.
Initial Value	Enter the default value for the Data.
Scope	Select the scope of the Data Field from the drop-down list. The options are: • Process- Select Process if you want to use the Data Field only in the current process. • Package- Select Package if you want to use the Data Field across all the processes in the package.

5. Click **OK**.

> **NOTE** Processes cannot be deleted for the records that are preconfigured in the service. Similarly, processes which have instances under them cannot be deleted.

3.5.2.2 System Data Fields

Some data are tracked internally by the System using a predefined set of Data Fields such as Status of Process. You can access these activity instance attributes in the same way you access regular data objects, but you cannot assign new values to them.

4 Process Monitor

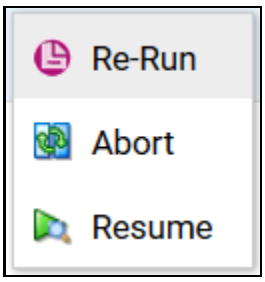
The Process Monitor is used to monitor the current stage of the Process for different instances. After integration with an Application, the workflow can be called. After calling it goes through all the stages defined. Process Monitor shows all the stages finished, current stage, and stages to come if any. Your user group should be mapped to the function role WFMACC (Workflow Monitor Access) to access the *Process Monitor* window.

Enter specific terms (keywords from Process ID, Process Name, or Process Description) in the Search field to search for matching Pipelines. You can sort the Processes displayed in the Process Monitor window based on Entity Id, Entity Name, Process ID, or Process Name. Click  to go to the Process Modeller window.

The records table consists of all the workflows which are called from the Application with details such as Entity Name, Entity ID, Process Name, Process Description, Execution Start Time, Last Execution Time, Last Updated By, and Status.

Click ⋮ to view the following sub-menu:

Figure 22: Description of the Process Monitor More Menu



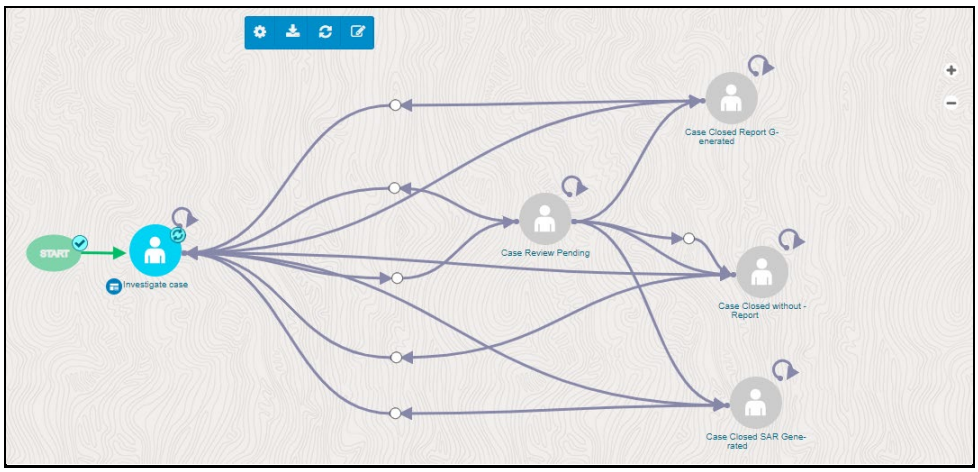
- Click **Re-Run** to run the process again.
- Click **Abort** to stop a process that is running.
- Click **Resume** to restart a process run.

4.1 Monitoring a Business Process

To monitor a business process:

1. From the *Process Monitor* window, click the Entity ID link corresponding to the process you want to monitor.

Figure 23: Description of the Activity Status in the Process Monitor Window

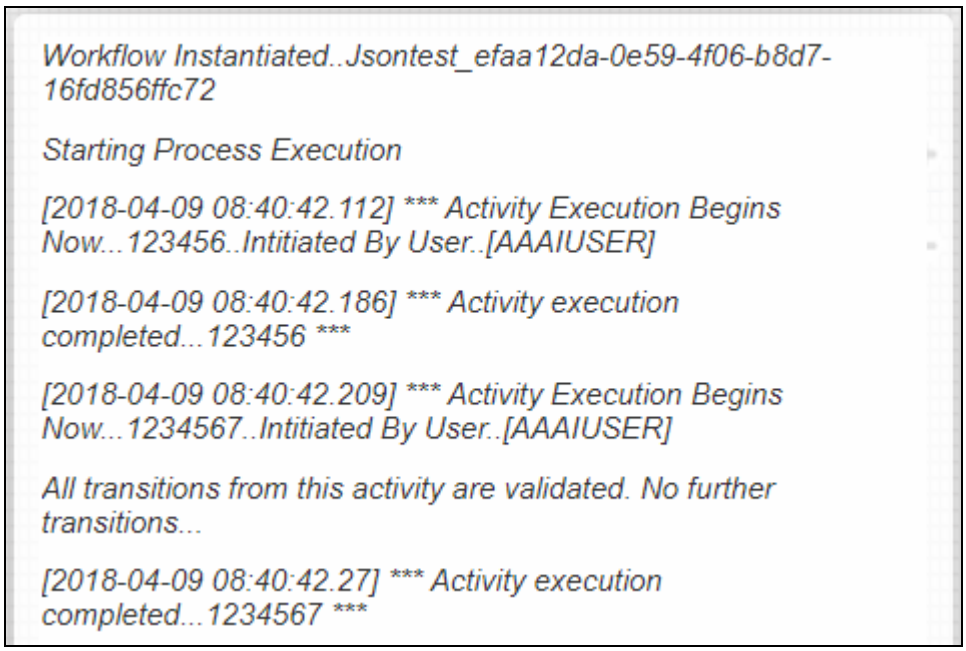


In the Process Monitor window, the status of the activity is represented as given:

- - This indicates that the execution of the activity is successful.
- - This indicates that the activity is currently running or waiting for the user's input to proceed.
- - This indicates that the execution of the activity has failed.
- - This indicates that the activity is yet to be executed.

2. Click to refresh the pane. Click to view the *Process Logs* pane.

Figure 24: Description of the Process Logs Window



The Process Logs pane shows all the execution stages of the process. Click the Process Monitor pane to close the *Process Logs* pane.

You can use + and − to zoom in and out the *Process Monitor* window.

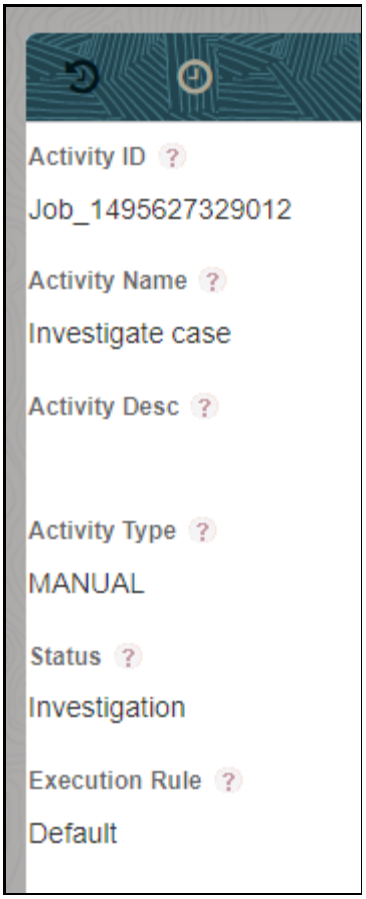
4.2 Viewing Activity Logs

This feature allows you to view logs of each activity from the Process Monitor window.

To view Activity logs:

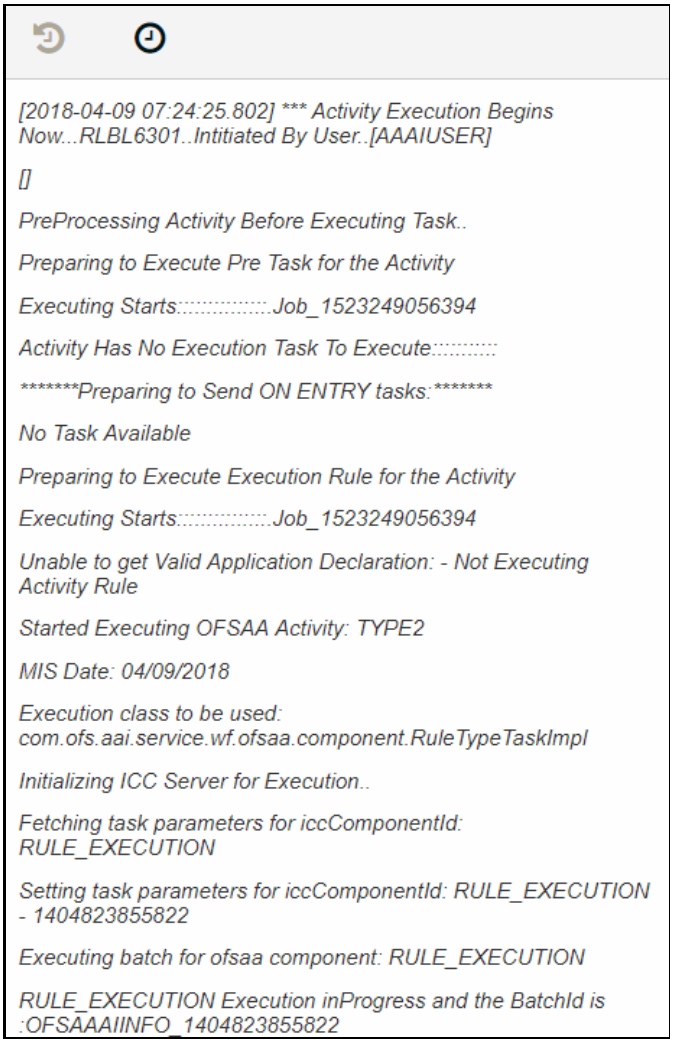
1. Double-click on the activity icon whose logs you want to view. The Activity Definition details are displayed.

Figure 25: Description of the Activity Definition



2. Click to view the Activity Logs.

Figure 26: Description of the Activity Logs



The log shows all the execution stages of the selected activity if it is already executed. Otherwise, it will be blank.

5 Calling a PMF Pipeline

You can call a PMF pipeline using the following ways:

- From Application UI
- From Process Modeller Window

5.1 From Application UI

You can call a PMF pipeline using the REST Service in an external application. The following is an example.

5.1.1 REST Service

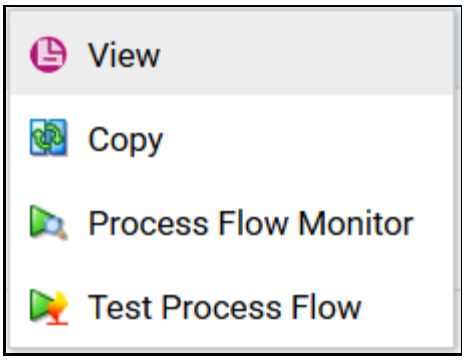
```
URL: <contextPath>/PMFService/startWorkflowProcess

Method: POST

Consumes("application/json")

Produces("text/plain")

Sample Input Params:

"{\"SummaryPayload\":{\"objectid\":\"123\",\"objecttype\":\"QTNR\",\"in
fodom\":\"OFSAAAIINFO\",\"segment\":\"OFSAAAIINFO\",\"userid\":\"AAAIUS
ER\",\"locale\":\"en_US\",\"securitymap\"

:{},\"applicationparams\"

:{\"testparam\":\"value1\",\"testparam2\":\"value2\"}}}";
```

5.2 From Process Modeller Window

You can call a PMF pipeline using the Test Process Flow function from the Process Modeller window as shown in the following. The Test Process Flow option is used to check whether the Process flow you designed works as expected.

1. From the *Process Modeller* window, click ⋮ corresponding to the pipeline you want to test. The submenu is displayed.

Figure 27: Description of the Test Process Flow



2. Click **Test Process Flow**. The *Execute Process Flow* window is displayed.

3. Enter an **Object ID** to identify the Process flow. This will be displayed as Entity ID in the *Process Monitor* window.
4. Enter the **Application Parameters** which are required in the Process flow that you are testing. Specify parameters in JSON format. This is an optional field.

   For example, `{"WF_RUNSK":"15","WF_MISDATE":"12/31/1999"}`
5. Click **OK**.

6 Frequently Asked Questions

1. What is Process Modeller?

   Use a Process Modeller to view and edit existing workflows and create new workflows.

2. What is Process Monitor?

   Use a Process Monitor to view the path (of the workflow) that a case has already traversed, its current status, and the next possible paths in that workflow. Since there can be several versions of each workflow that are being used by a CM at the same time, the Process monitor displays a workflow diagram of the version that the case is using.

3. Can I associate a workflow with multiple case types?

   Yes, one workflow can be associated with any number of case types. However, one case type can be associated with only one workflow.

4. How do I see all the versions of a workflow?

   The list of workflows displayed in Process Modeller shows all the versions of every workflow that exists in the database. Using the Process Name and Process ID, a user can identify which records are the versions of the same workflow.

5. Can I edit default workflows?

   Since default workflows will be overwritten during an upgrade, we do not recommend using default workflows in production. If a workflow is overwritten during an upgrade, it may impact all the inflight and closed cases using that workflow. You can copy default workflows or create a new version of the workflow.

6. If I modify a workflow, what impact does that have on cases already using the workflow?

   PMF provides the ability to modify a workflow and either save the changes directly on that workflow or create a new **version** of the workflow. This is achieved using the following buttons on the PMF Process Modeller Canvas (page on which you draw the workflow):

   - **Save** overwrites the workflow being edited. As a result, all cases (in-flight and closed) using that workflow will follow the modified workflow as soon as the changes are saved in PMF. New cases (of the Case Type(s) using this workflow) will also use this modified workflow.
   - **Save as New Version** saves the modifications as a new version of the workflow. When this happens the version number assigned to this new version = parent workflow's version number + 1. For example: If the parent workflow had a version number 4, this new workflow will have a version number 5. But just saving a new version of a workflow does not have any impact on any case unless this new version is mapped to a Case Type in Case Designer.

   When the Case Type-Workflow mapping is updated in Case Types UI, all cases of that Case Type created after the update will use the latest workflow mapped to the Case Type. All older cases of that Case Type continue on the version they were using previously. The moment a case type is mapped to a different workflow, new cases will start using the new workflow (but old cases will not be impacted).

   Example:

   a. Jan 1, a user creates a new AML workflow and maps it to Case Type = AML. So we have:

   b. Process ID = 1, Process Name = AML, Version = 0, mapped to Case Type = AML

c. Jan 2, cases with type = AML start coming in and use the AML workflow Version 0.

d. Jan 5, the user creates a version of this AML workflow. So we have:

e. Process ID = 2, Process Name = AML, Version = 1

f. The user creates this new version on Jan 5 but does not update the Case Type - Workflow mapping. So in Case Designer Case Type = AML is still mapped to Workflow = AML Version 0.

g. Jan 6 new cases with type = AML come in and are still going to use the AML workflow Version 0. Old cases (Jan 2 – 6) are also going to continue using AML workflow Version 0. If the user had modified the Case Type - Workflow mapping to map to the AML workflow Version 1, new cases arriving on Jan 6 would have used the AML workflow Version 1.

h. Jan 7, the user creates another version of this AML workflow and this time also changes the Case Type-workflow mapping to use this latest version. So we have:

i. Process ID = 3, Process Name = AML, Version = 2, mapped to Case Type = AML.

j. Jan 7 (after the change in step 6), new cases with type = AML come in and are now going to use the AML workflow Version 2. Old cases (Jan 2 – Jan 7 before the change in Case Designer) are going to continue using the AML workflow Version 0.

7. If I create a new version of a workflow in PMF and want to have someone review it before it goes into production, how do the reviewers ensure that the new version is not active until they want it to be?

If this workflow is linked to a Case Type in Case Designer, and the user saves the modifications using the **Save** feature, changes are reflected immediately in production. If the user saves the modifications using the **Save as a New Version** feature, they have to associate it with the case type for it to be enabled.

8. Can I copy workflows?

Yes, workflows can be copied in Process Modeller. Copying a workflow copies the workflow design (states and transitions diagram) but none of the metadata associated with the workflow is copied. Therefore, after copying a workflow, clients will have to fill in several details to make the workflow functional.

9. Can I deactivate a workflow in PMF? What impact does that have on cases already using the workflow?

PMF does not allow deactivation of workflows. If you do not want to use a workflow but also do not want to delete it, use the **end date** feature or just do not associate that workflow with any case type in Case Types UI.

10. Can I delete a workflow in PMF? What impact does that have on cases already using the workflow?

Yes, you can delete any version of a workflow through Process Modeller but we recommend that users set an end date instead so that the workflow remains available for future use. If the workflow is being used by one or more case types, clients should be advised to update the Case Type definition (Case Management UI) to use a different workflow before deleting a workflow. If a case type is associated with a deleted workflow, the service will receive an error message when it tries to call this workflow.

11. How is the case assignment done?

PMF does not perform a case assignment.

12. Can PMF update the status of a case automatically when the Due Date on a case passes?

No, at this time, PMF requires all status changes to be manually completed. This functionality may be provided in the future.

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