Oracle Financial Services Attribution Analysis

User Guide

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ORACLE
Financial Services

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OFS Analytical Applications Infrastructure Attribution Analysis User Guide

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1 Preface

This preface provides information for the Oracle Financial Services Attribution Analysis User Guide.

Topics:

- Access to Oracle Support
- Audience
- Additional Resources
- Conventions Used
- Acronyms Used

1.1 Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit:

- http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info
- http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.

1.2 Audience

This document is intended for the users configuring the Attribution component in PMF and executing Attribution Analysis.

1.3 Additional Resources

This section identifies additional resources for the OFS AAI application. You can access the online documentation for the OFS AAI 8.1.0.0.0 from the Oracle Help Center (OHC).

- Oracle Financial Services Advanced Analytical Applications Infrastructure (OFS AAAI) Release Notes
- Oracle Financial Services Advanced Analytical Applications Infrastructure (OFS AAAI) Application Pack Installation and Configuration Guide
- Oracle Financial Services Analytical Applications Process Modeling Framework Orchestration Guide

To find additional information about how Oracle Financial Services solves real business problems, see our website at www.oracle.com/financialservices.

1.4 Conventions Used

The following table lists the conventions used in this guide.

Table 1: Conventions Used in this Guide

Convention	Meaning
Italics	• Names of books, chapters, and sections as references • Emphasis
Bold	• The object of an action (menu names, field names, options, button names) in a step-by-step procedure • Commands typed at a prompt • User input
`Monospace`	• Directories and subdirectories • File names and extensions • Process names • Code sample, including keywords and variables within the text and as separate paragraphs, and user-defined program elements within the text
Hyperlink	Hyperlink type indicates the links to external websites, internal document links to sections.

1.5 Acronyms Used

The following table lists the acronyms used in this guide.

Table 2: Acronyms Used in this Guide

Acronyms	Description
BA	Business Analysts
Infodom	Information Domain
OFSAAI	Oracle Financial Services Analytical Application Infrastructure
OFSAA	Oracle Financial Services Analytical Applications
Navigation Tree	Left menu
PMF	Process Modeling Framework
URL	Uniform Resource Locator
UI	User Interface

2 Get Started

The topics in this section give an introduction to Attribution Analysis and the requirements to start working on it.

Topics:

- About this Guide
- What is Attribution Analysis?
- Prerequisites
- Signing into the Oracle Financial Services Analytical Applications
- Knowing the Component UI Features
- Knowing What to do?

2.1 About this Guide

This guide has information about configuring attribution components and executing Attribution Analysis on models or execution runs. Use it to see information or get help for the processes discussed.

For other products such as OFS AAI and OFS PMF, see the Additional Resources section.

2.2 What is Attribution Analysis?

Oracle Financial Services Attribution Analysis is a component integrated into the OFS AAI application's PMF. This component specifically addresses the requirement of financial institutions to compare the execution runs in models by varying one factor and studying the impact on other factors that are linked to it.

The comparison of the two executions (a base run instance and an inspect run instance) provides an insight into the impact of the outcome of the run when the variables are altered for every attribution run anchoring all but one variable (keeping all variables constant except one). You can create a group of tasks, runs, and models, and execute the processes configured in a parallel or a serial sequence as required. The results can be explored for analysis and reporting.

Models created in external systems can also be considered by the Attribution Analysis component. The output of the models can be further computed for attribution by connecting with the OFSAA system using various connection integration possibilities and create reports.

2.3 Licensing Information About Attribution Analysis

Attribution Analysis is a feature of the Oracle Financial Services Analytical Applications Infrastructure Extension (OFSAAIE) Pack 8.1.0.0.0 Release. The OFSAAIE pack can be installed on an OFSAA instance having one or more OFSAA application packs. The pack is enabled by the procurement of an additional license.

For details about licensing, see the Oracle Financial Services Analytical Applications Infrastructure Extension Pack 8.1.0.0.0 Release Notes.

2.4 Prerequisites

The following prerequisites apply for Attribution Analysis:

- Working knowledge of the PMF Application.

  For more information, see the Process Modeling Framework Orchestration Guide.

- The following Role and Function Code must be mapped to access and use Oracle Financial Services Attribution Analysis.

  For more information, see the **User Administrator** section in the OFS AAI User Guide 8.1.0.0.0.

Table 3: Role and Function Code Mapping

Role Code	Function Code
ATTRACC	ATTR_ADMN

2.5 Signing into the Oracle Financial Services Analytical Applications

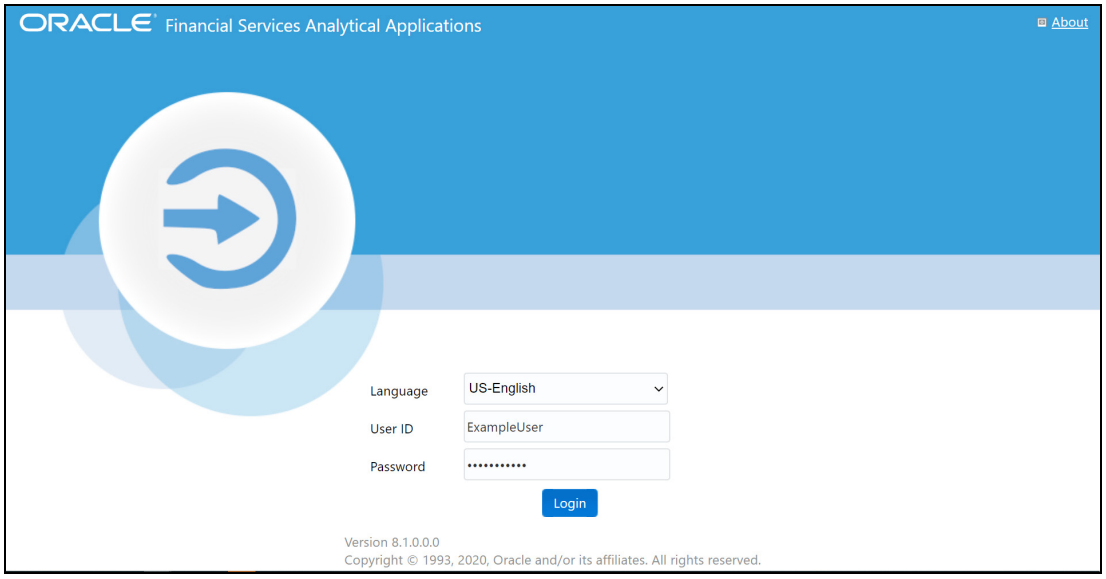
After the application is installed and configured, you can access Oracle Financial Services Analytical Applications.

To access the Oracle Financial Services Analytical Applications, follow these steps:

1. Enter the OFSAA URL in your browser.

   The *Login* window is displayed.

Figure 1: Oracle Financial Services Analytical Applications Login Page

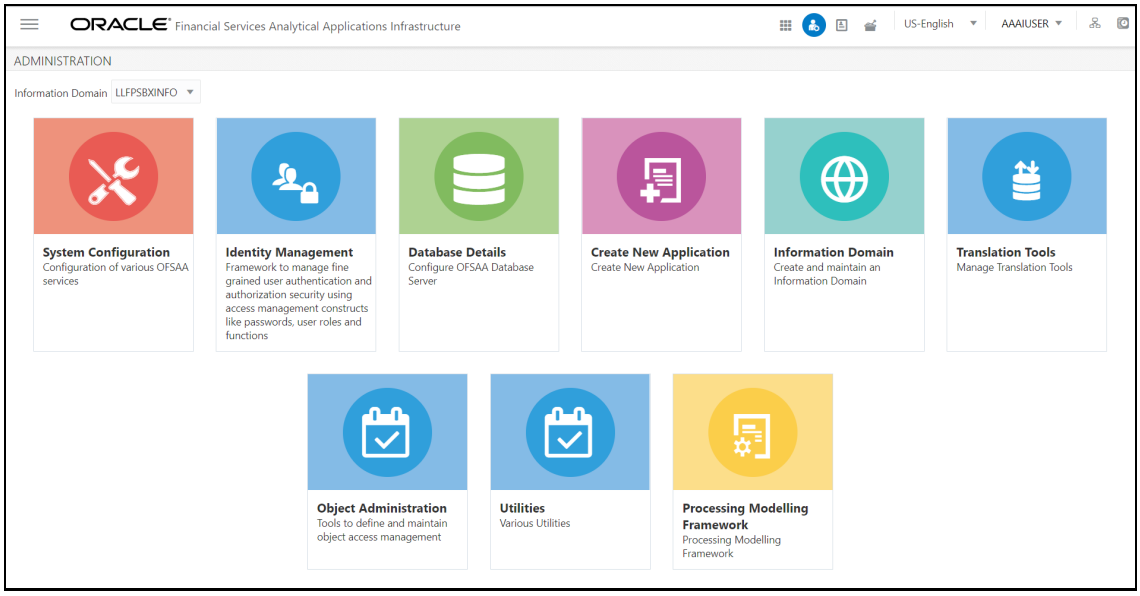


2. Select **Language**.

3. Enter your **User ID** and **Password**.
4. Click **Login**.
5. Click **Administration** from the **Header** to display the administration tasks in the Tiles menu.
6. Select the required **Information Domain** from the drop-down.

   For more information, see the Process Modeling Framework Orchestration Guide.

Figure 2: Application Selection - PMF



2.6 Knowing the Component UI Features

This section describes the user-interface specific to the Attribution Analysis component. Since it is a component within the PMF feature in OFSAA, you must know PMF.

See the Process Modeling Framework Orchestration Guide to familiarize yourself with the user interface and for application information.

2.7 Knowing What to do?

Attribution Analysis requires that you access OFSAA and define the Attribution Pipeline in PMF. Follow up by executing the Attribution Pipeline runs (at least two). Now that you have two or more instances of an execution run on the selected model, you can execute an Attribution Analysis.

The procedures are described in the following sections:

1. Defining the Attribution Pipeline
2. Preparing for Attribution Analysis Definition
3. Executing Attribution Analysis

3 Defining Attribution Analysis

The Attribution Analysis requires preparation of Attribution Components in the Process Modeler window by users. The Attribution Components configuration prepares two runs (base and inspect) from a model to be considered for the Attribution Analysis.

To prepare the runs, new attributable data is selected from models with data sourced from pre-executed runs. The attributable data is modified based on the variables identified for attribution. In the PMF, a process for a model is registered. The datasets and variables are selected from the model. The input and output variables are defined, and the Attribution Pipeline is executed.

To define the Attribution Pipeline, you must:

1. Configure the Attribution Component from PMF
2. Preparing for Attribution Analysis Definition
3. Execute the Attribution Pipeline runs in PMF

3.1 Configuring Attribution Component

The runs created in the Attribution Component in the OFSAA widgets are used in Attribution Analysis to compare variables. Create two or more runs for a selected model to use in the Attribution Analysis.

To configure an Attribution Component, follow these steps:

1. Log in to the OFSAA Application.
2. Click **Administration** from the **Header** to display the administration tasks in the Tiles menu.
3. Select the required **Information Domain** from the drop-down.
4. Select **Process Modeling Framework** to display a submenu.
5. Select **Process Modeller** from the submenu to display the **Process Modeller** window.
6. Click to display the **Process Details** popup.

   Enter the details as described in the following table:

Table 4: Fields in the Process Details Popup

Field	Description
Process ID	Enter an identifier for the attribution process.
Process Name	Enter a name for the attribution process.
Process Description	Enter a description of the attribution process.
App Package ID	Select the platform on which to base the process. For example, Loan Loss Forecasting and Provisioning.
Type	Select Attribution Pipeline for the type of process.
Registered Topics	Not applicable.

Field	Description
Spark DB	Not applicable.
Infodom	Select the required information domain on which to map the attribution pipeline.
Tag	Add a tag to classify the run.
Segment	Select the required segment from the drop down for the selected infodom.

7. Click **Save and Launch** to launch the Process Flow page.

   Or

   Click **Save and Close** to save the details and perform the operations later.

   Open the details from the Process Modeler window using the following steps:

   a. Click **Administration** from the **Header** to display the administration tasks in the Tiles menu.
   b. Select the required **Information Domain** from the drop-down.
   c. Select **Process Modeling Framework** to display a submenu.
   d. Select **Process Modeller** from the submenu to display the **Process Modeller** window.
   e. Select the Attribution Pipeline to display the Process Flow page.

8. On the **Process Flow** page, click **OFSAA WIDGETS** to display the available menu options.
9. Select **AttributionComponent** to display the drawing canvas.
10. Click the Attribution Component Widget on the canvas to display the Attribution Component page.

    The page displays a progress indicator to the top with the following configuration steps:

    a. Model Selection
    b. Data Definition
    c. Variable Mapping
    d. Handshake Configuration
    e. Summary

    As discussed at the beginning of this topic, the configuration requires the selection of a model, which would be used to select datasets and then further refine the selection by selecting variables from the datasets. The input variables selected are used to compute the output, which identifies potential attributable variables.

    To navigate through the configuration steps, click the required step in the progress indicator or click the **Prev** and **Next** buttons. Enter the details in the various configuration windows. Click the links in the preceding list to go to the respective subsections for details on the respective configuration steps.

11. After entering the configuration details, click **Save** on the Summary page.

3.1.1 Model Selection

The Model Selection is to select an application's model for the attribution analysis.

To configure Model Selection, enter the details as described in the following table:

Table 5: Configure Model Selection

Field	Description
Component Name	Enter a name for the attribution component to be configured.
Choose AppId	Select the required application package from the drop-down. The applications displayed are configured in PMF.
Choose Model	Select the required run from the drop-down. The runs displayed are configured for the selected application in the previous drop-down.

Click **Dataset Definition** on the progress indicator or **Next** to go to the Dataset Definition page and create a dataset.

3.1.2 Data Definition

The dataset selection is to select variables that are to be mapped (variable mapping).

To create a dataset on the Dataset Definition page, enter the details as described in the following table:

Table 6: Dataset Selection

Field	Description
Dataset	Select the required dataset from the drop-down.
Preview	Review the query that the application created for the selected dataset. This text box is a read-only field and is for analysis of the query.

Click **Variable Mapping** on the progress indicator or **Next** to go to the Variable Mapping page and maps variables from the selected dataset.

3.1.3 Variable Mapping

The mapping of variables from the selected dataset, which is considered for Attribution Analysis.

To map variables on the Variable Mapping page, enter the details as described in the following table:

Table 7: Variable Mapping of Dataset Selection

Field	Description
Component Type Information	The attribution component type requires details for the input and output variables. Select the required attribution component type for the selected model from the following and enter the information for the input and output variables: • Single - If the input variable and the output variable from a component are to be mapped. • Leading - If there are many attribution components and you want to select the first component to map the input variables. There is no case here to map the output variables. • Intermediate - If there are many attribution components and you want to select any of the intermediate components to map. It does not have any input of output variables mapped. • Trailing - If there are many attribution components and you want to select the last component to map to the output variable. There is no case here to map to an input variable.
Input Variables	The list of input variables used to compute the output and identify potential attributable variables.
1. Variable Name	Enter a name for the input variable.
2. Column Name	Select the required column from the dataset and assign it to the variable.
3. +	Click to add the input variables, which are then displayed in the table.
Output Variables	The list of output variables.
1. Variable Name	Enter a name for the output variable.
2. Column Name	Select the required column from the dataset and assign it to the variable.
3. +	Click to add the output variables, which are then displayed in the table.

Click **Handshake Configuration** on the progress indicator or **Next** to go to the Handshake Configuration page.

3.1.4 Handshake Configuration

The Handshake Configuration is where you provide the required API (Java API or PL/SQL procedure) for your application. The API is executed during the execution of the Attribution Analysis Definition replacing T2Ts or DTs (data feeding tasks) within the process, run, or model.

To configure the handshake, enter the details as described in the following table:

Table 8: APIs for Handshake Configuration

Field	Description
Seeded API Type	Select Seeded API from the drop-down as the type.
Seeded API Details	Enter a name for the procedure

Click **Summary** on the progress indicator or **Next** to go to the Summary page and review before execution.

3.1.5 Summary

The Summary page displays details for the configurations entered on the previous pages shown in the progress indicator. Review and if required change the details by going back to the previous pages. After completing the configuration details, click **Save** on the Summary page.

The run is mapped to the Attribution Component in the Widget. You are ready to execute the Attribution Analysis Definition.

3.2 Preparing for Attribution Analysis Definition

After configuring the Attribution Component, you must execute the Attribution Analysis and compare the variables in the run reports.

To execute Attribution Analysis, follow these steps:

1. Log in to the OFSAA Application.
2. Click **Administration** from the **Header** to display the administration tasks in the Tiles menu.
3. Select the required **Information Domain** from the drop-down.
4. Select **Process Modeling Framework** to display a submenu.
5. Select **Attribution Analysis** from the submenu to display the **Attribution Analysis** window.
6. Click to display the **Attribution Analysis Definition** popup.

   Enter the details as described in the following table:

Table 9: Attribution Analysis Definition

Field	Description
Attribution Name	Enter a name for the attribution process.
Choose Model	Select the required model from the drop-down.
Reference Run 1 Date	Select the date on which the base run instance was executed from the drop-down.
Reference Instance 1 Id	Select the base run instance from the drop-down from the instances created by runs executed on that day.
Reference Run 2 Date	Select the date on which the inspect run instance was executed from the drop-down.
Reference Instance 2 Id	Select the inspect run instance from the drop-down from the instances created by runs executed on that day.

Field	Description
Delta Rule API	Enter the API that analyze and calculate the difference. For example, procedure(). The API is a replacement to T2Ts or DTs (data feeding tasks) within the process, run, or model. **Note:** This value is configured in the Handshake Configuration section.
Select Variables	Select the variables required for the attribution from the drop-down for the date range or timeline considered. Only one variable is changed and the rest is kept constant. The runs are repeated to compare and analyze. **Note:** These variables are configured by administrators during the configuration of the attribution component.

The run outcomes in the reference instances for the to and from dates are compared and the variable within are analyzed for changes.

7. Click **Save** to save the definition and display on the Attribution Analysis page.
8. On the **Attribution Analysis** page, click:
   - : To delete the Attribution Analysis.
   - : To display the menu where you can do the following tasks:
     - View : To view the Attribution Analysis Definition details.
     - Execute : To execute the Attribution Analysis Definition run.
     - Instance Monitor : To view the number of Attribution Analysis Definition processes that have completed executing or are in the process.

       For more details, see the Viewing the Analysis Details section.

3.2.1 Viewing the Analysis Details

To view the Attribution Analysis execution details, follow these steps:

1. On the **Attribution Analysis** page, click to display the menu.
2. On the menu, click **Instance Monitor** to display the **Instance Monitor** window.
3. Click any required Attribution Analysis Definition process in the **Instance Monitor** window to display the details in the **Attribution Analysis Definition** window.
4. Click to view the graphical representation in the PMF Monitor canvas.

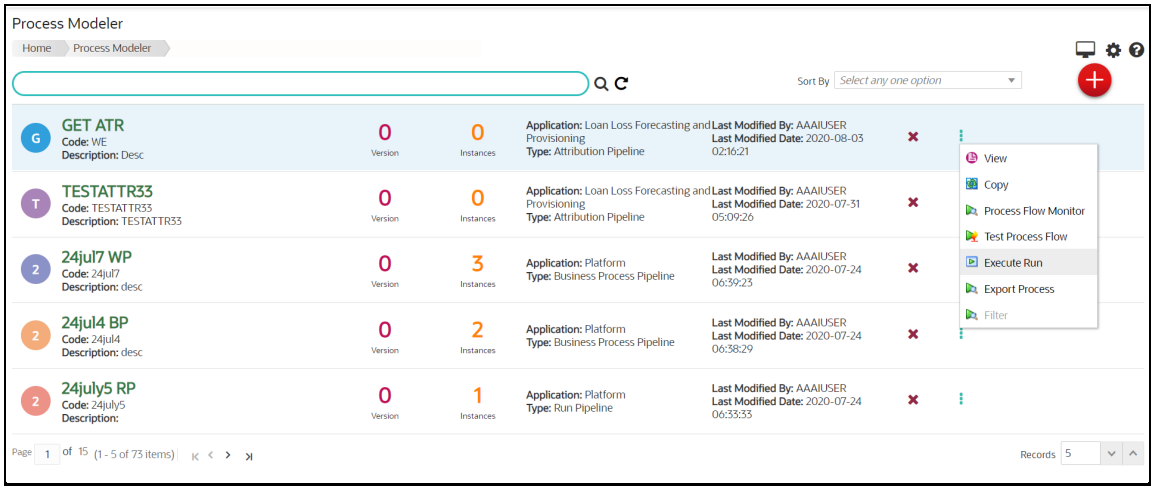
3.3 Executing Attribution Pipeline Runs

After preparing the Attribution Analysis definition, execute the Attribution Pipeline to create the run instances that are available during the execution of the Attribution Analysis Definition process.

To execute an Attribution Analysis run, follow these steps:

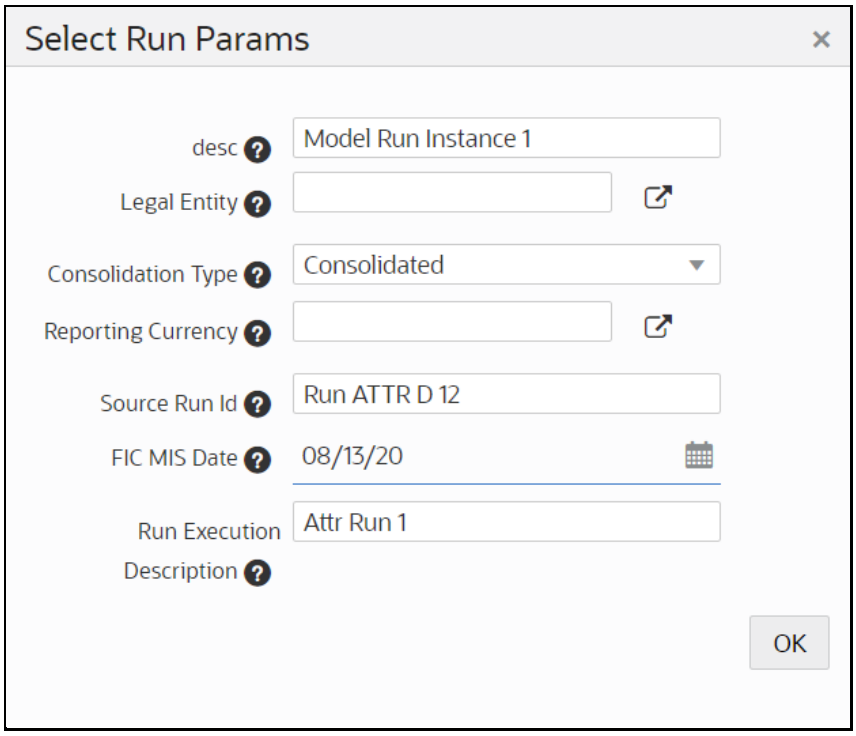
1. Log in to the OFSAA Application.
2. Click **Administration** from the **Header** to display the administration tasks in the Tiles menu.
3. Select the required **Information Domain** from the drop-down.
4. Select **Process Modeling Framework** to display a submenu.
5. Select **Process Modeller** from the submenu to display the **Process Modeller** window.
6. Select an Attribution Pipeline and click to display the menu.

Figure 3: Attribution Analysis Pipeline Menu in Process Modeler



7. Click Execute Run to display the **Select Run Params** popup.

Figure 4: Select Run Parameters

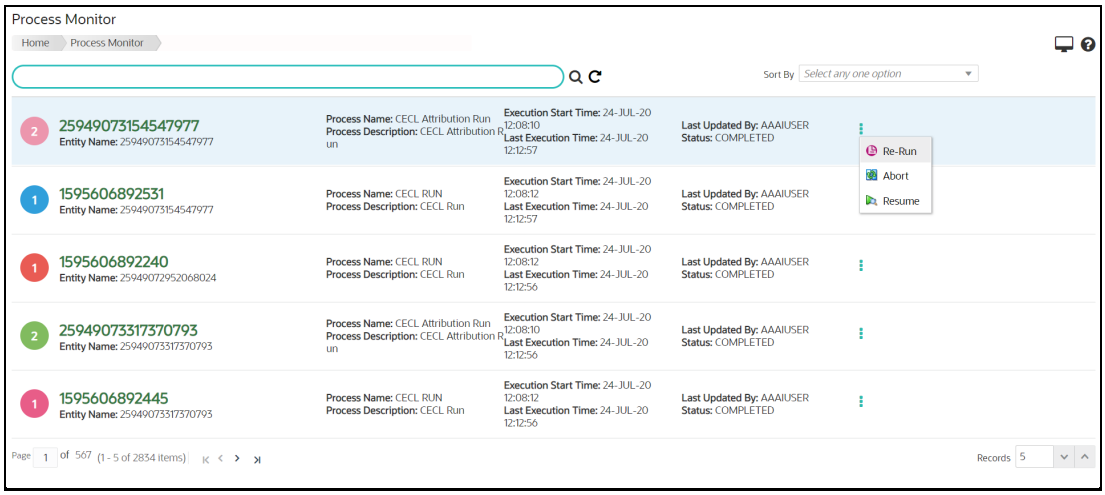


8. Enter details for the following:
   a. Desc: Enter a description of the run parameter.
   b. Legal Entity: Select the legal entity.
   c. Consolidation Type: Select the consolidation type from Solo or Consolidated.
   d. Reporting Currency: Select the reporting currency to be configured for the reporting data.
   e. Source Run ID: Enter the source ID for the run.
   f. FIC MIS Date: Select the FIC MIS date for the cash flows.
   g. Run Execution Description: Enter a description of the run execution.
9. Click **OK** to execute the run.
10. Check the status of the run if required from the Process Monitor window.

    To check the status of the run, follow these steps:

    a. Log in to the OFSAA Application.
    b. Click **Administration** from the **Header** to display the administration tasks in the Tiles menu.
    c. Select the required **Information Domain** from the drop-down.
    d. Select **Process Modeling Framework** to display a submenu.
    e. Select **Process Monitor** from the submenu to display the **Process Monitor** window.

Figure 5: Process Monitor Window with Submenu



11. Check the execution status in this window. Additionally, you can re-run the execution from this window using the submenu.

OFSAA Support

Raise a Service Request (SR) in My Oracle Support (MOS) for queries related to the OFSAA applications.

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