Contents

List of Figures ......................................................................................................................... ix

Preface xi

Audience ................................................................................................................................................... xi
Related Documents ........................................................................................................................... xi
Conventions ................................................................................................................................................. xii
Acronyms .................................................................................................................................................. xii

CHAPTER 1 About Inline Processing Engine (IPE) .................................................. 1
Overview ................................................................................................................................................... 1
Key Features .............................................................................................................................................. 1
Workflow of Inline Processing Engine application .............................................................................. 2
Users and User Groups ....................................................................................................................... 3
Users ....................................................................................................................................................... 3
User Groups ...................................................................................................................................... 3

CHAPTER 2 Getting Started ................................................................................................. 5
Accessing OFSAA Applications .............................................................................................................. 5
Top Menu ................................................................................................................................................... 6
Left Hand Side (LHS) ........................................................................................................................... 7
Applications Tab .................................................................................................................................. 7
Object Administration Tab ................................................................................................................. 8
System Configuration and Identity Management Tab ....................................................................... 8
Right Hand Side (RHS) .................................................................................................................................................. 9
Navigating to Inline Processing Engine Home Page .................................................................................................. 9
Using Common Buttons in IPE ..................................................................................................................................... 11

CHAPTER 3 Association and Configuration .................................................................................................................. 13

Accessing Association and Configuration Menu ......................................................................................................... 13
Managing Processing Segments ...................................................................................................................................... 14
  Accessing Processing Segments .................................................................................................................................. 14
  Adding Processing Segment .......................................................................................................................................... 14
  Searching Processing Segment .................................................................................................................................... 15
  Editing Processing Segment .......................................................................................................................................... 15
  Deleting Processing Segment ..................................................................................................................................... 16
Managing Business Entities ........................................................................................................................................ 16
  Accessing Business Entities ......................................................................................................................................... 17
  Importing Entity ............................................................................................................................................................ 17
  Updating Entity Details ................................................................................................................................................ 19
  Deleting an Entity .......................................................................................................................................................... 20
  Adding Business Entities .............................................................................................................................................. 20
  Editing Business Entity ................................................................................................................................................ 21
  Deleting Business Entity .............................................................................................................................................. 22
  Synchronizing Business Entities .................................................................................................................................. 22
  Updating Business Entity Attributes .......................................................................................................................... 22
Managing Inline Datasets ............................................................................................................................................... 23
  Overview ........................................................................................................................................................................ 23
  Accessing Inline Datasets .......................................................................................................................................... 24
  Adding Inline Datasets ................................................................................................................................................ 24
    Adding Inline Dataset Condition .................................................................................................................................. 25
  Searching Inline Dataset .............................................................................................................................................. 25
  Editing Inline Dataset .................................................................................................................................................. 26
  Deleting Inline Dataset ................................................................................................................................................. 26
Managing Traversal Paths ............................................................................................................................................... 26
  Overview ........................................................................................................................................................................ 26
  Accessing Traversal Paths ........................................................................................................................................... 27
  Adding Traversal Path .................................................................................................................................................. 27
    Adding Traversal Path Flow ........................................................................................................................................... 28
  Searching Traversal Path .............................................................................................................................................. 28
  Deleting Traversal Path ............................................................................................................................................... 29

CHAPTER 4 Managing Expressions .................................................................................................................................. 31
  Overview ........................................................................................................................................................................ 31
  Accessing Expressions Menu ...................................................................................................................................... 32
  Adding an Expression ................................................................................................................................................... 32
    Adding Variables ........................................................................................................................................................ 33
Contents

CHAPTER 5 Managing Post Processing Actions ................................................. 39
Overview..................................................................................................................... 39
Accessing Post Processing Actions........................................................................ Menu 39
Adding Post Processing Actions.............................................................................. 40
  Adding a Post Processing Action .......................................................................... 40
  Adding an Action Parameter .................................................................................. 41
Searching Post Processing Action........................................................................... 41
Editing Post Processing Action.................................................................................. 42
Deleting Post Processing Action............................................................................... 42

CHAPTER 6 Managing Profiles ........................................................................... 43
Overview..................................................................................................................... 43
Accessing Profiles Menu ........................................................................................... 43
Adding a Profile......................................................................................................... 44
  Adding Standard Measures ................................................................................... 46
  Adding Custom Measures ...................................................................................... 46
  Adding Filters ......................................................................................................... 46
  Adding Measure Aggregation Groups .................................................................. 47
Adding an Expression from Profiles Menu............................................................... 47
Searching a Profile.................................................................................................... 47
Editing a Profile......................................................................................................... 48
Deleting a Profile....................................................................................................... 48

CHAPTER 7 Managing Virtual Profiles ............................................................. 49
Overview..................................................................................................................... 49
Accessing Virtual Profile Menu.................................................................................. 49
Adding Virtual Profile................................................................................................ 50
  Adding Linked Profiles......................................................................................... 51
  Adding Measures................................................................................................. 51
  Adding Associated Inline Datasets ..................................................................... 51
  Adding Associated Paths..................................................................................... 52
Searching Virtual Profile.......................................................................................... 52
Editing Virtual Profile............................................................................................... 52
Deleting Virtual Profile............................................................................................... 53

CHAPTER 8 Managing Evaluations ................................................................. 55
Overview..................................................................................................................... 55
Contents

Adding Highlights to an Evaluation .................................................................................................................................60
Adding an Expression from Evaluations Menu .............................................................................................................59
Deleting an Assessment......................................................................................................................................................68
Editing an Assessment........................................................................................................................................................68
Searching an Assessment....................................................................................................................................................68
Exporting an Assessment...................................................................................................................................................67

CHAPTER 9  Managing Assessments ........................................................................................................................................63

Overview.......................................................................................................................................................................63
Accessing Assessments Menu............................................................................................................................................63
Adding an Assessment........................................................................................................................................................64
  Mapping Associated Evaluations................................................................................................................................65
  Adding Assessment Score and Outcome......................................................................................................................66
  Adding Action Parameters and Schedule ..................................................................................................................67
  Adding Assessment Database Parameters...................................................................................................................67
Exporting an Assessment.................................................................................................................................................67
Searching an Assessment................................................................................................................................................68
Editing an Assessment......................................................................................................................................................68
Deleting an Assessment...................................................................................................................................................68

CHAPTER 10  Executing an Assessment Batch .................................................................................................................69

Overview.......................................................................................................................................................................69
Executing an Assessment Batch through Rules Run Framework................................................................................69
  Creating a Process.......................................................................................................................................................69
  Creating a Hierarchy filter...........................................................................................................................................72
  Creating a Run and Executing it ................................................................................................................................75
Executing an Assessment Batch through Operations ................................................................................................80

CHAPTER 11  Displaying Assessment Results ...................................................................................................................1

Overview.......................................................................................................................................................................1
Accessing Assessments Results ...................................................................................................................................1
Displaying Assessments Results ...................................................................................................................................2
  Displaying Assessment Results for HIVE: ...................................................................................................................3

CHAPTER 12  Managing Import and Export Utilities .......................................................................................................5
Overview.................................................................................................................................................................................5
Import Functionality....................................................................................................................................................................5
Export Functionality..................................................................................................................................................................6

APPENDIX A  Configuring a User Defined Function in IPE ............................. 7
Configuring a User Defined Function in RTI................................................................. 7
Configuring any User defined function........................................................................ 8

APPENDIX B  Configuring a User Defined Assessment ................................. 11
Example Scenario......................................................................................................................... 11
Focus ........................................................................................................................................................................ 11
Scenario Class.......................................................................................................................................................... 11
Scenario Objective.................................................................................................................................................. 11
Alert Generation..................................................................................................................................................... 11
Filters .................................................................................................................................................................... 13
Data Streams of Interest....................................................................................................................... 13
List of Figures

Figure 1. IPE Workflow ......................................................................................................................................................... 2
Figure 2. OFSAA Login page ................................................................................................................................................. 5
Figure 3. OFSAA Home page ............................................................................................................................................... 6
Figure 4. Figure 4: Object Administration tab .................................................................................................................. 8
Figure 5. System Configuration and Identity Management Tab ........................................................................................ 9
Figure 6. OFSAA Home page (Inline Processing Engine) ................................................................................................. 10
Figure 7. Association and Configuration page .................................................................................................................. 13
Figure 8. Processing Segments page ................................................................................................................................. 14
Figure 9. Adding Processing Segment ............................................................................................................................... 15
Figure 10. Modifying Processing Segment ......................................................................................................................... 16
Figure 11. Business Entities page ..................................................................................................................................... 17
Figure 12. Importing Tables page ...................................................................................................................................... 18
Figure 13. Updating Table ..................................................................................................................................................... 20
Figure 14. Adding Business Entities ................................................................................................................................. 21
Figure 15. Adding Business Entity Details ......................................................................................................................... 21
Figure 16. Synchronizing Business Entities ....................................................................................................................... 22
Figure 17. Updating Business Entity Attributes ................................................................................................................ 23
Figure 18. Inline Datasets Details page ............................................................................................................................... 24
Figure 19. Adding Inline Dataset ..................................................................................................................................... 24
Figure 20. Traversal Paths Details page ............................................................................................................................. 27
Figure 21. Adding Traversal Path ..................................................................................................................................... 28
Figure 22. Expressions Details page .................................................................................................................................. 32
Figure 23. Adding an Expression ....................................................................................................................................... 32
Figure 24. Variable page ......................................................................................................................................................... 33
Figure 25. Adding Variables .................................................................................................................................................. 35
Figure 26. Associated metadata of Expression Details page ............................................................................................... 37
Figure 27. Post Processing Actions Details page ............................................................................................................... 40
Figure 28. Adding a Post Processing Action ........................................................................................................................ 40
Figure 29. Adding an Action Parameter .............................................................................................................................. 41
Figure 30. Profiles Details page .......................................................................................................................................... 44
Figure 31. Adding a Profile ................................................................................................................................................... 45
Figure 32. Virtual Profile Details page ................................................................................................................................. 49
Figure 33. Adding a Virtual Profile ................................................................................................................................... 50
Figure 34. Evaluation Details page .................................................................................................................................... 56
Figure 35. Adding an Evaluation ........................................................................................................................................ 57
Figure 36. Adding Highlights ............................................................................................................................................. 57
Figure 37. Saving Multiple Evaluations ............................................................................................................................... 62
Figure 38. Assessment Details page .................................................................................................................................. 64
Figure 39. Adding an Assessment ..................................................................................................................................... 65
List of Figures

Figure 40. Assessment Evaluation Window.................................................................66
Figure 41. Process Definition page ..............................................................................70
Figure 42. Process Details Run Rule Framework page ..............................................70
Figure 43. Folder Selector window.............................................................................71
Figure 44. Process RRF..............................................................................................71
Figure 45. Build Hierarchy page ...............................................................................72
Figure 46. Adding Business Hierarchy Details .........................................................73
Figure 47. Entity and Attribute details page ............................................................74
Figure 48. Adding Hierarchy Levels ..........................................................................74
Figure 49. Run definition page ..................................................................................75
Figure 50. New Run Definition details page...............................................................76
Figure 51. Job RRF window .....................................................................................77
Figure 52. Jobs for Run RRF page ............................................................................77
Figure 53. Hierarchy Browser window .....................................................................78
Figure 54. Job Hierarchy RRF page ..........................................................................78
Figure 55. Fire Run Page ..........................................................................................79
Figure 56. Fire Run Details Page .............................................................................79
Figure 57. Assessments Details Page .......................................................................1
Figure 58. Assessment Results page .........................................................................2
Preface

This guide explains the concept behind the Inline Processing Engine (IPE) and step-by-step instruction to use the framework.

This preface includes the following topics.

- Audience
- Related Documents
- Conventions

Audience

This guide is intended for the following users:

- **Business Users and Administrators** who are instrumental in solution designing and creation of statistical models using historical data and also to maintain and execute batches, make the Infrastructure Application secure and operational.

Related Documents

For more information about the Inline Processing Engine, refer to the following in OHC Documentation Library:

- OFS Inline Processing Engine Configuration Guide 8.0.5.0.0
- OFS Inline Processing Engine Sample Application Installation Guide 8.0.5.0.0
- OFS Advanced Analytical Applications Infrastructure Application Pack Installation and Configuration Guide 8.0.5.0.0
- OFS Analytical Applications Environment Check Utility Guide 8.0.5.0.0
- OFS Advanced Analytical Applications Infrastructure User Guide 8.0.5.0.0
Conventions

Table 1 provides the conventions used in this guide.

Table 1. Conventions Used in this Guide

<table>
<thead>
<tr>
<th>Convention</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italic</td>
<td>• Names of books, chapters, and sections as references • Emphasis</td>
</tr>
<tr>
<td>Bold</td>
<td>• Object of an action (menu names, field names, options, button names) in a step-by-step procedure • Commands typed at a prompt • User input</td>
</tr>
<tr>
<td>Monospace</td>
<td>• Directories and subdirectories • File names and extensions • Process names • Code sample, including keywords and variables within text and as separate paragraphs, and user-defined program elements within text</td>
</tr>
<tr>
<td>&lt;Variable&gt;</td>
<td>Substitute input value</td>
</tr>
</tbody>
</table>

Acronyms

This guide uses the following acronyms.

Table 2. Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTML</td>
<td>Hyper Text Markup Language</td>
</tr>
<tr>
<td>HTTP</td>
<td>Hypertext Transfer Protocol</td>
</tr>
<tr>
<td>Infodom</td>
<td>Information Domain</td>
</tr>
<tr>
<td>IP</td>
<td>Internet Protocol</td>
</tr>
<tr>
<td>IPE</td>
<td>Inline Processing Engine</td>
</tr>
<tr>
<td>OFSAA</td>
<td>Oracle Financial Services Analytical Applications</td>
</tr>
<tr>
<td>OFSAAA</td>
<td>Oracle Financial Services Advanced Analytical Applications</td>
</tr>
<tr>
<td>LHS menu</td>
<td>Left hand side menu</td>
</tr>
<tr>
<td>OFSAAI</td>
<td>Oracle Financial Services Analytical Applications Infrastructure</td>
</tr>
<tr>
<td>PDF</td>
<td>Portable Data Format</td>
</tr>
<tr>
<td>URL</td>
<td>Uniform Resource Locator</td>
</tr>
<tr>
<td>XML</td>
<td>Extensible Markup Language</td>
</tr>
</tbody>
</table>
CHAPTER 1  
About Inline Processing Engine (IPE)

The Oracle Financial Services Inline Processing Engine application creates an infrastructure for real time monitoring of incoming messages. This capability will enable you to identify fraud events earlier, avert more losses, and minimize customer service and retention issues.

This chapter covers the following topics:

- Overview
- Workflow of Inline Processing Engine application
- Users and User Groups

Overview

The Inline Processing Engine supports the ability to rapidly provide knowledge of related suspicious behavior back to individual business units, and even alert customers about any unpredicted activity.

This capability helps to identify events earlier, avert more losses, and minimize customer service and retention issues. This combination of real-time detection and interdiction, real-time alert correlation, and sophisticated behavior detection provided by the application, will result in a competitive fraud prevention offering.

The system uses cases from risk and performance OFSAA Applications, where real time monitoring is required.

Key Features

The Inline Processing Application has the following key features:

- **Association and Configuration** - The Association and Configuration menu has the following sections:
  - Processing Segments
  - Business Entities
  - Inline Datasets
  - Traversal Path

- **Expressions** - Expressions are used in Evaluation scoring and Filters.

- **Post Processing Actions** - Post Processing Actions are the actions which can be triggered by the outcome of the Assessment.

- **Profiles** - A profile is an aggregation of information. Profiles can be based on different grouping entities (for example, account, customer, and so on). This can be filtered to only look at particular kinds of transactions. Profiles can be based on time (last three months) or transaction counts (last 100 transactions).
Workflow of Inline Processing Engine application

Chapter 1—About Inline Processing Engine

- **Evaluations** - An assessment is made up of multiple individual evaluations. These evaluations start with information on the incoming transaction and check logical conditions.

- **Assessments** - When a transaction is received, an Assessment is performed. The assessment is a collection of individual evaluations, each of which can return a score.

**Workflow of Inline Processing Engine application**

The process flow of the Inline Processing Engine application is shown below.

![Workflow Diagram](image)

Figure 1. IPE Workflow
Users and User Groups

The Inline Processing Engine application consists of the following users and their actions:

Users

- IPE Administrators who maintain and execute batches, make the Infrastructure Application secure and operational, and configure users and security.

User Groups

The user group IPEADMN must be mapped to the user to access IPE.
CHAPTER 2

Getting Started

This chapter describes how to get started with Inline Processing Engine.
This chapter discusses the following topics:

- Accessing OFSAA Applications
- Navigating to Inline Processing Engine Home Page
- Using Common Buttons in IPE

Accessing OFSAA Applications

To access the OFSAA Applications, follow these steps.

1. Enter the URL in the following format in your Internet Explorer browser.


   ![OFSA Login page](image)

   **Figure 2. OFSA Login page**

2. Select the Language from the Language drop-down list.
3. Enter your User ID and Password.
4. Click **Login**. The OFSAA Application page is displayed.

![Figure 3. OFSAA Home page](image)

The OFSAA Home page has multiple tabs and each tab has specific links to OFSAA Infrastructure and/or Application modules. Depending on the user roles, you are mapped and depending on the OFSAA Application you select, the relevant tabs and links are displayed.

This page contains the following sections:

- **Top menu**
- **Left Hand Side (LHS)**
- **Right Hand Side (RHS)**

**Top Menu**

This section displays the logged in User information and Information Domain. The Top menu contains the following buttons:

- **Last Login Date**: This option allows you to view the last login date and time. It also displays the last failed login date and time.
- **Connected To**: This option allows you to view the Information Domain you are connected to and the Environment Details set in the Configuration page.
- **Language**: This option allows you to view the language selected.
- **User Name**: Displays the user name of the person logged in. Click the user name to view the following options:
  - **Preferences**: This option allows you to set the Home Page.
  - **About**: This option displays the copyright information.
  - **Change Password**: This option opens the Change Password window.
  - **Logout**: This option allows you to log out of the application.

**Left Hand Side (LHS)**

This section displays the menu which allows you to navigate to the required module. The items displayed in the menu depend upon the access rights of the logged in user.

The LHS menu changes depending on the application selected from the Select Application drop-down list. For more details, refer to the Oracle Financial Services Analytical Application Infrastructure User Guide.

When you select **Financial Services Inline Processing Engine**, the following menu items are displayed in the Home Page:

- Applications Tab
- Object Administration Tab
- Sandbox Tab
- System Configuration and Identity Management Tab

**Applications Tab**

The following menu items are available in the Applications tab:

- **Financial Services Inline Processing Engine**
  - **Inline Processing**
  - **Inline Processing Reports**
  - **Data Management**
    For more information, refer to the Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide.
  - **Data Management Framework**
    For more information, refer to the Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide.
  - **IPE Execution**
    This module allows the user to execute an assessment in IPE. For more information, refer to the Rules Run Framework module and Operation module in Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide. To execute the assessment in batch mode for IPE, refer to Executing an Assessment Batch.
  - **Metadata Browser**
For more information, refer to the Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide.

- Common Tasks
  For more information, refer to the Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide.
  - Data Model Management
  - Unified Analytical Metadata

**Object Administration Tab**

Object Administration is an integral part of the Infrastructure system and facilitates system administrators to define the security framework with the capacity to restrict access to the data and metadata in the warehouse, based on a flexible, fine-grained access control mechanism. These activities are mainly done at the initial stage and later, when required.

This document deals with the information related to the workflow of Infrastructure Administration process with associated procedures to assist, configure, and manage the administrative tasks effectively.

The Object Administration tab lists the various OFSAA Information Domains created in the OFSAA setup based on the logged in user and the mapped OFSAA Application User Group(s).

To access the Object Administration tab, select the required Information Domains from the Select Information Domains drop-down list.

Based on your selection, the page refreshes the menus and links across the pane.

![Figure 4: Object Administration tab](image)

**System Configuration and Identity Management Tab**

System Configuration and Object Administration is an integral part of Infrastructure administration process and facilitates System Administrators to provide security and operational framework required for Infrastructure.

System Administrators can configure the Server details, Database details, OLAP details, and Information Domain along with the other Configuration process such as segment and metadata mapping, mapping segment to security and rules setup. System Configuration is mostly a one time activity which helps System administrator to make the Infrastructure system operational for use.

The System Configuration and Identity Management tab lists the OFSAA Infrastructure System Configuration and Identity Management modules.
The Create New Application feature allows you (System Administrator) to create a new Application other than the standard OFSAA Applications and associate the standard/default platform framework menu with it, thereby enabling the new application for usage. The standard platform framework menu is seeded and rendered.

After you create an Application, a new Role is created as <APP_CODE>ACC. This role along with the IPE Write role (RTIADMIN) need to be mapped to the user group IPEADMN. The users mapped to that user group will get the new Application listed in the Select Applications drop-down from the Applications tab. Only Enabled applications are listed in the drop-down list.

To access the System Configuration and Identity Management tab, select the required Information Domains from the Select Information Domains drop-down list.

Based on your selection, the page refreshes the menus and links across the pane.

![Image](image.png)

**Figure 5. System Configuration and Identity Management Tab**

**Right Hand Side (RHS)**

This section displays user options available for the application selected.

**Navigating to Inline Processing Engine Home Page**

Once the application is installed and configured, you can access Oracle Financial Services Inline Processing Engine. To access Oracle Financial Services Inline Processing Engine, follow these steps:

1. Select **Inline Processing Engine** from the Select Application drop-down list.
2. Click **Inline Processing** on the right pane. The Inline Processing Home Page is displayed.
### Using Common Buttons in IPE

#### Table 3. Common Buttons

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>![icon]</td>
<td>To create a function.</td>
</tr>
<tr>
<td>![icon]</td>
<td>To view the details of a function.</td>
</tr>
<tr>
<td>![icon]</td>
<td>To edit the details of a function.</td>
</tr>
<tr>
<td>![icon]</td>
<td>To clear the fields and reset to default values.</td>
</tr>
<tr>
<td>![icon]</td>
<td>To select a new member.</td>
</tr>
<tr>
<td>![icon]</td>
<td>To select a filter/run condition/define sub process.</td>
</tr>
<tr>
<td>![icon]</td>
<td>To select a source/component/job.</td>
</tr>
<tr>
<td>![icon]</td>
<td>To select a hierarchies/measures/job condition.</td>
</tr>
<tr>
<td>![icon]</td>
<td>To set precedence for members.</td>
</tr>
<tr>
<td>![icon]</td>
<td>To execute a Run definition.</td>
</tr>
<tr>
<td>![icon]</td>
<td>To select hierarchical members</td>
</tr>
<tr>
<td>![icon]</td>
<td>To delete a function.</td>
</tr>
<tr>
<td>![icon]</td>
<td>To select the entities.</td>
</tr>
<tr>
<td>![icon]</td>
<td>To validate grid data.</td>
</tr>
<tr>
<td>![icon]</td>
<td>To save the details.</td>
</tr>
<tr>
<td>![icon]</td>
<td>To view the properties.</td>
</tr>
<tr>
<td>![icon]</td>
<td>To Refresh the grid details.</td>
</tr>
<tr>
<td>![icon]</td>
<td>To erase a specific value.</td>
</tr>
<tr>
<td>![icon]</td>
<td>To define an expression.</td>
</tr>
<tr>
<td>![icon]</td>
<td>To generate source model.</td>
</tr>
<tr>
<td>![icon]</td>
<td>To add attributes/add Source Configuration/Authorize a function.</td>
</tr>
<tr>
<td>![icon]</td>
<td>To generate Source Models.</td>
</tr>
<tr>
<td>![icon]</td>
<td>To generate a logic and view the SQL query/check syntax of the stored procedure.</td>
</tr>
<tr>
<td>![icon]</td>
<td>To add the source database configuration details.</td>
</tr>
<tr>
<td>![icon]</td>
<td>To view the dependencies of the selected Object.</td>
</tr>
<tr>
<td>![icon]</td>
<td>To Export data.</td>
</tr>
<tr>
<td>![icon]</td>
<td>To trace a definition details.</td>
</tr>
</tbody>
</table>
### Table 3. Common Buttons

<table>
<thead>
<tr>
<th>Button</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Button" /></td>
<td>To receive instant on-window help.</td>
</tr>
<tr>
<td><img src="image" alt="Button" /></td>
<td>To view the log.</td>
</tr>
<tr>
<td><img src="image" alt="Button" /></td>
<td>To specify a date using calendar.</td>
</tr>
<tr>
<td><img src="image" alt="Button" /></td>
<td>To View Dependencies.</td>
</tr>
<tr>
<td><img src="image" alt="Button" /></td>
<td>To run the object migration rule.</td>
</tr>
<tr>
<td><img src="image" alt="Button" /></td>
<td>To interrupt the object migration rule.</td>
</tr>
<tr>
<td><img src="image" alt="Button" /></td>
<td>To add and view the source database configuration details.</td>
</tr>
<tr>
<td><img src="image" alt="Button" /></td>
<td>To authorize or reject a function / definition.</td>
</tr>
<tr>
<td><img src="image" alt="Button" /></td>
<td>To map / un-map source tables to columns.</td>
</tr>
<tr>
<td><img src="image" alt="Button" /></td>
<td>To view the time dependencies.</td>
</tr>
<tr>
<td><img src="image" alt="Button" /></td>
<td>To view the pagination option.</td>
</tr>
<tr>
<td><img src="image" alt="Button" /></td>
<td>To view SQL statement.</td>
</tr>
<tr>
<td><img src="image" alt="Button" /></td>
<td>To view and enter the details in the Expression window.</td>
</tr>
<tr>
<td><img src="image" alt="Button" /></td>
<td>To create a Rule function.</td>
</tr>
<tr>
<td><img src="image" alt="Button" /></td>
<td>To open and view the rule details.</td>
</tr>
<tr>
<td><img src="image" alt="Button" /></td>
<td>To save a Rule function.</td>
</tr>
<tr>
<td><img src="image" alt="Button" /></td>
<td>To search / find a member.</td>
</tr>
<tr>
<td><img src="image" alt="Button" /></td>
<td>To Save with customized details.</td>
</tr>
<tr>
<td><img src="image" alt="Button" /></td>
<td>To view the rule properties.</td>
</tr>
<tr>
<td><img src="image" alt="Button" /></td>
<td>To map between hierarchies.</td>
</tr>
<tr>
<td><img src="image" alt="Button" /></td>
<td>To select a member.</td>
</tr>
<tr>
<td><img src="image" alt="Button" /></td>
<td>To deselect a member.</td>
</tr>
<tr>
<td><img src="image" alt="Button" /></td>
<td>To sort in ascending order.</td>
</tr>
<tr>
<td><img src="image" alt="Button" /></td>
<td>To sort in descending order.</td>
</tr>
<tr>
<td><img src="image" alt="Button" /></td>
<td>To access the documentation resources.</td>
</tr>
</tbody>
</table>
CHAPTER 3

Association and Configuration

This chapter provides detailed information about Association and Configuration functionality and step-by-step instructions to use this module.

Association and Configuration allows a user to define the base metadata required for usage of other components of IPE.

This chapter discusses the following topics:

- Accessing Association and Configuration Menu
- Managing Processing Segments
- Managing Business Entities
- Managing Inline Datasets
- Managing Traversal Paths

Accessing Association and Configuration Menu

To access the Association and Configuration menu, follow these steps:

1. Navigate to the Inline Processing Home Page.
2. Click Association and Configuration. The Association and Configuration page is displayed.

Figure 7. Association and Configuration page
Managing Processing Segments

Processing segments allows the user to logically group the metadata required for Assessments and its sub-components. Through Processing Segments, you can add and save a new segment or search for existing segments (for modification) or remove a segment.

Processing segment can be used for segregating assessments in run paradigm of IPE. This helps the client to selectively run a group of assessments in both real time or batch mode.

This section covers the following topics:

- Accessing Processing Segments
- Adding Processing Segment
- Searching Processing Segment
- Editing Processing Segment
- Deleting Processing Segment

Accessing Processing Segments

To access the Processing Segment page, follow these steps:

1. Navigate to the Inline Processing Home Page.
2. On the Association and Configuration menu, click Processing Segments. The Processing Segments page is displayed.

![Processing Segments page](image)

Adding Processing Segment

This option allows you to add a new processing segment, which is used to classify all the metadata in the selected Infodom logically.

To add a Processing Segment, follow these steps:

1. Navigate to the Processing Segments page.
2. Click **Add**. A new empty row is displayed in the list. Select the checkbox. The Add Processing Segment fields are enabled.

![Figure 9. Adding Processing Segment](image)

**Note:** If you click **Add** when a row is empty in the list, then the following warning message is displayed:

*Row is empty in Processing segment.*

3. Enter the following details:

<table>
<thead>
<tr>
<th>Fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processing Segment Code</td>
<td>Enter a distinct processing segment code. It allows only three characters.</td>
</tr>
<tr>
<td>Processing Segment Name</td>
<td>Enter a distinct processing segment name.</td>
</tr>
<tr>
<td>Description</td>
<td>Enter description for processing segment.</td>
</tr>
</tbody>
</table>

4. Click **Save**. A confirmation message is displayed.

**Searching Processing Segment**

To search Processing Segments, follow these steps.

1. Navigate to the Processing Segments page.

2. Enter the following details:

<table>
<thead>
<tr>
<th>Fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processing Segment Code</td>
<td>Enter the unique code for the processing segment.</td>
</tr>
<tr>
<td>Processing Segment Name</td>
<td>Enter a unique name for the processing segment.</td>
</tr>
</tbody>
</table>

3. Click **Go**. The search details are displayed.

**Editing Processing Segment**

To edit a Processing Segment, follow these steps:

1. Navigate to the Processing Segments page.

2. Select the check box corresponding to the Processing Segment that you want to modify. The Processing Segment fields are enabled. You can also view the business entities mapped to this Processing Segment in the Business Entities section.
3. Modify the necessary information. For more information on the Processing Segment fields, refer to the *Adding Processing Segment* table.

4. Click **Save**. A confirmation message is displayed.

### Deleting Processing Segment

To delete a Processing Segment, follow these steps.

1. Navigate to the Processing Segments page.
2. Select the check box corresponding to the Processing Segment you want to delete.
3. Click **Delete**.

**Note:** System does not allow the user to delete the selected Processing Segment if it is used in other IPE Metadata.

### Managing Business Entities

Business Entity is a business metadata layer on Database Tables. The user can import tables from the uploaded datamodel. For more information on Data Model upload, refer *Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide*.

Through importing tables functionality, the tables are imported to IPE Business layer for referring the entity for further processing.

Business Entity is a virtual layer that can be added on an existing table. Through Business Entities menu, you can add a new business entity and also search for existing business entities to modify or remove a business entity. To add a table in Data Model, refer *Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide*.

**Note:** User is not allowed to unmap Processing Segment from an Entity if it is associated with other metadata.

This section covers the following topics:

- Accessing Business Entities
Managing Business Entities
Chapter 3–Managing Association and Configuration

- Importing Entity
- Updating Entity Details
- Deleting an Entity
- Adding Business Entities
- Editing Business Entity
- Deleting Business Entity
- Synchronizing Business Entities
- Updating Business Entity Attributes

Accessing Business Entities

To access the Processing Segment page, follow these steps:

1. Navigate to the Inline Processing Home Page.
2. On the Association and Configuration menu, click **Business Entities**. The Business Entities page is displayed.

![Figure 11. Business Entities page](image)

**Importing Entity**

This option allows you to import data model tables to Inline Processing.

To import a Table, follow these steps:

1. Navigate to the Business Entities page.
2. Go to **Choose Entity** section. Click **Import Entity**. The Import Entity page is displayed.
3. By default, all the tables defined in the data model are displayed. The Entity name is displayed in the format `<Logical Name>`-`<Physical Name>`. Search for the required Entity and select it. The Business Entity fields are enabled.

4. Enter the following details:
### Updating Entity Details

To update entity details, follow these steps.

1. Navigate to the Business Entities page.
2. Select the table from the **Choose Entity** drop-down list.

---

#### Field Description

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Name</td>
<td>Enter a distinct Business Name of the Entity. By default, the Business Name is populated as the logical name provided for the Table in the data model. The details of this field can be modified.</td>
</tr>
</tbody>
</table>
| Entity Type            | Select the Entity Type from the drop-down list.  
  - **Activity**: Select a table as Activity if the data is to be processed by IPE as a part of assessment execution. To use Activity as a Reference, relevant Inline Datasets and Traversal Paths should be created. For example, if wire transaction and cash transaction are two activities, then there should be inline datasets created for them and a traversal path connecting the two.  
  - **Reference**: Select a table as Reference if the table has static values for IPE. A reference data cannot be processed by IPE.  
  - **Lookup**: Select a table as Lookup if it is used as a scoring table in Evaluations. This can be used as a Reference.  
  
  **Note**: Once a table is imported, you cannot change the entity type of the table.  |
| Processing Segment     | Select the Processing Segment from the multi-select drop-down list.  |
| Set Primary Key Attribute | Select the Primary Key Attribute from the drop-down list. This shows all the columns of the table. This is a unique attribute of the table which is imported. It is a mandatory field.  
  **Note**: Composite Primary Keys are not supported.  |
| Set Sequence ID Attribute | This is a unique attribute that helps in identifying the ID of the Activity Table. The results of IPE will provide the Sequence ID. This is a mandatory field if it is an activity. The Sequence ID will be auto-populated by the IPE Engine if it is a real time mode. In batch mode, this value is pre-populated and should be unique. Select the sequence ID attribute from the drop-down list.  
  **Note**: This field is enabled if you select Activity as the Entity Type.  |
| DB Sequence Name       | Enter the DB sequence name. A DB Sequence has to be created in the Atomic Schema. The name of that Sequence has to be provided in this field. It is not a mandatory field and it is applicable for Real time processing.  
  **Note**: This field is enabled if you select Activity as the Entity Type.  |
| Set Processing Status Attribute | Select the processing status attribute from the drop-down list. This attribute will be updated by IPE to indicate the result of the assessments, if it has passed or failed. It is not a mandatory field and it is applicable for Real time processing.  
  **Note**: This field is enabled if you select Activity as the Entity Type.  |
| Set Processing Period Attribute | Select the processing period attribute from the drop-down list. This attribute defines the date or time when the activity has occurred. For example, Transaction Time.  
  **Note**: This field is enabled if you select Activity as the Entity Type.  |
| Score Attribute        | Select the Score Attribute from the drop-down list. This attribute can be used in evaluation scoring.  
  **Note**: This field is enabled if you select Lookup as the Entity Type.  |

5. Click **Save**. A confirmation message is displayed.
Managing Business Entities
Chapter 3–Managing Association and Configuration

Figure 13. Updating Table

3. Enter or modify the necessary information. For more information on Business Entity fields refer to the Updating Business Entity Attributes table.

4. Click Save. A confirmation message is displayed.

Deleting an Entity

To delete a table, follow these steps.

1. Navigate to the Business Entities page.
2. Select the table from the Choose Entity drop-down list.
3. Click Delete.

Note: System does not allow the user to delete the selected entity if it is used in other IPE metadata.

Adding Business Entities

We can add multiple business entities to get differential behavior for the same entity. For example, 'account' can have business entities like beneficiary account and originator account.

User can add different datasets and traversal paths like transaction to originator account and transaction to beneficiary account.

To add Business Entities, follow these steps:

1. Navigate to the Business Entities page.
Figure 14. Adding Business Entities

2. Select the entity you wish to add as a business entity to from the **Choose Entity** drop-down list.

3. Click **Add** in the Business Entities section. The Business Entity Details dialog box is displayed.

Figure 15. Adding Business Entity Details

4. Enter the following details in the Business Entity Details dialog box:

Table 6. Business Entity Details

<table>
<thead>
<tr>
<th>Filed</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>This is a mandatory Field. Enter a name to the selected entity in this field.</td>
</tr>
<tr>
<td>Processing Segment</td>
<td>This is a mandatory Field. Select the Processing Segment(s) to which you want to add the selected entity, from the multi-select drop-down list.</td>
</tr>
<tr>
<td>Set Score Attribute</td>
<td>Select the attribute which you want to set as score from the drop-down list.</td>
</tr>
</tbody>
</table>

5. Click **Add**. A confirmation message is displayed.

**Editing Business Entity**

To edit the Business Entity, follow these steps:

1. Navigate to the Business Entities page.

2. Select the Business Entity to modify. The Business Entity edit dialog box is displayed.

3. Modify the necessary information. For more information on Business Entity fields refer to the Click **Save**. A confirmation message is displayed. table.

4. Click **Save**. A confirmation message is displayed.
Note: Changes made to the Business Entity details and attributes modifies the status of Evaluations and Assessments from VALID to INVALID. But the changes made to only the attributes of the business entity modifies the status of the associated Expression from VALID to INVALID.

Deleting Business Entity

This option allows you to delete a Business Entity which is not required.
To delete Business Entity, follow these steps.
1. Navigate to the Business Entities page.
2. Select the Business Entity to delete.
3. Click Delete.

Note: System does not allow the user to delete the selected Business Entity if it is used in other IPE metadata.

Synchronizing Business Entities

To add new columns that were added in the Data model or to update Business Names of the entities, Synchronizing Business Entities option has been provided. Follow these steps:
1. Navigate to the Business Entities page.
2. Select the Entity from the Choose Entity drop-down list.
3. Click Synchronize in the Business Entities section. The Synchronize Business Entities dialog box is displayed.

Figure 16. Synchronizing Business Entities
4. Select the business attributes from the Existing Attributes section to update new Business Names for the columns of the Entity.
5. Click Save. A confirmation message is displayed.

Updating Business Entity Attributes

To update the Business Entity Attributes, follow these steps.
1. Navigate to the Business Entities page.
2. Select the Entity and click Edit.
Managing Inline Datasets

This section describes the Inline Datasets functionality and gives step-by-step instructions to use this module. This section covers the following topics:

- Overview
- Accessing Inline Datasets
- Adding Inline Datasets
- Searching Inline Dataset
- Editing Inline Dataset
- Deleting Inline Dataset

Overview

Inline Datasets are joins between two Business Entities. The Inline Datasets need at least one condition to be defined.

For example, the following conditions are used for an Inline Dataset between Wire Transaction and Beneficiary Account:

Wire Transaction. Beneficiary Account ID=Beneficiary Account. Account ID

The sequence of the joins has to be correct for the required output.

Using this menu, you can add a new Inline Dataset and search for existing Inline Datasets for modification or removal.

Figure 17. Updating Business Entity Attributes

3. Modify the necessary information. For more information on Business Entity fields refer Click Save. A confirmation message is displayed. table. Select Display as Standard Measure to update this table information onto the profile. Only the table columns that have been selected as Display as Standard Measure are displayed in the Standard Measure Details section of Profiles.

4. Click Update. A confirmation message is displayed.
Accessing Inline Datasets

To access Inline Datasets, follow these steps:

1. Navigate to the Inline Processing Home Page.
2. On the Association and Configuration menu, click **Inline Datasets**. The Inline Datasets page is displayed.

![Figure 18. Inline Datasets Details page](image)

Adding Inline Datasets

The add Inline Dataset option allows you to define an Inline Dataset by adding a name and selecting the Start and End tables.

To add new Inline Dataset paths, follow these steps:

1. Navigate to the Inline Datasets details page.
2. Click **Add** from the Inline Dataset List tool bar. The Inline Dataset dialog box is displayed.

![Figure 19. Adding Inline Dataset](image)
3. Enter the following details.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inline Dataset Name</td>
<td>Enter the Inline Dataset Name.</td>
</tr>
<tr>
<td>Start Table</td>
<td>Select the start table from drop-down list. All the Business entities of type Activity, lookup, reference and also Virtual Profiles are displayed.</td>
</tr>
<tr>
<td>End Table</td>
<td>Select the end table from drop-down list. All the Business entities of type Activity, lookup, reference and also Virtual Profiles are displayed, except the selected Start Table.</td>
</tr>
</tbody>
</table>

**Adding Inline DataSet Condition**

To add new Inline Dataset condition follow these steps:

1. Click **Add** from the Inline Dataset Condition tool bar. The Inline Dataset Condition dialog box is displayed.
2. Enter following details.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start Field</td>
<td>Select the start field of the condition from the drop-down list. This shows all Fields (Columns) of the Start Table.</td>
</tr>
</tbody>
</table>
| Operator       | Select the operator from the drop-down list. The available operators are =, >, <, >=, <=, and <>.
| End Field       | Select the end field of the condition from the drop-down list. This shows all the Fields (Columns) of the End Table. Select if you want Attribute, Literal or Expression from the field next to this field. |

3. Click **Save**. A confirmation message is displayed.

**Searching Inline Dataset**

To search Inline Dataset, follow these steps.

1. Navigate to the Inline Datasets details page.
2. Enter the following details:
Managing Traversal Paths
Chapter 3–Managing Association and Configuration

Table 9. Inline Dataset Table Details

<table>
<thead>
<tr>
<th>Fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inline Dataset Name</td>
<td>Enter the Inline Dataset name.</td>
</tr>
<tr>
<td>Start Table</td>
<td>Select the start table from drop-down list.</td>
</tr>
<tr>
<td>End Table</td>
<td>Select the end table from drop-down list.</td>
</tr>
</tbody>
</table>

3. Click Go. The Search Details are displayed.

**Editing Inline Dataset**

To edit Inline Dataset, follow these steps:

1. Navigate to the Inline Dataset Details page.
2. Select the Inline Dataset to modify. The Inline Dataset Edit dialog box is displayed.
3. Modify the necessary information. For more information on Business Entity fields refer to the *Adding Inline Datasets* table.
   
   **Note:** Start and end tables cannot be edited. Only inline dataset condition can be edited.
4. Click Save. A confirmation message is displayed.

**Deleting Inline Dataset**

This option allows the user to delete an Inline Dataset if it is not used by other components of IPE. To delete the Inline Dataset, follow these steps:

1. Navigate to theInline Datasets details page.
2. Select the Inline Dataset to delete.
3. Click Delete.

**Note:** System does not allow the user to delete the selected Inline Dataset if it is used in other IPE metadata.

**Managing Traversal Paths**

This section describes the Traversal Path functionality and provides step-by-step instructions to use this module.

This section discusses the following topics:

- Overview
- Accessing Traversal Paths
- Adding Traversal Path
- Searching Traversal Path
- Deleting Traversal Path
Overview

Traversal Paths are the paths between two or more entities. The traversal paths defined can be used for creation of expressions, evaluations, and profiles. The start entity for the path should be the Activity Entity. There are intermediate Entities in the path.

For example, if we must have a path between Wire Transaction and Beneficiary Customer E-mail entities, then we must have path like Wire Transaction' Beneficiary Account' Beneficiary Customer' Beneficiary Customer E-mail.

Inline Dataset (Joins) between are compulsory.

- Wire Transaction-Beneficiary Account
- Beneficiary Account- Beneficiary Customer
- Beneficiary Customer- Beneficiary Customer E-mail

Accessing Traversal Paths

To access the Traversal Paths, follow these steps:

1. Navigate to the Inline Processing Home Page.
2. On the Association and Configuration menu, click **Traversal Paths**. The Traversal Paths page is displayed.

![Traversal Paths Details page](image)

Adding Traversal Path

This option allows you to define a traversal path by adding a name and selecting the Start and End tables.

To add a new Traversal Path, follow these steps:

1. Navigate to the Traversal Paths page.
2. Click **Add** from the Traversal Path List tool bar. The Traversal Path Maintenance dialog is displayed.
Adding Traversal Path Flow

1. Click **Add** in the Traversal Path Flow section. The new Traversal Path fields are expanded.

2. Enter following details.

3. Click **Save**. A confirmation message is displayed.

Searching Traversal Path

To search Traversal Paths, follow these steps.

1. Navigate to the Traversal Paths page.

2. Enter the following details:
3. Click **Go**. The Search Details are displayed.

## Deleting Traversal Path

To delete a Traversal Path, follow these steps.

1. Navigate to the Traversal Paths page.
2. Select the Traversal Path ID or name to delete.
3. Click **Delete**. The Traversal Path Details page is updated.

**Note:** System does not allow the user to delete the selected Traversal Path if it is used in other IPE metadata.

### Table 12. Searching Traversal Path

<table>
<thead>
<tr>
<th>Fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traversal Path Name</td>
<td>Enter the traversal path name.</td>
</tr>
<tr>
<td>Start Table</td>
<td>Select the start table from drop-down list.</td>
</tr>
<tr>
<td>End Table</td>
<td>Select the end table from drop-down list.</td>
</tr>
</tbody>
</table>
This chapter provides detailed information about Expressions functionality and provides step-by-step instructions to use this module.

This chapter discusses the following topics:

- Overview
- Accessing Expressions Menu
- Adding an Expression
- Searching an Expression
- Deleting an Expression
- Displaying Dependant Metadata Expression List

**Overview**

Expression for a Profile is used as a filter in the evaluations. Expressions are to be created on the activity table on whom an evaluation or profile will be created.

An Expression Builder is used to build expressions using Entities, Attributes, Functions, Mathematical Operators, and Constant Values. For example,

FT and MT Amount for a day: Accounts Source Unique Identifier_cnt.

The examples of expressions are as follows:

- A
- A+B
- (A + B)/C
- (ATM and POS: Base Amount)

(Get Last Characters ((ATM and POS: Merchant Address) 2)

The Expression Builder allows you to add and remove expressions.
**Accessing Expressions Menu**

To access the Expressions menu, follow these steps:

1. Navigate to the Inline Processing Home Page.
2. Click **Expressions**. The Expressions page is displayed.

![Figure 22. Expressions Details page](image)

**Adding an Expression**

This option allows you to define an expression by adding a name and selecting the Activity and Processing Segment from the drop-down list. An expression can also be added from Profiles menu and Evaluations menu.

You can add an Expression by applying a Function to a group or by applying a Function to an Expression. To configure a User Defined Function, refer to **Configuring a User Defined Function in IPE**.

To add an Expression, follow these steps:

1. Navigate to the Expressions details page.
2. Click **Add** on the Expressions tool bar. The Add Expressions dialog box is displayed.

![Figure 23. Adding an Expression](image)

3. Enter the following details:
Table 13. Adding an Expression

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expression Name</td>
<td>Enter a name for the expression.</td>
</tr>
<tr>
<td>Activity</td>
<td>Select the activity from the drop-down list.</td>
</tr>
<tr>
<td>Processing segment</td>
<td>Select the processing segment from the drop-down list (Energy, Banking, and so on).</td>
</tr>
</tbody>
</table>

**Adding Variables**

This is used to define variables for expressions.

4. Click **Add** on the Variables tool bar. The Add Variables dialog box is displayed.

![Variable page](image)

Figure 24. Variable page

5. Enter the following details:

Table 14. Adding Variables

<table>
<thead>
<tr>
<th>Fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operator</td>
<td>Select the operator from the drop-down list. This is disabled for the first variable.</td>
</tr>
<tr>
<td>Business Entity</td>
<td>Select the business entity from the drop-down list. The list is based on selected Activity and processing segment.</td>
</tr>
<tr>
<td>Business Attribute</td>
<td>Select the business attribute from the drop-down list. The list is based on the selected business entity.</td>
</tr>
<tr>
<td>Create New Group</td>
<td>If this option is selected, new Group ID is created.</td>
</tr>
<tr>
<td>Add to Current Group</td>
<td>If this option is selected, new variable is added to existing selected Group ID. If there is no existing group, then select Create New Group.</td>
</tr>
</tbody>
</table>
| Apply Function to Group | Select the function from the drop-down list. The list of functions is based on variable datatype and function argument datatype. Select from the following options for the second variable:  
  - **Literal Value**: If the selected function has additional argument mapped, then **Literal Value** should be entered in the Text box.  
  - **Expression**: If the selected function has expressions mapped to it, then select the Expression from the drop-down list. |
Adding an Expression
Chapter 4–Managing Expressions

6. Click **Save** to refresh the Variables Grid.

### Applying Function to Group/Expression

You can add an Expression by applying a Function to a group or by applying a Function to an Expression. To configure a User Defined Function, refer *Configuring a User Defined Function in IPE*.

To apply a function to a group, follow these steps:

1. Once a Group is created, select that group from the list.
2. Click **Apply Function to Group**. The Apply Function to Group field details are displayed.
3. Select the function from the drop-down list. The list of functions is based on variable datatype and function argument datatype.
4. Select from the following options for the second variable:
   - **Literal Value**: If the selected function has additional argument mapped, then Literal Value should be entered in the Text box.
   - **Expression**: If the selected function has expressions mapped to it, then select the Expression from the drop-down list.
5. Click **Save** to refresh the Variables Grid.

To apply a function to an Expression, follow these steps:

1. Once a Group is created, select that group from the list.
2. Click **Apply Function to Expression**. The Apply Function to Expression field details are displayed.
3. Select the function from the drop-down list. The list of functions is based on variable datatype of expression and variable.
4. Select from the following options for the second variable:
   - **Literal Value**: If the selected function has additional argument mapped, then Literal Value should be entered in the Text box.
   - **Expression**: If the selected function has expressions mapped to it, then select the Expression from the drop-down list.

**Note**: Changes made to the Business Entity details and attributes modifies the status of Evaluations and Assessments from VALID to INVALID. But the changes made to only the attributes of the business entity modifies the status of the associated Expression from VALID to INVALID.

<table>
<thead>
<tr>
<th>Remove Function from Group</th>
<th>Select a group and then click <strong>Remove</strong> the Function from Group to remove the function from the selected group.</th>
</tr>
</thead>
</table>
| Apply Function to Expression | Select the function from the drop-down list. The list of functions is based on variable datatype of expression and variable. Select from the following options for the second variable:  
  - **Literal Value**: If the selected function has additional argument mapped, then Literal Value should be entered in the Text box.  
  - **Expression**: If the selected function has expressions mapped to it, then select the Expression from the drop-down list. |
5. Click **Save** to refresh the Variables Grid.

6. Click **Submit**. A confirmation message is displayed.

**Searching an Expression**

To search Expressions, follow these steps:

1. Navigate to the Expressions details page.
2. Enter the following details:

**Table 15. Searching Expression**

<table>
<thead>
<tr>
<th>Fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expression Name</td>
<td>Enter the Expression Name.</td>
</tr>
<tr>
<td>Activity</td>
<td>Select the activity from the drop-down.</td>
</tr>
<tr>
<td>Processing Segment</td>
<td>Select the Processing Segment from the drop-down.</td>
</tr>
</tbody>
</table>

**Figure 25. Adding Variables**

5. Click **Save** to refresh the Variables Grid.

6. Click **Submit**. A confirmation message is displayed.
Deleting an Expression

Chapter 4–Managing Expressions

3. Click Go. The Search Details are displayed.

Deleting an Expression

To delete an Expression, follow these steps:

1. Navigate to the Expressions details page.
2. Select the required Expression.
3. Click Delete.

Note: System does not allow the user to delete the selected Expression if it is used in other IPE metadata.

Displaying Dependant Metadata Expression List

The Expression list screen should show the Associated/Dependent metadata. This will be useful to trace the use of Expression and to decide if it has to be deleted. Associated metadata will include:

- Profiles that contain the expression in its filters
- Virtual Profiles that are built using the aforementioned profiles
- Evaluations that contain the expressions in its filters
- Assessments that contain the aforementioned evaluations

To display the dependant metadata expression list, follow these steps:

1. Navigate to the Expressions details page.
2. Enter the Expression name whose associated metadata is to be checked and edited.
3. If the expression entered has profiles, virtual profiles, evaluations and assessments associated to it, then they are displayed in the Expressions window.
Figure 26. Associated metadata of Expression Details page
CHAPTER 5

Managing Post Processing Actions

This chapter describes Post Processing Actions functionality and provides step-by-step instructions to use this module.

Note: Managing Post Processing actions is applicable only for Real Time Processing.

This chapter discusses the following topics:

- Overview
- Accessing Post Processing Actions Menu
- Adding Post Processing Actions
- Searching Post Processing Action
- Editing Post Processing Action
- Deleting Post Processing Action

Overview

Post Processing Actions are the actions which can be triggered by the outcome of Assessment.
In Post Processing Actions, you can add a new post processing action and also search for existing post processing actions for modification or removing a post processing action.

Accessing Post Processing Actions Menu

To access the Post Processing Actions page, follow these steps:

1. Navigate to the Inline Processing Home Page.
2. Click Post Processing Actions. The Post Processing Actions page is displayed.
Adding Post Processing Actions

Chapter 5–Managing Post Processing Actions

Figure 27. Post Processing Actions Details page

Adding Post Processing Actions

This option allows you to define a post processing action.

This section covers following topics:

- Adding a Post Processing Action
- Adding an Action Parameter

Adding a Post Processing Action

To add a Post Processing Action, follow these steps:

1. Navigate to the Post Processing Actions details page.
2. Click **Add** on the Post Processing Actions tool bar. The Add Post Processing Actions dialog box is displayed.
3. Enter the following details:
Table 16. Post Processing Actions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Enter the name of Post Processing Actions.</td>
</tr>
<tr>
<td>Action Type</td>
<td>Select the Post Processing Actions from the drop-down list. (For example, Generate Alert, sent JMS Message, and Send RTD Message)</td>
</tr>
<tr>
<td>Note:</td>
<td>Additionally, the user can also add a new Action Type.</td>
</tr>
</tbody>
</table>

4. Click **Add**. A confirmation message is displayed.

**Adding an Action Parameter**

To add Action Parameters, follow these steps:

1. Navigate to the Post Processing Actions details page.
2. Click **Add** on the Action Parameters tool bar. The Add Action Parameters dialog box is displayed.

3. Enter the following details:

**Table 17. Action Parameter**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action Parameter Code</td>
<td>Enter the code of action parameter.</td>
</tr>
<tr>
<td>Action Parameter Name</td>
<td>Enter the name of action parameter.</td>
</tr>
<tr>
<td>Action Parameter Type</td>
<td>Select the action parameter type from the drop-down list (Text or Password)</td>
</tr>
<tr>
<td>Action Parameter Value</td>
<td>Enter the value for action parameter.</td>
</tr>
<tr>
<td></td>
<td>- If the action parameter type is text, enter text box.</td>
</tr>
<tr>
<td></td>
<td>- If the action parameter type is password, enter password field.</td>
</tr>
</tbody>
</table>

4. Click **Save**. A confirmation message is displayed.

**Searching Post Processing Action**

To search Post Processing Action, follow these steps:

1. Click **Post Processing Actions** on the Inline Processing Engine Home page. The Post Processing Actions Details page is displayed.
2. Enter the Post Processing Action name.
3. Click Go. The Search Details are displayed.

**Editing Post Processing Action**

To modify Post Processing Action details, follow these steps:

1. Click Post Processing Actions on the Inline Processing Engine Home page. The Post Processing Actions Details page is displayed.
2. Select the required Post Processing Action.
3. Modify the necessary information. For more information on Processing Segment fields, refer to the Adding Post Processing Actions table.
4. Click Save. A confirmation message is displayed.

**Deleting Post Processing Action**

To delete a Post Processing Action, follow these steps:

1. Click Post Processing Actions on the Inline Processing Engine Home page. The Post Processing Actions Details page is displayed.
2. Select the required Post Processing Action.
3. Click Delete.

**Note:** System does not allow the user to delete the selected Post Processing Action if it is used in other IPE metadata.
This chapter describes Profiles functionality and provides step-by-step instructions to use this module. This chapter discusses the following topics:

- Overview
- Accessing Profiles Menu
- Adding a Profile
- Adding an Expression from Profiles Menu
- Searching a Profile
- Editing a Profile
- Deleting a Profile

**Overview**

Profiles are an aggregation of information. Profiles can be based on different grouping entities (for example, account and customer) and can be filtered to only look at particular kinds of transactions. Profiles can also be based on time (last three months) or activity counts (last 100 transactions).

**Accessing Profiles Menu**

To access the Profile, follow these steps:

1. Navigate to the Inline Processing Home Page.
2. Click **Profiles**. The Profiles page is displayed.
Adding a Profile

This section covers following topics:

- Adding Standard Measures
- Adding Custom Measures
- Adding Filters
- Adding Measure Aggregation Groups

To add a Profile, follow these steps:

1. Navigate to the Profiles details page.
2. Click **Add** on the Profile tool bar. The Add Profile fields are expanded.
Figure 31. Adding a Profile

3. Enter the following details:

Table 18. Profile

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profile Name</td>
<td>Enter the name of the virtual profile.</td>
</tr>
<tr>
<td>Processing Segment</td>
<td>Select the processing segment from the drop-down list.</td>
</tr>
<tr>
<td>Activity</td>
<td>Select the activity from the drop-down list.</td>
</tr>
<tr>
<td>LookBack Type</td>
<td>Select the LookBack type.</td>
</tr>
<tr>
<td>LookBack Value</td>
<td>Enter the LookBack value.</td>
</tr>
<tr>
<td>Unit</td>
<td>This option is enabled only when Time is selected as lookback. Select the unit from the drop-down list.</td>
</tr>
</tbody>
</table>
| Aggregate Grouping           | Select the type from the drop-down list. The list shows all Time columns of the activity:  
|                              | - Each Record- shows the activity for each record                           |
|                              | - Daily- shows the daily record                                              |
|                              | - Monthly- shows the monthly record                                          |
| Aggregate Grouping on Business Property | This option is enabled if Aggregate Grouping is Daily or Monthly. It lists all Time columns of the activity. |
Adding a Profile
Chapter 6–Managing Profiles

Adding Standard Measures

This is used to define a measure on the defined columns as Standard Measures during import of the table in the Business Entities module.

Measures are to be defined on the table columns which need aggregations.

1. Click Add on the Standard Measures tool bar. The Add Standard Measures fields are expanded.
2. Enter the following details:

<table>
<thead>
<tr>
<th>Table 19. Standard Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fields</td>
</tr>
<tr>
<td>Business Attribute</td>
</tr>
<tr>
<td>Measure Aggregation Type</td>
</tr>
</tbody>
</table>

Adding Custom Measures

This is used to define a measure on a column which was not defined while importing the table in the Business Entities module.

1. Click Add on the Custom Measures tool bar. The Add Custom Measures fields are expanded.
2. Enter the following details:

<table>
<thead>
<tr>
<th>Table 20. Custom Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fields</td>
</tr>
<tr>
<td>Business Entity</td>
</tr>
<tr>
<td>Business Attribute</td>
</tr>
<tr>
<td>Measure Aggregation Type</td>
</tr>
</tbody>
</table>

Adding Filters

This is used to add filters for the selected Profile. To add a filter, follow these steps:

1. Click Add on the Filters tool bar. The Filter Details fields are expanded.
2. Enter the following details:

<table>
<thead>
<tr>
<th>Table 21. Filter Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fields</td>
</tr>
<tr>
<td>Filter Name</td>
</tr>
<tr>
<td>Source Expression</td>
</tr>
</tbody>
</table>
Adding Measure Aggregation Groups

This is used to define an Aggregation Group on the defined columns as Measure Aggregation Groups during import of the table in the Business Entities module.

1. Click **Add** on the Measure Aggregation Groups tool bar. The Measures Aggregation Group fields are expanded.
2. Enter the following details:

### Adding an Expression from Profiles Menu

An expression can be added from the Profiles menu apart from the Expression menu itself. To add an expression from Profile menu, follow these steps:

1. Navigate to the Profiles details page.
2. Click **Add** on the Profile tool bar. The Add Profile fields are expanded.
3. Click the Activity from the drop down list.
4. Click **Add Expressions** on the Profile Details tool bar. The Expression Details page is displayed.
5. Add an expression. For more information, refer to the *Adding an Expression* table.

### Searching a Profile

To search a Profile, follow these steps:

1. Navigate to the Profiles details page.
2. Enter the following details:

### Table 23. Search Profile

<table>
<thead>
<tr>
<th>Fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profile Name</td>
<td>Enter the Profile Name.</td>
</tr>
<tr>
<td>Activity</td>
<td>Select the activity from the drop-down.</td>
</tr>
<tr>
<td>Processing Segment</td>
<td>Select the Processing Segment from the drop-down.</td>
</tr>
</tbody>
</table>

3. Click **Go**. The Search Details are displayed.

### Editing a Profile

To modify the Profile details, follow these steps.

1. Navigate to the Profiles details page.
2. Select the required Profile.
3. Modify the necessary information. For more information on Processing Segment fields, refer to the *Adding a Profile* table.
4. Click **Save**. A confirmation message is displayed.

**Note:** When you edit the filters, standard measures, custom measures and measure aggregation groups of a profile and cancel the same, the modifications are still saved, even if the Profile itself is not saved.

**Note:** When you edit a profile, the associated Expression has to be re-saved.

When a Standard Measure, Custom Measure, and so on are added in profile, the same would get saved to the profile definition irrespective of saving or cancelling the Profile changes, as these measure creations have the **Save** button in the popup during which it is saved to the database. This holds good for similar operations everywhere in the Framework.

Once a Profile is re-saved, irrespective of the changes to the profile, the profile tables `p_<profile_id>` will be recreated. Hence all the existing records get deleted.

### Deleting a Profile

To delete a Profile, follow these steps:

1. Navigate to the Profiles details page.
2. Select the required Profile.
3. Click **Delete**.

**Note:** System does not allow the user to delete the selected Profile if it is used in other IPE metadata.
CHAPTER 7

Managing Virtual Profiles

This chapter provides detailed information about Virtual Profiles functionality and step-by-step instructions to use this module.

This chapter discusses the following topics:

- Overview
- Accessing Virtual Profile Menu
- Adding Virtual Profile
- Searching Virtual Profile
- Editing Virtual Profile
- Deleting Virtual Profile

Overview

Virtual Profiles are the wrapper around one or more profiles. Virtual Profiles can be used when a user wants to:

- Merge profiles on two different activities or same activity
- Reduced look back on the same profile.

Through Virtual Profiles menu, you can add a new virtual profile and also search for existing virtual profiles to modify or remove a virtual profile.

Accessing Virtual Profile Menu

To access the Virtual Profile, follow these steps:

1. Navigate to the Inline Processing Home Page.
2. Click Virtual Profiles. The Virtual Profiles page is displayed.

![Figure 32. Virtual Profile Details page](image)

**Figure 32. Virtual Profile Details page**
Adding Virtual Profile

Adding a Virtual Profile allows you to define a virtual profile by adding the profile details.

This section covers following topics:

- Adding Linked Profiles
- Adding Measures
- Adding Associated Inline Datasets
- Adding Associated Paths

To add a Virtual Profile, follow these steps:

1. Navigate to the Virtual Profiles details page.
2. Click Add on the Virtual Profile tool bar.

Figure 33. Adding a Virtual Profile

3. Enter the following details:

Table 24. Virtual Profile

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profile Name</td>
<td>Enter the name of the virtual profile.</td>
</tr>
<tr>
<td>Processing Segment</td>
<td>Select the processing segment from the drop-down list.</td>
</tr>
<tr>
<td>Activity</td>
<td>Select the activity from the drop-down list.</td>
</tr>
<tr>
<td>LookBack Type</td>
<td>Select the LookBack Type value. The options are: Count or Time</td>
</tr>
<tr>
<td>LookBack Value</td>
<td>Enter the LookBack Value.</td>
</tr>
<tr>
<td>Unit</td>
<td>This option is enabled only when Time is selected as lookback. Select the unit from the drop-down list.</td>
</tr>
<tr>
<td>Aggregate Grouping</td>
<td>Select the type from the drop-down list. The list will show all the Time columns of the Activity:</td>
</tr>
<tr>
<td></td>
<td>- Each Record- Shows the activity for each record.</td>
</tr>
<tr>
<td></td>
<td>- Daily- Shows the daily record</td>
</tr>
<tr>
<td></td>
<td>- Monthly- Shows the monthly record</td>
</tr>
</tbody>
</table>
4. Click **Save**. A confirmation message is displayed.

**Adding Linked Profiles**

Linked Profiles are the profiles which are used to create the Virtual profile. A minimum of two Linked Profiles are required to create a Virtual Profile. Else, a validation message is displayed as follows: *At least two profiles are required in linked profiles.*

1. Click **Add** on the linked profile tool bar and enter the following details:

<table>
<thead>
<tr>
<th>Table 25. Linked Profile</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fields</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>Profile Name</td>
<td>Select the virtual profile from the drop-down list. The first profile which is added will be considered as a primary profile. From the second profile onwards, the drop-down list will only show the Profiles with same number of Measure Aggregate Groups and Measures used in primary profile.</td>
</tr>
</tbody>
</table>

**Adding Measures**

1. Click **Add** on the Measures tool bar. The Add Measure fields are expanded.

2. Enter the following details:

<table>
<thead>
<tr>
<th>Table 26. Measures</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fields</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>Business Property</td>
<td>Select the business property type from the drop-down list.</td>
</tr>
<tr>
<td>Measure Aggregation Type</td>
<td>Select the measure aggregation type from the drop-down list.</td>
</tr>
</tbody>
</table>

**Adding Associated Inline Datasets**

Associated Inline Datasets are shown once user has saved the Virtual Profile.

1. Click **Add** on the Associated Inline Datasets tool bar. The Add Associated Inline Data set fields are expanded.

2. Enter the following details:

<table>
<thead>
<tr>
<th>Table 27. Associated Inline Datasets</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fields</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>Inline Dataset Name</td>
<td>Enter the Inline dataset name.</td>
</tr>
<tr>
<td>Start Table</td>
<td>Select the start table from the drop-down list.</td>
</tr>
<tr>
<td>Start Field</td>
<td>Select the start field of the condition from the drop-down list.</td>
</tr>
<tr>
<td>Operator</td>
<td>Select the operator from the drop-down list. The available operators are =, &gt;, &lt;, &gt;=, &lt;=, and &lt;&gt;.</td>
</tr>
</tbody>
</table>
Adding Associated Paths
Associated Paths are shown once the user has saved the Virtual Profile.

1. Click Add on the Associated Paths tool bar. The Add Associated Paths fields are expanded.
2. Enter the following details:

Table 28. Associated Paths

<table>
<thead>
<tr>
<th>Fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traversal Path Name</td>
<td>Enter the traversal path name.</td>
</tr>
<tr>
<td>Start Table</td>
<td>Select the start table from the drop-down list.</td>
</tr>
<tr>
<td>End Table</td>
<td>Select the end table from the drop-down list.</td>
</tr>
<tr>
<td>Source Entity</td>
<td>Select the source entity from the drop-down list.</td>
</tr>
<tr>
<td>Destination Entity</td>
<td>Select the destination entity from the drop-down list.</td>
</tr>
<tr>
<td>Change Description</td>
<td>Enter the details in the field. This is a mandatory field.</td>
</tr>
</tbody>
</table>

Note: It is to be noted that while adding the Traversal Path and Inline Dataset from Virtual Profiles, the current Virtual Profile should either be the Start table or the End table. If it is not so, then the added Inline Dataset or the Traversal Path will not be displayed under the corresponding tool bar. The same Traversal Path or Virtual Profile should be added in the Inline dataset list and traversal path list under Associations and configurations. Additionally, once the associated traversal path or associated the Inline Dataset is deleted from Virtual profiles window, the same should be deleted from the Inline dataset list and the Traversal Path list under Associations and Configurations.

3. Click Save. A confirmation message is displayed.

Searching Virtual Profile

To search Virtual Profile, follow these steps.

1. Navigate to the Virtual Profiles details page.
2. Enter the following details:

Table 29. Searching Virtual Profile

<table>
<thead>
<tr>
<th>Fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profile Name</td>
<td>Enter the Profile Name.</td>
</tr>
<tr>
<td>Activity</td>
<td>Select the activity from the drop-down list.</td>
</tr>
<tr>
<td>Processing Segment</td>
<td>Select the Processing Segment from the drop-down list.</td>
</tr>
</tbody>
</table>

3. Click Go. The Search Details are displayed.

Editing Virtual Profile

To modify Virtual Profile Details, follow these steps.

1. Navigate to the Virtual Profiles details page.
2. Select the required Virtual Profile.

3. Modify the necessary information. For more information on Processing Segment fields, refer to the *Adding Virtual Profile* table.

4. Click *Save*. A confirmation message is displayed.

**Note:** When a Virtual Profile is modified, the underlying Expression should be resaved for the changes to take effect.

### Deleting Virtual Profile

To delete the Virtual Profile details, follow these steps.

1. Navigate to the Virtual Profiles details page.
2. Select the required Virtual Profile.
3. Click *Delete*.

**Note:** System does not allow the user to delete the selected Virtual Profile if it is used in other IPE metadata.
Managing Evaluations

This chapter describes Evaluations functionality and provides step-by-step instructions to use this module. This chapter discusses the following topics:

- Overview
- Accessing Evaluation Menu
- Adding an Evaluation
- Adding an Expression from Evaluations Menu
- Adding Highlights to an Evaluation
- Searching an Evaluation
- Editing an Evaluation
- Saving Multiple Evaluations
- Deleting an Evaluation

Overview

Evaluations are logical comparisons against conditions that result in a score. The essential evaluation types are listed below:

- Condition Evaluations: These can be checks against literals or against other attributes.
  - For examples,
    - If the Transaction Origination Country is “Nigeria”, then 10 points.
    - If the Transaction Origination Country is in High Risk Countries List, then 10 points.
  - These can involve other logical expressions for evaluating multiple conditions.

- Profile Comparison: These are not materially different than the condition evaluations. One of the things that can be on the right side of the equation is the profile check.
  - For example:
    - If the Transaction Amount is > High Risk Country Transactions 75th Percentile Amount then 10 points.

- Value Lookups: These evaluations use a dimensional table where the attribute values lead to a score that we lookup. This may not necessarily be a separate evaluation type, but rather a mechanism for getting the associated points. For example, the Conditional Checks evaluation could be an evaluation that awards points from a table, but only for transactions originated in Nigeria.
  - For example,
    - If the Transaction Origination Country is 'Nigeria', then points based on High Risk Countries List using Transaction Origination Country.
  - For example, the evaluation only applies to Nigeria. If that was left out, the evaluation could simply be the following:
    - Get points based on High Risk Countries List using Transaction Origination Country.
Accessing Evaluation Menu

To access the Evaluation page, follow these steps:

1. Navigate to the Inline Processing Home Page.
2. Click **Evaluations**. The Evaluations page is displayed.

![Evaluation Details page](image)

**Adding an Evaluation**

This section covers following topics:

- Adding Filters
- Adding Evaluation Scoring

To add an Evaluation, follow these steps:

1. Navigate to the Evaluation details page.
2. Click **Add** on the Evaluations tool bar. The Add Evaluation page is displayed.
3. Enter the following details:

**Table 30. Expression**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Enter the name of the evaluation.</td>
</tr>
<tr>
<td>Processing Segment</td>
<td>Select the processing segment from the drop-down list.</td>
</tr>
<tr>
<td>Activity</td>
<td>Select the activity from the drop-down list.</td>
</tr>
<tr>
<td>Join Type</td>
<td>Select the type of Join from the drop-down list:</td>
</tr>
<tr>
<td></td>
<td>- Inner: This option performs the intersection of records between two tables and gives a FAIL for no intersection.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> This is the default option.</td>
</tr>
<tr>
<td></td>
<td>- Left: This option lists the records between two tables which are based on a particular condition and gives a NULL for no transaction.</td>
</tr>
<tr>
<td></td>
<td>For more information on Joins, see <a href="#">Joins</a>.</td>
</tr>
</tbody>
</table>

4. Click **Save**. A confirmation message is displayed.

**Joints**

Joints are of two types:
- Inner Join
- Left Join

**Inner Join**

This type of Join performs the join of two tables by finding the intersection columns and displays only those records. So, this type of Join only gives a FAIL for no intersection. It does not provide more information on whether the information is missing in a table, or if the condition is not met. Supporting inner joins restricted applications not to distinguish between records that fail to meet business logic (filter conditions) or lack of data.
**Left Join**

This type of Join performs the exclusive join between two tables by listing the records based on a certain condition. So, in this case, we will have a certain number of records displayed even if the intersection is zero. This will give a result of NULL indicating zero intersection and shows whether data was missing or the condition was not met.

**Use Case for Joins**

Select
  
  case parameter. pscore is null then 20 else parameter.pscore end score // calculating score

From cust
  
  join Parameter

On cust.acct_type = parameter.acct_type

Where cust.balance > 5000

This evaluation scores a customer whose balance is greater than 5000. Score is derived from Parameter table depending on the account type.

**Inner join:**

Inner join approach scores all transaction into default bucket. Irrespective of whether data is missing or filter conditions failed.

Inner join cannot distinguish if customer balance is less than 5k or if customer’s account type is invalid and balance is greater than 5000.

Both transactions will be scored using default bucket(ZERO).

**Left Join:**

Using left joins, IPE distinguishes between transactions with missing data and failing to meet the business logic.

Select
  
  case parameter. pscore is null then 20 else parameter.pscore end score // calculating score

From cust
  
  LEFT join Parameter

On cust.acct_type = parameter.acct_type

Where cust.balance > 5000

If customer balance is less than 5000 and valid acct_type then score is ZERO default bucket.
If customer balance is greater than 5000 and invalid acct_type then score will 20.

**Adding Filters**

1. Click **Add** on the Filters tool bar. The Add Filter Dialog box is displayed.
2. Enter the following details:

Table 31. Adding Filters

<table>
<thead>
<tr>
<th>Fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filter Name</td>
<td>Enter the name of the filter.</td>
</tr>
<tr>
<td>Source Expression</td>
<td>Select the source expression from the drop-down list. The list will be based on the selected Activity.</td>
</tr>
<tr>
<td>Operator</td>
<td>Select the operator from the drop-down list for the expression and also the expression that it is to be operated on.</td>
</tr>
</tbody>
</table>
| Comparator Type   | Select the Comparator type:  
|                   | - If Expression type is selected, then a drop-down list is displayed.  
|                   | - If Literal Value is selected, then a text field is displayed to enter the details  
|                   | Note: If literal value is a character, then the value should be wrapped in single quotes. |

3. Click **Save**. A confirmation message is displayed.

**Adding Evaluation Scoring**

1. Expand **Evaluation Scoring**. Enter the following details:

Table 32. Evaluation Scoring

<table>
<thead>
<tr>
<th>Fields</th>
<th>Description</th>
</tr>
</thead>
</table>
| Evaluation Scoring| Select the score type. The options are:  
|                   | - Fixed: If this option is selected, then the score should be entered in the text box displayed.  
|                   | - Lookup: This option shows the lookup tables.  
|                   | - Expression: This option shows the list based on the selected Activity. |
| Change Description| Enter the change description details. This is a mandatory field.            |

2. Click **Save**. A confirmation message is displayed.

**Adding an Expression from Evaluations Menu**

An expression can be added from the Evaluations menu apart from the Expression menu itself. To add an expression from Evaluations menu, follow these steps:

1. Navigate to the Evaluation details page.
2. Click **Add** on the Evaluations tool bar. The Add Evaluation fields are expanded.
3. Click the Activity from the drop down list.
4. Click **Add Expressions** on the Evaluations Details tool bar. The Expression Details page is displayed.
5. Add an expression. For more information, refer to the **Adding an Expression** table.
Adding Highlights to an Evaluation

Highlights are data elements of an IPE Assessment that are stored and displayed for the benefit of knowing the reasons for an alert/case generation. These summarized details are basically Expressions that may or may not be used in Evaluation logic. If these expressions are already not part of an Evaluation, then they are newly created and saved as a part of Highlights.

To add a Highlight to an Evaluation, follow these steps:

1. Navigate to the Evaluation details page.
2. Select an Evaluation. The Evaluation Details page is displayed.
3. Click **Add** on the Highlights tool bar. The Highlights Details fields are expanded.
4. Select an Expression from the drop-down list.
5. Click **Save**. The Expression is displayed in the Highlights section.

### Figure 36. Adding Highlights

3. Click **Add** on the Highlights tool bar. The Highlights Details fields are expanded.
4. Select an Expression from the drop-down list.
5. Click **Save**. The Expression is displayed in the Highlights section.

### Passing Parameters from Run Rule Framework (RRF) to IPE

Parameters can be passed from RRF to IPE as Parameter Groups and Parameters. The format of Parameters and Parameter groups are as follows:

- For Parameters, segment codes must be separated by `@@` token
- For Parameter groups, segment codes must be separated by `~` token

To pass parameters, the format should be as follows:

`<Segment Code1>~<Segment Code2>@@x@@y`

where,

- x is the code used for the kind of query you want to execute
- y is the code used for the kind of records you want as the result
Here, \( x \) can be one of the following codes that depict the kind of query you want to use for different scenarios:

- If you want to run an Assessment query, then the code is \( 1 \)
- If you want to run a Highlights query, then the code is \( 2 \)
- If you want to run an Assessment and Highlights query and generate Highlights, then the code is \( 3 \)

Here, \( y \) can be one of the following codes that depict the kind of records you want to obtain as the result:

- If you want to run Assessment or Highlights or both for FAILONLY records, then the code is \( 1 \)
- If you want to run Assessment or Highlights or both for PASSONLY records, then the code is \( 2 \)
- If you want to run Assessment or Highlights or both for PASSNFAIL records, then the code is \( 3 \)

**Note:** For second parameter group, the default ID is FAILONLY.

For example, if you want to run both Assessment and Highlights query and generate Highlights for the segment codes FRA and ONL, then the codeline is “FRA~ONL@@3@@2”.

If you want to generate only Highlights for all segments, then the codeline is “@@2@@3”

### Searching an Evaluation

To search an Evaluation, follow these steps.

1. Navigate to the Evaluation details page.
2. Enter the following details:
3. Click **Go**. The Search Details are displayed.

#### Table 33. Searching Evaluation

<table>
<thead>
<tr>
<th>Fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluation Name</td>
<td>Enter the Profile Name.</td>
</tr>
<tr>
<td>Activity</td>
<td>Select the activity from the drop-down.</td>
</tr>
<tr>
<td>Processing Segment</td>
<td>Select the Processing Segment from the drop-down.</td>
</tr>
</tbody>
</table>

3. Click **Go**. The Search Details are displayed.

### Editing an Evaluation

To modify Evaluation details, follow these steps.

1. Navigate to the Evaluation details page.
2. Select the required Evaluation.
3. Modify the necessary information. For more information on Evaluation fields, refer to the Adding an Evaluation table.
4. Click **Save**. A confirmation message is displayed.
Saving Multiple Evaluations

To save multiple Evaluations at once, follow these steps:

1. Navigate to the Evaluation details page.
2. Select the Evaluations that you want to save from the Evaluations list.
3. Click **Save**. The Change Description textbox is displayed.
4. Enter the description.
5. Click **Save**. A confirmation message is displayed. Status of the saved Evaluations changes from **INVALID** to **VALID**.

![Figure 37. Saving Multiple Evaluations](image)

Deleting an Evaluation

To delete an Evaluation, follow these steps.

1. Navigate to the Evaluation details page.
2. Select the required Evaluation.
3. Click **Delete**.

**Note:** System does not allow the user to delete the selected Evaluation if it is used in other IPE metadata.
Managing Assessments

This chapter explains about Assessments functionality and provides step-by-step instructions to use this module. This chapter discusses the following topics:

- Overview
- Accessing Assessments Menu
- Adding an Assessment
- Exporting an Assessment
- Searching an Assessment
- Editing an Assessment
- Deleting an Assessment

Overview

Analysis of incoming data is handled by a combination of Evaluations or a single Evaluation, which are created in Assessments.

The final decision on an activity is made by an Assessment, which can be made up of one or more Evaluations. A set of evaluations are assembled into an Assessment. Assessment performs the complete validation and returns a score. Assessment will check multiple evaluation logic and consider the Sum of all Evaluation Score for the output score.

There are two assessment scoring types:

- Normalized Base: It is the adjustments of score or distributions in statistics.
- Sum of Evaluation Score: It is the total sum score of all selected evaluations.

Through assessments, you can add a new assessment and also search for existing assessments for modification or removing an assessment.

Accessing Assessments Menu

To access the Assessments menu, follow these steps:

1. Navigate to the Inline Processing Home Page.
2. Click Assessments. The Assessments page is displayed.
Adding an Assessment

This option allows you to define an assessment by adding the assessment details. This section covers the following topics:

- Mapping Associated Evaluations
- Adding Assessment Score and Outcome
- Adding Action Parameters and Schedule
- Adding Assessment Database Parameters

To add an Assessment, follow these steps:

1. Navigate to the Assessments details home page.
2. Click Add on the Assessment tool bar. The Add Assessment page is displayed.
3. Enter the following details:

Table 34. Adding Assessment

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment Name</td>
<td>Enter the name of the assessment.</td>
</tr>
<tr>
<td>Processing Segment</td>
<td>Select the processing segment from the drop-down list.</td>
</tr>
<tr>
<td>Activity</td>
<td>Select the activity from the drop-down list.</td>
</tr>
<tr>
<td>Execution Mode</td>
<td>Select the execution mode. The options are:</td>
</tr>
<tr>
<td></td>
<td>Live- Assessments are used for scoring.</td>
</tr>
<tr>
<td></td>
<td>Test- Assessments are used for offline analysis.</td>
</tr>
<tr>
<td>Persist Type</td>
<td>Select the Persist Type for the Assessment. The options are:</td>
</tr>
<tr>
<td></td>
<td>All Records : Select this type if you want all the records that have</td>
</tr>
<tr>
<td></td>
<td>passed or failed to be displayed.</td>
</tr>
<tr>
<td></td>
<td>Failed Records : Select this type if you want only failed records to be</td>
</tr>
<tr>
<td></td>
<td>displayed.</td>
</tr>
</tbody>
</table>

Mapping Associated Evaluations

To map associated evaluations to an assessment, follow these steps:

1. Navigate to Associated Evaluations section. Click Map. The Associated Evaluations Mapping Dialog box is displayed.
Adding an Assessment
Chapter 9–Managing Assessments

2. Select Evaluations from Available Evaluations pane. Click \( \text{to move to Included Evaluation pane.} \)

**Note:** Evaluation filter -This option gets populated for the selected evaluation in Associated Evaluations.

Adding Assessment Score and Outcome

To add and Assessment Score and Outcome, follow these steps:

1. Navigate to Assessment Scoring section.
2. Expand **Assessment Scoring.** The Assessment Score add fields are displayed.
3. Enter the following details:

Table 35. Adding Assessment Score

<table>
<thead>
<tr>
<th>Fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scoring</td>
<td>Select the score type. The options are:</td>
</tr>
<tr>
<td></td>
<td>• Max of Evaluation Score: This option calculates the maximum score among the associated evaluations and assigns it as the score for the Assessment.</td>
</tr>
<tr>
<td></td>
<td>• Normalized Score: This option calculates the normalized score among the associated evaluations and assigns it as the score for the Assessment.</td>
</tr>
<tr>
<td></td>
<td>• Sum of Evaluation Score: This option calculates the sum of the scores among the associated evaluations and assigns it as the score for the Assessment.</td>
</tr>
<tr>
<td>Normalized to</td>
<td>Enter the normalized to score.</td>
</tr>
<tr>
<td>Normalization Base</td>
<td>Enter the normalization base score.</td>
</tr>
<tr>
<td>Cut-off score</td>
<td>Enter the cut-off score or the minimum score required to attain normalization.</td>
</tr>
<tr>
<td>Assessment Outcome</td>
<td>Select the type of action. Enter the upper limit and lower limit score.</td>
</tr>
</tbody>
</table>
Adding Action Parameters and Schedule

To add an action parameter and schedule to an assessment, follow these steps:

1. Navigate to Action Parameters and Schedule section.
2. Expand Action Parameters. The Action Parameters add fields are displayed.
3. Enter the following details:

<table>
<thead>
<tr>
<th>Fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parameter Name</td>
<td>Enter the parameter name.</td>
</tr>
<tr>
<td>Parameter value</td>
<td>Enter the parameter value.</td>
</tr>
<tr>
<td>Schedule</td>
<td>Select the schedule type. The options are:</td>
</tr>
</tbody>
</table>
<pre><code> |                     | ● Activate- To activate a Schedule                                          |
 |                     | ● Deactivate- To deactivate a Schedule                                      |
</code></pre>
<p>| Change Description   | Enter the Change Description. This is a mandatory field.                   |</p>

4. Click Save. A confirmation message is displayed.

   Note: Managing Post Processing Actions is applicable for Real Time Processing only.

   Note: In the assessment details, for the Hold Transaction Message, user has to configure the Assessment Action Parameters manually in the Action Parameter Details page. It is to be noted that the message format can be changed as per the requirement of the user.

Adding Assessment Database Parameters

This option allows you to add run time parameters for HIVE. For example,

```
SET mapred.reduce.tasks = 1000; SET mapred.child.java.opts = -Xmx2048m;
SET SESSION FORCE PARALLEL DML PARALLEL 8; ALTER SESSION FORCE PARALLEL DML PARALLEL 8;
```

Note: No space is allowed between ; and SET

Exporting an Assessment

This option allows the user to migrate an assessment and associated metadata from one environment to another. To export an assessment, follow these steps:

1. Navigate to the Assessments details home page.
2. Select the Assessment Name in the list.
3. Click Export. The exported assessment details are stored as XML files. Once the assessment is exported, an XML file gets generated in the path `<APP_LAYER_FTPSHARE>/<INFODOM>/RTI>`. Once the file is exported, the following message is displayed:
Searching an Assessment

Chapter 9–Managing Assessments

Assessment Export Window

**Searching an Assessment**

To search an Assessment, follow these steps:

1. Click **Assessments** on the Inline Processing Home Page. The Assessment Details page is displayed.
2. Enter the following details:
3. Click **Go**. The search details are displayed.

<table>
<thead>
<tr>
<th>Fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment Name</td>
<td>Enter the Assessment Name.</td>
</tr>
<tr>
<td>Activity</td>
<td>Select the activity from the drop-down.</td>
</tr>
<tr>
<td>Processing Segment</td>
<td>Select the Processing Segment from the drop-down.</td>
</tr>
</tbody>
</table>

3. Click **Go**. The search details are displayed.

**Editing an Assessment**

To modify Assessment details, follow these steps:

1. Navigate to the Assessments details home page.
2. Select the required Assessment.
3. Modify the necessary information. For more information on Processing Segment fields, refer to the *Adding an Assessment* table.
4. Click **Save**. A confirmation message is displayed.

**Deleting an Assessment**

To delete an Assessment, follow these steps:

1. Navigate to the Assessments details home page.
2. Select the required Assessment.
3. Click **Delete**.

**Note:** System does not allow the user to delete the selected Assessment if it is used in other IPE metadata.
This chapter provides detailed information about executing a batch of assessments and step-by-step instructions to use this module.

Batch mode execution is now on HIVE, along with RDBMS.

**Note:** Impersonalization is not supported in IPE.

This chapter discusses the following topics:

- Overview
- Executing an Assessment Batch through Operations

**Overview**

This chapter explains the procedure of executing an assessment batch in two ways, i.e. Rules Run Framework and Operations.

**Executing an Assessment Batch through Rules Run Framework**

To execute an Assessment Batch, it involves the following procedures:

- Creating a Process
- Creating a Hierarchy filter
- Creating a Run and Executing it

**Creating a Process**

To create a Process, follow these steps:

1. Navigate to the OFSAA Home Page and select **IPE Execution** from Select Application drop-down list.
2. Select **Process Management** under it and then **Orchestration**.
Figure 41. Process Definition page

4. Click New on the List tool bar. The Run Rule Framework window is displayed.

Figure 42. Process Details Run Rule Framework page

5. Under the Linked To tool bar, click on the button next to Folder. The Folder Selector dialog box is displayed.
6. Select the folder that is to be linked to the process.

7. In the Master information tool bar, enter the code and name of the process.

8. Click **Component** on the tool bar. The Run Rule Framework Dialog box is displayed.
9. Click **Inline Processing** from the List on the left and select the activity that is to be executed. The activity is displayed on the right under Tasks in ROOT.

10. Click on the button next to the activity. The parameter dialog box is displayed. To enter these details, see section **Passing Parameters from Run Rule Framework (RRF) to IPE**.

11. Click **OK**. The activity is displayed under Process.

12. Click **Save**. A confirmation message is displayed.

**Creating a Hierarchy filter**

To create a Hierarchy Filter, follow these steps:

1. Navigate to the OFSAA Home Page and select **Common Tasks** from Select Application drop-down list.

2. Select **Unified Analytical Metadata** under it and then **Dimension Management**.

3. Select **Build Hierarchy**. The Business Hierarchy page is displayed.

![Figure 45. Build Hierarchy page](image_url)
4. Click **Add** (+) on the Business Hierarchy tool bar. The Add Business Hierarchy window is displayed.

![Add Business Hierarchy](image)

Figure 46. Adding Business Hierarchy Details

5. Enter the following details:

<table>
<thead>
<tr>
<th>Fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
<td>Enter the Code.</td>
</tr>
<tr>
<td>Short Description</td>
<td>Enter the short description.</td>
</tr>
<tr>
<td>Long Description</td>
<td>Enter the long description.</td>
</tr>
<tr>
<td>Hierarchy Type</td>
<td>Select Hierarchy Type. It has the following options:</td>
</tr>
<tr>
<td></td>
<td>- Regular</td>
</tr>
<tr>
<td></td>
<td>- Measure</td>
</tr>
<tr>
<td></td>
<td>- Time</td>
</tr>
<tr>
<td></td>
<td>From these options, select Regular</td>
</tr>
<tr>
<td>Hierarchy Subtype</td>
<td>Select Hierarchy Subtype. It has the following options:</td>
</tr>
<tr>
<td></td>
<td>- Business Intelligence Enabled</td>
</tr>
<tr>
<td></td>
<td>- Non Business Intelligence Enabled</td>
</tr>
<tr>
<td></td>
<td>- Parent Child</td>
</tr>
<tr>
<td></td>
<td>From these options, select Non Business Intelligence Enabled</td>
</tr>
</tbody>
</table>

6. Click on the button next to **Entity**. The Entity and Attribute dialog box is displayed.
7. Select the Activity table from **Entity**. The Attributes of the Activity table are displayed.

8. Select the Attribute whose result is to be displayed.

9. Click **Save**. The details are displayed on the Add Business Hierarchy window.

10. Click **Add (+)** on the Business Hierarchy tool bar. The Add Hierarchy Levels dialog box is displayed.

---

Table 39. Adding Hierarchy Levels

<table>
<thead>
<tr>
<th>Fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short Description</td>
<td>Enter the short description.</td>
</tr>
</tbody>
</table>
12. Click **Save**. A confirmation message is displayed.

### Creating a Run and Executing it

To create a run and execute it, follow these steps:

1. Navigate to the OFSAA Home Page and select **IPE Execution** from Select Application drop-down list.
2. Select **Process Management** under it and then **Orchestration**.
3. Select **Run Definition**. The Run Definition page is displayed.

4. Click **New (+)** on the List toolbar. The Run Rule framework window is displayed.
5. Select the folder that is to be linked to the process run.

6. In the Master Information tool bar, enter the following details:

Table 40. Adding Run Definition

<table>
<thead>
<tr>
<th>Fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Code</td>
<td>Enter the Code of the process.</td>
</tr>
<tr>
<td>Name</td>
<td>Enter the Name of the process.</td>
</tr>
<tr>
<td>Type</td>
<td>Select Type. It has the following options:</td>
</tr>
<tr>
<td></td>
<td>• Simulation Run</td>
</tr>
<tr>
<td></td>
<td>• Base Run</td>
</tr>
</tbody>
</table>
```
From these options, select Base Run
```

7. Click **Selector** on the List tool bar. From the options displayed, select **Job**. The Job Details page is displayed.
8. Select the Process from the list. The process gets displayed on the right.

9. Click OK. The job is displayed on the Run Rule Framework window.

10. Click Next. Add the required hierarchy to the jobs.

11. Select the filter to be added to the job.
12. Click **OK**. The required hierarchy for the job is selected and is displayed on the Run Rule Framework window.

13. Click **Save**. A confirmation message is displayed. The run is created and displayed on the Run Definition page.
14. Select the run from the Run definition page that is to be executed and click **Fire Run**. The Fire Run Rule Framework dialog box is displayed.
15. Enter the following details:

<table>
<thead>
<tr>
<th>Fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Request Type</td>
<td>Select Request Type based on the following options:</td>
</tr>
<tr>
<td></td>
<td>- Single: If the batch has to be executed once.</td>
</tr>
<tr>
<td></td>
<td>- Multiple: If the batch has to be executed multiple times at different</td>
</tr>
<tr>
<td></td>
<td>intervals.</td>
</tr>
<tr>
<td>Batch</td>
<td>Select Batch. It has the following options:</td>
</tr>
<tr>
<td></td>
<td>- Create</td>
</tr>
<tr>
<td></td>
<td>- Create &amp; Execute</td>
</tr>
<tr>
<td></td>
<td>From these options, select Create &amp; Execute</td>
</tr>
<tr>
<td>Wait</td>
<td>Select Wait. It has the following options:</td>
</tr>
<tr>
<td></td>
<td>- Yes: This will execute the batch after a certain duration. Enter the</td>
</tr>
<tr>
<td></td>
<td>duration as required.</td>
</tr>
<tr>
<td></td>
<td>- No: This will execute the batch immediately.</td>
</tr>
<tr>
<td>Filters</td>
<td>Enter the filter details.</td>
</tr>
<tr>
<td></td>
<td>Note: $MISDATE option can be used to execute the run for that particular</td>
</tr>
<tr>
<td></td>
<td>day. The format for it to enter in the filter details is:</td>
</tr>
<tr>
<td></td>
<td>to_date(&lt;ACTIVITY_TABLE_NAME&gt;.&lt;ACTIVITY_DT_COL&gt;)=$MISDATE</td>
</tr>
<tr>
<td></td>
<td>Note: For $MISDATE option:</td>
</tr>
<tr>
<td></td>
<td>- For either Date or Timestamp datatypes, to_date is mandatory for the</td>
</tr>
<tr>
<td></td>
<td>filter.</td>
</tr>
<tr>
<td></td>
<td>- Activity Table Name and Activity Column Name should be in capital.</td>
</tr>
</tbody>
</table>

16. Click OK to run the batch.

**Executing an Assessment Batch through Operations**

To execute an Assessment Batch through Operations, refer to the Operation module in *Oracle Financial Services Analytical Applications Infrastructure User Guide*.

**Note:** Execution of an IPE Assessment through Batch Processing in the Operations Batch Maintenance screen is not supported.

While executing the batch, provide the following parameters when you add Task Details:

- $RUNID=<RUN_ID>
- $PHID=1
- $EXEID=<EXECUTION_ID>
- $RUNSK=0
CHAPTER 11

Displaying Assessment Results

This chapter provides detailed information about displaying assessment results and step-by-step instructions to use this module.

This chapter covers the following topics:

- Overview
- Accessing Assessments Results
- Displaying Assessments Results

Overview

You can display Assessment Results for batch mode processing only.

Accessing Assessments Results

To access the Assessments menu, follow these steps:

1. Navigate to the Inline Processing Home Page.
2. Click Assessments. The Assessments page is displayed.

Figure 57. Assessments Details Page
Displaying Assessments Results

To display Assessment Results, follow these steps:

1. Navigate to the Assessments details page.
2. Enter the following details:

<table>
<thead>
<tr>
<th>Fields</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity</td>
<td>Select the Activity.</td>
</tr>
<tr>
<td>Assessment</td>
<td>Select the Assessment whose result is to displayed.</td>
</tr>
<tr>
<td>Result</td>
<td>Select the Result Type. The options are:</td>
</tr>
<tr>
<td></td>
<td>● Pass</td>
</tr>
<tr>
<td></td>
<td>● Fail</td>
</tr>
<tr>
<td>Score</td>
<td>Select the Score.</td>
</tr>
<tr>
<td>Activity Property To Display</td>
<td>Select the properties to be displayed.</td>
</tr>
<tr>
<td>Additional Filter</td>
<td>Click Add and select the Activity Property and operator.</td>
</tr>
</tbody>
</table>

3. The Assessment Results is displayed.

Figure 58. Assessment Results page
Displaying Assessment Results for HIVE:

To display the Assessment Results on HIVE for batch mode processing, a few additional steps have to be performed as follows:

1. Navigate to Database Details on the home screen.
2. Select the Database Name for the Infodom.
3. Edit JDBC Connection String by adding `UseNativeQuery=1` at the end of the string.

For example,

```
jdbc:hive2://ofss1234:10001/tres;AuthMech=1;KrbServiceName=hive;KrbHostFQDN=ofss1234;KrbRealm=AA.COM;UseNativeQuery=1
```

4. Restart the servers.
CHAPTER 12  Managing Import and Export Utilities

This chapter provides detail information about Import and Export functionality and step-by-step instructions to use this module.

This chapter discusses the following topics:

- Overview
- Import Functionality
- Export Functionality

Overview

Import and Export utilities are provided, when performed through command line RTIImport.sh and RTIExport.sh. These are available in `<FIC_HOME>/ficapp/common/FICServer/bin`

Import Functionality

Follow these steps:

1. Login to the Server where application layer is installed.
2. Navigate to the path.
   `<FIC_HOME>/ficapp/common/FICServer/bin`
   Execute the below command
   `. /RTIImport.sh $1 $2 $3 $4`
   Where $1 is the File name which has to be imported along with the absolute path where file exists.
   $2 is infodom and $3 is APP ID and $4 should always be false.

   For example,
   ```bash
   RTIImport.sh <APP LAYER FTPSHARE>/<INFOR- DOM>/RTI/RTIExport_RTIINFO_2014.06.19.39.38.xml RTIINFO OPS_IPE false
   ```

   **Note:** The Import file name should always start with `RTIExport_`
Export Functionality

Follow these steps:

1. Login to the Server where application layer is installed.
2. Navigate to the path.
   `<FIC_HOME>/ficapp/common/FICServer/bin`
   Execute the below command.
   `./RTIExport.sh $1 $2 $3 $4 $5`
   Where $1 is the folder in which the exported XML is created.
   $2 is the Infodom name and $3 is APP ID, $4 is Assessment IDs Separated by Comma and $5 is flag ‘true’ to export all association and configuration metadata.
   For $5, system will export all Traversal Paths and all base metadata involved in those Traversal Paths. $5 is optional and default is ‘false’.
   For example,
   `./RTIExport.sh /scratch/ofsaapp/Ftpshare/OFSA802IUT/RTI RTIINFO OFS_IPE 1790,1802 true|false`

This creates a file within the target folder in the following format:
`RTIExport_<INFODOM_NAME>_<DATE_TIME_STAMP>.xml`

For example:
`RTIExport_RTIINFO_2015.09.23.14.35.34.xml`

Note: $5 will be false for UI export.

Note: Export functionality through UI exports only the associated metadata.
Configuring a User Defined Function in IPE

This Appendix explains about configuring a user defined function in IPE. This Appendix covers following topics:

- Configuring a User Defined Function in RTI
- Configuring any User defined function

Configuring a User Defined Function in RTI

To configure a User Defined Function in RTI, follow these steps:

1. GETLASTCHARS (FUNCTION NAME) (PARAMETER NAME1 DATA TYPE1, PARAMETER NAME2 DATA TYPE 2)
   return 'return data type'
   Begin
   Function Body
   End

2. For Example, to create a Function GETLASTCHARS in the Atomic Schema, follow the steps below.
   create or replace function GETLASTCHARS(inputString varchar2, noOfChars number)
   return varchar2
   is
   v_chars varchar2(32767) := '';

   begin
   select SUBSTR(inputString,0-noOfChars,noOfChars) into v_chars from dual;

   return v_chars;
   end GETLASTCHARS;

   Note: At any point of time, the user created functions for use in Expression should have only two parameters. In the Example Function, the inputString and noOfChars are the two parameters.
**Configuring any User defined function**

To Configure any User defined function, follow these steps.

1. The information to be inserted into the tables `rti_function`, `rti_func_arg_map` and  
   `rti_func_data_type`.

2. To configure the above Created Function to appear in the Select Function drop-down, execute the following  
   Scripts in the Config Schema.

   The values should be added to the following tables according to the format shown below:

   ```
   insert into RTI_FUNCTION (N_FUNC_ID, V_RETURN_TYPE, V_FUNC_CODE, V_FUNC_NAME,  
   V_DESC, V_NOTES, V_FUNC_TYPE, V_FUNC_STR, V_MAX_PARAM)  
   values(value1,value2,value3....)
   where,
   N_FUNC_ID is a unique value given to the function.
   V_RETURN_TYPE is the return type of the function.
   V_FUNC_CODE is the function code.
   V_FUNC_NAME is the name of the function.
   V_DESC is the description provided for the function.
   V_NOTES is the information provided regarding the function.
   V_FUNC_TYPE is the return type of the function.
   V_FUNC_STR is the function
   V_MAX_PARAM is the number of maximum parameters allowed for the function.
   Example,
   insert into RTI_FUNCTION (N_FUNC_ID, V_RETURN_TYPE, V_FUNC_CODE, V_FUNC_NAME,  
   V_DESC, V_NOTES, V_FUNC_TYPE, V_FUNC_STR, V_MAX_PARAM)  
   values (30, 'VARCHAR2(200)', 'GETLASTCHARS', 'Get Last Characters ', 'Gets  
   the Last Characters.', null, 'F', 'GETLASTCHARS(@1@,@2@,@3)', 3);

   insert into RTI_FUNC_ARG_MAP (N_MAP_ID, N_FUNC_ID, V_ARG_DESC,  
   V_ARG_DATA_TYPE, N_ARG_NUM)  
   values(value1,value2,value3....)
   where,
   N_MAP_ID is a mapping value given to the function.
   N_FUNC_ID is a unique value given to the function.
   V_ARG_DESC is the description provided for the argument.
   V_ARG_DATA_TYPE is the datatype of the argument of the function.
   N_ARG_NUM is the sequential number given to the argument .
   ```
Example,
insert into RTI_FUNC_ARG_MAP (N_MAP_ID, N_FUNC_ID, V_ARG_DESC, V_ARG_DATA_TYPE, N_ARG_NUM) values (40, 30, 'Char Value to be evaluated', 'char', 1);
insert into RTI_FUNC_ARG_MAP (N_MAP_ID, N_FUNC_ID, V_ARG_DESC, V_ARG_DATA_TYPE, N_ARG_NUM) values (41, 30, 'Number of places', 'char', 2);
insert into RTI_FUNC_ARG_MAP (N_MAP_ID, N_FUNC_ID, V_ARG_DESC, V_ARG_DATA_TYPE, N_ARG_NUM) values (42, 30, '..............', 'char', 3);

insert into RTI_FUNC_DATA_TYPE (N_MAP_ID, N_FUNC_ID, V_DATA_TYPE) values (70, 30, 'CHAR');
insert into RTI_FUNC_DATA_TYPE (N_MAP_ID, N_FUNC_ID, V_DATA_TYPE) values (71, 30, 'VARCHAR');
insert into RTI_FUNC_DATA_TYPE (N_MAP_ID, N_FUNC_ID, V_DATA_TYPE) values (72, 30, 'VARCHAR');

where,
N_MAP_ID is a mapping value given to the function.
N_FUNC_ID is a unique value given to the function.
V_DATA_TYPE is the datatype of the function.
Example,
insert into RTI_FUNC_DATA_TYPE (N_MAP_ID, N_FUNC_ID, V_DATA_TYPE) values (70, 30, 'CHAR');
insert into RTI_FUNC_DATA_TYPE (N_MAP_ID, N_FUNC_ID, V_DATA_TYPE) values (71, 30, 'VARCHAR');
insert into RTI_FUNC_DATA_TYPE (N_MAP_ID, N_FUNC_ID, V_DATA_TYPE) values (72, 30, 'VARCHAR');
Configuring a User Defined Assessment

This Appendix explains about configuring a user defined function in IPE:

Example Scenario:

Monitoring ATM Withdrawals

Focus

- Account (AC)
- Customer (CU)

Scenario Class

Fraud (FR)

Scenario Objective

An account which is transacting through ATM in different permutations and combinations requires monitoring to avoid fraudulent activities.

Alert Generation

An alert would be generated when the filters of an evaluation are met. Profiles shall provide an output for some of the filters of an evaluation.

Table 43: Alert Generation

<table>
<thead>
<tr>
<th>Evaluations</th>
<th>Filters for an Evaluation</th>
<th>Profiles for an Evaluation</th>
</tr>
</thead>
</table>
| Frequent ATM Withdrawals          | ATM withdrawals >=2  
                                         | Amount withdrawal > 200  
                                         | Time Period after deposit within 4 hours  
                                         | ATM Deposit > 500  | Frequent Count of ATM Withdrawals  
                                         | Time Period after deposit |
| Frequent ATM withdrawals on a device | ATM withdrawals >= 10  
                                                                             | Within = 10 minutes  | Frequent count of withdrawals on a device |
| Frequent ATM withdrawals on a card – Velocity 1 | ATM withdrawals >=3  
                                                                             | Within = 10 minutes  | Frequent count of withdrawals on a card |
| Frequent ATM withdrawals on a card – Velocity 2 | ATM withdrawals >=5  
                                                                             | Within = 15 minutes  | Amount Withdrawn >= 10000  | Frequent count of withdrawals on a card |
### Table 43: Alert Generation

| Suspicious ATM Withdrawals | ATM withdrawals > =3  
|                          | Amount withdrawal >800 
|                          | Time Period = 30 minutes 
|                          | Device = Different 
|                          | Card = Different 
| Suspicious Count of ATM withdrawals for different Device & Card | Withdrawal Time Period |
| Suspicious ATM Withdrawals on a card | ATM withdrawals > =3  
|                          | Amount withdrawal >800 
|                          | Time Period = 30 minutes 
|                          | Device = Different 
|                          | Card = Same  
| Suspicious Count of ATM withdrawals for different Device & same Card | Withdrawal Time Period |
| Suspicious ATM Withdrawals on a ATM machine | ATM withdrawals > =3  
|                          | Amount withdrawal >800 
|                          | Time Period = 30 minutes 
|                          | Device = Same 
|                          | Card = Different  
| Suspicious Count of ATM withdrawals for same Device & different Card | Withdrawal Time Period |
| Suspicious ATM Withdrawals on a card and ATM device | ATM withdrawals > =3  
|                          | Amount withdrawal >800 
|                          | Time Period = 30 minutes 
|                          | Device = Same 
|                          | Card = Same  
| Suspicious Count of ATM withdrawals for same Device & Card | Withdrawal Time Period |
| ATM Withdrawals in Unusual Time | Current Amount withdrawal > 300  
|                          | Current Transaction Time between 5 to 7 pm 
|                          | Previous Transaction Time between 4 to 5pm  
|                          | Previous Amount withdrawn > 300 
| Amount withdrawn on a previous transaction in an unusual time | |
| ATM withdrawals in High Risk period | Transaction Time : 12am to 5am | High Risk Period |
| Frequent ATM Transactions on a ATM Device | # of cards used > 10  
|                          | Device = Same 
|                          | Within = 10 minutes  
| Count of Cards used at a ATM device | Transaction Time |
| Maximum Amount ATM Withdrawals | # of Maximum Amount Withdrawn > 3  
|                          | Within = 10 minutes 
|                          | Device = Same 
|                          | Maximum Amount > =  
| Count of maximum amount withdrawn | Transaction Time Period for maximum amount withdrawn |
| Frequent Balance Enquires | # of balance enquires > = 5  
|                          | Balance Enquiry within = 10 minutes 
|                          | Device = same  
| Count of Balance Enquires at a device | Balance Enquiry time |
Appendix B—Configuring a User Defined Assessment

Table 43: Alert Generation

<table>
<thead>
<tr>
<th>Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suspicious ATM withdrawal – device specific</td>
<td>More than X maximum amount ATM withdrawals in Y minutes at same ATM device</td>
</tr>
<tr>
<td>Unusual ATM Location</td>
<td>The location of this ATM transaction is not one of the typical ATM locations for this card.</td>
</tr>
</tbody>
</table>

Filters

- For Account Focus
  - Include ATM Transactions only
  - Include Customer Retail Accounts only
- For Customer Focus
  - Include ATM Transactions only
  - Include Customer Retail Accounts only

Data Streams of Interest

- Account
- Customer
- Watch List
- Watch List Entry
- Transaction

Building Blocks

Table 44: Building Blocks

<table>
<thead>
<tr>
<th>Parameter Name</th>
<th>Description</th>
<th>Sample Value (Min, Max)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount Deposited</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amount Withdrawn</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Look back for withdrawal</td>
<td></td>
<td></td>
</tr>
<tr>
<td># of withdrawals</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Appendix B—Configuring a User Defined Assessment

#### Highlights

<table>
<thead>
<tr>
<th>Building Block</th>
<th>Description</th>
<th>Possible Number of Records Retrieved to Describe Alert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash Transaction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Account</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Account Balance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Account Summary</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Highlights**

<table>
<thead>
<tr>
<th>Display Name</th>
<th>Description</th>
</tr>
</thead>
</table>

**Frequency Period** — Real Time

**Look back Period** — Tunable