

**Oracle® Financial Services Analytical Applications
Infrastructure**

User Guide

Release 7.2

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Oracle Financial Services Analytical Applications Infrastructure User Guide, Release 7.2

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Primary Author: Vinay Kumar Mohan

Contributing Author: Surag Ramachandran

Contributor: Sue Bernstein, Kiran Kumar

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Preface

Intended Audience

Welcome to Release 7.2 of the *Oracle Financial Services Analytical Applications Infrastructure User Guide*.

See Related Information Sources on page xviii for more Oracle product information.

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A	External Scheduler Interface Component

Related Information Sources

- Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) Installation and Configuration Guide
- Oracle Financial Services Analytical Applications Data Model Data Dictionary
- Oracle Financial Services Analytical Applications Data Model Utilities User Guide
- Oracle Financial Services Cash Flow Engine Reference Guide
- Oracle Financial Services Asset Liability Management (OFSALM) User Guide
- Oracle Financial Services Profitability Management (OFSPM) User Guide

- Oracle Financial Services Funds Transfer Pricing User Guide

Getting Started

Infrastructure - An Overview

Oracle Financial Services Analytical Applications Infrastructure is the complete end-to-end Business Intelligence solution that is easily accessible via your desktop. Its single interface lets you tap your company's vast store of operational data to track and respond to business trends. It also facilitates analysis of the processed data. With Infrastructure you can query and analyze data that is complete, correct and consistently stored at a single place. It has the prowess to filter data that you are viewing and using for analysis; it allows you to personalize information access to users based on their role within the organization.

It creates a complete view of your enterprise and helps you:

- Track enterprise performance across information silos.
- Use one interface to access all enterprise databases.
- Create consistent business dimensions and measures across business applications.
- Automate the creation of coordinated data marts.
- Use your own business language to get fast and accurate answers from all your databases.
- Monitor your business performance 24 x 7 through e-mail, web and wireless alerts.
- Deploy an open XML and web- based solution against all major relational or multi-dimensional databases on Microsoft Windows and UNIX servers.

This chapter provides an overview of Infrastructure - its components and explains how these components are organized in the splash screen. It also explains the user login in process.

Infrastructure Components

Broadly, the Infrastructure application consists of an underlying tool-set that is used to deploy an analytical solution. The tool-set comprises of a core module that may or may not be accompanied by optional modules.

- Core Module
- System Configuration
- Security Management System (SMS)
- Information Command Center (ICC)
- Unified Metadata Manager (UMM)

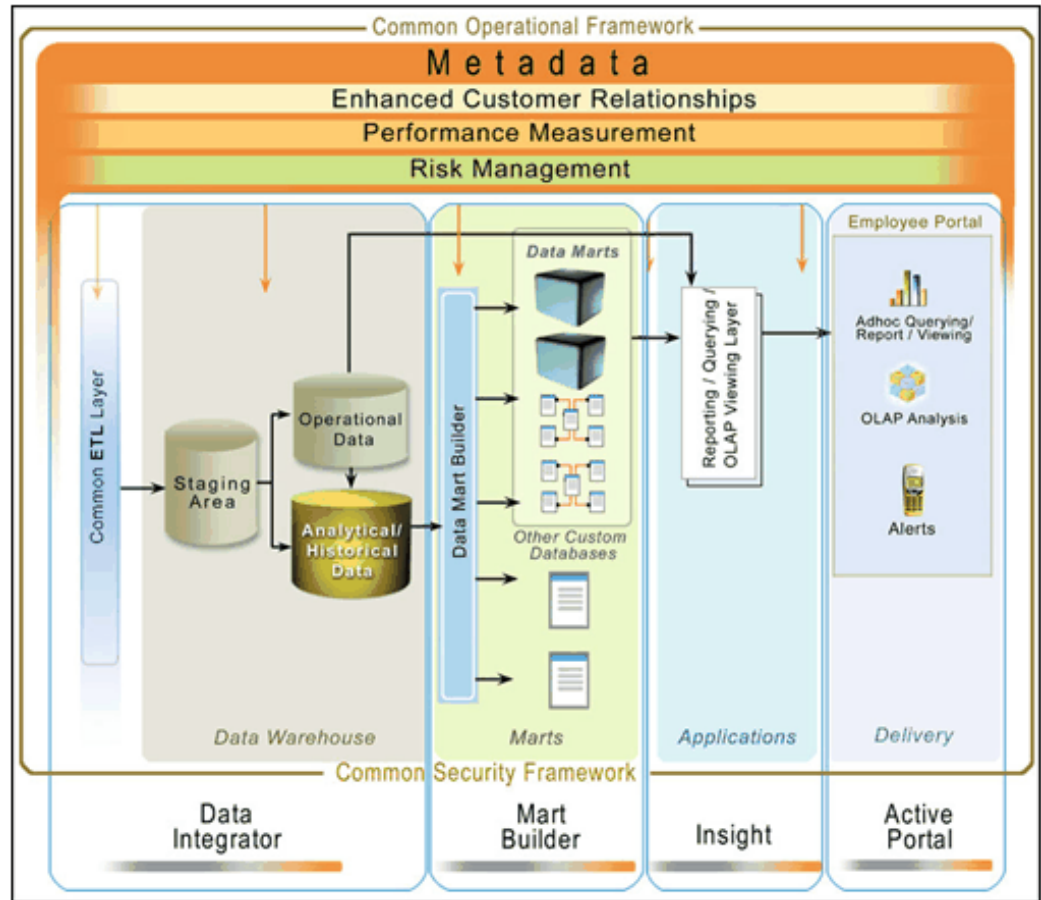
In addition the following optional modules are available upon licensing:

- Data Integrator

All components – Core and Optional - are encapsulated within a common Security and Operational framework as shown in the Figure below.

Infrastructure also offers many business analytical solution(s) in the financial services domain that are licensed separately to the organization.

This manual provides an overview of the technology components only.



Infrastructure Security and Operational Framework

The Information Security Subsystem (SMS) provides for a capacity to restrict access to the data and meta-data in the warehouse, based on a flexible, fine-grained access control mechanism. The Operational Framework (ICC) orchestrates the running of various tasks in the warehouse from the other subsystems, providing a single window to operators to manage the complex and interconnected operations of the warehouse.

Infrastructure Unified Metadata

The Unified Metadata Manager transforms your ability to manage your enterprise by distributing a consistent view of the business dimensions and key measures to every decision maker and application developer. Oracle Financial Services Analytical Applications Infrastructure' unique Unified Metadata technology allows your enterprise to define a consistent set of business terms and securely deploy them across the entire range of analytic applications from your data warehouses and data marts to your business intelligence and alerting tools to your data distribution and portal applications.

Infrastructure Data Integrator

Infrastructure Data Integrator is a comprehensive Extraction, Transformation and Loading tool, which extends information reach to the most diverse sources of data across the enterprise. The extraction engine is capable of accessing and extracting data models and data from over 40 different data storage mechanisms over diverse platforms.

The tasks that are routed through the Infrastructure Web Service framework could be requests for execution, requests for status sent by client with transaction id or requests sent by client with user id for the list of requests fired by the user and their current status.

- For accessing Infrastructure Web Service, the user requires a client.
- Please refer to the Infrastructure Installation Manual for instructions on configuring the Web Service in Oracle Financial Services Analytical Applications Infrastructure.
- Please contact Infrastructure Support for more information.

Document Management through Infrastructure Web Services

The Infrastructure Web Services framework can also be integrated with Oracle Universal Content Management. The users have the option of choosing to use the Infrastructure Document Management framework which is available in the Infrastructure Operational Risk Analytics Solution or the Oracle UCM tool. It is possible to Upload, Attach, Detach or Purge a document using Document Management through Infrastructure Web Services.

Co-existence with Third Party Tools

The Infrastructure tool-set is modular and facilitates the end-to-end process of creating and managing data warehouses. The Data Integrator component facilitates the ETL process, the Mart Builder component facilitates the Aggregation process and the Insight/Active Portal components facilitate the information delivery process. An interesting aspect of Infrastructure is that it can co-exist with other specific applications in the industry while managing the process of maintaining the data warehouse. The co-existence is achieved through the deployment of adapters that serve as an integration layer for metadata between Infrastructure and the specific third party tools.

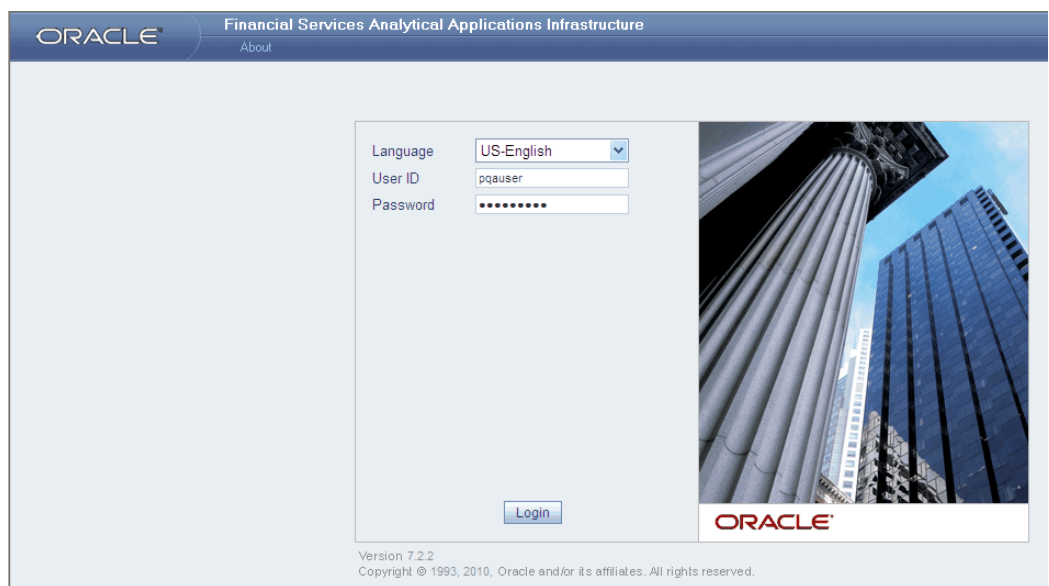
How is Infrastructure organized?

Infrastructure modules are organized under four main function lists. They are as follows:

- System Configuration
- Unified Metadata Manager
- Administration
- Operations

Logging into Infrastructure

While logging on to Oracle Financial Services Analytical Applications Infrastructure, the following screen will be displayed:



The screenshot shows the Oracle Financial Services Analytical Applications Infrastructure login interface. At the top, there is a blue header with the Oracle logo on the left and the text "Financial Services Analytical Applications Infrastructure" and "About" on the right. The main content area is light gray and contains a login form on the left and a large image of a classical building with columns on the right. The login form has three fields: "Language" with a dropdown menu set to "US-English", "User ID" with the text "pqouser", and "Password" with a masked field of dots. Below the fields is a "Login" button. At the bottom of the page, there is a small footer with the text "Version 7.2.2" and "Copyright © 1993, 2010, Oracle and/or its affiliates. All rights reserved."

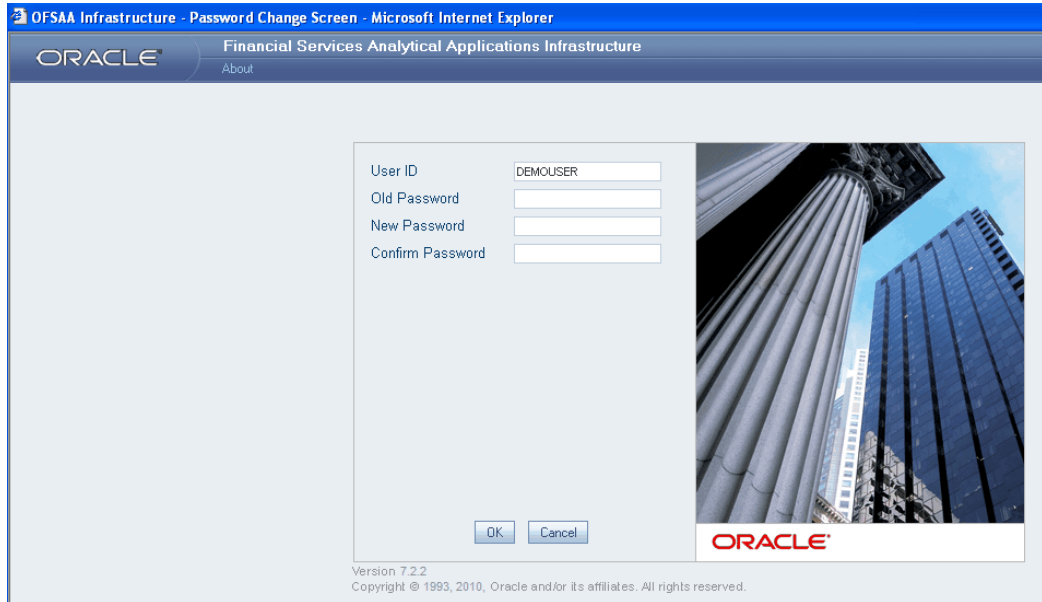
Select the required language from the **Language** drop-down list.

Example

US English

Note: The language options displayed in the drop down are based on the license.

Based on the selection of Language, the appropriate language login screen is displayed. You will be prompted to change your password on your first login. Alternatively, you can also choose to change your password any time.



In the **Change Password** screen, enter the old and new password, confirm it and click **OK** to go to the Infrastructure splash screen. Click **Cancel** to exit the Change Password screen without changing the password.

- It is important that the password should be at least six characters long. If you do not adhere to this pre-requisite, you will see a system message that reads Password must be at least six characters long.
- The password must be alphanumeric. If you enter a combination of only numbers or only alphabets, you will see a system message that reads Password should be a combination of numbers and characters.
- Passwords are case sensitive.
- Passwords with spaces are not accepted.
- A new password should be different from previous five passwords.
- Passwords are displayed as asterisks (stars) to ensure that the password is not revealed to other users.

Note: If you encounter any of the following problems, you need to contact the System Administrator:

- Your user id and password are not recognized while trying to login into the Infrastructure application.

- Your user id is locked after three consecutive unsuccessful attempts.
- Guest user cannot change the password.

As System Administrator:

Post installation, the first login into Infrastructure is possible only for a System Administrator through user id "sysadm". This id is created at the time of installation with the password provided during installation.

Enter login id "sysadm" and password that was provided during installation. Click **Login**.

As System Authorizer:

System Authorizer Id and Password is also created at time of installation. This id is required to authorize the users created by the system administrator.

Enter login id as "sysauth" and password that was provided during installation. Click **Login**.

As Business User:

The Business users will be created by System Administrator and will be authorized by the System Authorizer. The built-in security system of Infrastructure ensures every user is permitted access to screens based on the user's role.

Enter User Id and password issued by the System Administrator and click **Login**.

Exploring the Splash Screen

Splash Screen

After logging into the system, the Infrastructure splash screen is displayed. The splash screen is divided into three frames:

- The top or Header frame.
- The left or Function Menu frame and
- The right frame or Work Area.

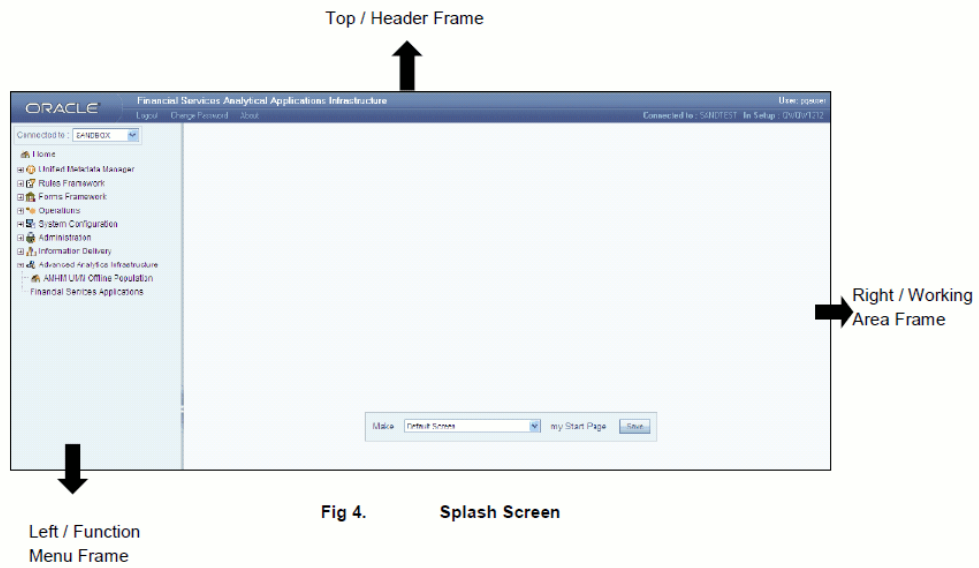
The Header frame displays the user details along with the Information Domain selected in the right hand corner in top frame of the screen. To exit Infrastructure, click **Logout**.

Example

Logout icon allows you to exit Oracle Financial Services Analytical Applications Infrastructure.

The built-in security system of Infrastructure ensures restricted access to screens based

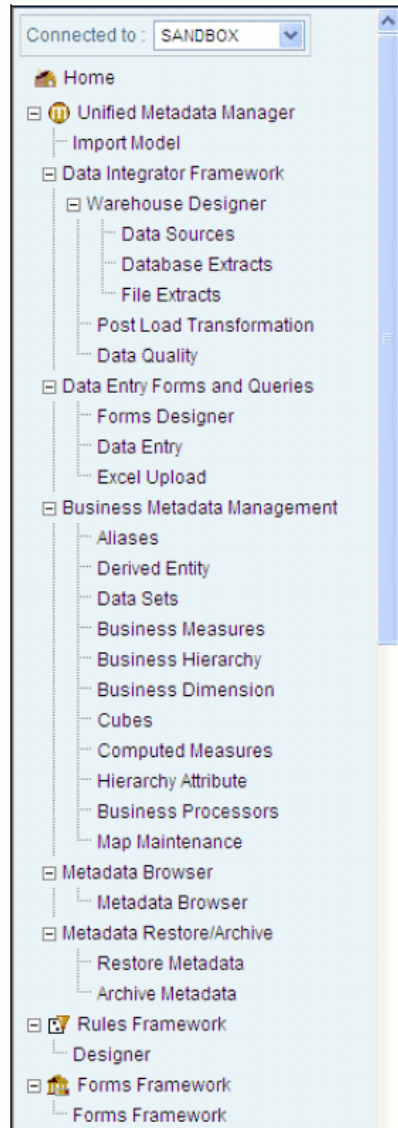
on the user's role. This is based on the functions that you as a user are required to perform.



The Function Menu frame displays the Information domain to which you are connected.

Example

The main functions of Oracle Financial Services Analytical Applications Infrastructure, which appear as expandable folders contains submenus with different options.



Unified Metadata Manager is the main menu with Import Model under it.

Data Integrator is the main menu with Data Sources, Database Extracts, File Extracts, Post Load Transformation and Data quality listed under.

Forms Designer, Data Entry and Excel upload is listed under Data Entry Forms and Queries.

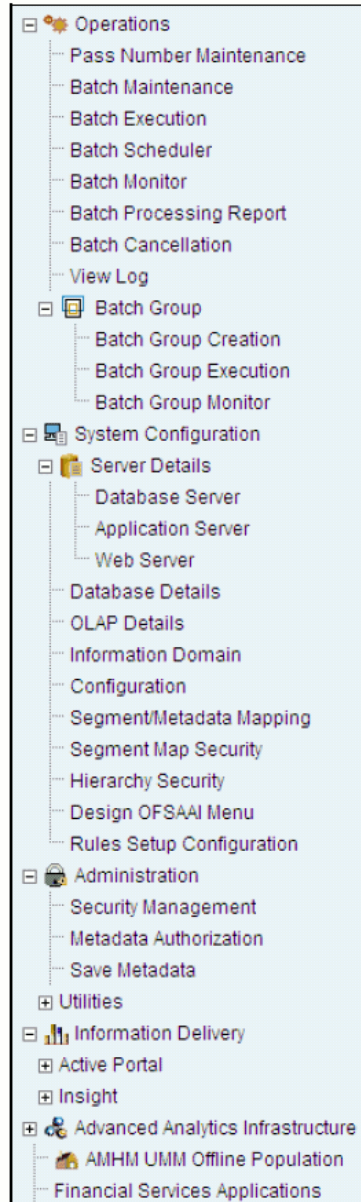
Aliases, Derived Entity, Data sets, Business Measures, Business Hierarchy, Business Dimension, Cubes, Computed Measures, Hierarchy Attributes, Business Processors, Map Maintenance is listed under Business Metadata Management.

Metadata Browser is the main menu.

Restore Metadata and Archive metadata is listed under Metadata Restore/Archive.

Designer listed under Rules Framework

Forms Framework is listed under Forms Framework



Pass Number Maintenance, Batch Maintenance, Batch Execution, Batch Scheduler, Batch Monitor, Batch processing Report, Batch Cancellation, View Log, Batch Group creation, batch Group Execution and Batch Group Monitor comes under Operations.

Database Server, Application Server, Web Server, Database Details, OLAP Details, Information Domain, Configuration, Segment/Metadata Mapping, Segment Map Security, Hierarchy Security, Design OFSAI Menu, Rules Setup Configuration comes under System Configuration.

Security Management, metadata Authorization, Save Metadata and Utilities comes under Administration.

Active Portal and Insight comes under Information Delivery

Advanced Analytics infrastructure is the main menu

AMHM UMM Offline Population and Financial Services Applications are two individual topics.

To view a submenu/option:

Click + to expand the function menu folder. The function menu will display the list of submenus. To view the options within each of these submenu folders, click +.

Example

Click + to expand the Operations menu folder to view the options listed under it, namely, Batch Scheduling, Batch Monitor and Batch Group. Click + to expand the Batch Group submenu folder to view the options listed under it, namely, Batch Group Creation, Batch Group Execution and Batch Group Monitor.

The five main functions listed under the Function Menu frame are:

Unified Metadata Manager that contains Technical Metadata Management and submenus.

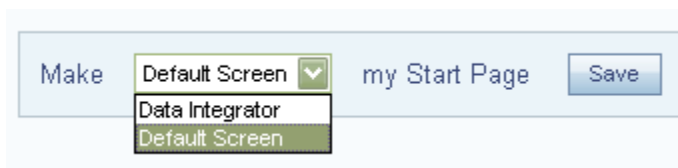
1. Import Model
2. Technical Metadata Management submenu contains the Data Integrator option.

Operations function menu contains Batch Scheduling, Batch Monitor and Batch Group options.

System Configuration function menu contains Server Details, Database Details, Information Domain, Configuration.

Administration function menu contains User Administrator, System Administrator, Audit Trail Report, User Activity Reports and Utilities options.

The Right pane / Working Area frame allows you to choose your start page that will be displayed on logging in. Select the start page from the Make --- my Start Page drop-down list. You can choose to have Data Integrator or Default Screen as the Start Page for Oracle Financial Services Analytical Applications Infrastructure.



Click **Save**. The selected page will be the start page displayed when you log on to Infrastructure next time.

Note: Only the splash screens to which the user is mapped will be visible in the drop-down list.

Overview of OFSAA Infrastructure

OFSAA Infrastructure

OFSAA Infrastructure includes facilities for creating and maintaining

- Dimensional reference data
- Interest rate and currency exchange rate data
- Process tuning data

OFSAA Infrastructure also includes functionality for building and maintaining rules that may be used by any Oracle Financial Services Analytical Application. These common rule objects include:

- Expressions
- Hierarchies
- Filters

The analytical applications that you see on the Left Hand Side (LHS) of the Financial Services Applications home page will depend on your logon privileges and on the OFSAA modules that have been installed for your environment, but you will always see the OFSAA Infrastructure components under Financial Services Applications > Master Maintenance.



The following chapters document how to navigate the OFSAA user interface to create and maintain dimensional reference data, interest rate & currency exchange rate data, and process tuning data; and to create and maintain OFSAA Infrastructure rules: Expressions, Hierarchies, and Filters.

Chapter	Subject
Chapter 3	OFSAA Administration
Chapter 4	OFSAA Data Entry Forms and Queries
Chapter 5	OFSAA Attributes
Chapter 6	OFSAA Dimension Members
Chapter 7	OFSAA Hierarchies
Chapter 8	OFSAA Filters
Chapter 9	OFSAA Expressions
Chapter 10	OFSAA Rate Management
Chapter 11	Simplified Batches

The remainder of this chapter documents:

- Overview of Dimensionality in OFSAA

- Overview of OFSAA Rules
 - Hierarchies
 - Filters
 - Expressions

Overview of Dimensionality in OFSAA

Dimensions are used to stratify your business data for processing or reporting purposes. For example, at a minimum General Ledger systems are typically stratified by a General Ledger dimension, an organization or cost center dimension, and a time dimension. Customer account level data will normally have these same dimensions but are often additionally segmented by dimensions such as Product or Customer. You may wish to construct models using a specialized product dimension or other customized dimensions such as geography, cost pool, transaction, activity or channel.

Dimensions are comprised of lists of members. For example, the Organizational Unit dimension might be comprised of Branch #1, Branch #2, Branch #3, etc. Some dimensions may contain tens or even hundreds of thousands of members (e.g., a large organizational or customer dimension) while others may contain as few as two members (e.g., a simple product-type dimension with values of Fixed and Variable).

The member values or "Chart of Accounts" for each dimension may be maintained either internally within the OFSAA Infrastructure or externally.

Internally

OFSAA Infrastructure includes functionality for Adding, Viewing, Editing, or Deleting dimension member values. Which of these functions you can access depends on your logon privilege and on the dimension with which you wish to work. For details, on the creation and maintenance of Dimension Members, see Chapter 6: OFSAA Dimension Members..

Externally

You may choose to source and maintain some Charts of Accounts from external systems such as your General Ledger, a Data Warehouse, or from some other external master data management system. See *Oracle Financial Services Analytical Applications Data Model Utilities User Guide* for details on loading dimensional data from external systems.

Combination

You may also choose to maintain some Chart of Account values from an external source while maintaining other Chart of Account values internally.

Referential Integrity

You may have dimension member values defined in your Chart of Accounts that do not exist in your business data, particularly if the dimension member values are used as attribute values (see discussion of attributes below). But you would never want to have an occurrence of a dimension member value in your business data that did not exist in the dimension's Chart of Accounts. When you load business data into OFSAA, you need assurance that there are no dimension member values present in the business data that are not defined in your Chart of Accounts. For details on ensuring referential integrity between your business data and your Chart of Accounts data, see *Installation and Configuration Guide*.

Dimension Attributes

Some OFSAA dimensions support attributes. Dimension attribute values are used to qualify dimension members. For example, a cost center, say Branch #1, might have a Headcount attribute with a value of 32 and a Volume attribute with a value of High. A product dimension member, say 30-year fixed rate jumbo LIBOR mortgage, might have a Rate attribute with a value of LIBOR, a Size attribute with a value of Jumbo, and a Loan Type attribute of Fixed. A General Ledger account, say Benefit Expense, might have an Account Type attribute with a value of Non-Interest Expense.

Like dimensions, attributes are used to stratify your business data for processing or reporting purposes. Some dimension attributes are seeded within the OFSAA data model and are used extensively in processing. You may define as many user-defined attributes as you need.

OFSAA Infrastructure includes functionality for Adding, Viewing, Editing, or Deleting dimension attributes. Which of these functions you can access depends on your logon privilege and on the dimension with which you wish to work. For details on the creation and maintenance of dimension attributes, see Chapter 5: OFSAA Dimension Attributes.

Once an attribute has been defined for a dimension, attribute values may be assigned to individual dimension member values. These attribute values may be open-ended (dates, numbers, or strings) or may be restricted to a defined set of members (see further discussion below; also see Chapter 5: OFSAA Dimension Attributes).

Hierarchies

Some OFSAA dimensions support hierarchies. Hierarchies may be used to provide sophisticated stratification for either processing or reporting purposes. For example, an organizational hierarchy might start with a Division level containing Western Region, Eastern Region, and Southern Region; the next level down within the hierarchy might be state or county. A product hierarchy might begin with branches for Asset vs. Liability vs. Service products; under the Asset branch, you might define additional

branches for Mortgage Lending, Commercial Lending, Consumer Lending, etc. Hierarchies are used extensively in OFSAA models to assign methods to products and to support allocation methodologies.

Like dimension members, dimension hierarchies may be maintained either internally within the OFSAA Infrastructure or externally.

Internally

OFSAA Infrastructure includes functionality for Adding, Viewing, Editing, or Deleting hierarchies. Which of these functions you can access depends on your logon privilege and on the hierarchy with which you wish to work. For details, on the creation and maintenance of hierarchies, see Chapter 7: OFSAA Hierarchies.

Externally

You may choose to source and maintain some or all of your hierarchies from external systems such as your General Ledger, a Data Warehouse, or from some other external master data management system, such as Oracle Data Relationship Management (DRM). See *Oracle Financial Services Analytical Applications Data Model Utilities User Guide* for details on loading hierarchy data from external systems.

Combination

You may also choose to maintain some hierarchies from an external source while maintaining other hierarchies internally.

Rollup Members for Dimensions Supporting Hierarchies

For dimensions that support hierarchies, every dimension member value has the property of being either a "leaf" value (child-only or last descendent child value) or a "rollup node" value. For example, if Branch #1, Branch #2, and Branch #3 all belonged to the West rollup point of an organizational hierarchy, then West would also be a dimension member value of the Organizational Unit dimension. Your business data is typically expressed at the "leaf" level.

Dimension Types

OFSAA supports 3 fundamentally different kinds of dimensions

- Key Processing Dimensions
- Standard Dimensions
- Simple Dimensions

Key Processing Dimensions

- Are accessible as modeling dimensions for all of the OFSAA analytical engines
- Are expressed as columns in nearly all of your business fact tables
- Support both attributes and hierarchies

Metadata for Key Processing Dimensions is stored in four tables:

- A base table (e.g., DIM_PRODUCTS_B)
- A translation table (e.g., DIM_PRODUCTS_TL)
- An attribute table (e.g., DIM_PRODUCTS_ATTR)
- A hierarchy table (e.g., DIM_PRODUCTS_HIER)

Base tables store basic information about each dimension member and translation tables store names and descriptions for each dimension member in multiple languages (see *Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) Installation and Configuration Guide* for details on multi-language support). Attribute tables store one or many attribute values for each dimension member. Hierarchy tables store one or more hierarchies for each dimension (you may define as many hierarchies as you wish for any dimension that supports hierarchies).

Seeded Key Processing Dimensions

OFSAA is seeded with 5 Key Processing dimensions:

- Financial Element
- Organizational Unit
- General Ledger Account
- Common Chart of Accounts
- Product

Among the 5 seeded Key Processing dimensions, only the Financial Element dimension is pre-populated with a Chart of Accounts, but it is only populated in the range between 0 and 10,000 (For more details on the seeded Chart of Accounts for the Financial Element dimension see *Oracle Financial Services Profitability Management (OFSPM) User Guide*). This is a reserved range in which you may not add new members, or edit or delete existing members. You may add user-defined Financial Elements anywhere outside the reserved range.

User Defined Key Processing Dimensions

See *Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) Installation and Configuration Guide* for details on adding your own user-defined Key Processing dimensions.

Standard Dimensions

Standard dimensions may support attributes and/or hierarchies depending on how they are configured, but are not used as processing dimensions within any of the analytical application engines.

Like Key Processing Dimensions, metadata for Standard Dimensions is stored in a base table and in a translation table. A Standard Dimension may or may not have an attribute table or a hierarchy table depending on how it is configured. Within the OFSAA modules, Standard dimensions that are defined as having a hierarchy table will support hierarchies and Standard dimensions that are defined as having an attribute table will support attributes. See the *Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) Installation and Configuration Guide* and *Oracle Financial Services Analytical Applications Data Model Data Dictionary* for additional information.

Seeded Standard Dimensions

OFSAAI is seeded with 2 Standard Dimensions

- Country
- Customer

Both dimensions support attributes and hierarchies. Default member values are provided for the Country dimension, but no values are provided for the Customer dimension.

User Defined Standard Dimensions

See the *Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) Installation and Configuration Guide* for details on adding user-defined Standard dimensions.

Simple Dimensions

Sometimes referred to as Code dimensions, Simple dimensions are "lists of values" that support neither attributes nor hierarchies. Their 3 key uses are:

- Reserved for use within the analytical application engines
- Stratifying your data for process or report filtering purposes

- Serving as "lists of values" when used as attributes

The OFSAA Data Model comes with more than 150 seeded Simple dimensions. Many of these seeded Simple dimensions are also seeded with dimension members. Unlike Key Processing dimensions and Standard dimensions, Simple dimensions are stored in two tables:

- A code table (e.g., AMRT_TYPE_CD)
- An Multi-Language Support or MLS table (e.g., AMRT_TYPE_MLS)

Again, see *Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) Installation and Configuration Guide* for details on multi-language support.

Reserved Simple Dimensions

Accrual Basis Code is an example of a seeded Simple dimension that is used extensively by the application modules. It is seeded with a small list of values (such as 30/360, Actual/360, Actual/Actual, etc.) and its value set may not be modified.

Amortization Type Code is another example of a reserved Simple Dimension. Amortization Type Code is populated with reserved values that the Cash Flow engine interprets, and its value set may not be modified. Many other Simple Dimensions are reserved and may not be modified.

Simple Dimensions Used for Processing or Reporting Purposes

This kind of Simple Dimension cannot be used directly by the application engines, but they are accessible to OFSAA Filter rules (for more information on Filter rules, see Chapter 8: OFSAA Filters).

Credit Rating is an example of a seeded Simple Dimension that may be used for processing or reporting purposes. You may, for example, wish to allocate risk equity to individual instruments as a function of Credit Rating. The seeded values for Credit Rating are Moody's credit ratings, but you are free to completely redefine the membership of this dimension. Geographic Location is another example. Geographic Location is pre-populated with US States and Canadian provinces, but you are free to completely redefine the list of geographic locations.

Simple Dimensions Used as Attribute Domains

Both seeded and user-defined attributes often utilize a Simple Dimension to provide a list of values. For example, you might create an Adjustable Type attribute on your Product dimension and you might want this attribute to be limited to the values of Fixed, Variable, or Administered. In this case, you might first build a Simple Dimension called Type whose dimension members were limited to three values: Fixed, Variable, or Administered. Next you could assign the Type dimension to be the domain of your new Adjustable Type attribute.

See *Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) Installation*

and Configuration Guide and Oracle Financial Services Analytical Applications Data Model Data Dictionary for additional information on which Simple Dimensions you may extend or modify and on how to add your own Simple Dimensions to the data model.

Overview of Attributes

OFSAA Infrastructure includes functionality for Adding, Viewing, Editing, or Deleting dimension attributes. Which of these functions you can access depends on your logon privilege and on the dimension with which you wish to work. For details, on the creation and maintenance of Dimension Attributes, see Chapter 5: OFSAA Attributes.

Attributes

The seeded OFSAA Key Processing Dimensions have a number of seeded or seeded & required attributes. For example, the Common Chart of Accounts dimension includes an Account Type attribute and an Accrual Basis attribute; the Financial Element dimension includes an Aggregation Method attribute. Some of these attributes have important implications in processing within OFSAA.

You may add Attributes to any Key Processing Dimension or to any Standard Dimension that supports Attributes (see sections above describing Key Processing Dimensions and Standard Dimensions).

One of the important properties of an Attribute is its Data Type. OFSAA Infrastructure supports Dimension Attribute Data Types of:

- Date, String, or Number
- Dimension

Unbounded & Bounded Attribute Data Types

Dimension attribute data types may be either bounded or unbounded. The Date, String, and Number type are unbounded, i.e., there is no predetermined set of attribute values. A Date attribute value may be any valid date, a String attribute value may be any string up to 30 characters in length, and a Number attribute value may be any number.

Examples of these kinds of attribute data types might include:

- Cost Center Open Date (a Date attribute on the Organizational Unit dimension)
- Product Memo (a String attribute on the Product dimension)
- Cost Center Headcount (a Number attribute on the Organizational Unit dimension)

Unlike attributes having the Date, String, or Number data type, attributes whose data type is Dimension have defined sets of values. For example, the Product dimension has a seeded attribute called Accrual Basis the data type of which is Dimension. The Accrual Basis dimension is seeded with 8 values. Accrual Basis is a restricted dimension

(you may View Accrual Basis dimension members but you may delete them or add new accrual bases), but whenever you assign an Accrual Basis attribute value to one of your Product dimension member values, you must select from the list of 8 available Accrual Bases.

Overview of OFSAA Rules

OFS Analytical Application models are constructed using combinations of OFSAA rules. For example:

- An Allocation rule might utilize a Hierarchy Filter rule, an Expression rule, and a Static Table Driver rule
- A Transfer Pricing rule might utilize a Hierarchy rule, a Data Element Filter rule, and a Prepayment rule
- A Data Element Filter rule might utilize an Expression rule
- A Group Filter rule always incorporates one or more underlying Data Element Filter rules
- A Hierarchy Filter rules always utilize an underlying Hierarchy rule

The advantage of constructing models from discrete rule components is that individual rules may be re-used dozens or even hundreds of times. For example, if you wish to build a large series of allocation rules which operate on non-interest expense data in the Western region, you may build filters for (1) non-interest expense and (2) the Western region and then utilize these filters in every allocation rule. As another example, if you wanted to assign the same transfer pricing method and assumptions to all mortgage products, you could build a Hierarchy on the product dimension containing a Mortgage Products rollup point and assign your method and assumptions at the rollup level. You could subsequently utilize the same Hierarchy rule for allocation processing or reporting purposes.

Many rule types are specific to individual analytical applications (e.g., Transfer Pricing rules, Asset/Liability Management rules, Allocation rules, etc.) while OFSAA Infrastructure rules are shared across all OFS applications. Rule types that are shared across all applications include:

- Hierarchies
- Hierarchy Filters
- Data Element Filters
- Group Filters
- Expressions

Dimensions, dimension members, attributes, and currency exchange rates are also shared across all applications.

Dependencies

OFSAA rules often depend on other rules for some or all of their data or usefulness. For example, an Allocation rule may depend on a Data Element Filter rule to select and focus data in a meaningful way. If that Data Element Filter is deleted, then the Allocation rule becomes unusable. OFSAA applications track such dependencies and ensure that users may not delete rules that are consumed by other rules. Additionally, rule summary screens that present lists of rules that you have defined, offer functionality for you to generate reports on rule interdependency.

OFSAA Filters

OFSAA Infrastructure supports three kinds of filtering:

- Data Element Filters
- Group Filters
- Hierarchy Filters

Data Element Filters

Data Element Filters are used to select and focus data. For example, you may transfer price some financial instruments at their source and may therefore wish to ensure that you do not overwrite the transfer rates for any instruments that already have a non-zero transfer rate. In such a case, you could construct a Data Element Filter to isolate only those instruments having a non-zero transfer rate. As another example, you may wish to allocate a charge to demand deposit accounts having small balances. In this case, you could construct a Data Element Filter to focus on just those instrument records having balances less than your chosen threshold.

Group Filters

Group Filters are used to join together one or more Data Element Filters. For example, if you built one Data Element Filter that focused on balances less than 10,000 and a second Data Element Filter that focused on accounts whose origination date was prior to 2009, a Group Filter built on the two Data Element Filters would focus on accounts with balances less than 10,000 AND whose origination dates were prior to 2009.

Hierarchy Filters

Hierarchy Filters allow you to focus on data that rolls up to one or more points within a chosen hierarchy. You may also focus on "leaf" level data or a combination of "leaf" level and rollup levels. For example, if your organization had a Western, Northern, Southern,

and Eastern division, you could construct a Hierarchy Filter that focused on data belonging to branch 1, 2, or 7 within the Eastern division plus any data belonging to the Northern division.

OFSAA Expressions

Expressions represent formulas for combining data from your data model (e.g., Column A divided by Column B times Column C). The results of Expressions may be invoked within a number of OFSAA rule types (e.g., Data Element Filters, Allocation rules, etc). For details on building and maintaining Expressions, see Chapter 9: Expressions.

Folders

One of the fundamental properties of any OFSAA rule is the Folder in which it is stored. Your System Administrator will configure your user ID to have access to one or more folders in which you can store your rules. Your access rights will likely be similar to co-workers who have a similar business role. For details on security management and defining Segment Maintenance in OFSAA, see *Oracle Financial Services Analytical Applications Infrastructure User Guide*.

Storing rules in folders gives you the means to segregate your rules for functional or security considerations. For example, you may wish to:

- Set up folders to store Transfer Pricing rules that are separate from folders you have built for Profitability Management rules and that are also separate from folders you have built for Asset/Liability Management rules
- Establish some folders for rules you are in the process of developing and testing and other folders for fully tested, production ready rules
- Segregate some rules that are fundamental to the definition of other rules (e.g., some Data Element Filters may be used in dozens or hundreds of other rules) in order to ensure that access to those fundamental rules is highly controlled
- Segregate your hierarchies, which are also frequently fundamental to OFSAA models, into a restricted-access folder

Visibility of Rules

Every navigation path to view a rule in OFSAA begins with a Summary screen. Within the Summary screen for each rule type, a user may browse through all of the rules that are stored within Folders to which the user has access. From each Summary screen, users may be granted the ability to Add, Edit, View, or Delete rules.

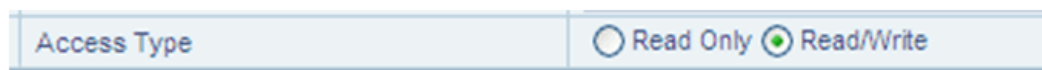
When building rules in an OFS Analytical Application, you frequently call upon other OFSAA rules (e.g., a Data Element Filter nested within an Allocation rule or a Hierarchy utilized within a Transfer Pricing rule). When nesting a child rule within a parent rule

you must specify the child rule by its Name and Folder (where both Name and Folder are presented in drop-down list boxes). In this context, the Folder drop-down list box for every user will include every Folder in the Information Domain regardless of his Folder access rights. This means that a user may invoke a child rule from any Folder even if he cannot access that child rule directly through its Summary screen.

Additionally, whenever a user nests a parent rule within a child rule, the OFSAA user interface provides the user the ability to view a read-only version of the underlying child rule.

Access Type

Another fundamental property of every OFSAA rule is its Access Type.



Access Type may be set to either Read/Write or Read Only. Only the "creator" or "owner" of a rule may modify the rule if it is set to Read Only. The user ID under which a rule is initially built is the owner of a rule. You may modify a rule that you do not own provided that:

- The rule has been stored with the Read/Write access type
- You have been granted Edit privilege for the rule's type
- You have been granted access to the Folder in which the rule is stored

Again, for details on security management in OFSAA, see *Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) Installation and Configuration Guide*.

Global Preferences

Clicking Global Preferences invokes the Global Preferences screen. Global Preferences items are used to configure your user interface. Here, you set your default application language and date format, and your desired Pagination Records. Pagination Records determine how many rows will be displayed on summary screens. If you select Pagination Records to be 25 records, then any screen displaying results in a tabular format will display a maximum of 25 records. To see the next set of 25 records, you would use the Next VCR button



Functional Currency and Signage are installation-time parameters that may not be reset in Global Preferences.

Functional Currency is defined as "the currency of the primary economic environment

in which an entity conducts its business". For details on signage, see the *Oracle Financial Services Analytical Applications Profitability Management (OFSPM) User Guide*.

Normally, you will set preferences for yourself, but if you are logged in as an Administrator, you may set Global Preferences for All Users. When setting preferences for All Users, you may restrict the ability of non-Administrators to change a Global Preference item by deselecting the "Is Editable" checkbox. If a preference item is defined as "not editable", a user who is not an Administrator will inherit the value of the preference item that his Administrator has set for him and he will not have the ability to change it for himself.

Property Name	Property Value	Is Editable
Default Application Language	US-English	<input checked="" type="checkbox"/>
Date Format	M/d/yyyy	<input checked="" type="checkbox"/>
Pagination Records	25	<input checked="" type="checkbox"/>

Property Name	Property Value
Functional Currency	US Dollar
Signage	Natural Signage

Application Preferences

In addition to Global Preferences, page 2-13, each of the OFS Analytical Applications has its own local application preferences. In the same way as in Global Preferences, Application Preferences (for each application) employs a "delegation" model that allows Administrators to set some preference items for all users while allowing non-administrative users to personalize other preference items.

Normally, you will set Application Preferences for yourself, but if you are logged in as an Administrator, you may set Application Preferences for all users of an application. When setting preferences for all users, you may restrict the ability of non-Administrators to change an Application Preference item by deselecting the "Is Editable" checkbox. If a preference item for a non-administrative user is defined as "not editable", a user who is not an Administrator will inherit the value of the preference item that his Administrator has set for him and he will not have the ability to change it

for himself.

Global Preferences

^ Select Preferences For

Show Preferences For: **ALL USERS**

^ **Display**

Property Name	Property Value	Is Editable
Default Application Language	US-English	<input checked="" type="checkbox"/>
Date Format	yy/MM/dd	<input checked="" type="checkbox"/>
Pagination Records	20	<input checked="" type="checkbox"/>

^ **Ledger**

Property Name	Property Value
Functional Currency	US Dollar
Signage	Natural Signage

Application Preferences

^ Select Preferences For

Show Preferences For: **ALL USER**

Active for Master Maintenance:

^ **Processing - General**

Property Name	Property Value	Is Editable
As of Date	11/26/09	<input checked="" type="checkbox"/>
Default Total Error Message Limit	250	<input checked="" type="checkbox"/>
Default Error Message Limit Per Item	25	<input checked="" type="checkbox"/>
Debugging Output Level	Do not output SQL to log file	<input checked="" type="checkbox"/>

^ **Processing - Application Specific**

Property Name	Property Value	Is Editable
Enforce Mass Undo	<input checked="" type="radio"/> Yes <input type="radio"/> No	<input checked="" type="checkbox"/>

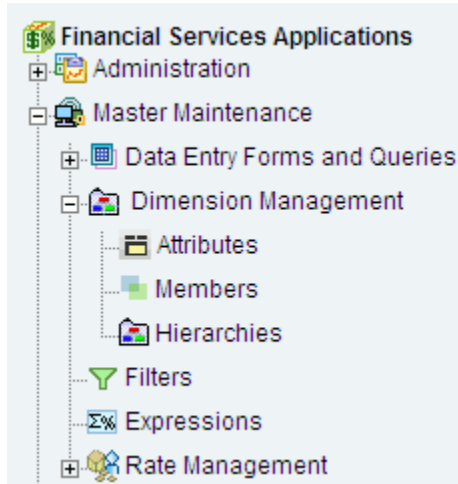
^ **Assumption Management Defaults**

Property Name	Property Value	Is Editable
Folder Name	SEGTEST	<input checked="" type="checkbox"/>
Access Type	<input type="radio"/> Read <input checked="" type="radio"/> Read/Write	<input checked="" type="checkbox"/>

While most Application Preferences items are unique to the application to which they belong, two properties are common to Application Preferences for each of the OFS Analytical Applications: Folder Name and Access Type.

^ Assumption Management Defaults		
Property Name	Property Value	Is Editable
Folder Name	GASEGR2	<input checked="" type="checkbox"/>
Access Type	<input type="radio"/> Read <input checked="" type="radio"/> Read/Write	<input checked="" type="checkbox"/>

Having the Folder Name and Access Type properties set at the application level allows you to have a different default Folder and Access Type for each OFS Analytical Application. Within the Left Hand Side or LHS menu, all OFSAA Infrastructure rules (Hierarchies, Filters, & Expressions) are maintained under Master Maintenance.



Since Folder and Access Type are not Global Preference items, a user must select one application's set of Application Preferences to be "Active" to govern the default values of Folder and Access Type for Oracle Financial Services Analytical Applications Infrastructure rules. This is done by selecting one of your Application Preference sets to be the one that is "Active for Master Maintenance".

OFSSA Administrative Reporting

Introduction

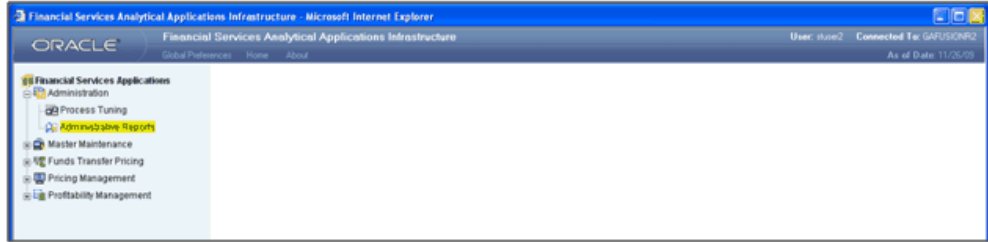
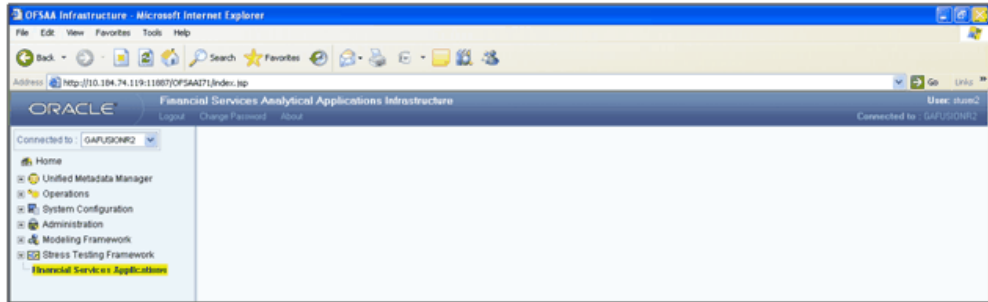
Administrative Reports provide reporting functionality for the Administrators of Oracle Financial Services Analytical Applications (OFSSA) to monitor, analyze, and correct data.

The System Administrator or users with Administrative privileges can view the Administrative Reports.

Logging in to the Administrative Reports

Procedure

1. Click, Financial Services Applications >Administration >Administrative Reports. Refer to the following screenshots.



2. The Administrative Reports - Admin Home section is displayed.

ORACLE Interactive Dashboards Admin Home Data Quality Object Registration Security

Welcome, Administrator Dashboards - Admins - View Products - Settings - Log Out

Admin Home

Instrument Name
LINK [X] Go

Data Quality

Record Counts over Time
Time run: 12/14/2009 6:10:27 PM

As Of Date: 31 Dec 2014

Data Stratification - Current Net Rate
Time run: 12/14/2009 6:43:01 PM

Current Net Rate Bucket	Current Book Balance	Record Count
2 - 4 - 8.000	1,000,000.00	1
Grand Total	1,000,000.00	1

Data Stratification - Current Book Balance
Time run: 12/14/2009 6:43:01 PM

Current Book Balance Bucket	Current Book Balance	Record Count
1 - 100001 - 1000000	1,000,000.00	1
Grand Total	1,000,000.00	1

Data Stratification - Origination Date
Time run: 12/14/2009 6:43:01 PM

Origination Date Bucket	Current Book Balance	Record Count
1 - 1000000000	1,000,000.00	1
Grand Total	1,000,000.00	1

Data Stratification - Maturity Date
Time run: 12/14/2009 6:43:01 PM

Maturity Date Bucket	Current Book Balance	Record Count
1 - 1000000000	1,000,000.00	1
Grand Total	1,000,000.00	1

Object Registration

Registered Objects Summary
Time run: 12/14/2009 6:10:27 PM

Classification	Classification Code	Classification Description	No of Registered Objects
Instrument	20	Sub-type for all instrument tables	21
Ledger Book	60	Ledger Book	1
Portfolio	100	Portfolio of instrument tables	6
M.S. Descriptors Reserved	197	M.S. Description table for Reserved Code values	6
Codes Reserved Base 90	198	Base table for Reserved Code values	11
TP Cash Flow	200	Classification to identify tables that qualify for TP Cash Flow methods	21
TP Non-Cash Flow	210	Classification to identify tables that qualify for TP Non-Cash Flow methods	21
Codes User Defined Base 90	204	Base table for User Defined Code columns	17
M.S. Descriptors User Defined	206	M.S. Description table for User Defined Code columns	19
Transaction Profitability	300	Classification to identify transaction summary tables that will be used for profitability	20
Instrument Profitability	310	Classification to identify instrument tables that will be used for profitability	20
TP Cash Costing	370	Transfer Pricing Option Costing processing	11
PA Lookup Tables	500	Lookup tables used in PA Lookup Table G	4
Break Funding	550	Break Funding instrument for TP	1
Derivative Instruments	600	Classification to identify derivative instruments	6

Security

User ID: BHARATH User Name: Bharath Go

User Privileges
Time run: 12/14/2009 6:43:01 PM

User Name	Group Name	Segment Name	Role Name	Function Name
Bharath	POADMIN	DEMOSES		ITL Analyst Data Quality Admin Designer User ODS Fusion Add Attributes Fusion Add Hierarchies Fusion Add Members Fusion Attribute Home Page Fusion Attributes - View Dependent Data Fusion Query Attributes

Records 1 - 10

Interactive Dashboards in Administrative Reports

In the Administrative Reports window, there are four dashboard links:

- Admin Home
- Data Quality
- Object Registration

- Security

Admin Home

The Admin Home section is displayed by default when you login. If you are in any other section, click the Admin Home link in the top of the Administrative Reports header, to go to the Admin Home section. Admin Home displays the summary of reports from the other three links.

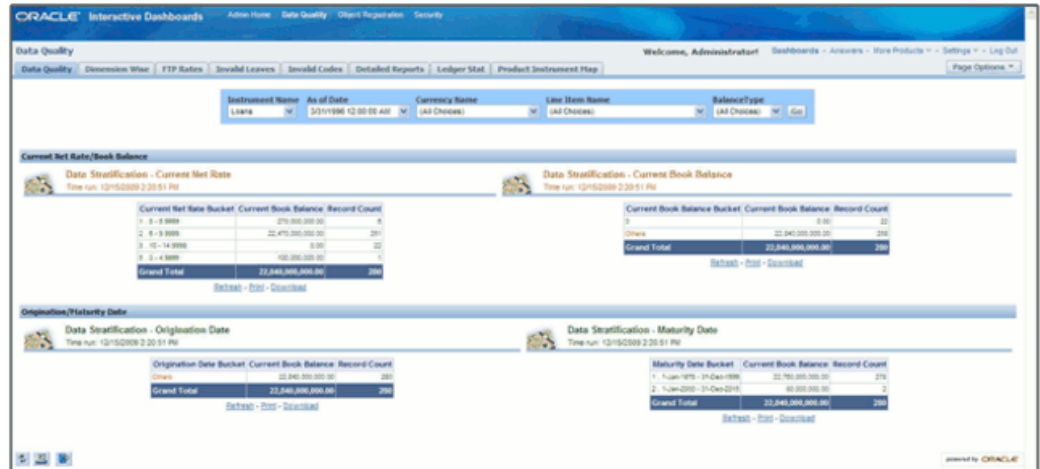
Access Permissions

Following are the steps to access permissions to include Defi Forms for the Admin BI Buckets entries.

1. Login to the Oracle Financial Services Analytical Applications Infrastructure
2. Click the Operations > Financial Services Applications
3. Go to > Master Maintenance > Data Entry Forms and Queries > Forms Designer
4. Click the Assign Rights Radio button
5. Select Admin BI in the Available Applications drop down box
6. Select the 4 UI forms (one at a time) in the Available Forms drop down box (For example, Bucket definition of Book Balance)
7. Click Next
8. Select the users from the Available User List
9. Select the relevant check boxes from View, Add, Edit, Delete, and All above.
10. Click Save Access Rights. You will get the message that user is mapped successfully.
11. Click Back to Forms Designer.
12. Repeat the steps 4 to 11 for other 3 forms (Bucket Definition Maturity Date, Bucket Definition net Rate, Bucket Definition Origination Date)

Data Quality

To go to the Data Quality reports, click Data Quality link at the top of the Administrative Reports. The following window is displayed.



The Data Quality reports help you to validate the quality of the underlying fact data. By going through the reports, you can identify data discrepancies, missing data, incorrect data, and so on and then undertake the necessary steps to rectify any issues. These data reports can be customized to fit your needs by defining suitable bucket range values as described above.

The four data buckets available are:

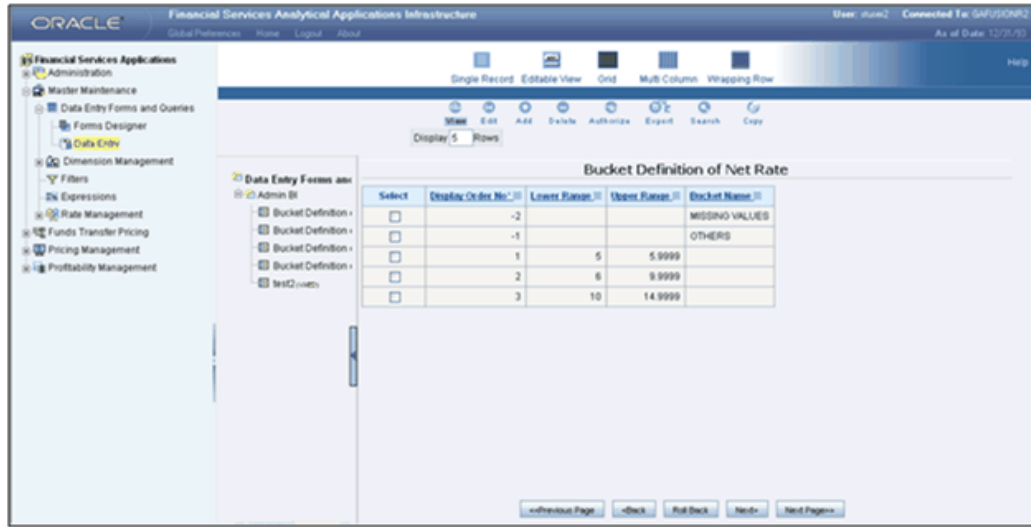
- Book Balance Bucket Definition
- Maturity Date Bucket Definition
- Net Rate Bucket Definition
- Origination Date Bucket Definition

These values can be defined in the following section:

Financial Services Applications > Master Maintenance > Data Entry Forms and Queries > Data Entry.

Refer the following screenshot.

- The seeded values are Display Order No => -1 and -2. You should not delete or edit these seeded values.
- Make sure there is no row with 'Display order No.' column with value 0 (zero). In case of AIX environment, display order No. might be generated with '0' (zero value). Delete this row using 'Delete option'.



Data Quality Dashboard

Data Quality Dashboard page contains eight tabs.

Data Quality Tab


This section contains a prompt to filter the data based on the value selected from the dropdown box.

You can select a value from the drop down list. Based on the selected values, the data is filtered.


There are four reports in this window.

1. Data Stratification - Current Net Rate

The current net rate details for each bucket range value of the Instruments are displayed here.


Current Net Rate/Book Balance		
 Data Stratification - Current Net Rate Time run: 12/11/2009 4:16:03 PM		
Current Net Rate Bucket	Current Book Balance	Record Count
1 . 5 - 5.9999	270,000,000.00	8
2 . 6 - 9.9999	22,470,000,000.00	251
3 . 10 - 14.9999	0.00	22
5 . 0 - 4.9999	100,000,000.00	1
Grand Total	22,840,000,000.00	280
Refresh - Print - Download		

To view a detailed report, click the bucket range for which you need the detailed report. The detailed report for the selected bucket range is displayed.

Data Quality										
 Detailed Report - Current Net Rate Time run: 12/11/2009 4:20:36 PM										
ID Number	Identity Code	Account Number	Product ID	Org unit ID	GL Account ID	Common COA ID	Origination Date	Maturity Date	Cur Net Rate	Current Book Balance
10033	19980331	L-1000000032	135	1	300120	30012	31-Mar-1996	01-Apr-1996	4.5000	100,000,000.00
Grand Total										100,000,000.00
Return - Refresh - Print - Download										

2. Data Stratification - Current Book Balance

The current book balance details for each bucket range value for the Instruments are displayed here.

Data Stratification - Current Book Balance		
 Time run: 12/15/2009 4:05:46 PM		
Current Book Balance Bucket	Current Book Balance	Record Count
1 . 101 - 1000	6,499.00	7
2 . 1001 - 10000	22,146.00	5
3 . 10001 - 100000	4,769,629.00	91
4 . 100001 - 1000000	332,594,117.00	660
Others	80,772,827,473.00	1619
Grand Total	89,110,218,864.00	2372
Refresh - Print - Download		

To view a detailed report, click the bucket range for which you need the detailed report. The detailed report for the selected bucket range is displayed.

Data Quality
Detailed Report - Current Book Balance
 Time run: 12/11/2009 4:36:27 PM

ID Number	Identity Code	Account Number	Product ID	Org unit ID	GL Account ID	Common COA ID	Origination Date	Maturity Date	Cur Net Rate	Current Book Balance
10033	19900331	L-1000000032	135	1	300120	30012	31-Mar-1996	01-Apr-1996	4.5000	100,000,000.00
10059	19900331	L-22	135	0	14710	3002	31-Aug-1993	31-Aug-1998	5.0000	50,000,000.00
10302	19900331	L-7	135	0	14710	3001	31-Aug-1993	31-Aug-1998	5.0000	40,000,000.00
10058	19900331	L-21	135	0	14710	3002	31-Jul-1993	31-Jul-1998	5.5000	50,000,000.00
10090	19900331	L-23	135	0	14710	3002	30-Sep-1993	30-Sep-1998	5.5000	50,000,000.00
10301	19900331	L-6	135	0	14710	3001	31-Jul-1993	31-Jul-1998	5.5000	40,000,000.00
10303	19900331	L-8	135	0	14710	3001	30-Sep-1993	30-Sep-1998	5.5000	40,000,000.00
10019	19900331	L-9	135	0	14710	3001	31-Oct-1993	31-Oct-1998	5.0000	40,000,000.00
10067	19900331	L-20	135	0	14710	3002	30-Jun-1993	30-Jun-1998	5.0000	45,000,000.00
10061	19900331	L-24	135	0	14710	3002	31-Oct-1993	31-Oct-1998	5.0000	55,000,000.00
10283	19900331	L-5	135	0	14710	3001	30-Jun-1993	30-Jun-1998	5.0000	40,000,000.00
10017	19900331	L-10	135	0	14710	3001	30-Nov-1993	30-Nov-1998	5.5000	40,000,000.00
10055	19900331	L-19	135	0	14710	3002	30-May-1993	31-May-1998	5.5000	45,000,000.00
10062	19900331	L-25	135	0	14710	3002	30-Nov-1993	30-Nov-1998	5.5000	55,000,000.00
10068	19900331	L-4	135	0	14710	3001	30-May-1993	31-May-1998	5.5000	40,000,000.00

Return - Refresh - Print - Download
 Records 1 - 15

3. Data Stratification - Origination Date

The origination date details for each bucket range value for the Instruments are displayed here.

Origination/Maturity Date
Data Stratification - Origination Date
 Time run: 12/11/2009 4:16:03 PM

Origination Date Bucket	Current Book Balance	Record Count
Others	22,840,000,000.00	280
Grand Total	22,840,000,000.00	280

Refresh - Print - Download

To view a detailed report, click the bucket range for which you need the detailed report. The detailed report for the selected bucket range is displayed.

Data Quality
Detailed Report - Origination Date
 Time run: 12/11/2009 4:39:25 PM

ID Number	Identity Code	Account Number	Product ID	Org unit ID	GL Account ID	Common COA ID	Origination Date	Maturity Date	Current Book Balance
10016	19900331	L-1	135	0	14710	3001	31-Mar-1993	31-Mar-1998	40,000,000.00
10017	19900331	L-10	135	0	14710	3001	30-Nov-1993	30-Nov-1998	40,000,000.00
10018	19900331	L-11	135	0	14710	3001	31-Dec-1993	31-Dec-1998	40,000,000.00
10019	19900331	L-9	135	0	14710	3001	31-Oct-1993	31-Oct-1998	40,000,000.00
10028	19900331	L-3	135	0	14710	3001	30-Apr-1993	30-Apr-2003	40,000,000.00
10029	19900331	L-1000000002	135	1	14710	700000002	31-Jan-1996	31-Jan-1999	100,000,000.00
10030	19900331	L-1000000018	135	1	14710	100000009	31-Jan-1996	31-Jan-1997	100,000,000.00
10031	19900331	L-1000000019	135	1	14710	100000009	31-Jan-1996	31-Jan-1997	100,000,000.00
10032	19900331	L-1000000020	135	1	14710	100000009	01-Apr-1996	31-Jan-1997	100,000,000.00
10033	19900331	L-1000000032	135	1	300120	30012	31-Mar-1996	01-Apr-1996	100,000,000.00
10034	19900331	L-1000000066	135	1	14710	800017	31-Jan-1996	31-Jan-1997	100,000,000.00
10035	19900331	L-1000000067	135	1	14710	800037	31-Jan-1996	31-Jan-1997	100,000,000.00
10036	19900331	L-1000000068	135	1	14710	800038	31-Jan-1996	31-Jan-1997	100,000,000.00
10037	19900331	L-1000000069	135	1	14710	100020	31-Jan-1996	31-Jan-1997	100,000,000.00
10038	19900331	L-1000000070	135	1	14710	100021	31-Jan-1996	31-Jan-1997	100,000,000.00

Return - Refresh - Print - Download

4. Data Stratification - Maturity Date

The Maturity Date details for each bucket range value for the Instruments are displayed here.

Data Stratification - Maturity Date
 Time run: 12/11/2009 4:44:38 PM

Maturity Date Bucket	Current Book Balance	Record Count
1 . 1-Jan-1978 - 31-Dec-1999	22,760,000,000.00	278
2 . 1-Jan-2000 - 31-Dec-2015	80,000,000.00	2
Grand Total	22,840,000,000.00	280

Refresh - Print - Download

To view a detailed report, click the bucket range for which you need the detailed report. The detailed report for the selected bucket range is displayed.

Data Quality
Detailed Report - Maturity Date
 Time run: 12/11/2009 4:48:48 PM

ID Number	Identity Code	Account Number	Product ID	Org unit ID	GL Account ID	Common COA ID	Origination Date	Maturity Date	Current Book Balance
10028	19900331	L-3	135	0	14710	3001	30-Apr-1993	30-Apr-2003	40,000,000.00
10054	19900331	L-18	135	0	14710	3002	30-Apr-1993	30-Apr-2003	40,000,000.00
Grand Total									80,000,000.00

Return - Refresh - Print - Download

Dimension Wise

You can select the values to filter the data by selecting the values from the top drop down list. The following four reports are displayed here:

- Amortization Type / Adjust Type/ Reprice Freq

- Payment Frequency/ Remaining Payments
- Product
- General Ledger Account

The screenshot displays the Oracle Financial Services Analytical Applications Infrastructure interface. At the top, there are navigation tabs for 'Data Quality', 'Dimension View', 'FTP Rates', 'Invalid Leaves', 'Invalid Codes', 'Detailed Reports', 'Ledger Stat', and 'Product Instrument Flag'. Below these, there are filters for 'Instrument Name' (Loans), 'As of Date' (3/21/2009 12:00:00 AM), 'Currency Name' (All Choices), 'Line Item Name' (All Choices), and 'Balance Type' (All Choices). The main content area is divided into three sections:

- Amortization Type / Prepayment Frequency:** A table showing line items for 'Certificate of Deposits' with columns for 'Line Item', 'Asset Type Code', 'Adj Type Code', 'Reprice Freq', 'Current Book Balance', and 'Record Count'.
- Payment Frequency / Remaining Payments:** A table showing payment details with columns for 'Payment Multiplier', 'Payment Term', 'Remaining Payments', 'Current Book Balance', and 'Record Count'.
- Line Items / Natural Account:** Two summary tables. The 'Line Items' table shows a total of 280 records with a current book balance of 22,840,000,000.00. The 'Natural Account' table lists various 'TL Leaf' accounts with their respective balances and record counts.

FTP Rates

You can filter the data by selecting the values from the drop down list. The Transfer Pricing Stratification Reports show a summary of the FTP results for all instrument tables.

FTP Rate Detail					
Transfer Pricing Stratification Report for All Products					
Time run: 12/11/2009 4:15:47 PM					
Product Name	Record Count	Avg Balance	WAvg Transfer Rate	WAvg Note Rate	WAvg Gross Spread
Certificate of Deposits	280	1,200,000,000.00	0.0000%	8.9000%	0.0000%

[Refresh](#) - [Print](#) - [Download](#)

You can click on the product name to go to the account level - detail report as shown in the following screenshot.

Data Quality Welcome, Administrator! [Dashboards](#) - [Answers](#) - [More](#)

Transfer Pricing Stratification Report for All Products-Detailed
Time rpt. 12/11/2009 5:05:13 PM

Product Name	ID Number	Identity Code	Account Number	Product ID	Org unit ID	Common COA ID	GL Account ID	Origination Date	Maturity Date	Avg Balance	WAvg Transfer Rate	WAvg Note Rate	WAvg Gross Spread
	10016	19960331	L-1	135	0	3001	14710	31-Jan-1993	31-Jan-1996	40,000,000.00	0.0000%	8.0000%	0.0000%
	10017	19960331	L-10	135	0	3001	14710	30-Nov-1993	30-Nov-1996	40,000,000.00	0.0000%	8.0000%	0.0000%
	10018	19960331	L-11	135	0	3001	14710	31-Dec-1993	31-Dec-1996	40,000,000.00	0.0000%	7.0000%	0.0000%
	10019	19960331	L-8	135	0	3001	14710	31-Oct-1993	31-Oct-1996	40,000,000.00	0.0000%	8.0000%	0.0000%
	10020	19960331	L-3	135	0	3001	14710	30-Apr-1993	30-Apr-2003	40,000,000.00	0.0000%	7.0000%	0.0000%
	10029	19960331	L-1000000002	135	1	70000002	14710	31-Jan-1996	31-Jan-1999	0.00	0.0000%	0.0000%	0.0000%
	10030	19960331	L-1000000018	135	1	10000009	14710	31-Jan-1996	31-Jan-1997	0.00	0.0000%	0.0000%	0.0000%
	10031	19960331	L-1000000019	135	1	10000009	14710	31-Jan-1996	31-Jan-1997	0.00	0.0000%	0.0000%	0.0000%
	10032	19960331	L-1000000020	135	1	10000009	14710	01-Apr-1996	31-Jan-1997	0.00	0.0000%	0.0000%	0.0000%
	10033	19960331	L-1000000021	135	1	30012	30012	31-Jan-1996	01-Apr-1996	0.00	0.0000%	0.0000%	0.0000%
	10034	19960331	L-1000000025	135	1	820017	14710	31-Jan-1996	31-Jan-1997	0.00	0.0000%	0.0000%	0.0000%
	10035	19960331	L-1000000026	135	1	820017	14710	31-Jan-1996	31-Jan-1997	0.00	0.0000%	0.0000%	0.0000%
	10036	19960331	L-1000000028	135	1	820018	14710	31-Jan-1996	31-Jan-1997	0.00	0.0000%	0.0000%	0.0000%
	10037	19960331	L-1000000029	135	1	100020	14710	31-Jan-1996	31-Jan-1997	0.00	0.0000%	0.0000%	0.0000%
	10038	19960331	L-1000000070	135	1	100021	14710	31-Jan-1996	31-Jan-1997	0.00	0.0000%	0.0000%	0.0000%
	10039	19960331	L-1000000071	135	1	820001	14710	31-Jan-1996	31-Jan-1997	0.00	0.0000%	0.0000%	0.0000%
	10040	19960331	L-1000000072	135	1	820002	14710	31-Jan-1996	31-Jan-1997	0.00	0.0000%	0.0000%	0.0000%
	10041	19960331	L-1000000073	135	1	820003	14710	31-Jan-1996	31-Jan-1997	0.00	0.0000%	0.0000%	0.0000%
	10042	19960331	L-1000000074	135	1	820044	14710	31-Jan-1996	31-Jan-1997	0.00	0.0000%	0.0000%	0.0000%
	10043	19960331	L-1000000075	135	1	820045	14710	31-Jan-1996	31-Jan-1997	0.00	0.0000%	0.0000%	0.0000%
	10044	19960331	L-1000000076	135	1	820046	14710	31-Jan-1996	31-Jan-1997	0.00	0.0000%	0.0000%	0.0000%
	10045	19960331	L-1000000077	135	1	820004	14710	31-Jan-1996	31-Jan-1997	0.00	0.0000%	0.0000%	0.0000%
	10046	19960331	L-1000000078	135	1	820048	14710	31-Jan-1996	31-Jan-1997	0.00	0.0000%	0.0000%	0.0000%
	10047	19960331	L-114800184	135	1	820001	14710	31-Jan-1996	31-Jan-1997	0.00	0.0000%	0.0000%	0.0000%
	10048	19960331	L-12	135	0	3001	14710	31-Jan-1994	31-Jan-1999	40,000,000.00	0.0000%	7.0000%	0.0000%

Records 1 - 25
[Status](#) - [Refresh](#) - [Print](#) - [Download](#)

Invalid Leaves

Contains reports for invalid leaves based on the list of Dimension Members compared with the Instrument data. You can filter the data selecting the drop down list provided at the top. The following four reports are displayed here:

- Invalid Products
- Invalid Org Unit
- Invalid Common COA
- Invalid GL Account

Invalid Codes

Contains the reports for invalid Codes based on the dimensions compared with Instruments. You can filter the data selecting the drop down list provided at the top. The following seven reports are displayed here:

- Accrual Basis Code
- Amortization Code
- Adjustable Type Code
- Compound Basis Code
- Behaviour Type Code
- Behaviour Sub Type Code

- Net Margin Code

Detailed Reports

Contains the detailed report for a particular Instrument based on the selection in the drop down.

Identity Code	ID Number	Account Number	Product ID	Org unit ID	Common COA ID	GL Account ID	Origination Date	Maturity Date	Current Book Balance	Current Par Balance
	10016	L-1	136	0	3001	14710	31-Mar-1993	31-Mar-1996	45,000,000.00	45,000,000.00
	10017	L-10	136	0	3001	14710	30-Nov-1993	30-Nov-1996	45,000,000.00	45,000,000.00
	10018	L-11	136	0	3001	14710	31-Dec-1993	31-Dec-1996	45,000,000.00	45,000,000.00
	10019	L-8	136	0	3001	14710	31-Oct-1993	31-Oct-1996	45,000,000.00	45,000,000.00
	10020	L-3	136	0	3001	14710	30-Apr-1993	30-Apr-2003	45,000,000.00	45,000,000.00
	10029	L-1000000002	136	1	70000002	14710	31-Jan-1996	31-Jan-1999	100,000,000.00	100,000,000.00
	10030	L-1000000018	136	1	10000009	14710	31-Jan-1996	31-Jan-1997	100,000,000.00	100,000,000.00
19960331	10031	L-1000000019	136	1	10000009	14710	31-Mar-1996	31-Jan-1997	100,000,000.00	100,000,000.00
	10032	L-1000000020	136	1	10000009	14710	31-Apr-1996	31-Jan-1997	100,000,000.00	100,000,000.00
	10033	L-1000000032	136	1	30012	300120	31-Mar-1996	31-Apr-1996	100,000,000.00	100,000,000.00
	10034	L-1000000096	136	1	800017	14710	31-Jan-1996	31-Jan-1997	100,000,000.00	100,000,000.00
	10035	L-1000000097	136	1	800017	14710	31-Jan-1996	31-Jan-1997	100,000,000.00	100,000,000.00
	10036	L-1000000098	136	1	800018	14710	31-Jan-1996	31-Jan-1997	100,000,000.00	100,000,000.00
	10037	L-1000000099	136	1	100020	14710	31-Jan-1996	31-Jan-1997	100,000,000.00	100,000,000.00
	10038	L-1000000075	136	1	100021	14710	31-Jan-1996	31-Jan-1997	100,000,000.00	100,000,000.00

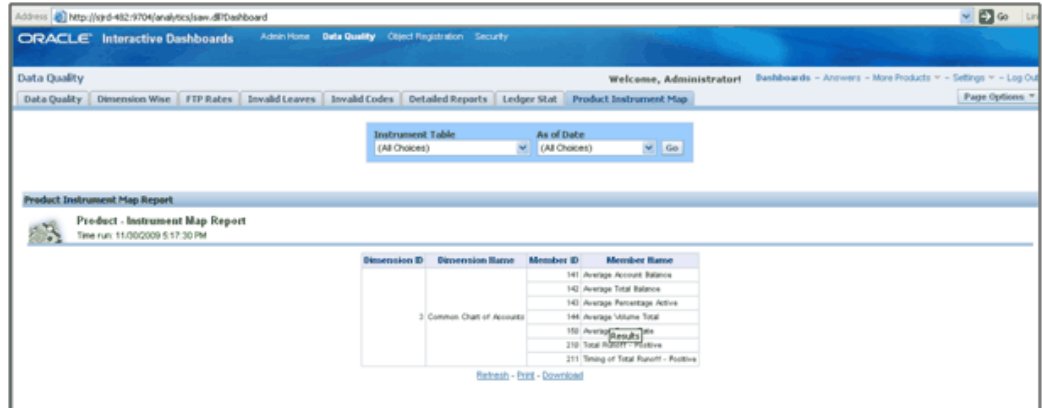
Ledger Stat

Contains the reports for missing dimension members compared with Ledger Stat data values. You can filter the data by selecting from the drop down list provided at the top. The following five reports are displayed here:

- Missing Products
- Missing Org Units
- Missing Common COA
- Missing GL Account
- Missing Financial Elements

Product Instrument Map

Contains the Product Instrument Map report. You can filter the data based the drop down selection. The Product Instrument Map data is used within both ALM and FTP Process rules. These processes allow users to select data to be included in the process based on a Product Hierarchy. The engines need to reference this data to determine which instrument tables to include in the process.



Object Registration

To go to the Object Registration reports, click Object Registration at the top of the Administrative Reports page. The details of the registered objects are present in the reports. You can obtain the data type of each object from this report. There are two tabs in this section.

1. Object Registration Tab

The details of the classification and number of registered objects are obtained here.

Classification	Classification Code	Classification Description	No of Registered Objects
Instrument	20	Super-type for all instrument tables	21
Ledger Stat	50	Ledger Stat	1
Portfolio	100	Portfolio of instrument tables	8
MLS Descriptions Reserved	197	MLS Description table for Reserved Code values.	8
Codes Reserved (base ID)	196	Base table for Reserved Code values.	11
TP Cash Flow	200	Classification to identify tables that qualify for TP Cash Flow methods.	21
TP Non-Cash Flow	210	Classification to identify tables that qualify for TP Non-Cash Flow methods.	21
Codes User Defined (base ID)	295	Base table for User Defined Code columns.	17
MLS Descriptions User Defined	296	MLS Description table for User Defined Code columns.	16
Transaction Profitability	300	Classification to identify transaction summary tables that will be used for profitability.	20
Instrument Profitability	310	Classification to identify instrument tables that will be used for profitability.	20
TP Option Costing	370	Transfer Pricing Option Costing processing.	11
FA Lookup Tables	500	Lookup tables used in FA Lookup Table ID	4
Break Funding	530	Break Funding instrument for TP	1
Derivative Instruments	600	Classification to identify derivative instruments	9

2. Detailed Report

You can click on any classification to navigate to the detailed registered objects report.

Registered Column Report
Time: 12/11/2009 4:27:01 PM

Attribute	Column Name	Physical Data Type	Logical Data Type	Data Length	Data Precision	Data Scale	Nullable	Column Order	Processing Key	Balance	Standard Rate	Transfer Price Out	Related Field
Account Age	ACCOUNT_AGE_CD	NUMBER	DEFAULT	22	20	0	Y	1	No	No	No	No	ACCOUNT_AGE_MULT_CD
Account Age Multiplier	ACCOUNT_AGE_MULT_CD	CHAR	TEXT	2	0	0	Y	2	No	No	No	No	ACCOUNT_AGE_CD
Account Age Offset	ACCOUNT_AGE_OFFSET	NUMBER	NUMBER	10	0	0	Y	3	Processing Key	No	No	No	
Account Base Date	ACCOUNT_BASE_CD	NUMBER	CODE	22	0	0	Y	4	No	No	No	No	
Account Type Code	ACCOUNT_TYPE_CD	CHAR	CODE	1	0	0	Y	5	No	No	No	No	
Adjustable Type Code	ADJUSTABLE_TYPE_CD	NUMBER	CODE	22	0	0	Y	6	No	No	No	No	

Lookup tables are used within OFSAA Profitability Management application. Lookup tables have to be created and registered within OFSAAI, in order to display them in Lookup Table Driver definition of OFSAA Profitability Management application. For more information on Lookup Table creation, see *Oracle Financial Services Analytical Applications Data Model Utilities User Guide*.

Security

The details about user privileges, group privileges, functions, and so on for the viewing of the objects are provided here.

The screenshot displays the Oracle Interactive Dashboards Security interface. It features four main sections: User Privileges, Group Privileges, Role Privileges, and Function Privileges. Each section includes a search bar with filters for User ID, User Name, and Segment Name, and a table listing the associated privileges. The User Privileges table shows columns for User Name, Group Name, Segment Name, Role Name, and Function Name. The Group Privileges table shows columns for Group Name, Role Name, Segment Name, Function Name, and User Name. The Role Privileges table shows columns for Role Name, Function Name, Segment Name, User Name, and Group Name. The Function Privileges table shows columns for Function Name, Role Name, Group Name, Segment Name, and User Name. The interface also includes navigation buttons like Refresh, Print, and Download, and a timestamp indicating the time run.

User Privileges

The details of a user and various associated privileges can be viewed in this report.

This screenshot provides a detailed view of the User Privileges for user 'AA'. The search filters are set to User ID: AA, User Name: (All Choices), and Segment Name: (All Choices). The table below lists the privileges for this user:

User Name	Group Name	Segment Name	Role Name	Function Name
Action Assessor	AAGRP	R0R5EQ2	Action Assessor	Access to user options link Action Identification All Close All Create All Request for Appro All Save Call Remote Web Services Close for document DOC_MNU Document Management Access

The interface includes navigation buttons (Refresh, Print, Download) and indicates 'Records 1 - 10'.

You can click the user name to obtain the detailed user report.

Security

 **Detailed User Report**
Time run: 11/30/2009 5:33:59 PM

User Name : Action Assessor

User ID	AA
User Name	Action Assessor
Created Date	05/25/2009 21:26:08 PM
Created By	RORADMIN
User Start Date	05/25/2009
Last Login Date	09/01/2009 12:33:09 PM
Last Modified By	RORADMIN
Last Modified Date	05/25/2009 21:26:08 PM
Authorize Status	Authorized
Email	snphani@identity.com

[Return](#) - [Refresh](#) - [Print](#) - [Download](#)

Group Privileges

The details of a user group and various associated privileges can be viewed in this report.

Group Privileges

Group Code: AAGRP | Group Name: (All Choices) | Segment Name: (All Choices) | Go

Group Privileges
Time run: 11/30/2009 5:29:06 PM

Group Name	Role Name	Segment Name	Function Name	User Name
AAGRP	Action Assessor	RORSEG2	Access to user options link	Action Assessor
			Action Identification	Action Assessor
			AI Close	Action Assessor
			AI Create	Action Assessor
			AI Request for Appro	Action Assessor
			AI Save	Action Assessor
			Call Remote Web Services	Action Assessor
			Close for document	Action Assessor
			DOC_MNU	Action Assessor
			Document Management Access	Action Assessor

Records 1 - 10
[Refresh](#) - [Print](#) - [Download](#)

You can click the group name to get the detailed group report.

Security

Detailed - Group
Time run: 11/30/2009 5:36:41 PM


Group Name : AAGRP

Group Code	AAGRP
Group Name	AAGRP
Group Desc	Action Assessor Group
Group Type	USER
Created Date	05/25/2009 21:26:38 PM
Created by	R0RADMIN
Last Modified Date	05/25/2009 21:26:38 PM
Last Modified By	R0RADMIN


[Return](#) - [Refresh](#) - [Print](#) - [Download](#)

Role Privileges

The details related to role privileges can be viewed in this report.

Role Privileges					
Role Code CWSADMIN		Role Name (All Choices)		Go	
 Role Privileges Time run: 12/11/2009 6:12:20 PM					
Role Name	Function Name	Segment Name	User Name	Group Name	
CWS Administrator	Call Remote Web Services	DEMOSEG	authdef	DEMOGRP	
			DEMOUSER	DEMOGRP	
			test11	DEMOGRP	
			varun1	VRNGRP	
			varun2	DEMOGRP	
			varun3	DEMOGRP	
			vicky	DEMOGRP	
		GASEGR2	authdef	DEMOGRP	
			DEMOUSER	DEMOGRP	
			stuser2	STGROUP	
			Records 1 - 10 Refresh - Print - Download		

You can click the role name to get the detailed role report.


Security	
 Detailed - Role Time run: 12/11/2009 6:27:09 PM	
Role Code	CWSADMIN
Role Name	CWS Administrator
Role Desc	CWS Administrator Role
Role Type	SYSADMN
Created Date	10/10/1956 00:00:00
Last Modified Date	10/10/1956 00:00:00
Created By	SYSADMN
Last Modified By	SYSADMN
Return - Refresh - Print - Download	

Function Privileges

The details related to function privileges can be viewed in this report.

Function Privileges

Function Code: ALSADD Function Name: (All Choices) Go

 **Function Privileges**
Time run: 12/11/2009 6:12:20 PM

Function Name	Role Name	Group Name	Segment Name	User Name
Add Alias	Business Analyst	DEMOGRP	DEMOSEG	authdef
				DEMOUSER
				test11
				varun2
				varun3
			vicky	
			GASEGR2	authdef
				DEMOUSER
				test11
				varun2

Records 1 - 10

[Refresh](#) - [Print](#) - [Download](#)

You can click the function name to get the detailed function report.

Security



Detailed - Function

Time run: 12/11/2009 6:32:37 PM

Function Name : Add Alias

Function Code	ALSADD
Function Name	Add Alias
Function Description	The user mapped to this function can add Alias
Function Type	SYS
Created Date	10/10/1958 00:00:00
Created By	SYSADMIN
Last Modified Date	10/10/1958 00:00:00
Last Modified By	SYSADMIN

[Return](#) - [Refresh](#) - [Print](#) - [Download](#)

Adhoc Reporting – Special Instructions

The following instructions need to be followed whenever you want to carry out the Adhoc Reporting or Adhoc Querying using the OBI Answers tool or any other querying or reporting tools.

In the OBI Answers tool, when you click the Answers link, you will find single subject area, Fusion. Here you can select the tables (folders) and columns related to the Object Registration, Data Quality and Security dashboards. These tables (folders) and columns can also be used for Adhoc Reporting or Adhoc Querying.

Since these tables belong to different functional areas, namely Object Registration, Data Quality and Security, relationships or table joins across functional areas are not supported for Adhoc Reporting. Therefore, during Adhoc Report or request creation you have to make sure that tables and columns selected are within the functional groups mentioned in the following section to get correct results.

Data Quality

You can use following folders (tables) and columns for Adhoc Querying on Data Quality related objects.

- Dim Stratification
- Dim Leaves
- Dim Invalid Codes
- Dim Ledger Stat
- Dim Product
- Dim Org Unit
- Dim Currency
- Dim General Ledger
- Dim Common COA
- Fact Stratification
- Fact Leaves
- Fact Invalid Codes

Object Registration

You can use following folder for Adhoc Querying on Object Registration related queries.

- Dim Classification

Security

You can use following folder for Adhoc Querying on Security related queries.

- Dim Security

OFSA Data Entry Forms and Queries

Introduction to Data Entry Forms and Queries

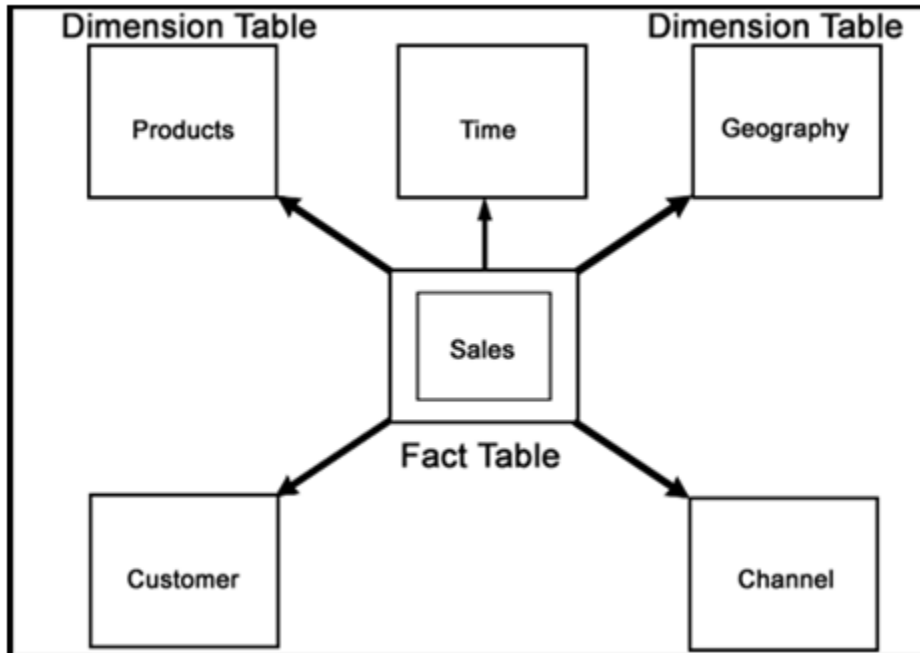
The Data entry Forms and Queries (DeFQ) module of DI is designed to create user-friendly Data Entry Screens with a choice of layouts, which aids easy data view and data manipulation. You can select tables based on which you can create forms that can be used in any Application.

Acronyms

The terminology used in this manual is:

Data Model - A logical map that represents the inherent properties of the data independent of software, hardware or machine performance considerations. The model shows data elements grouped into records, as well as the association around those records.

Star Schemas - It is the simplest of data warehouse schemas. This schema resembles a star diagram. While the center contains one or more fact tables the points (rays) contain the dimension tables. Refer the figure below.



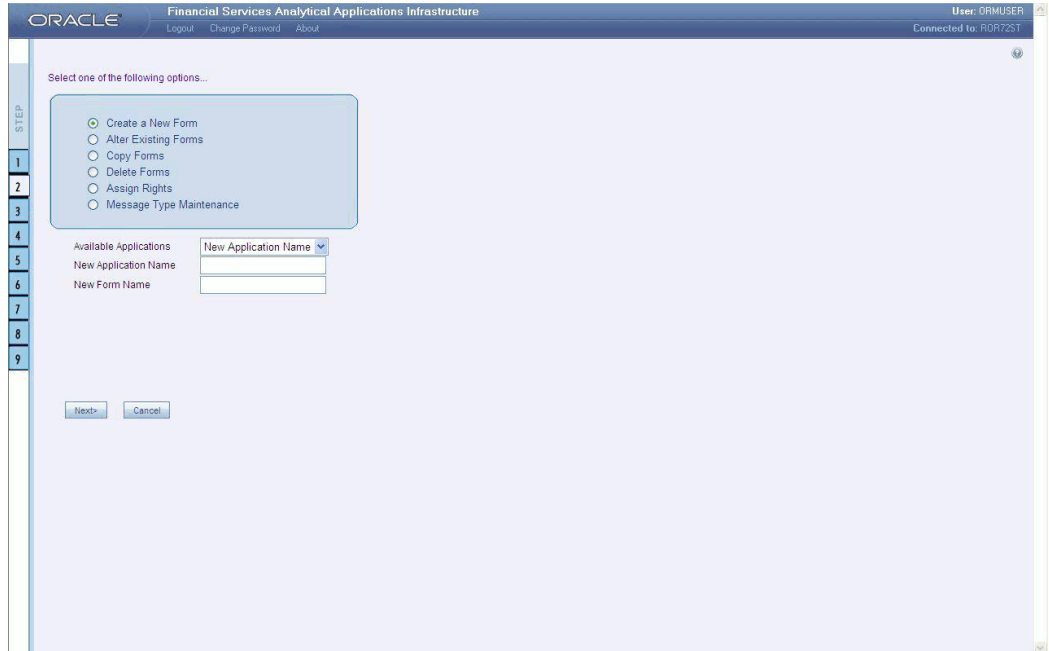
In a star schema, only one join is needed to establish the relationship between the fact table and any one of the dimension tables which optimizes queries as all the information about each level is stored in a row.

Designing Forms

The Data Entry Forms and Queries menu has three options, namely, **Form designer**, **Data Entry** and **Excel Upload** options.

To Design forms, click **Form Designer** to open the **Forms Designer Wizard** . In this screen, you can create, alter, copy or delete forms. **Create a new Form** is the default option that is chosen when you open the wizard. The various steps involved in the creation of the form are displayed in the left pane of the screen. You can also assign User Rights to already defined Forms.

The first screen of the Forms Designer wizard is displayed as Step 2, Step 1 being the login screen.



Creating a New Form

To design a new form you will have to first choose the **Create a New Form** option. On entering the screen this option will be selected by default.

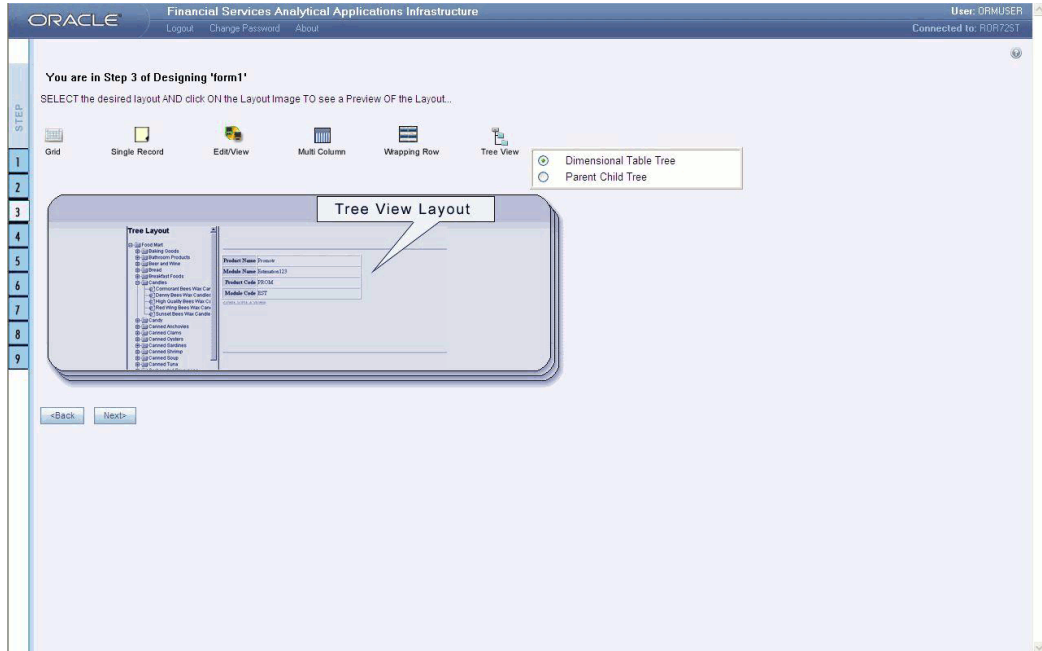
An Application refers to a group with a list of forms within it. The Available application field will contain the new application by default.

To create a new form, select **New Application** from the **Available Applications** drop-down list, click the field provided for **New Application Name** and enter an application name.

Enter a form name in the **New Form Name** field.

Note: To modify an existing form, select **Alter Existing Forms** option. Make your modifications and move to step 3.

Click **Next** to go to step 3. Click **Cancel** to reset the fields.

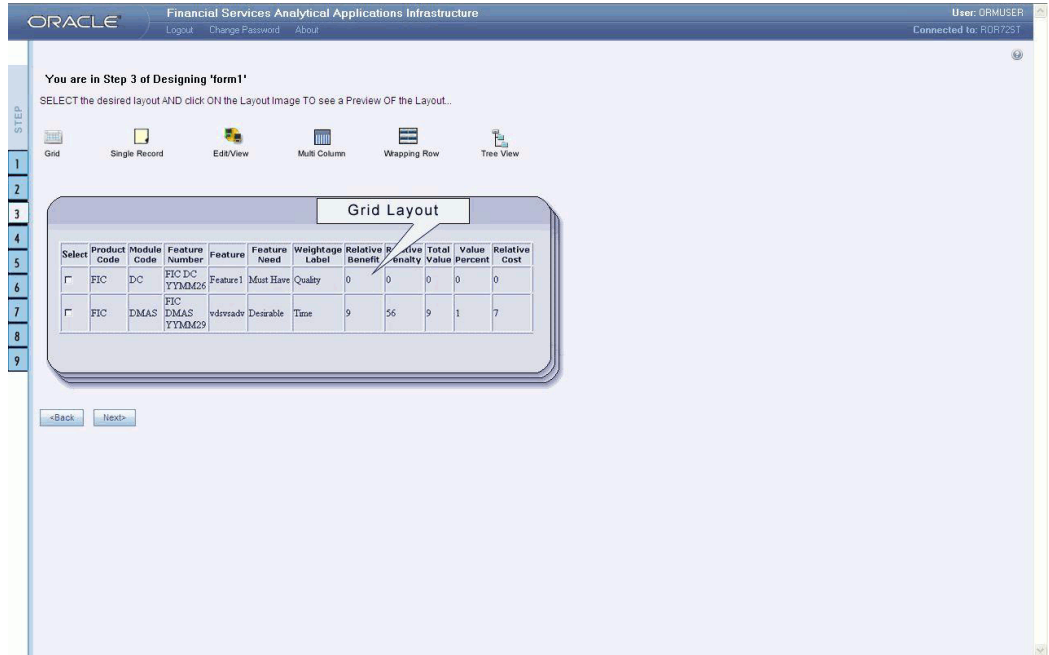


The Layout screen displays a range of pre-defined layouts for your form. The various layouts available are Grid, Single Record, Edit/View, Multi Column, Wrapping Row and Tree View.

To view the display of a layout, click any of the icons on the top of the screen. Click **Back** to go to the previous screen. Click **Next** to go to step 4. Click **Cancel** to refresh the choice of the selected layout.

The Grid Layout

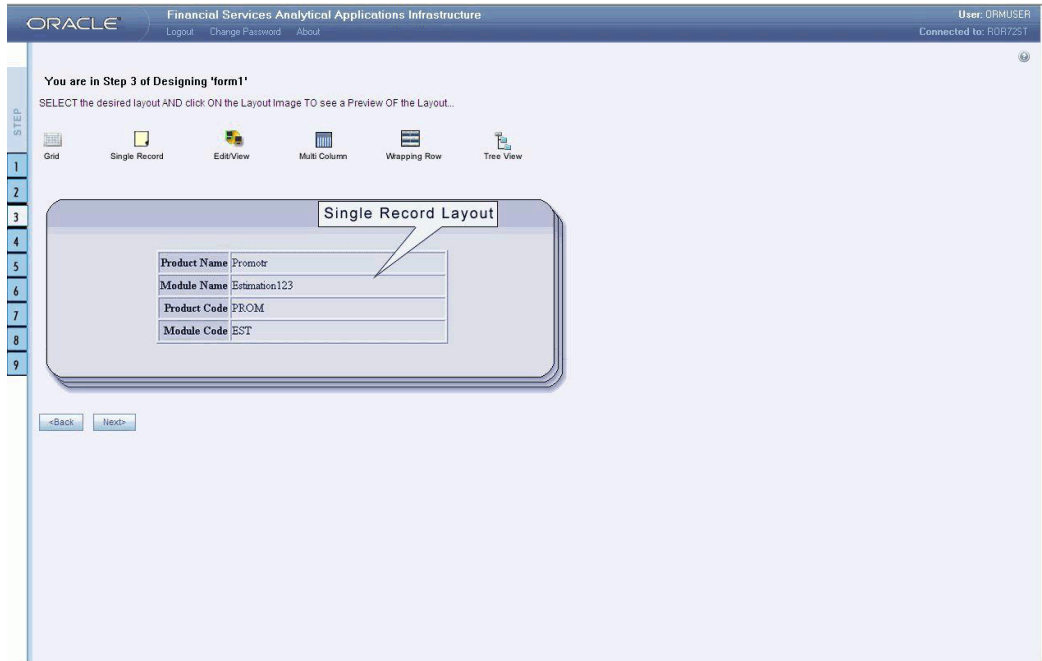
The **Grid Layout** is the default layout that is displayed. It will display the records in the form of a table/grid with multiple rows of data.



This layout can be used when you wish to view multiple records from a table at a time.

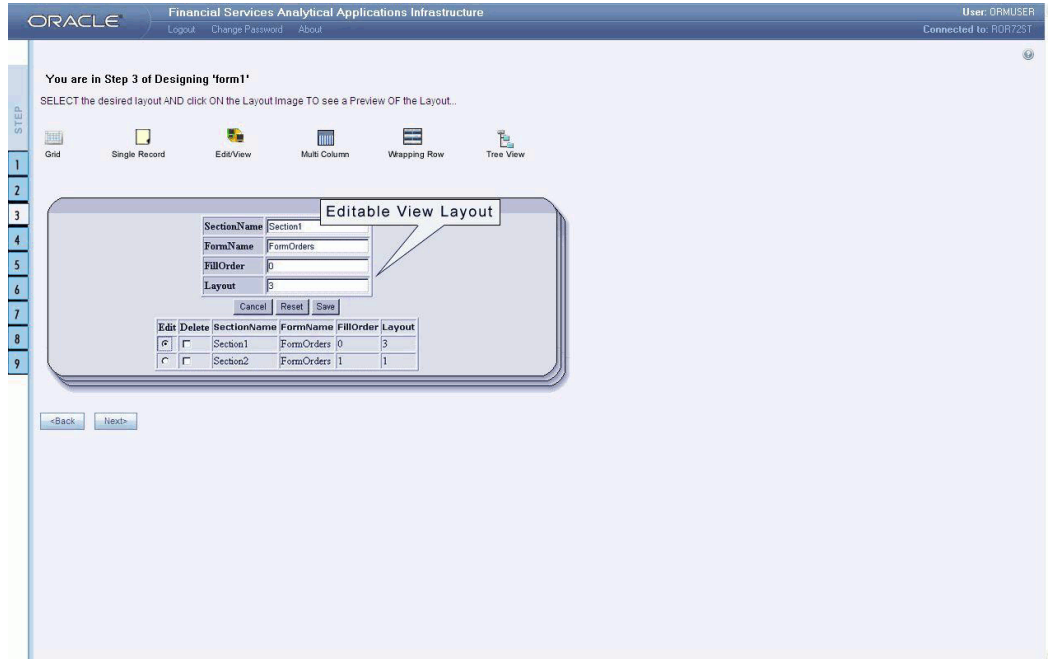
The Single Record Layout

The Single Record Layout displays a single record at a time.



The Edit/View Layout

The Edit/View Layout is a combination of the single record and grid layout.

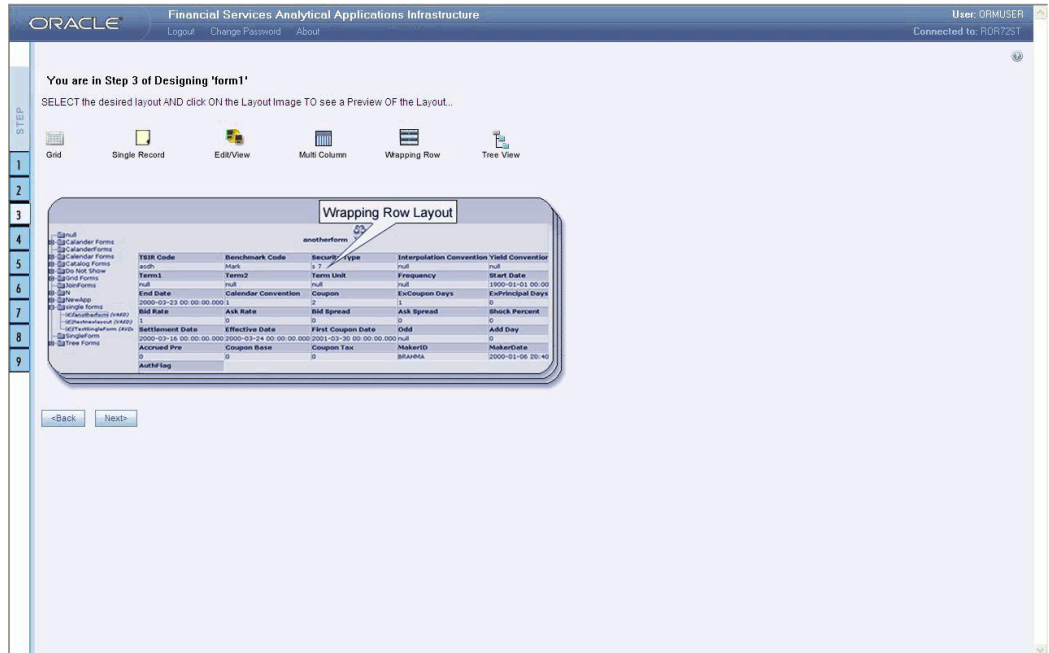


If you choose a record in the grid, that particular record will be displayed in the form, in a single record format, which is editable. By default the first record will be displayed in the editable grid.

Note: The display names of the columns are editable only during altering the created form.

The Multi Column Layout

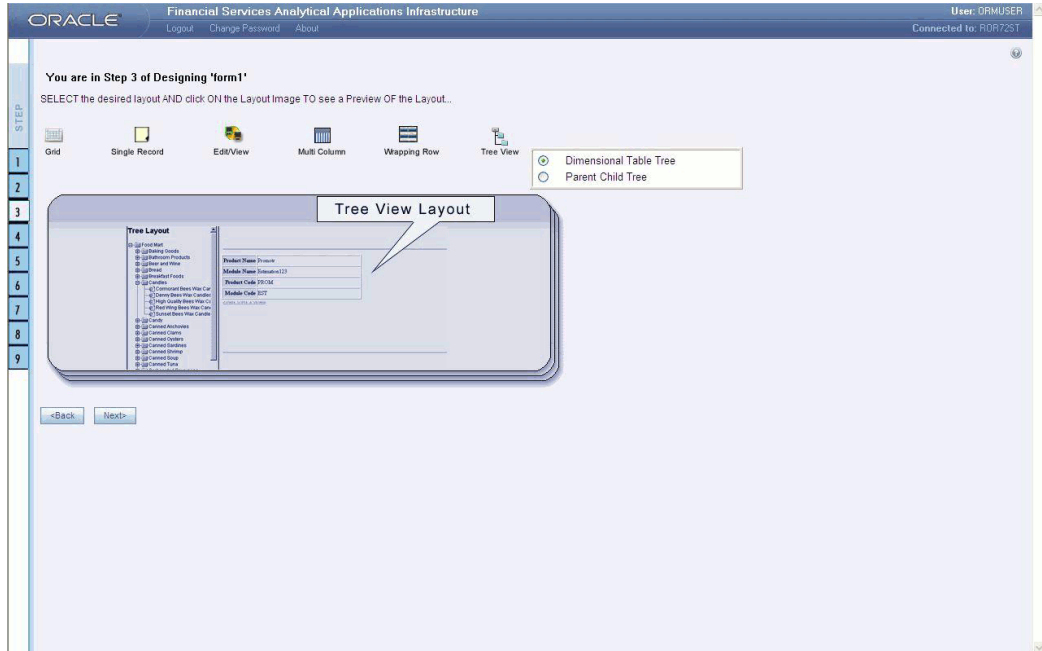
The **Multi Column Layout** displays a single record with its column in a grid format.



You can view a wrapping row layout form easily without having to scroll horizontally to view all the data.

The Tree View Layout

The Tree view layout represents the dimensional table. It presents the entire dimension tree with selected dimension details.

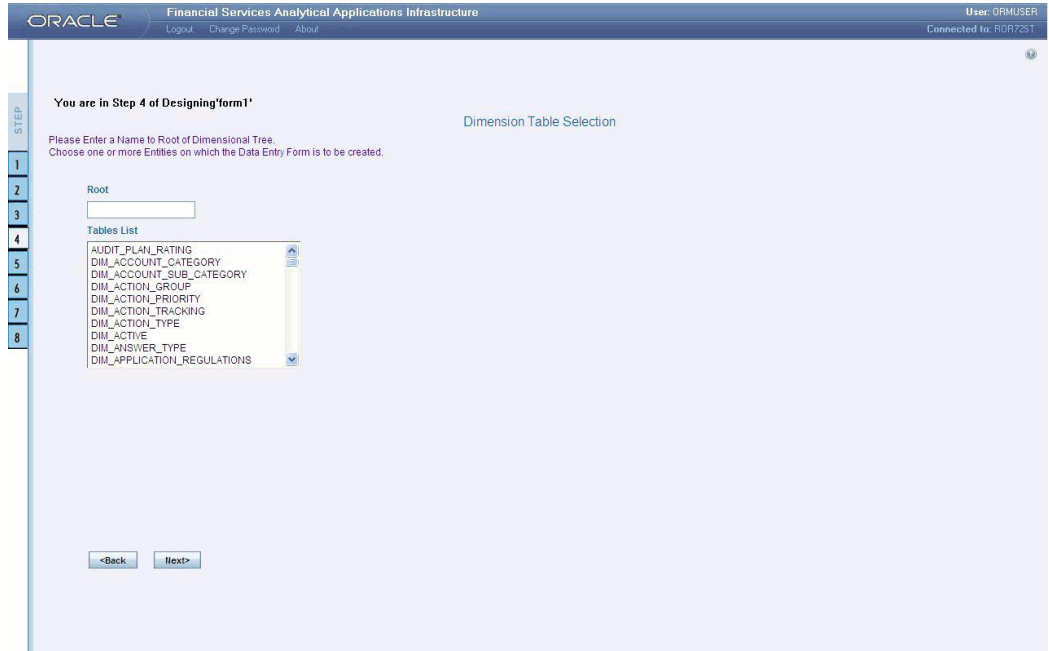


Click Back to go to the previous screen. Click Next to go to step 4. Click Cancel to reset the selected layout option.

For Grid, Single Record, Edit/View, Wrapping Row, Multicolumn and Tree View Layouts

The table screen displays the Tables List box with available tables. You can choose more than one table by pressing the CTRL key for nonadjacent selection or the SHIFT key for multiple adjacent selections.

However, it is necessary that the tables that you select have same data type for the two mapped fields.



Example

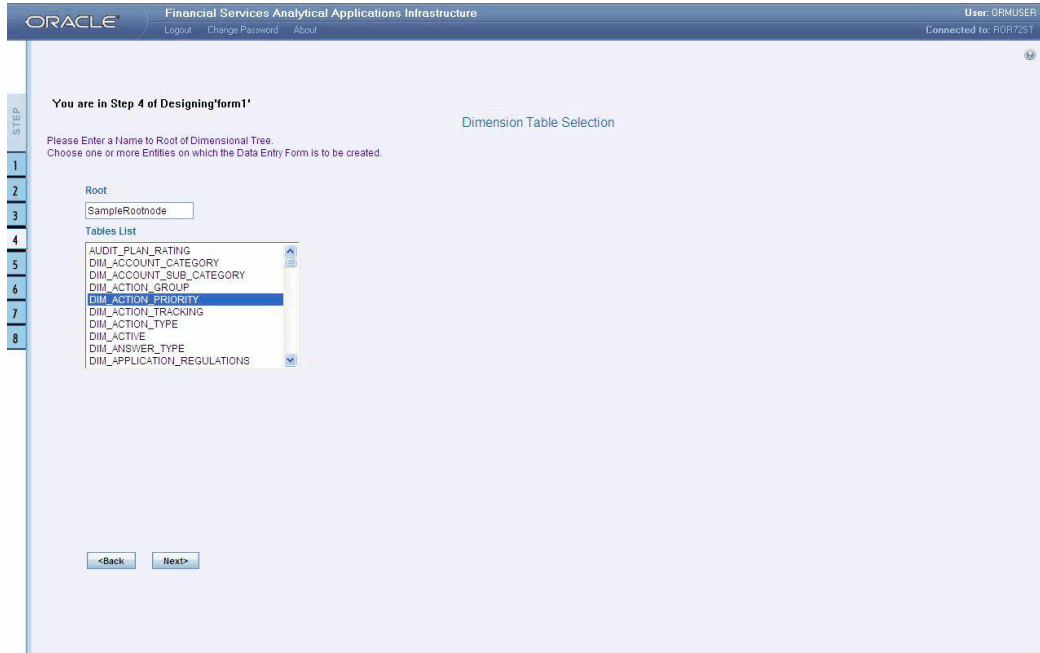
DIM_ACTION_GROUP

DIM_ACTION_PRIORITY

DIM_ACTION_TYPE

Click **Back** to go to the previous screen. Click Next to go to step 5. Click Cancel to refresh the table list.

If you have selected **Tree View layout** in the previous screen, the Table list screen will be as shown below.



Enter a root node name in the Root text box.

Example

Sample Rootnode

Choose a table that you want to be included in the form.

Example

DIM_ACTION_GROUP

Click Back to go to the previous screen. Click Next to go to the join tables screen.

Joining Tables

In the join table screen, you can select the fields to be joined.



Choose a table name that you wish to add or edit.

Example

DIM_PRODUCTS

Select the field of the chosen table that you want to add from the Available Fields list box and choose the field that you want to join it with of the latter table. The chosen fields will be displayed in the Join Condition pane.

Example

DIM_PRODUCTS.V_D_PRODUCT
 LEVEL_1_CODE=DIM_PRODUCTS.V_D_PRODUCT_LEVEL_2_DESC

Click **Clear** to clear the join condition.

Click **Back** to go to the previous screen. Click **Next**, to join the fields and go to step 5.

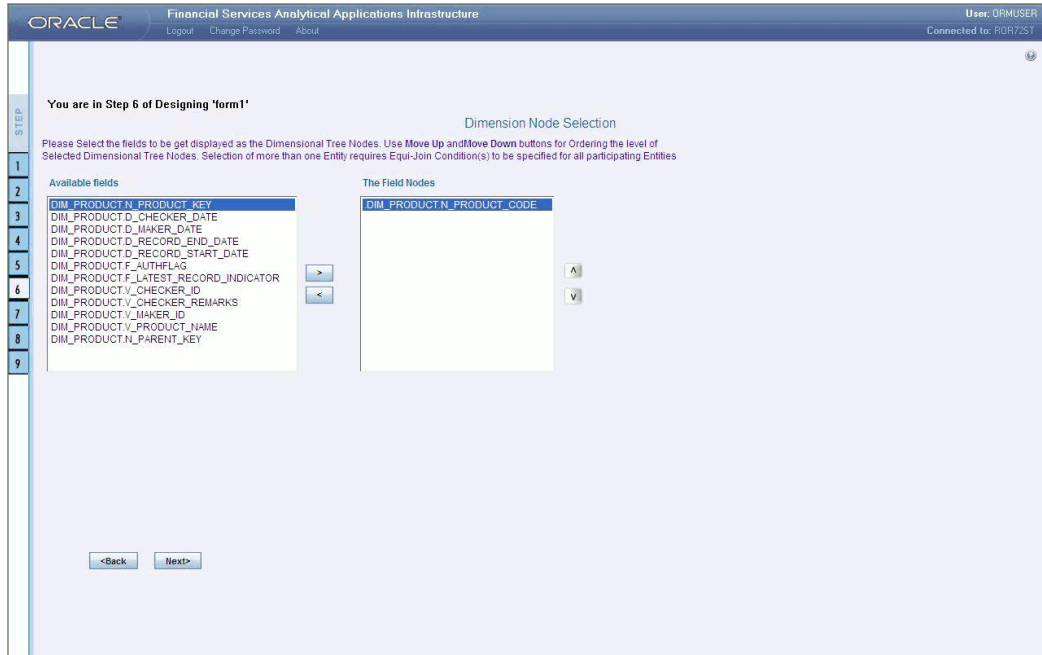
Click **Cancel** to refresh the table list.

For Grid, Single Record, Edit/View, Wrapping Row, Multicolumn and Tree View Layouts

The Fields screen displays the Available Fields pane and Fields for sorting pane. The mandatory fields are highlighted with the '*' symbol and are automatically displayed in the Selected Fields pane as pre-selected for you and are shown in the Chosen Fields Pane. These mandatory fields are fields (primary key fields and not null fields) that require data to be entered by the user while performing Data Entry on the underlying table.

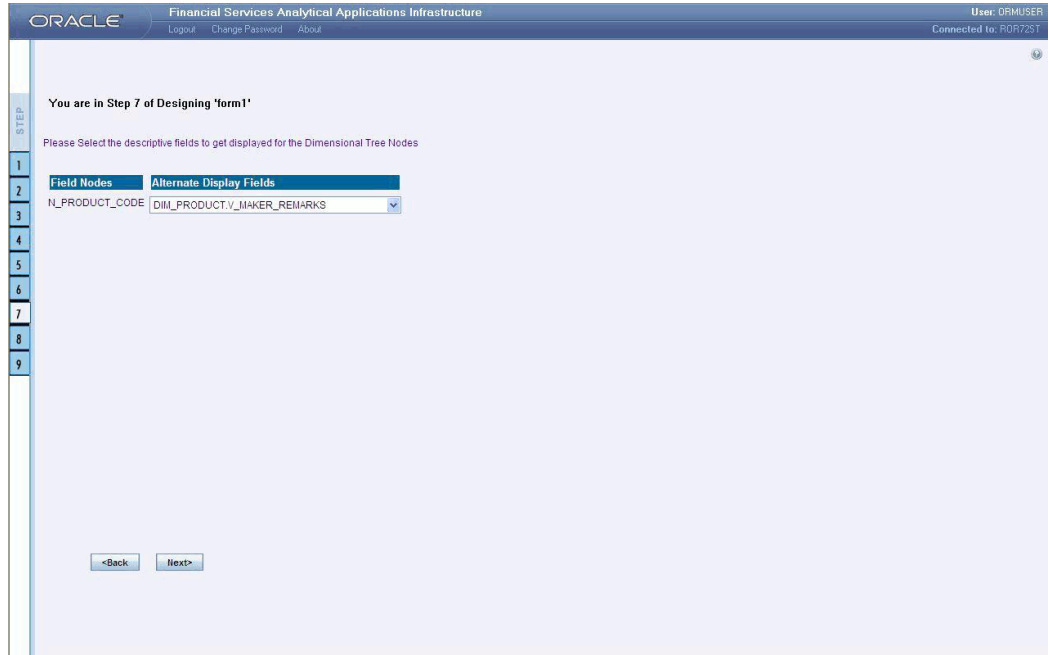
Example

If you want the fields to be sorted based on the Branch Code, select the field CUSTOMER V_CUST_BRANCH_CODE.



Select the fields from the Available Fields pane that you want to be included in the form and click (>) to move to the Fields to Display pane. To remove a field(s) from the Fields to Display pane to the Available Fields pane, click (<) . To move all the fields to the Fields to Display pane from the Available Fields pane, click (>>) . To move all the non mandatory fields to the Available Fields pane, click (<<) .

To arrange the fields that are displayed in the Fields to Display pane, click up arrow symbol to move a field up and down arrow symbol to move down. This order determines how the Fields are displayed in the Data Entry Form. This order can be different from the order in which the fields are in the underlying table.



Select the fields from the Available Fields pane that you want to be included in the form and click (>) to move to Step 8. To remove a field(s) from the Choose Fields pane to the Available Fields pane, click (<) . To move all the fields to the Choose Fields pane from the Available Fields pane, click (>>) . To move all the non mandatory fields to the Available Fields pane, click (<<) .

To arrange the fields that are displayed in the Choose Fields pane, click up arrow symbol to move a field up and down arrow symbol to move down. This order determines how the Fields are displayed in the Data Entry Form. This order can be different from the order in which the fields are in the underlying table.

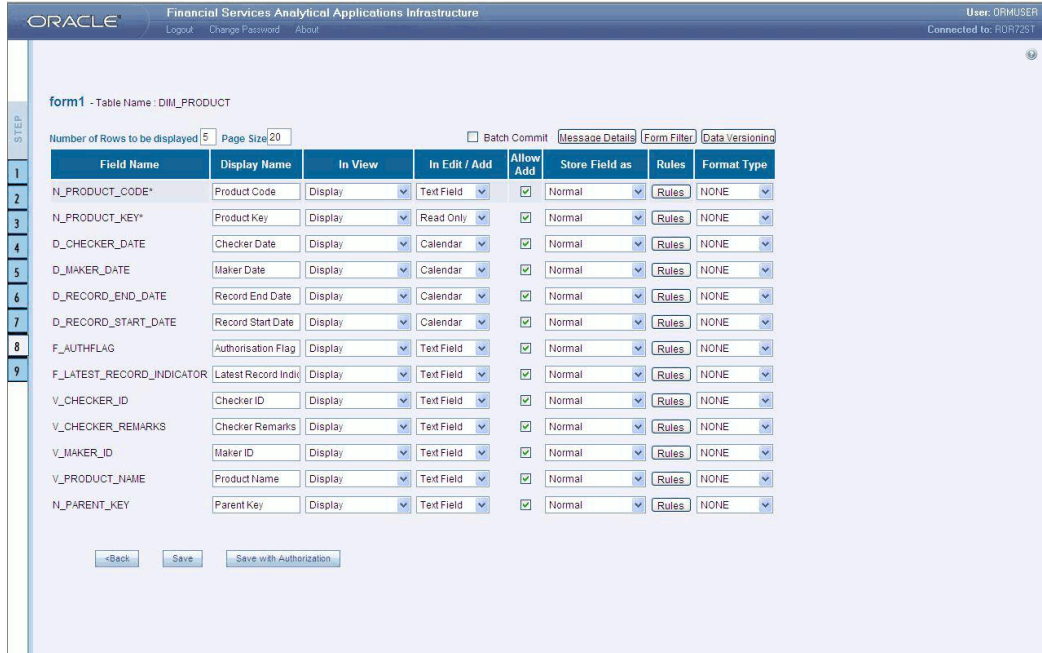
The selected fields will be sorted in ascending order by default. To set the order of the fields in the descending order, check the check-box provided for **Sort By Descending**.

Note: The fields displayed in the Sort Fields screen are the list of fields chosen from the Fields Selection screen.

Click **Back** to go to the previous screen. Click **Next** to go one step further.

For Grid, Single Record, Edit/View, Wrapping Row & Multicolumn Layouts

The index screen displays the form with Field Name, Display Name, In View, In Edit/Add, Allow Add, Store Field as and Rules detail columns. You can specify the details for each of the field names.



You can change the display name of the field name by entering a name in the Display Name field.

Example

User Expiry Date

You can choose a field to be displayed by selecting the In View option as Display or Do not Display. If the field you choose is a foreign key field or if more than one table is selected, the In View displays Same Field, Alternate Display Field and Do not Display options.

You can specify the edit options for a user by specifying the edit parameters. Click the In Edit/Add field to open the drop-down list box. Select the edit parameter that you want to apply to a field. For normal fields you can choose the edit parameters like Text Field, Text Area, Select List, Protected Field, Read Only and Do Not Show. If it is a foreign key field the In Edit/Add parameters displayed will be Read Only, Select List and Do Not Show. For primary key fields the In Edit/Add parameter displayed will be Read Only and Do Not Show. In case of calendar fields, the In Edit/Add parameters displayed are Calendar and Do Not Show.

To give the user permission to add a new record, select the Allow Add option against the field name. If form is saved with add option as true for some fields and false for some fields then it will give an alert saying "Choose Allow Add for the mandatory fields."

To specify the field storage format, click the **Store Field as** field to open the drop-down list. You can choose the store format as Normal, Sequence Generator, Maker Date, Checker Date, Created Date, Modified Date Auth Flag, Maker id, Maker Date, Checker id, Checker Date, Checker Remarks and Maker Remarks.

You can also apply rules to a field. Click Rules to open the screen.

Applying Rules

You can apply rules only if the In **Edit/Add** fields are Text Field, Text Area or Protected Field. The rule option is essential for data validation

To specify rules for Text Field, Text Area and Protected Field, click the **Rule** option to open the Specifying Rules and Expressions for Data Validations window.

If a field has a character data type, you can specify here the rule for the field to be displayed without spaces, only characters or alphanumeric. If a field has a numeric data type, you can check the check-box provided for Numeric Only. You can choose whether/not you require Negative values to be displayed by checking/un-checking the field provided for Non Negative, not null will be displayed for the non primary key and/or nullable fields.

Specify the maximum width of the field in the Maximum Width box. You can set the column alignment by selecting the appropriate alignment from the Alignment drop-down list. On specifying the options, click Ok to save.

Click **clear** to Clear the information entered in the screen. Click **Close** to close the screen.

Click **Back** to go to the previous screen. Click **Save** to save the field details setting.

- Only forms with primary key tables can have the authorization option while saving.
- By default, the alignment for character and date data type is taken as Left. And for numbers it is displayed as Right. But the alignment can be changed to Right, Left or Center.

You can specify the edit options for a user by specifying the edit parameters. The In Edit option varies for different fields based on whether the field is foreign, primary or calendar fields.

Click the **In Edit/Add** field to open the drop-down list box. You can choose the edit parameters like Text Field, Text Area, Select List, Read Only, Do Not Show and Expression Generator. Select the edit parameter that you want to apply to a field.

When you select the Select List option in the In Edit/Add column, a pop-up window is displayed.

Note: The Select List option will not be displayed for foreign key fields.

Enter the list of values to be displayed, in the List of Values field. You may choose the field to be Comma Separated Values or Dynamic list of values options.

Comma Separated Values can have only the user specified values while creating a form.

Dynamic Field accepts the fieldname from a table, which it stores in the database, which is used during Data Entry. Specify **Alternate DisplayValues** in the appropriate field.

Click **OK** to save the specified list of values. Click **Cancel** to clear the List of Values field. Click **Close** to close the pop-up window.

If you select Dynamic List of Values, you will be able to select the table values and then define a filter condition for the selected values, as shown in the following screen-shot.

The screenshot shows the 'Define List of Values' dialog box. At the top, the 'Field Name' is 'F_AUTHFLAG'. Below it, there are two radio buttons: 'Comma Separated Values' (unselected) and 'Dynamic List of Values' (selected). The main area is divided into three sections: 'Table', 'List Value Field', and 'Display Value Field', each with a dropdown menu containing 'AUDIT_PLAN_RATING.OVRALL_BU_RAT'. Below these are three columns: 'Fields' (listing various audit plan rating fields), 'Operators' (listing mathematical and logical operators), and 'Functions' (listing database functions like ABS(), ACOS(), etc.). At the bottom, there is a 'List Value Filter Condition' text area and three buttons: 'OK', 'Clear', and 'Close'.

To give the user permission to add to the field, select the Allow Add option against the field name. The Allow Add option is mandatory for primary key and not null fields.

To specify the field storage format, click the Store Field as field to open the drop-down list box. You can choose the store format as Normal, Sequence Generator, maker ID, Checker ID, Maker Date, Checker Date, Created Date, Modified Date, Maker Remarks, Checker Remarks and AuthFlag.

Click Back to go to the previous screen. Click Save to save the field details setting.

To save the form containing primary key tables, click **Save with Authorization**.

- Only forms with primary key tables can have the authorization option while saving.
- If the user want the value to be displayed with the thousands separator, such a numeric field should be defined under the Display Value Field.

Committing the Batch

Selecting the check-box provided for Batch Commit virtually groups/baskets the entire set of table forms. With this grouping, the system ensures that if a particular form in the table fails to be executed, the entire set of forms will be returned. Hence, all activities for the selected table is carried out in batches.

Defining the Form Filter

With the **Form Filter** screen you can specify expressions for the form filter condition.

The screenshot shows a dialog box titled "SPECIFYING EXPRESSIONS FOR FORM-LEVEL FILTER CONDITION". It contains three columns of options:

- Fields:** DIM_PRODUCT_D_CHECKER_DATE, DIM_PRODUCT_D_MAKER_DATE, DIM_PRODUCT_D_RECORD_END_DATE, DIM_PRODUCT_D_RECORD_START_DATE, DIM_PRODUCT_F_AUTHFLAG, DIM_PRODUCT_F_LATEST_RECORD_INDICATOR, DIM_PRODUCT_FIC_MIS_DATE, DIM_PRODUCT_N_PARENT_KEY
- Operators:** {, }, +, /, *, <, >
- Functions:** ABS(), ACOS(), ADD_MONTHS(), ASCII(), ATAN(), ATAN2(), CEIL(), CHR()

Below these columns is an "Expression Viewer" text area. At the bottom of the dialog are three buttons: "OK", "Clear", and "Close".

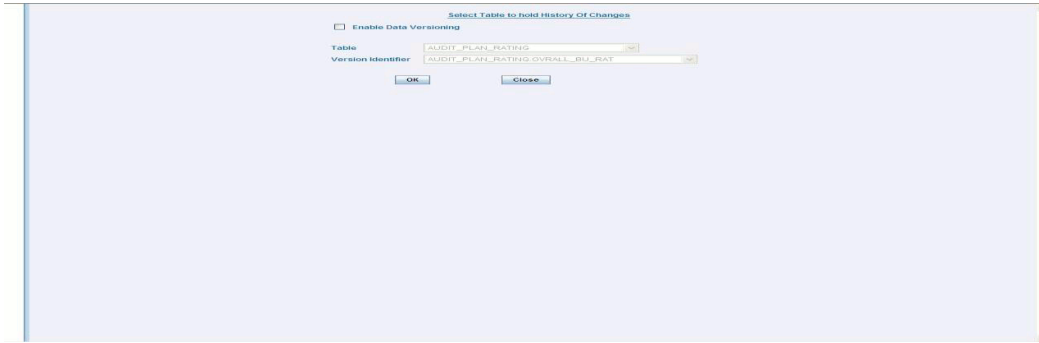
Click to select the **Field**, **Operator** and **Function** from the appropriate panes.

The expression you define will be displayed in the **Expression Viewer** pane.

Click OK to save the expression. Click Clear to refresh the screen. Click Close to close the screen without saving.

Data Versioning

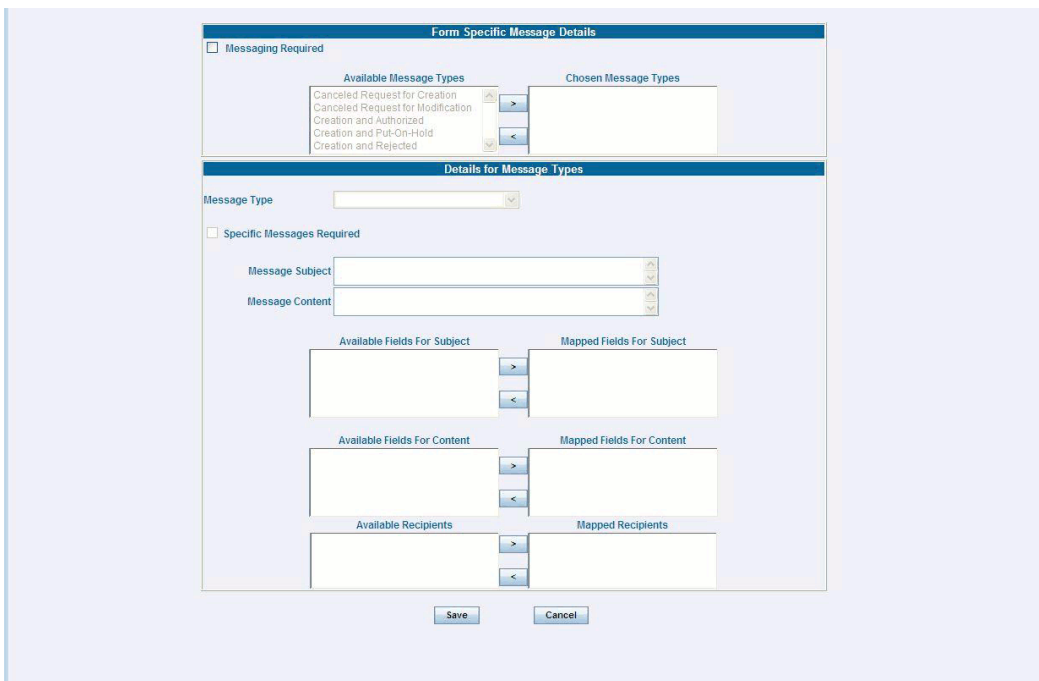
Using this screen you can perform data versioning on an authorized form. The table version is tracked based on the date of modification. Check the check-box provided for **Enable Data Versioning** to ensure that the version is tracked.



If you select this option, the modifications made to the particular form are displayed as per date versioning.

Specifying Message Details

With the messaging screen, you can specify an alert message that can be sent either to the Creator of the form or to an Authorizer. Click the **Message Details** tab in the index screen. The Message Details screen will be populated on your screen.



To activate the Messenger feature, you need to check the check-box provided for **Messaging Required**.

If you do not require this option, leave the Messaging required check box unchecked. Mails will be sent appropriately, only one mail will be sent for the entire batch.

The Message types, Recipients, Subject and Content fields are comes from the metadata.

Select the Message Type from the Available list and click (>) to move the message type to the Chosen Message Types pane.

Example

Canceled Request for Modification

Select the check-box provided for Specific Messages Required to add a Specific Message.

Select the Message Type from the drop-down list box of the Message Type field. Message line appears automatically based on the selection of the event type.

Example

Canceled Request for Modification

Subject line will appear automatically based on the selection of the event type.

Example

Infodom - \$INFODOM\$, Application - \$APPLNNAME\$, Form - \$FORMNAME\$ -
Cancel Request for Modification

Message content will appear automatically based on the selection of the event type.

Example

Infodom - \$INFODOM\$, Application - \$APPLNNAME\$, Form - \$FORMNAME\$ -
Cancel Request for Modification

Double-click the Recipient name in the Available Recipients pane. The selected recipient/s are displayed in the Mapped Recipients pane.

Example

Authorizer

- If you select Authorizer, the message will be sent to all the selected authorizer's for authorization.
- You need to click the Save with Authorization tab in the Index screen so that the messages are functional. When you Save with Authorization, the next screen to be populated is the Authorization screen, where you can assign rights.

Similarly, select the Field/s for Subject and Fields for Content. Available fields for the subject and content can be selected by the user.

Click **Save** to save the changes. If you click **Cancel**, a message pop's-up requesting you to confirm the cancellation without saving. Click Ok in the Pop-up.

Click **Save with Authorization** in the Index screen to save the changes with authorization. Clicking Save opens up the Assigning Rights screen.

Altering an Existing Form

To alter an existing form, select Alter Existing Forms option. Click the Application name field to open the drop-down list box. Select the name of the application whose form you wish to alter. On choosing the application name, the forms belonging to the selected application will be displayed in the Form Name field. Click the Form Name field to open the drop-down list box and select the form that you want to alter.

Alter forms apply only to fields and not to tables.



Click Next to go to step 3. Click Cancel to discard the form selection that you have made.

Note: The forms that are displayed in the Form name list box are dependent on the DSN (Data Source Name) that you have specified.

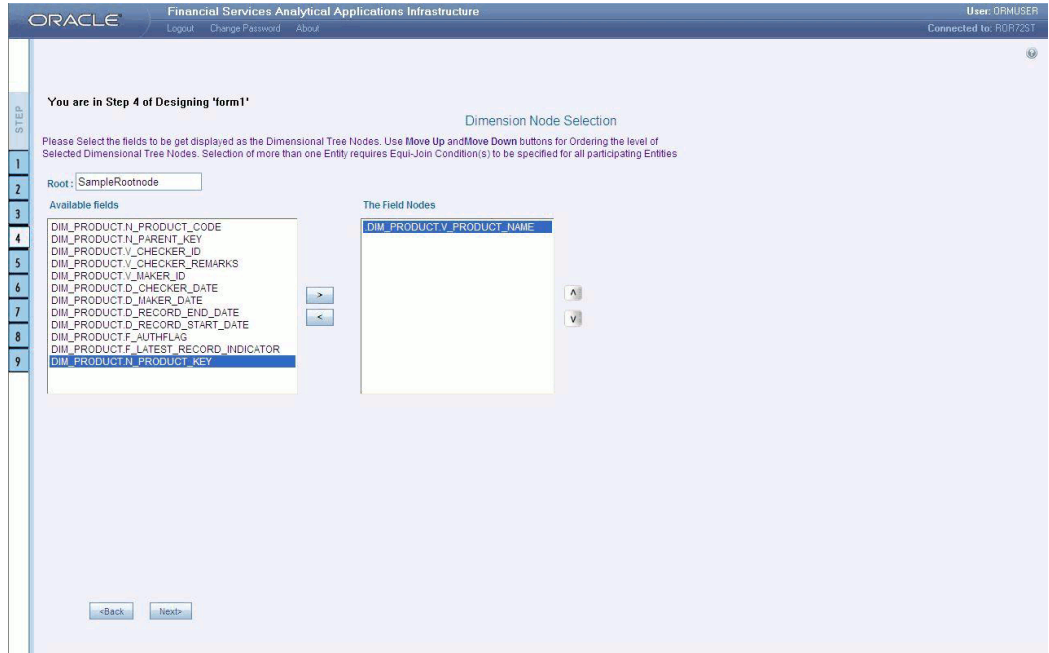
The alter fields screen displays the list of fields of the selected form in the Chosen Fields pane. In this screen the fields, which are selected while creating the form are displayed in the Chosen Fields list and the fields that are not selected but available are shown under the Available Fields list.



Select the fields from the Available Fields pane, which you want to alter and click (>) to move to the Chosen Fields pane. To remove a field/s from the Chosen Fields pane to the Available Fields pane, click (<). To move all the fields to the Chosen Fields pane from the Available Fields pane, click (>>). To remove all the fields to the Available Fields pane, click(<<).

To arrange the fields that are displayed in the Choose Fields pane, click up arrow symbol to move a field up and down arrow symbol to move down. This order determines how the Fields are displayed in the Data Entry Form. This order can be different from the order in which the fields are in the underlying table.

Click **Back** to go to the previous screen. Click **Next** to go further. The alter sort fields screen displays the sort fields to be altered in the Chosen Fields pane with which you want to sort the table.

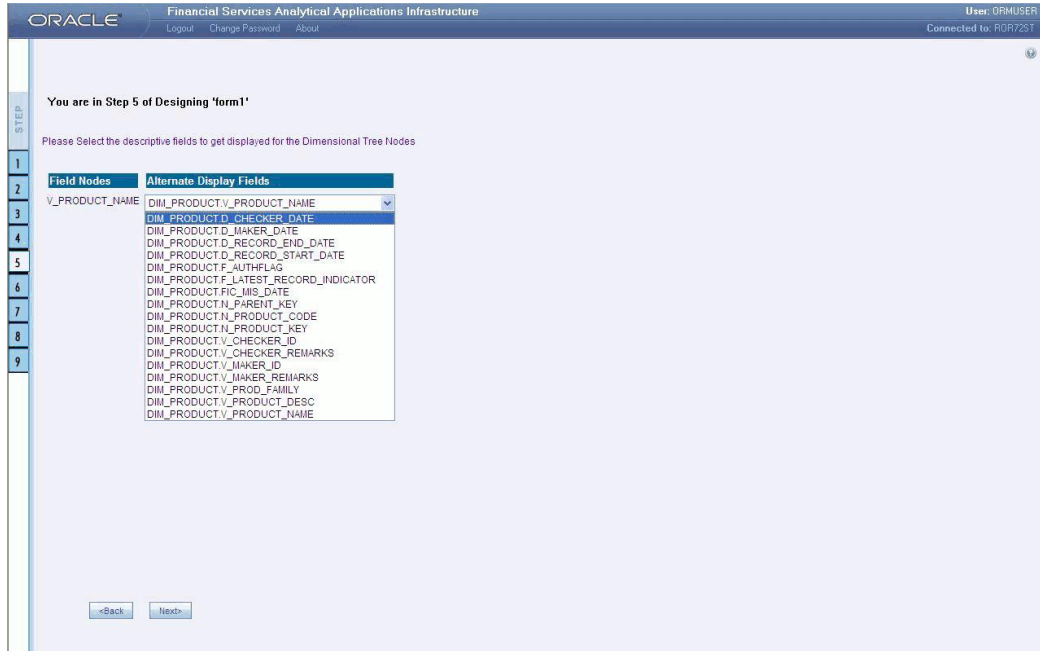


Select the fields from the Available Fields pane, which you want to alter and click (>) to move to the Chosen Fields pane. To remove a field/s from the Chosen Fields pane to the Available Fields pane, click (<). To move all the fields to the Chosen Fields pane from the Available Fields pane, click (>>). To remove all the fields to the Available Fields pane, click (<<).

Note: The user can change the root node name specified while designing the form.

Click Back to go to the previous screen. Click Next to go to next step.

The form screen displays the forms to be altered containing Field Name, Display Name, In View, In Edit/Add, Allow Add, Store Field as and Rules detail columns contain the data which are already selected while creating the form. You can alter the details for each of the field names.



You can change the display name of the field name by entering a name in the Display Name field.

You can choose a field to be displayed by selecting the In View option as Display or Do not Display.

You can specify the edit options for a user by specifying the edit parameters. Click the **In Edit/Add** field to open the drop-down list box. You can choose the edit parameters like Text Field, Text Area, Select List, Protected Field, Read Only, Do Not Show, Check Box and URL. Select the edit parameter that you want to apply to a field.

Note: The AlternateDisplayField is displayed only if the selected table contains a foreign key or if the joined tables are selected.

To give the user permission to add to the field, select the Allow Add option against the field name.

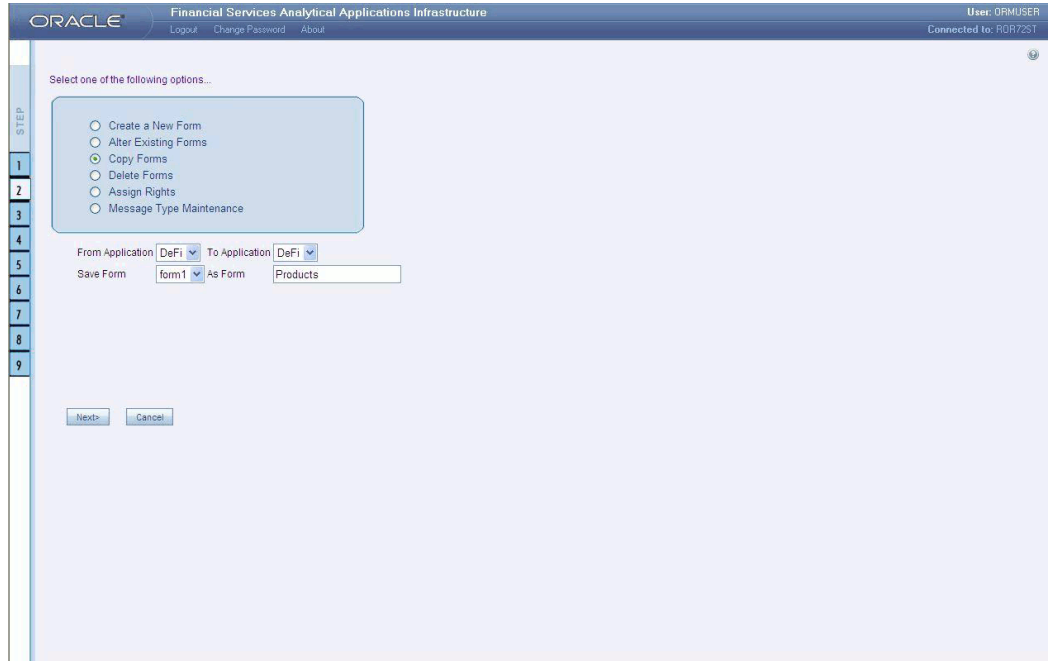
To specify the field storage format click the Store Field as field to open the drop-down list box. You can choose the store format as Normal, Encrypted, Auto Generated or Formula.

You can also apply rules to a field. Click Rules to open the screen.

Click Back to go to the previous screen. Click Save to save the field detail settings

Copying an Existing Form

To copy an existing form, select Copy from Existing Forms option.



Select the application from which you want to copy a form. Click the Application name field to open the drop-down list box. Select the name of the application. On choosing the application name, the forms belonging to the selected application will be displayed in the Form Name field. Click the Form Name field to open the drop-down list box and select the form that you want to copy.

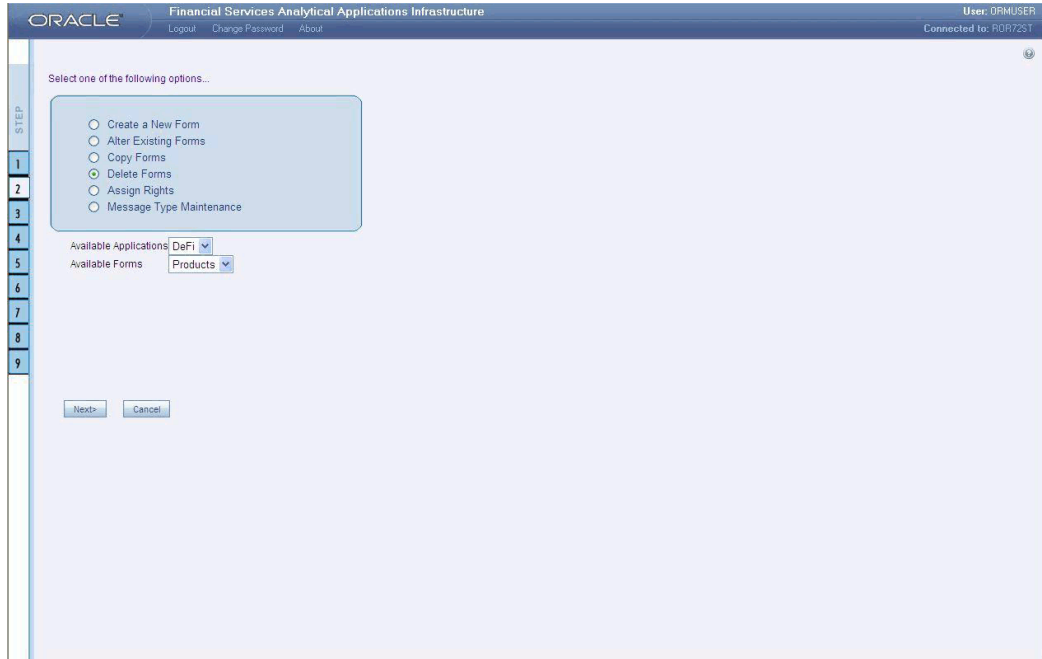
Select the application to which you wish to copy the new form. Click the Application name field to open the drop-down list box and select the application. Enter the name of the new form you are creating in the Save Form as field. This option allows creation of variants for a given form where you might want to change some user rights or some display options and other subtle variations on the form for a given layout and the underlying table.

Click **Next** to save the details of the newly created form. Click **Cancel** to discard the form selection that you have made and clear the name entered in the **Save Form As** field.

Deleting a Form

To delete an existing form, select **Delete Forms** option.

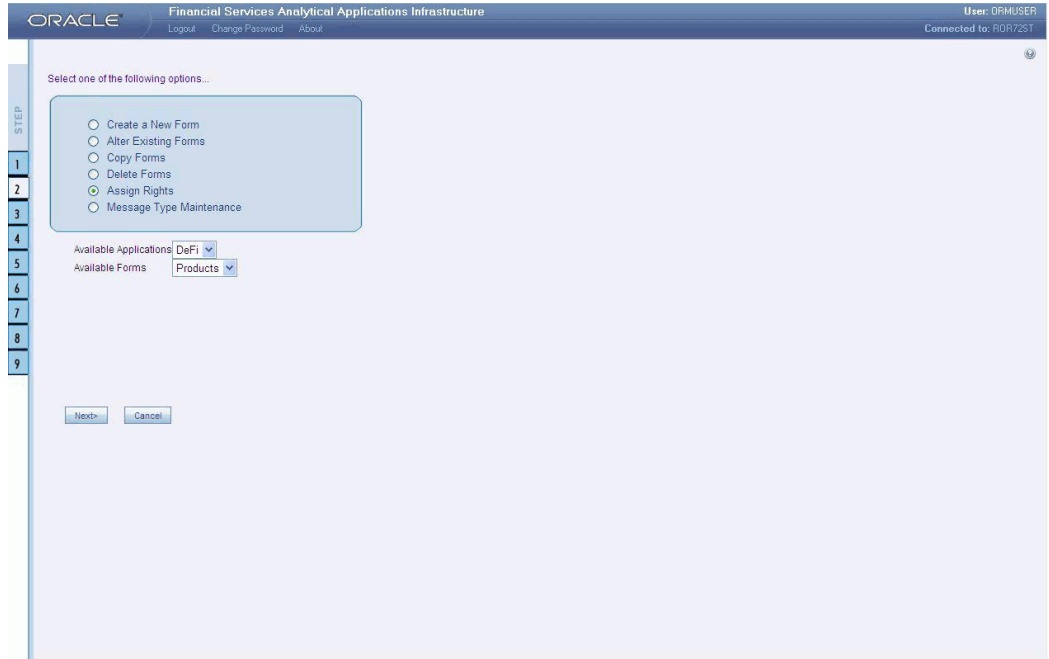
Select the application from which you want to delete a form. Click the Application name field to open the drop-down list box and select the name of the application. On choosing the application name, the forms belonging to the selected application will be displayed in the Form Name field. Click the Form Name field to open the drop-down list box and select the form that you want to delete.



Click **Next** to delete the form. A confirmation message is displayed which reads **Do you want to delete the form Loss?** Click **Ok** to confirm deletion. Click **Cancel** to cancel the delete request.

Assigning Rights to a Form

To assign rights to a form, select Assign Rights option.



Click the Application name field to open the drop-down list box. Select the application from which you wish to choose the form to which you want to assign rights. The chosen application will be displayed in the Application Name field. Click the Form Name field to open the drop-down list box. Select the form you want to assign rights to.

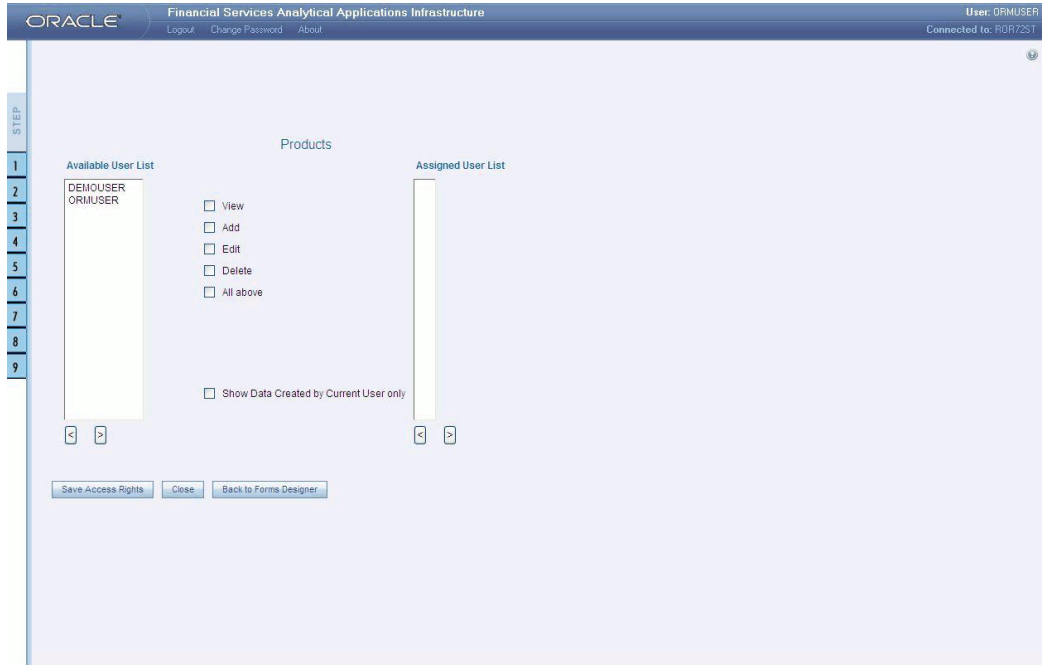
Example

Application name: ST

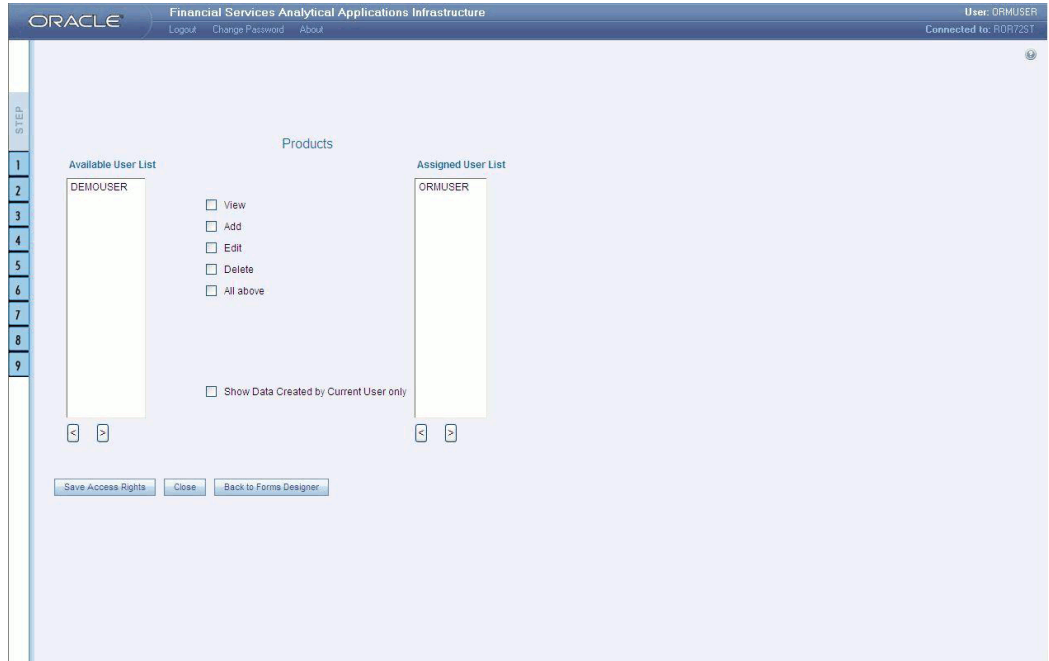
Form name: TreeForm

Click Next to go to step 3 or Click Cancel to discard the form selection that you have made.

The user list screen displays the list of available and assigned users. Click the < or > buttons to navigate through the list of users in case the number of users are more than what could be accommodated in one page.



Select the user to whom you want assign the rights to from the **Available User List** pane and select the rights you want to assign to the user. You can assign View, Add, Edit, Delete or All above options. The user name will move to the Assigned User List once it is saved.



The Authorize and Auto-Authorize options are applicable for all the forms that have been saved with the **Authorize** option.

The Auto Authorize feature for records is applicable in scenarios where the Creator and Authorizer are the same. If a User has Add and Auto Authorize grants, the data entered by the user is auto authorized and the data is in Authorized status. In case of normal Authorization, the Record added by the creator has to be authorized by a different user who has Authorize permissions.

Note: The feature of Auto Authorize in Forms Designer is applicable only for data entered through Data Entry screen and not through Excel upload.

Click **Save Access Rights** to save the rights you have defined for the selected Users. Click **Close** to close the Assign Rights screen.

To go back to the forms designer, click the **Back to Forms Designer** button. When you have finished assigning users, click **Finish** to return to the splash screen.

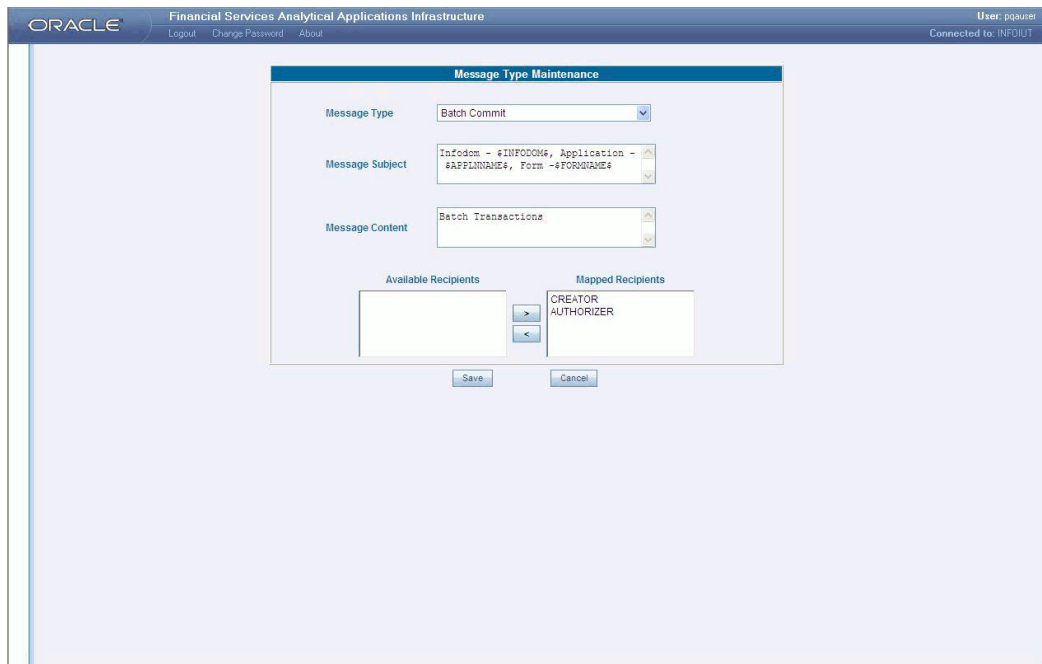
To open help for the Forms Designer screen click **Help**. To return to the DI splash screen, click **Home**.

Message Type Maintenance

For the maintenance of the Message Types, select the **Message Type Maintenance** option in the first screen of the Forms Designer Wizard.



Click **Next** to continue. The **Message Type Maintenance** screen is displayed.



Select the message category from the **Message Type** drop-down list. The message types are the same as those available in the Message Details screen as explained earlier.

Example

Canceled Request for Creation

The Message Subject field displays the subject line that will be displayed for the particular Message Type selected. You can make the required modifications in this field.

Example

Infodom - \$INFODOM\$, Application - \$APPLNNAME\$, Form -\$FORMNAME\$ -
Cancel Request For Creation

The Message Content field displays the content of the message for the particular Message Type selected. You can make the required modifications in this field.

Example

Infodom - \$INFODOM\$, Application - \$APPLNNAME\$, Form -\$FORMNAME\$ -
Cancel Request For Creation

Double-click the Recipient name in the Available Recipients pane. The selected recipient/s moves to the Mapped Recipients pane.

Example

Authorizer

Note: If you select Authorizer, the message will be sent to all the selected authorizers for authorization.

Click **Save** to save the changes. On clicking **Cancel**, a message requesting you to confirm the cancellation without saving is displayed. Click **OK** to discard the changes.

Entering Data

The **DeFQ** menu has three options, namely, Forms Designer, Data Entry and Excel Upload options. Click **Data Entry** to open the screen. In this screen you can view, edit, add, delete or authorize data. You can view, edit, add, delete or authorize based on the rights that are assigned to you during form creation.

You can query the record to get specific data using search option. You are also provided with the option to export the result set.

Note: To open multiple Data Entry windows, specify the URL of the Data Entry window as the value in the URL box in the Design Oracle Menu screen. It enables the user to perform the search operation in more than one screen.



If the logged-in-user is not mapped with the forms and applications it will display an alert saying "There are no forms available for the login user".

The DeFQ Forms frame displays the list of existing forms. The forms that are displayed are dependent on the rights assigned to user.

Note: The roll back option can be used only for authorized record to undo the modifications made to it.

(Refer to: Roll Back section for more details)

Viewing Form Details

Forms are displayed in View format by default. The forms are displayed based on the application names in the left pane. Based on the rights that are assigned to the user, he can access View, Edit, Add, Delete options. Click a form to view the details. The form details will be displayed in the layout that it was defined.

Example

Application Name: CAT Test

Form Name: Auth

In case of grid layout, the number of rows displayed is based on the number of rows that you specify in the Display ---Rows field.

Example

Display 5 Rows

To view all the records in the table click Next to go to the next set of records. To return to the previous set of records, click Back.

It is recommended that you assign an easily viewable number of rows to be displayed. The user can view records as a Single Record, Editable View, Grid layouts, multi column or wrapped rows layout.

Note: The roll back option can be used only for authorized record to undo the modifications made to it.

Single Record layout

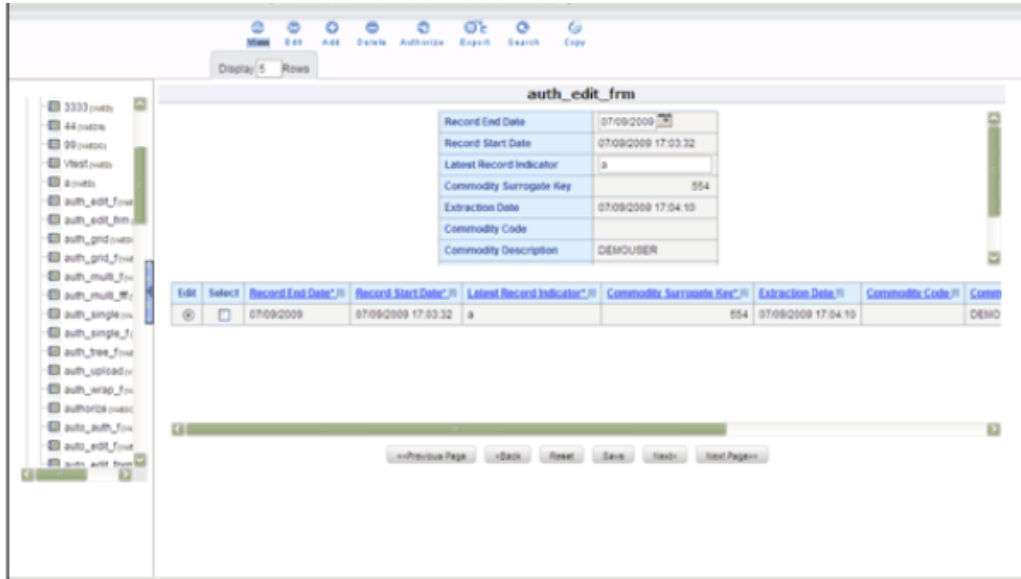
To view a single record at a time, click Single Record.

To view all the records in the table click Next to go to the next record. To return to the previous record, click Back.

Note: The roll back option can be used only for authorized record to undo the modifications made to it.

auth_single_f	
Extraction Date	07/13/2009 11:51:53
Currency Code Surrogate Key	343
Currency Code	2321
Record End Date	07/23/2009 14:17:08
Record Start Date	07/23/2009 14:17:16
Latest Record Indicator	U
Local Currency Indicator	
Reporting Currency Indicator	Unauthorized
Residual Currency Indicator	
Currency Risk Factor	2
Currency Description	3
Currency Iso Code	2
Currency Short Description	DEMOUSER
Currency Type Description2	2
Currency Type	2

To view a record in the editable view, click Editable View. In the editable view you can view and edit records, which can be selected from the grid of records.



The editable view format displays a single record in the top frame, which can be edited. The grid layout is displayed in the frame below. To edit a record, select the Edit option against the record in the grid layout. The selected record will be displayed as a single record with editable fields. The main advantage is you can easily compare the changes you have made in the data with the data shown in grid format

The number of records to be displayed in the form can be specified in the Display Rows text box.

To save the changes that you have made to the field/s, click Save. Click Reset to return the record settings to its original field settings.

Grid Layout

To view a record in a grid layout, click Grid. This is the default layout that is displayed while viewing a form.

Select	Extraction Date	Currency Code	Surrogate Key	Currency Code	Record End Date	Record Start Date	Latest Record Indicator	Local Currency
<input type="checkbox"/>	07/13/2009 11:51:53		343	2321	07/13/2009 11:59:15		U	
<input type="checkbox"/>	12/31/1999		2	EUR	07/10/2009 16:30:24	07/10/2009 16:30:05	N	
<input type="checkbox"/>	12/31/1999		3	JPY	12/31/1999	11/30/1999	Y	
<input type="checkbox"/>	12/31/1999		4	GBP	12/31/1999	11/30/1999	N	
<input type="checkbox"/>	12/31/1999		5	EUR	07/10/2009 17:05:43	07/10/2009 17:05:43	N	

To sort a record based on a field, click the column title hyperlink.

Example

Click FIC_MIS_DATE column title hyperlink to sort fields alphabetically based on the MIS Date.

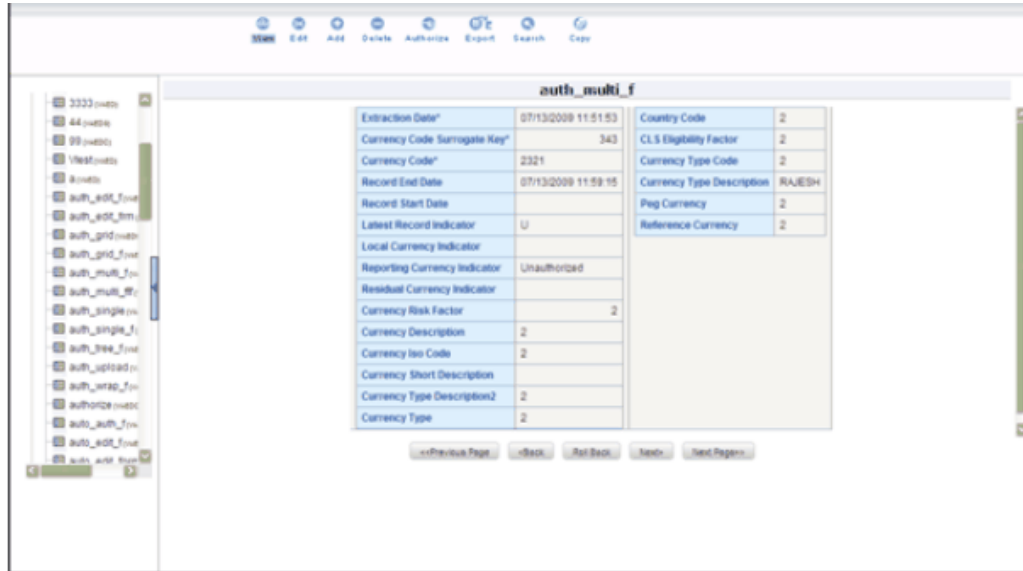
The number of records to be displayed in the form can be specified in the Display Rows text box.

To view all the records in the table click Next. To return to the previous set of records, click Back.

Note: The roll back option can be used only for authorized record to undo the modifications made to it.

Multi Column Layout

To view all the columns of a selected record, click Multi Column. This layout enables you to view a record without having to scroll or with minimum scrolling to view all the columns.



To view all the records in the table, click Next. To return to the previous record, click Back.

Note: The roll back option can be used only for authorized record to undo the modifications made to it.

Wrapping Row Layout

To view all the rows of a selected record, click Wrapping Row. This layout enables you to view a wrapping row easily without having to scroll horizontally to view all the data.

Extraction Date*	Currency Code Surrogate Key*	Currency Code*	Record End Date	Record Start Date
07/13/2009 11:51:53		343 2321		07/13/2009 11:50:15
Latest Record Indicator	Local Currency Indicator	Reporting Currency Indicator	Residual Currency Indicator	Currency Risk Factor
U		Unauthorized		2
Currency Description	Currency Iso Code	Currency Short Description	Currency Type Description2	Currency Type
2	2		2	2
Country Code	CLS Eligibility Factor	Currency Type Code	Currency Type Description	Peg Currency
2	2	2	RAJESH	2
Reference Currency				
2				

To view all the records in the table click Next to go to the next record. To return to the previous record, click Back.

Note: The roll back option can be used only for authorized record to undo the modifications made to it.

Editing a Form

To edit a form, check the select option in the Select column and click **Edit** button. The form fields are displayed with editable fields, which you can modify if required.

To save the changes that you have made to the field/s, click **Save**. Click **Reset** to return the record/table settings to its original field settings.

The records also can be edited in the layouts mentioned earlier (in View mode). All the fields will be displayed in the editable grid, but the primary key fields cannot be edited so will be displayed in un-editable format.

Click **Next** to edit the next set of records. To return to the previous records, click **Back**.

Roll Back

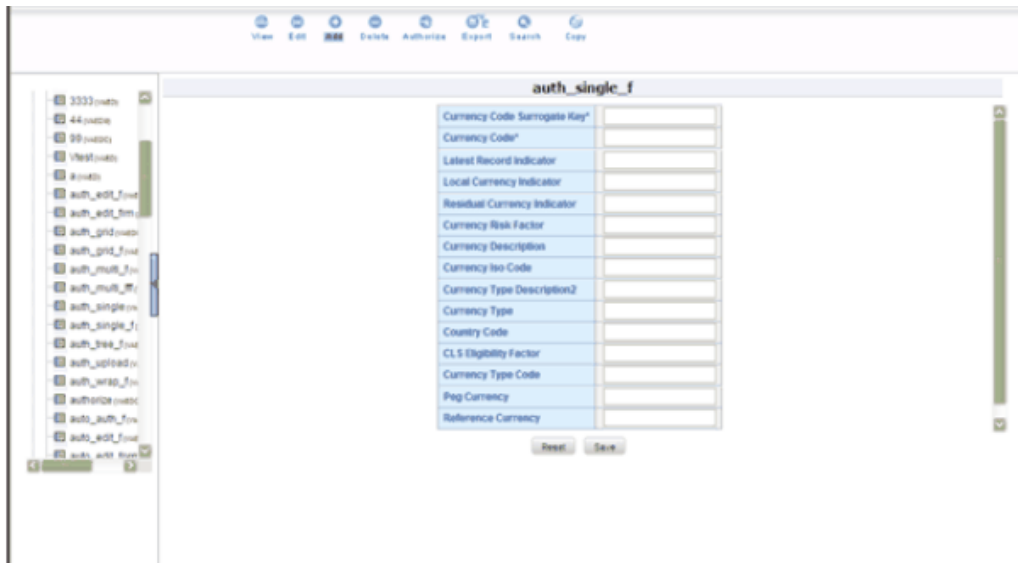
The Roll Back option can be used only for authorized records. After the records are edited and saved, the roll back operation can be performed in view mode by selecting the particular record to undo the modifications made to it.

- Once the record is edited using Edit option, its modified flag is set and the record with its modified flag set alone can be rolled back.

- If the record is not an authorized record it will display a alert saying roll back functionality is available only for records which has its authorization flag set to "Modified".

Adding Rows to a Form

To add data to the selected table in a form, specify the number of rows to be added in Rows field in the options frame and click **Add** button.



Enter data in these new fields and save them by clicking **Save**. Click **Reset** to return the table settings to its original field settings.

Note: If the user want to see the display with the thousands separator for any numeric columns, the input should be given in the same manner.

Deleting a Record in a Form

To delete a record, check the select option in the Select column against the record you wish to delete and click delete.

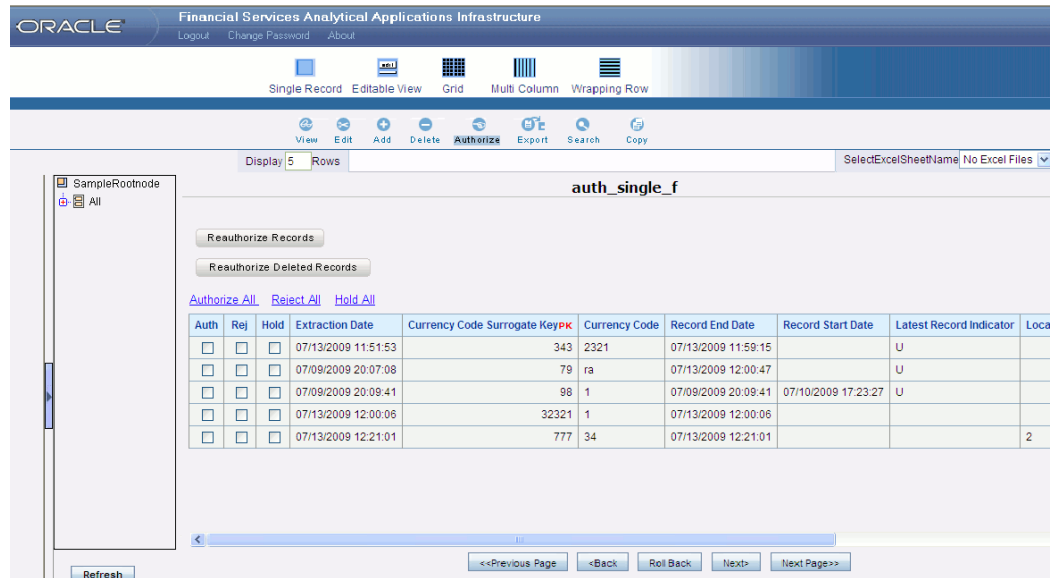
A warning message will be displayed prompting you to confirm deletion. Click Ok to delete the record or Cancel to discard deletion.

Authorizing Data

The Data Entry module allows you to authorize data entered during form creation

provided the table contains a primary key field.

To authorize data, select the form and click Authorize. The records that are required to be authorized will be displayed with Auth, Rej, au_fname, au_idPK (Primary Key identifier), au_lname, AuthFlag (representing the status of the record), contract, MakerDate, MakerID and phone details. If there are no records to authorize, the screen will display the message No records to be authorized.



Note: The primary key fields in the record are displayed in red as PK.

You can authorize only those records that are created by another user if you have authorization rights. If you do have authorization rights, the record created by another user, the AuthFlag will display U, which suggests that it is an unauthorized record requiring authorization.

If the record is already authorized, the AuthFlag will display A. If any record is rejected, if the form is authorized, then the AuthFlag will be displayed as R. If the Authorized user put the records on Hold, then the AuthFlag will be displayed as UH. After Authorizing, the Auth Flag will be set to A.

Any changes (modification / deletion) made to the records after authorization will be marked for authorization and can only be authorized by the users who have the privilege. The new records created before authorization can be edited or deleted by any user who has the privilege to do the same.

To authorize a record, select the Auth option against the record you wish to authorize and click Save. To reject/delete a record, select the check box in the Reject column against the record and click Save. A warning message is displayed. The records selected for deletion will be deleted from the table. Proceed? Click OK to confirm deletion or click Cancel to delete the request.

Note: You can authorize forms only if the authorize rights have been assigned to you.

To authorize the next set of records, click **Next**. To authorize all the records in the form, select the **Authorize all** option and click Save.

To reject all records, select the **Reject all** and click **Save**. If the authorizer is not sure whether to authorize the records the **Hold all** option can be used, which can be authorized or rejected at the later point.

Re-authorizing Records

The Records to be reauthorized link will be displayed only if some other user has modified the authorized records. An authorized record that has been modified will display the AuthFlag M, which suggests that the record have been modified. To reauthorize modified records, click the Records to be re-authorized link to open a new screen.

Auth	Rej	Hold	Extraction Date	Currency Code	Surrogate Key	Currency Code	Record End Date	Record Start Date	Latest Record Indicator	Local Currency Indicator	Reporting Currency
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	07/23/2009 14:20:25	666	3	07/13/2009	07/23/2009 14:20:25	0			Modified
			07/13/2009 12:14:49	666	3	07/13/2009 12:19:20	07/13/2009 12:20:10	0			Modified

The record that needs re-authorization is displayed with new details. The original authorized record is also displayed. To re-authorize/reject/put-on-Hold the records select the Auth, Rej or On-Hold option against it and click Save.

Click Next to authorize the next set of records,. To close the screen, click Close. Reset Button will reset the check-boxes to null.

A mail will be sent to the creator that records are authorized/rejected/put-on-hold.

OFSAA Attributes

Overview

This chapter describes the creation and maintenance of OFSAA Attributes. Specifically, this chapter will cover:

- Attribute Summary & Detail Screens
- Navigation within the Attribute Summary Screen
- Navigation within the Attribute Detail Screen

See Overview of OFSAA Infrastructure, page 2-1 for details on how Attributes are used in OFS Analytical Applications. See *Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) Installation and Configuration Guide* for details on bulk loading dimension attributes

Summary & Detail Screens

Attributes Management

An Attribute is a property or qualifier that describes a dimension member.

The simple dimensions will not have attributes.

Examples of Attributes are:

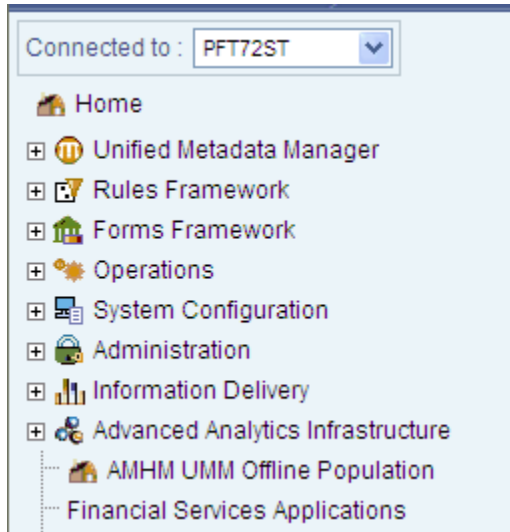
- A product dimension can have an Account Type attribute indicating whether it is an asset or liability.
- A Financial Element dimension can have an Aggregation Method attribute which includes options such as beginning, last, average by days weighted, and sum, simple average and balance weighted average.

- An Attribute that will indicate whether a dimension member is a 'leaf' in a hierarchy or not.

Accessing Attributes

Log on to OFSAAI application. The Attribute management must be done after the Infodom is selected .Select Infodom from the Connected to drop-down list.

Click the **Financial Services Applications** function menu in the left pane of the OFSAAI Splash screen.

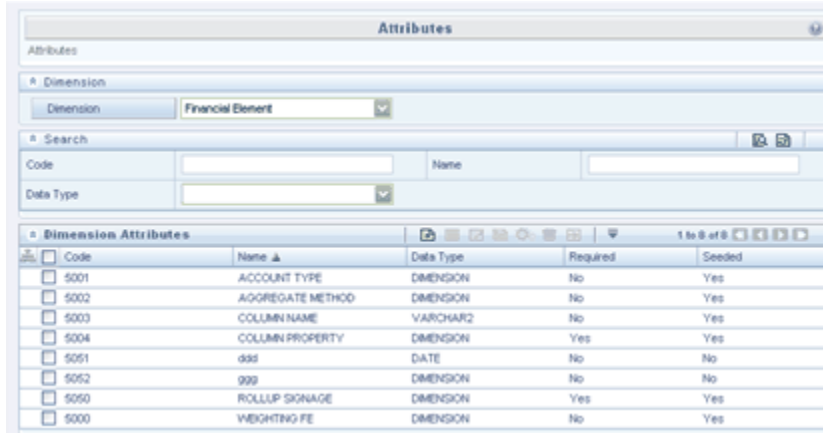


The Financial Services Applications screen appears.



Click **Master Maintenance > Dimension Management > Attributes**. The **Attributes** screen is displayed in the right pane which contains the panels like Dimension, Search and Dimension Attributes.

By selecting a dimension and by using search criteria, you can control the set of Attributes that are displayed. When you Add, Edit, Copy, or View an Attribute, a detail screen is displayed.



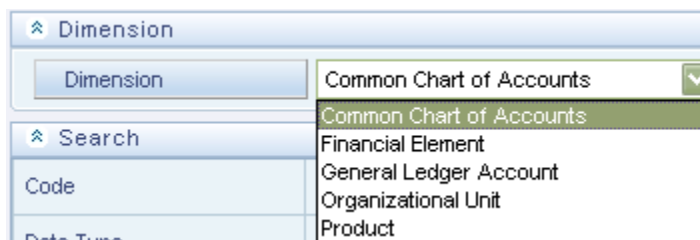
Navigation within the Summary Screen

When you first navigate to the Attributes summary screen, the Attributes associated with your first dimension are presented in a summary grid. The Attributes summary screen has three containers:

- Dimension
- Search
- Dimension Attributes

Dimension Panel

In the Dimension panel select the required dimension from the dropdown. When clicked on the dropdown the pre-defined key dimensions are listed.



Search Panel

The Search Panel consists of three fields namely Code, Name and Data Type. You can search for existing attributes defined for the selected Dimension.

You can search for the required Dimension based on the Code, Name and Data Type. Enter the Code or Name of the Dimension as the search criteria and click the dropdown adjacent to Data Type field. The options like Date, Dimension, Number and String can be chosen.

After the required search criteria is mentioned click Search. The attributes matching the search criteria will be displayed in the Dimension Attributes panel

Dimension Attributes Container

The Dimension Attributes container presents a grid containing all of the Attributes that meet your search criteria. The Dimension Attributes summary grid offers several controls that allow you to perform different functions when an Attribute is selected.

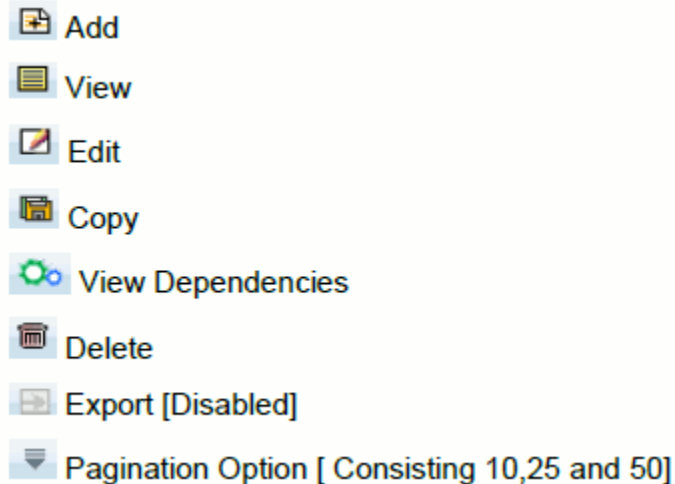
Dimension Attributes					
<input type="checkbox"/>	Code	Name	Data Type	Required	Seeded
<input type="checkbox"/>	5001	ACCOUNT TYPE	DIMENSION	No	Yes
<input type="checkbox"/>	5002	AGGREGATE METHOD	DIMENSION	No	Yes
<input type="checkbox"/>	5003	COLUMN NAME	VARCHAR2	No	Yes
<input type="checkbox"/>	5004	COLUMN PROPERTY	DIMENSION	Yes	Yes
<input type="checkbox"/>	5050	ROLLUP SIGNAGE	DIMENSION	Yes	Yes
<input type="checkbox"/>	5000	WEIGHTING FE	DIMENSION	No	Yes

To select an Attribute, click on a check box in the first column of the grid. More than one Attribute can be selected at a time but this will cause some of the controls to become disabled. Clicking on a check box a second time de-selects an Attribute.

You may select or deselect all of the Attributes in the summary grid by clicking on the check box in the upper left hand corner of the summary grid directly to the left of the Code column header.

Dimension Attributes Toolbar

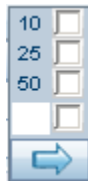
The following list comprises the buttons in the tool bar present in the **Dimension Attributes**, panel in the Attributes screen.



In the default screen only Add and the dropdown buttons are enabled. When the particular Dimension Attribute is selected then the other buttons are enabled.

Pagination Options

The number of rows to be displayed at a time can be set by clicking the Pagination Options button in the toolbar. The Pagination Options dropdown will be displayed. The available options are 10, 25 and 50 rows. You can also enter the number of rows to be displayed in the empty field provided, select the check box and click Go.



Sorting Options

To sort the Dimension Attributes in the ascending or descending order, click the Code, Name, Data Type, Required or Seeded columns of the table.

Adding a New Attribute

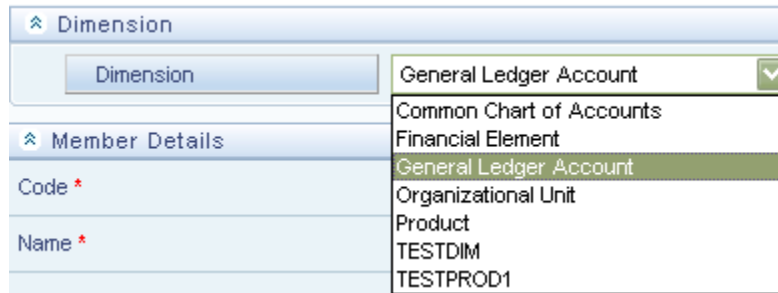
The Add control is disabled if any rows in the grid have been selected.

Click the Add button in the Dimension Attributes toolbar to create a new Attribute. The **New - Attribute** screen is displayed. Panels like **Dimension**, **Attribute Details** and

Attribute Properties are displayed.

Selecting Dimension

In the Dimension panel, click on the dropdown and select the required Dimension.



Viewing Attribute Definition

Selecting a single row out of the grid enables the View control.

Select the Dimension Attribute you wish to view in the Attribute screen and click the View button in the Toolbar to view the details of the selected Attribute. The **View – Attributes** window is displayed.



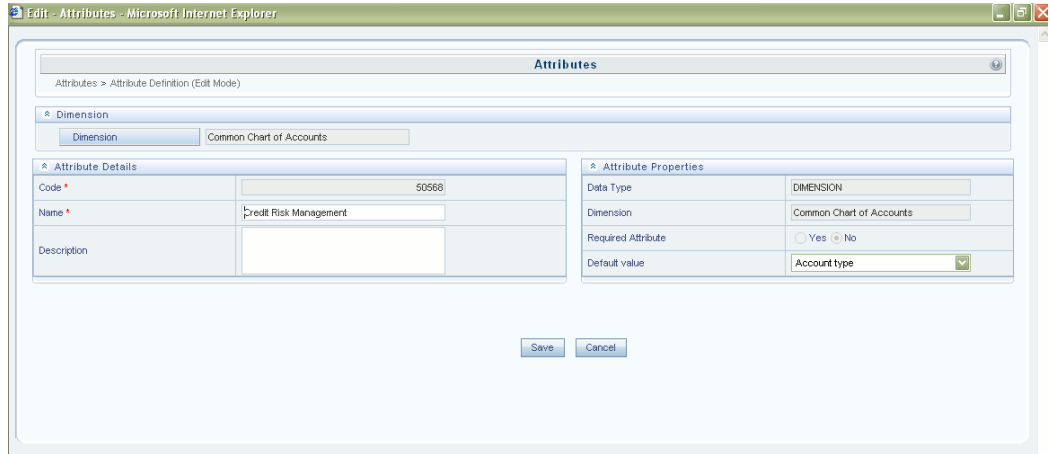
Details such as Dimension, Attribute Details, and Attribute Properties on which the Attribute is based are displayed.

These details cannot be modified from this window. After viewing the details, click Close to close the window.

Editing Attribute Definition

Selecting a single row out of the grid enables the Edit control.

Select an Attribute and click the Edit button in the toolbar to edit the selected **Attribute**. The **Edit – Attributes** window is displayed.



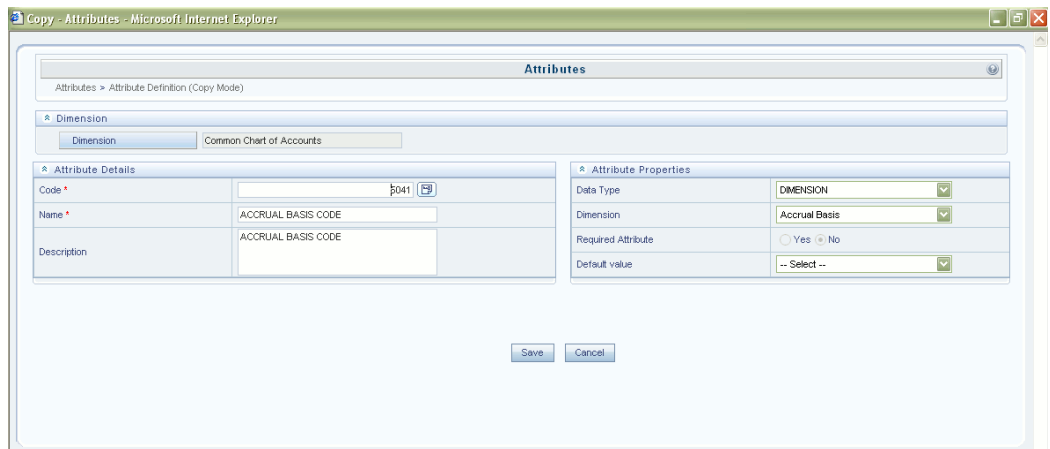
Only Name, Description and the Default Value field can be modified in this window. Make the necessary modifications and click Save to save the changes. The record is updated successfully and is listed in the Dimension Attribute list.

Note: For Number Data type, Scale field is not editable.

Copying Attribute Definition

Selecting a single row out of the grid enables the Copy control.

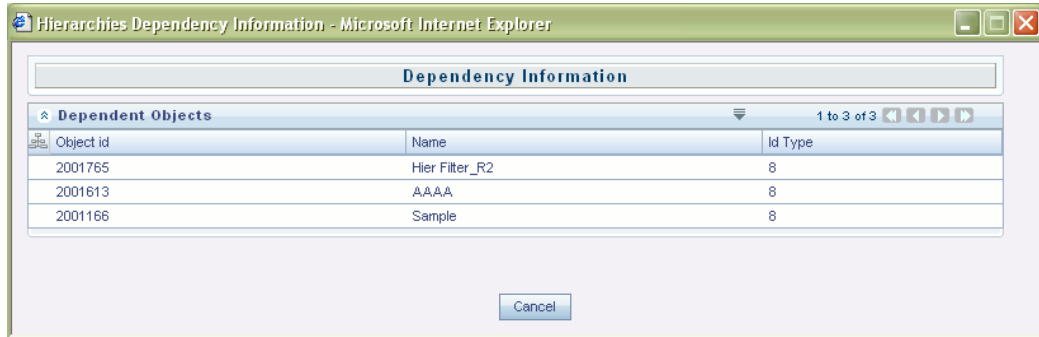
Select an Attribute and click the Copy button in the toolbar to save the selected Attribute definition details as new definition with required changes. The **Copy – Attributes** window is displayed.



The **Attribute Details** and **Attribute Properties** can be edited in this screen. Make the required changes and enter the new code and name. Click Save to save the changes. The record is updated successfully.

Check Dependencies

Select an attribute and click the Check Dependencies button in the toolbar to view the members having values for the selected Attribute definition. The **Attributes Dependency Information** window is displayed.



The details like Code, Name and Is Leaf are displayed. After viewing the details, click Close to close the window.

Delete

Select an Attribute in the Attributes summary screen and click the Delete button in the tool bar to delete an Attribute. The Attribute will be deleted and a confirmation message will be displayed.

- At a time more than one Attribute can be selected for deletion. If there is some Member having value for the Attribute to be deleted then message will be displayed as "Dependencies exist for this element" and the Attribute cannot be deleted.
- If the attribute is predefined then it cannot be deleted. The message will be displayed as "Seeded data cannot be deleted"

Dimension Attributes Summary Grid

The following columns categorize each Attribute in the summary grid:

- Code
- Name
- Data Type
- Required

- Seeded

Code

Displays the Attribute's Code value.

Name

Displays the Attribute's short name. Performing a "mouse-over" on an Attribute Name displays the Attribute's description

Data Type

Displays the Attribute's data type (String, Number, Date, or Dimension).

Required

Attributes are either "Required" (Yes) or optional (No).

When creating a new dimension member, you must provide an attribute value for any attribute that is "Required". Only certain seeded attributes are "Required". You may not create "Required" user-defined attributes.

Seeded

Displays whether or not an Attribute is seeded. You may not edit or delete seeded attributes.

Navigation within the Detail Screen

When you Add, Edit, Copy, or View an Attribute, the Attributes Detail screen is displayed.

The screenshot shows the 'Attributes' detail screen with the following components:

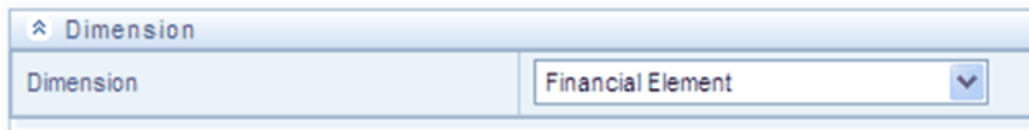
- Attributes** (Page Title)
- Breadcrumb: [Attributes](#) > Attribute Definition (New Mode)
- Dimension** (Section Header)
- Dimension: Financial Element
- Attribute Details** (Section Header)
- Code *: 5051
- Name *: New Attribute
- Description: New Financial Element Attribute
- Attribute Properties** (Section Header)
- Data Type: DATE
- Dimension: (Empty)
- Required Attribute: Yes No
- Default value: MM/DD/YYYY

Attribute Functionality

See Overview of OFSAA Infrastructure for details on how Attributes are used in OFS Analytical Applications.

Dimension Container

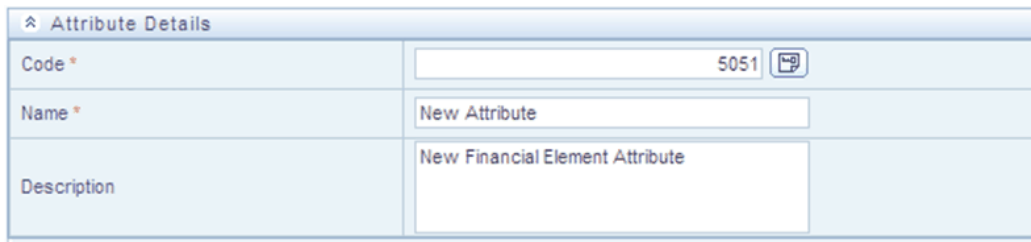
Displays the name of the dimension to which an Attribute belongs. When Editing or Copying an existing Attribute, this is a read-only value. When Adding a new Attribute, you must select the dimension to which you want your new attribute to be assigned.



Attribute Details Container

Code

When Adding a new Attribute, you must select a Code value to which you want your new attribute to be assigned. Code values for each attribute belonging to a dimension must be unique, but you are otherwise free to pick any numeric value you wish. You may also click the Generate Code shortcut key to automatically generate a new Code value. The system generated code for the new Attribute to be defined will be displayed.



You must supply a Code value before you can save a new Attribute definition and you may not change a Code value once an Attribute definition has been saved.

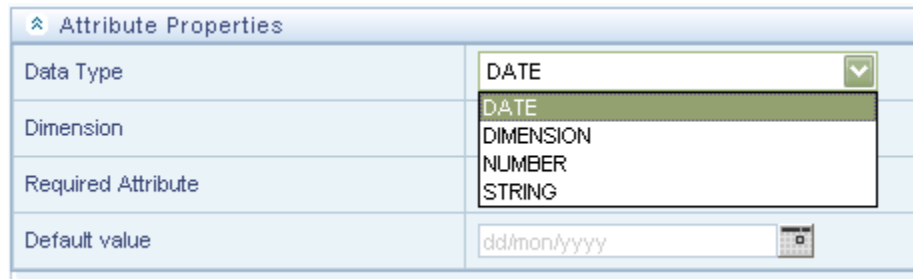
Name and Description

Enter a suitable name and description for the new Attribute in the Name and Description field.

Attribute Properties Container

Entering the Attribute Properties

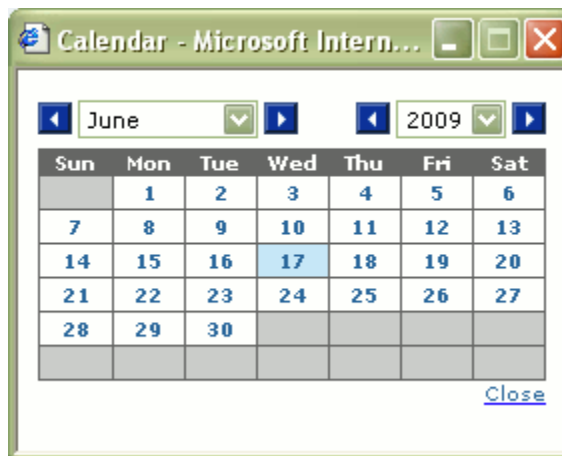
Click on the dropdown adjacent to Data Type field. The options like Date, Dimension, Number and String are listed.



Attribute Properties	
Data Type	DATE
Dimension	DATE DIMENSION NUMBER STRING
Required Attribute	
Default value	dd/mon/yyyy

Attribute Definition based on Date Data Type

If DATE is selected as the Data Type then the Default Value field is enabled. Click the Calendar button to select a valid date. The window will open up showing the calendar.



The selected date will be displayed in the Default Value field.

Attribute Definition based on Dimension Data Type

If the Data Type is DIMENSION, the Dimension field is enabled.

Attribute Properties	
Data Type	DIMENSION
Dimension	Account Type
Required Attribute	<input type="radio"/> Yes <input checked="" type="radio"/> No
Default value	-- Select --

Click on dropdown in the Dimension field. Select the required Dimension from the listed Dimensions.

In the **Default Value** field click on the dropdown and the Members mapped to respective Dimension would be displayed.

Attribute Properties	
Data Type	DIMENSION
Dimension	Common Chart of Accounts
Required Attribute	<input type="radio"/> Yes <input checked="" type="radio"/> No
Default value	LeafMember 61008

-- Select --

3g

a date mem

△△

Account type

ALERT_

bfgf

cdddd

dfg

Dsdfsdf

ffffsfsdfs

fvrfgLeafMember 61006

gLeafMember 61005

hhLeafMember 61002

hhLeafMember 61004

hLeafMember 61001

isl

LeafMember 61007

LeafMember 61008

LeafMember 61009

LeafMember 61010

-- More --

Select the required Member from the dropdown and it would be displayed in the Default Value field in **New - Attribute** screen.

If the required Member is not listed in the dropdown then select --More--. The **Member Search** window is displayed.



Key in the Code, Name, Description and the valid details in the **Member Search** window and click on Search.

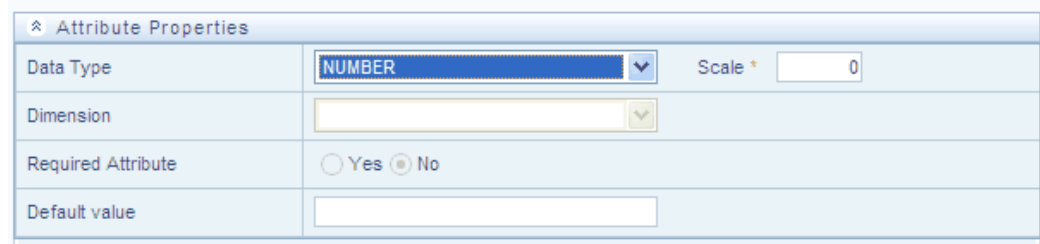
The selected Member will be displayed in the Default Value field in the **New - Attribute** screen.

All Members are displayed in the dropdown if the search criterion is left blank and Search is clicked.

Attribute Definition based on Number Data Type

From the dropdown in the Data Type field, select **NUMBER**.

The Default Value field allows to key in the valid numerical value on which the Attribute is to be defined.



When the Data Type is selected as Number, a new text field Scale is enabled. By default, the Scale value is set as 0. 0 implies an integer.

The Scale can be edited to value between 0 and 5 thereby making it a decimal. Scale value less than scale defined is permitted. Scale value greater than scale value is automatically trimmed.

Attribute Definition based on String Data Type

Select **STRING** from the dropdown in Data Type field.

You can key in the alpha numerical value in the Default Value field.

Attribute Properties	
Data Type	STRING
Dimension	
Required Attribute	<input type="radio"/> Yes <input checked="" type="radio"/> No
Default value	Pre456

After the Dimension, Attribute Details and Attribute Properties are keyed in click on Save in the **New - Attribute** screen to validate the entries and capture the defined Attribute.

The records are inserted successfully and are listed in Dimension Attributes list. Click Cancel if you want to ignore the entries and return to the Attributes screen.

OFSAA Dimension Members

Summary & Detail Screens

Upon initially navigating to Master Maintenance > Dimension Management > Members, a summary screen is displayed showing all of the defined Dimension Members for one dimension (your first dimension alphabetically). By selecting a dimension and by using search criteria, you can control the set of Dimension Members that are displayed. When you Add, Edit, Copy, or View a Dimension Member, a detail screen is displayed.

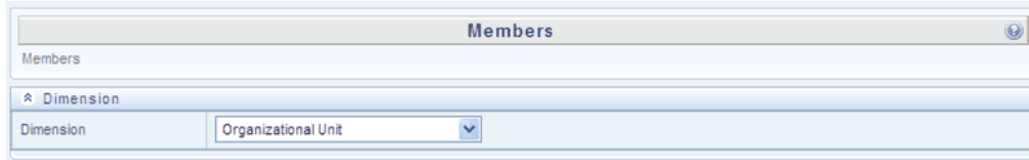
Navigation within the Summary Screen

When you first navigate to the Dimension Members summary screen, the Dimension Members associated with your first dimension are presented in a summary grid. The Dimension Members summary screen has three containers:

- Dimension
- Search
- Dimension Members

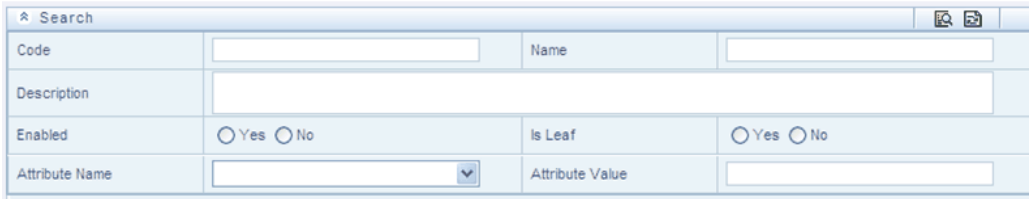
Dimension Container

To add or maintain a Dimension Member, you must first select the dimension to which a Dimension Member belongs. The Dimension drop down list box in the Dimension container displays all of your dimensions that are configured to be viewable (not every dimension is viewable through the application user interface; for details on which dimensions are viewable, see the *Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) Installation and Configuration Guide*..



Search Container

Each Dimension Member possesses a Code value, a Name, and a Description. Dimension Members also have the properties of being enabled or disabled and of being a leaf member (last-descendent-child value) or a rollup member (representing a rollup point in a hierarchy). Finally, each Dimension Member value is assigned an attribute value for each its attributes. You may search on any of these properties in the Search container.



Search Control

Enter your desired search criteria and click on the Search control.

Reset Control

Clicking on the Reset control clears any search criteria you may be using and refreshes the screen.

Dimension Members Container

Dimensions are comprised of finite lists of Dimension Members. The Dimension Members container presents a grid containing all of the Dimension Members that meet your search criteria. The Dimension Members summary grid offers several controls that allow you to perform different functions when a Dimension Member is selected.

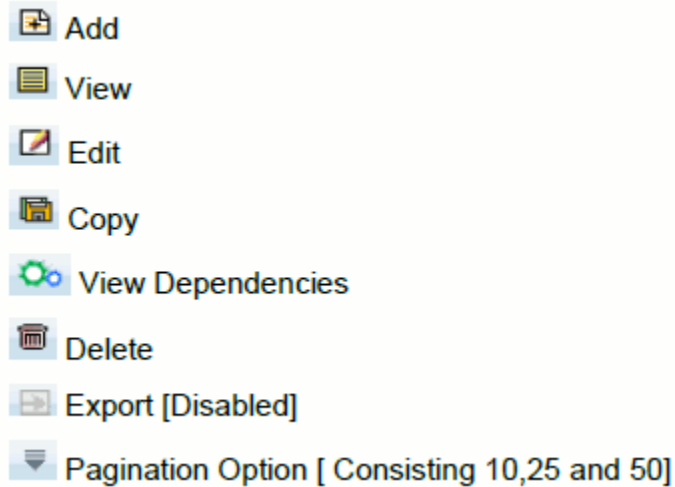
To select a Dimension Member, click on a check box in the first column of the grid. More than one Dimension Member can be selected at a time but this will cause some of the controls to become disabled. Clicking on a check box a second time deselects a Dimension Member.



You may select or deselect all of the Dimension Members in the summary grid by clicking on the check box in the upper left hand corner of the summary grid directly to the left of the Code column header.

Dimension Members Toolbar

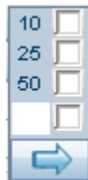
The following list comprises the buttons in the tool bar present in the **Dimension Members**, panel in the Members.



In the default screen only Add and the dropdown buttons are enabled. When the particular Dimension Member is selected then the other buttons are enabled.

Pagination Options

The number of rows to be displayed at a time can be set by clicking the Pagination Options button in the toolbar. The Pagination Options dropdown will be displayed. The available options are 10, 25 and 50 rows. You can also enter the number of rows to be displayed in the empty field provided, select the check box and click Go.



Sorting Options

To sort the Dimension Members in the ascending or descending order, click the Code, Name, and Is Leaf columns of the table.

Add

Clicking on the Add control begins the process of building a new Dimension Member. The Add control is disabled if any rows in the grid have been selected.

View

Selecting a single row out of the grid enables the View control. Clicking on the View control allows you to view the detailed definition of a Dimension Member on a read-only basis. The View control is only enabled when a single Dimension Member has been selected.

Edit

Selecting a single row out of the grid enables the Edit control. Clicking on the Edit control allows you to modify an existing Dimension Member. The Edit control is only enabled when a single Dimension Member has been selected.

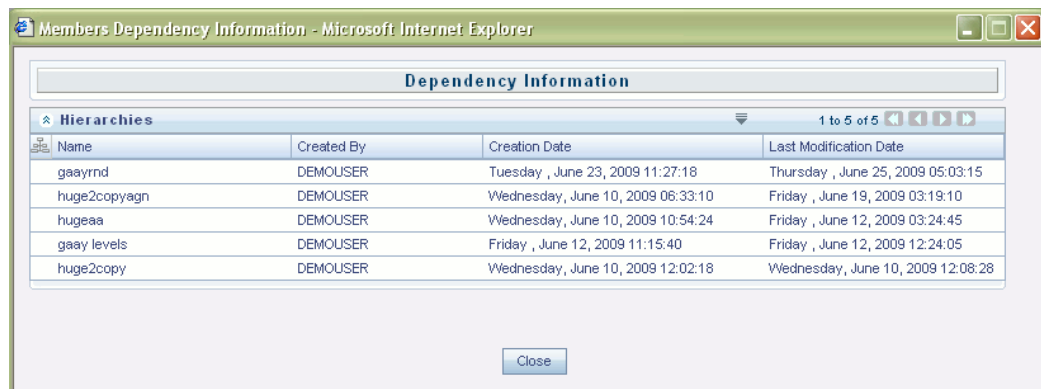
Copy

Selecting a single row out of the grid enables the Copy control. Clicking on the Copy control allows you to create a copy of an existing Dimension Member. The Copy control is only enabled when a single Dimension Member has been selected.

Check Dependencies

Select a Member and click the Check Dependencies button in the toolbar to view the hierarchies which has this Member as its Node.

The **Members Dependency Information** window is displayed.



The details like Name, Created By, Creation Date, Creation Date and Last Modification Date are displayed. After viewing the details, click Cancel or Close to close the window.

Delete

See also: *Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) Installation and Configuration Guide "Configuration for Dimension and Hierarchy Management"* which contains a section on "Configuring Member Deletion" using AMHMConfig.properties.

If your dimension is set up to enable member deletion, select one or more members in the Members summary screen, then click the **Delete** button in the toolbar, to delete those members. After you confirm that you want to delete the selected members, if there are no restrictions on the members you selected, they will be deleted. You will then see a message indicating that the members has been removed.

Restrictions on Deletion:

- If any dependencies exist (For example, if the member is used in any Hierarchy), a message will indicate that "Dependencies exist for the element" and the member cannot be deleted. Select the summary page **Check Dependencies** button to display a report of Hierarchies, which include the member.
- If the member is predefined, then it cannot be deleted. A message will indicate "Seeded data cannot be deleted".

Dimension Members Summary Grid

The following columns categorize each Dimension Member in the summary grid:

- Code
- Name
- Is Leaf

Dimension Members			
Code	Name	Is Leaf	
<input type="checkbox"/> 9113	Treasury-9113	No	
<input type="checkbox"/> 9114	Loan Operations-9114	No	
<input type="checkbox"/> 9115	Deposit Operations-9115	No	
<input type="checkbox"/> 9116	Corporate-9116	No	
<input type="checkbox"/> 9117	Treasury-9117	No	
<input type="checkbox"/> 9119	Retail-9119	No	
<input type="checkbox"/> 9120	Wholesale-9120	No	
<input type="checkbox"/> 9121	Operations-9121	No	
<input type="checkbox"/> 9122	Admin	No	
<input type="checkbox"/> 9123	Retail-9123	No	
<input type="checkbox"/> 9124	Wholesale-9124	No	
<input type="checkbox"/> 9125	Operations-9125	No	
<input type="checkbox"/> 9126	Administration	No	
<input type="checkbox"/> 9127	Corporate - Parent	No	

Code

Displays the Dimension Member's Code value.

Name

Displays the Dimension Member's short name. Performing a "mouse-over" on a Dimension Member Name displays the Dimension Member's description.

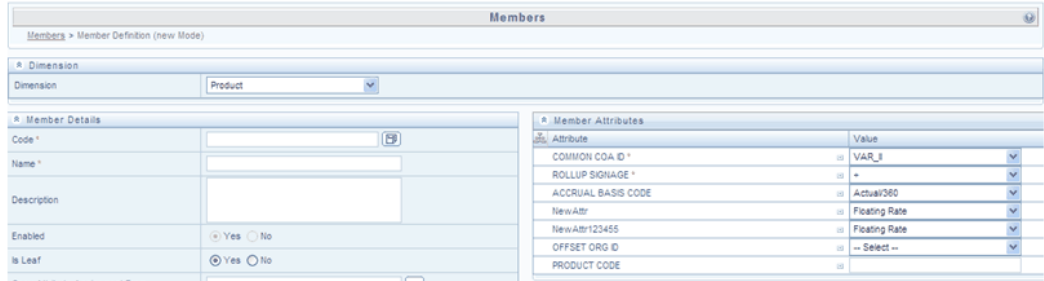
Is Leaf

Displays the Dimension Member's "Is Leaf?" property. Members may be declared to be either "leaf members" or "rollup members". When building a hierarchy in OFSAAI, "leaf members" are those dimension members that have no descendent dimension members. In building a dimension member set, you must have at least some rollup members (Is Leaf = No) before you can construct a multilevel hierarchy.

Your business data is normally expressed at the leaf level. An individual mortgage instrument record, for example, would belong to a (leaf level) cost center for a (leaf level) principal balance General Ledger Account and would carry a (leaf level) designation of Product.

Navigation within the Detail Screen

When you Add, Edit, Copy, or View a Dimension Member, the Dimension Members Detail screen is displayed.



Dimension Member Functionality

See Overview of OFSAA Infrastructure for details on how Dimension Members are used in OFS Analytical Applications.

Dimension Container

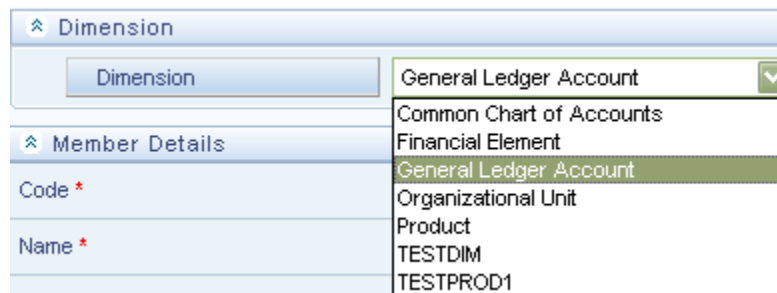
Displays the name of the dimension to which a Dimension Member belongs. When Editing or Copying an existing Dimension Member, this is a read-only value. When Adding a new Dimension Member, you must select the dimension to which you want your new Dimension Member to be assigned.

Adding a New Member

Click the Add button in the **Dimension Members** toolbar to create a new Member. The **New – Member Details** screen is displayed.

Selecting Dimension

Selected Dimension from the Members screen will be displayed as the dimension for which member has to be defined. It can be modified by clicking on the dropdown from the Dimension panel.



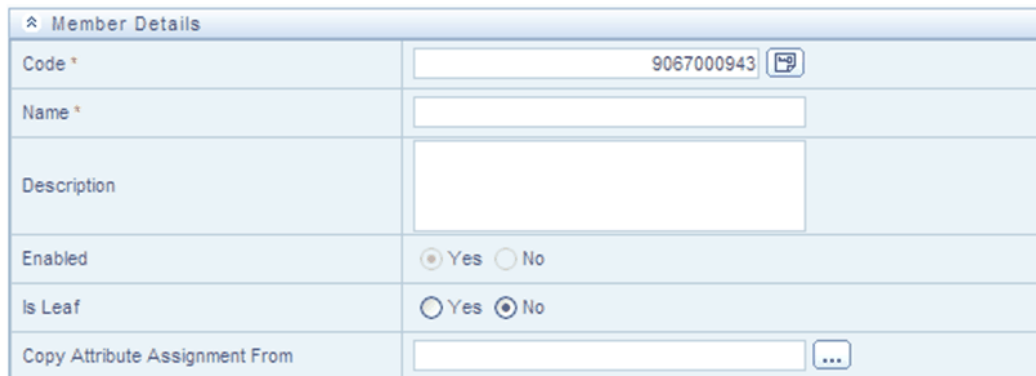
Dimension Member Details Container



Code

When Adding a new Dimension Member, you must select a Code value to which you want your new Dimension Member to be assigned. Code values for each Dimension Member belonging to a dimension must be unique, but you are otherwise free to pick any numeric value you wish. You may also click the Generate Code shortcut key to automatically generate a new Code value.

You must supply a Code value before you can save a new Dimension Member definition and you may not change a Code value once a Dimension Member definition has been saved.

- When Editing an existing Dimension Member, Code is a read-only value
- When Copying an existing Dimension Member, you must supply a new Code value



Member Details	
Code *	<input type="text" value="9067000943"/> 
Name *	<input type="text"/>
Description	<input type="text"/>
Enabled	<input checked="" type="radio"/> Yes <input type="radio"/> No
Is Leaf	<input type="radio"/> Yes <input checked="" type="radio"/> No
Copy Attribute Assignment From	<input type="text"/> 

Name

Used to name or re-name your Dimension Member. You must supply a Name (or a new name if you wish to re-name your Dimension Member) before you can save a Dimension Member definition.

Description

Used to store a description of your Dimension Member.

Enabled

When a member is enabled, it will be visible in many other pages which permit member selection. To make it unavailable for selection, you can Disable the member by setting Enabled = No.

In the Add member screen, Enabled remains in read-only mode and is set to Yes, since a new member should typically be available for selection in other screens. If you wish to

disable a member at some point, you can use the Edit screen to set Enabled = No.

Important: You may not disable a member if it is used in any Hierarchy. Use the Check Dependencies button in the summary page to display a report of Hierarchies which include the member.

Is Leaf

A member may be referred to as either a "leaf member" or "rollup member". When building a hierarchy in OFSAAI, "leaf members" are those dimension members that cannot have descendant dimension members. If the Member property Is Leaf = No, the member can be placed as a hierarchy node, and children (other rollup members or leaves) can be placed as its descendants. In building a dimension member set, you must have at least some rollup members (Is Leaf = No) before you can construct a multilevel hierarchy.

For any simple dimension, the Is Leaf flag will be disabled.

Important: If a rollup member has underlying children in any hierarchy, it cannot be switched to Leaf.

Copy Attribute Assignment From

Instead of manually completing all the attribute value assignments for a new Dimension Member, you may copy attribute assignments from a pre-existing Dimension Member. To do so, click the ellipses adjacent to Copy Attribute Assignment From field to open the Member Browser window. You may select a member directly or you may search for the member whose attributes you wish to copy. Once you have selected a member and clicked OK, the attribute values of the member you selected are copied into the definition of your new Dimension Member.



Members			
Dimension: Organizational Unit			
Search 🔍 📄			
Code	<input type="text"/>	Name	<input type="text"/>
Description	<input type="text"/>		
Enabled	<input type="radio"/> Yes <input type="radio"/> No	Is Leaf	<input type="radio"/> Yes <input type="radio"/> No
Attribute Name	<input type="text"/>	Attribute Value	<input type="text"/>
Dimension Members 1 to 50 of 185			
Admin			
Administration			
All Orgs			
Bank 1			
Bank 1-9067000908			
Bank 2			
BRANCH A1			
BRANCH A2			
Branch Admin			
BRANCH B1			
COMPANY A			
COMPANY B			
COMPANY C			
Consumer Direct East			
Consumer Direct West			
<input type="text"/>			
<input type="button" value="Ok"/> <input type="button" value="Close"/>			

Entering the Member Details

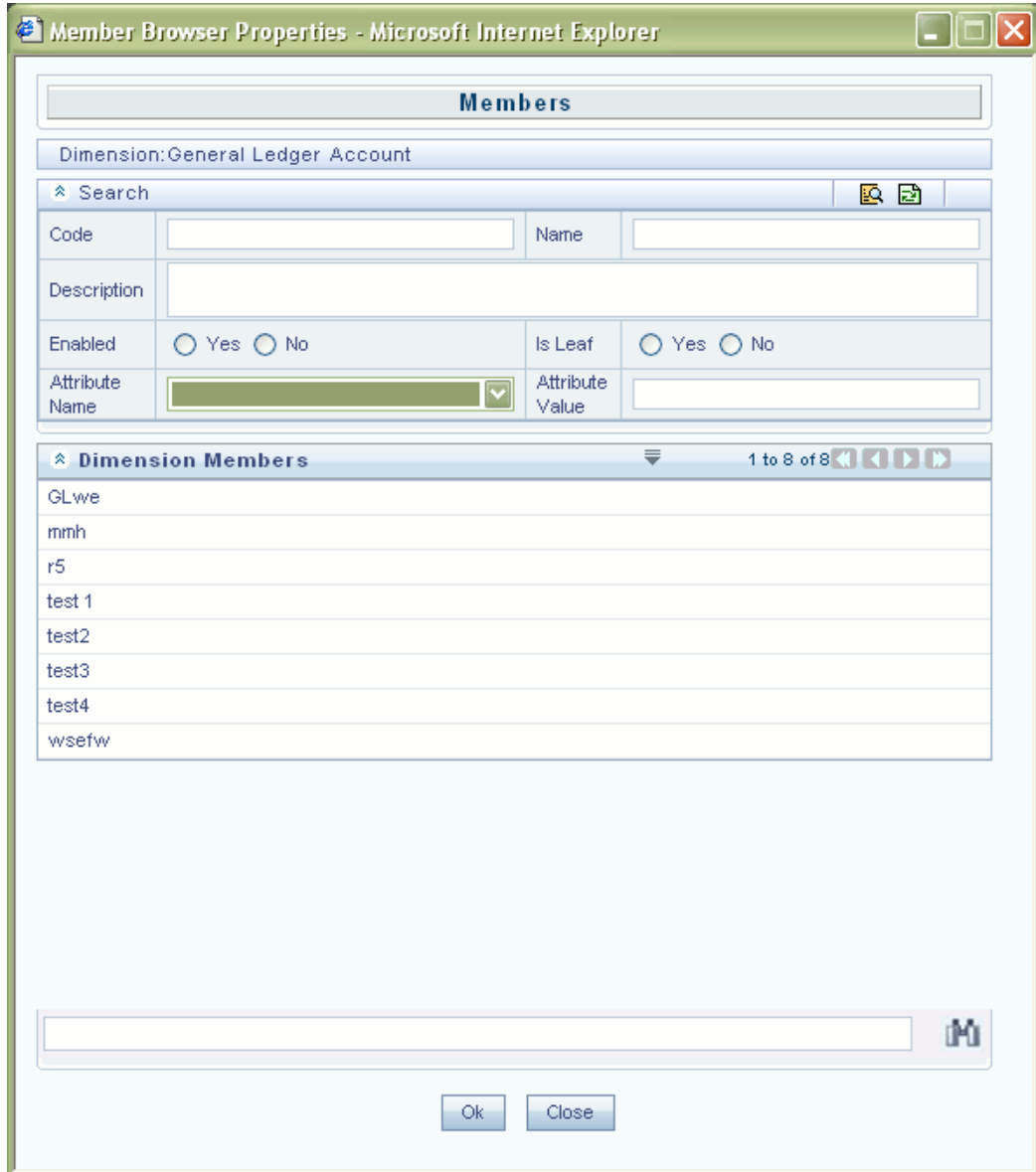
Click Generate Code button Code field. The system generated code for the new Member to be defined will be displayed.

Enter a suitable name and description for the new Member in the Name and Description field. Select YES or NO in the Enabled and the Is Leaf field.

Note: By default the Enabled field is disabled where YES is selected as the member should be made use in the Hierarchy screen. This can be edited only in the Edit option.

* Member Details	
Code *	<input type="text" value="52"/> 
Name *	<input type="text"/>
Description	<input type="text"/>
Enabled	<input type="radio"/> Yes <input type="radio"/> No
Is Leaf	<input checked="" type="radio"/> Yes <input type="radio"/> No
Copy Attribute Assignment From	<input type="text" value="47"/> 

Click Launch button adjacent to **Copy Attribute Assignment From** field. The Member Browser Properties window opens up.



Choose the Member from the **Dimension Members** field. If the required Member is not displayed on the Dimension Members field then search the Member with the use of the Search panel.

Click OK so that the selected Member is displayed in the Copy Attribute Assignment From field in **New – Member Details** screen.

Once the Attribute is chosen then the details existing to the selected Attribute is displayed in the **Member Attributes** panel.

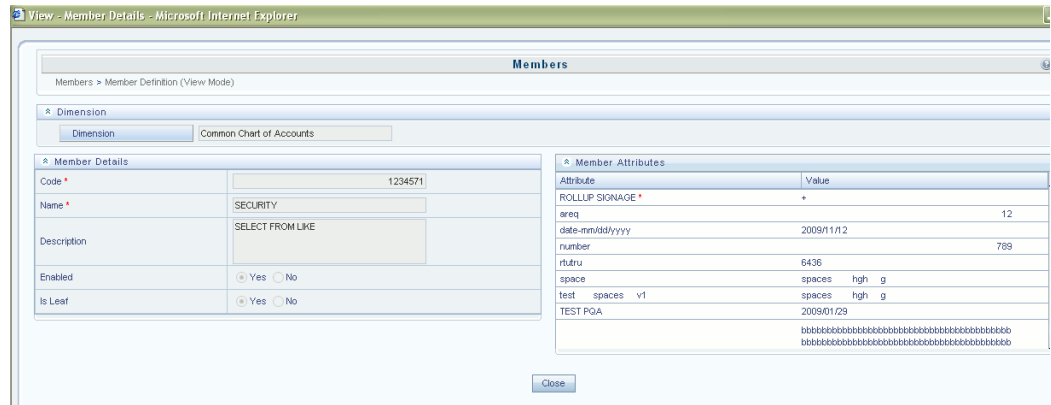
Note: To define a New Member, Copy Attribute Assignment From field can be left blank so that the Member Attributes panel can be filled in

without considering the values already assigned.

Viewing Member Definition

Select the **Dimension Members** you wish to view in the Member screen and click the View button in the toolbar to view the details of the selected Member.

The **View – Member Details** window is displayed.



Details such as Dimension, Member Details and Member Attributes are displayed.

These details cannot be modified from this window. After viewing the details, click Close to close the window.

Editing Member Definition

Select a Member and click the Edit button in the toolbar to edit the selected Member.

The **Edit – Member window** is displayed.

Members > Member Definition (Edit Mode)

Dimension: Common Chart of Accounts

Member Details:

- Code: 600011
- Name: Account type
- Description: account type
- Enabled: Yes No
- Is Leaf: Yes No
- Copy Attribute Assignment From: [...]

Member Attributes:

Attribute	Value
ROLLUP SIGNAGE	+
ACCOUNT TYPE	-- Select --
ACCRUAL BASIS CODE	-- Select --
ALERT_	yyMMdd
ALERT_OER	yyMMdd
areq	
ascsxds	yyMMdd
date-mmdd/yyyy	yyMMdd
dsdd	yyMMdd
DROP IN	yyMMdd
HYGI	yyMMdd
number	789
OFFSET_ORG_ID	-- Select --
rlftr	rlf6415R1

Buttons: Save, Cancel

Only the Code and Name field cannot be edited in this window. Make the necessary modifications in the fields enabled and click Save to save the changes. The record is updated successfully.

Copying Member Definition

Select a Member and click the Copy button in the toolbar to save the selected Member definition details as new definition with necessary changes. The **Copy – Member Details** window is displayed.

Members > Member Definition (Copy Mode)

Dimension: Common Chart of Accounts

Member Details:

- Code: 61005
- Name: gl_LeafMember 61005
- Description: LeafMember 61005
- Enabled: Yes No
- Is Leaf: Yes No
- Copy Attribute Assignment From: [...]

Member Attributes:

Attribute	Value
ROLLUP SIGNAGE	+
ACCOUNT TYPE	-- Select --
ACCRUAL BASIS CODE	-- Select --
ALERT_	yyMMdd
ALERT_OER	yyMMdd
areq	
ascsxds	yyMMdd
date-mmdd/yyyy	yyMMdd
dsdd	yyMMdd
DROP IN	yyMMdd
HYGI	yyMMdd
number	
OFFSET_ORG_ID	-- Select --
rlftr	

Buttons: Save, Cancel

The **Member Details** and the **Member Attributes** can be edited in this screen. Make the required changes and enter the new code and name. Click **Save** to save the changes. The record is updated successfully.

Dimension Member Attributes Container

Entering the Member Attributes

Attributes and their Values mapped to a particular Dimension are displayed in the **Member Attributes** panel.

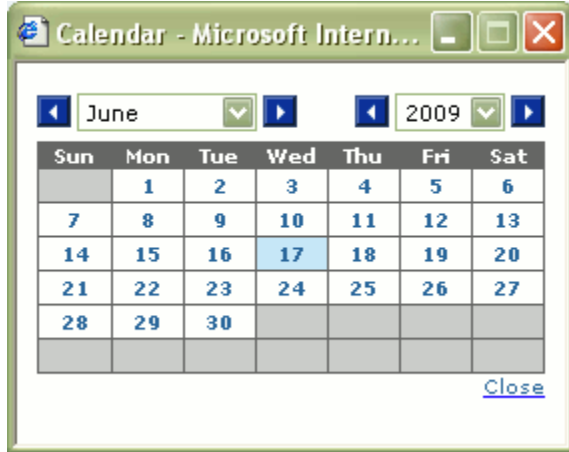
Member Attributes	
Attribute	Value
Account Type *	<Use Detail Leaves>
3010	333
3011	+
Accounting	Monday , June 01 , 2009
ACCRUAL BASIS CODE	-- Select --
Attribute23June	TM Adj Type (700036)
DESCRIPTION	
e	Day, Month dd, yyyy
e	Day, Month dd, yyyy
mystring	wefgeragrag
mystring	Day, Month dd, yyyy
Offset COA ID	-- Select --
Offset ORG ID	-- Select --
Tax Rate	

Attribute based on Date Value

The Attributes based on Date has the default value which can be changed by clicking the Calendar button.

Member Attributes	
Attribute	Value
Tax Rate *	0
Common COA ID	-- Select --
date1	Wednesday , June 3, 2009
Offset COA ID	-- Select --
stringq	etdrstserterysy

Click the Calendar button to select a valid date. The window will open up showing the calendar.



The selected date will be displayed in the Value field adjacent to the Attribute based on date.

Attribute based on Dimension Value

The Attributes based on Dimension has the default value set. Click on dropdown in the Value field. Select the required Member from the listed Members.

Member Attributes	
Attribute	Value
Account Type *	<Use Detail Leaves>
3010	333
3011	+
Accounting	Monday , June 01 , 2009
ACCRUAL BASIS CODE	-- Select --
Attribute23June	-- Select --
DESCRIPTION	-- Select --
e	TM LPD Test (700017)
e	TM LPD Test (700018)
mystring	TM LPD Test (700019)
mystring	TM LPD Test (700020)
mystring	TM LPD Test (700021)
mystring	TM LPD Test (700022)
mystring	TM LPD Test (700023)
mystring	TM LPD Test (700024)
mystring	TM LPD Test (700025)
mystring	TM LPD Test (700026)
mystring	TM LPD Test (700027)
mystring	TM LPD Test (700028)
mystring	TM LPD Test (700029)
mystring	TM LPD Test (700030)
mystring	TM LPD Test (700031)
mystring	TM LPD Test (700032)
mystring	TM LPD Test (700033)
mystring	TM LPD Test (700034)
mystring	TM LPD Test (700035)
mystring	TM LPD Test (700036)
mystring	-- More --

Select the **--More--** option if the required Member is not available in the listed Members.

On clicking **--More--** the Member Search window is displayed.

You can search for existing Members defined for the selected Dimension based on Code, Name, Description, Enabled, Is Leaf, Attribute Name or Attribute Value.

Search			
Code	<input type="text"/>	Name	<input type="text"/>
Description	<input type="text"/>		
Enabled	<input type="radio"/> Yes <input type="radio"/> No	Is Leaf	<input type="radio"/> Yes <input type="radio"/> No
Attribute Name	<input type="text"/>	Attribute Value	<input type="text"/>

Key in the Code or Name, Description of the Dimension as the search criteria and select the **Yes** or **No** from the **Enabled** field and Is Leaf field. Click on the dropdown adjacent to Attribute Name field and select the required **Attribute Name**. Enter the valid **Attribute Value** in the available field.

After the required search criteria is mentioned, click Search. The Members matching the search criteria will be displayed adjacent Value field in the **New – Member Details** screen.

Attribute based on Number Value

The Attributes based on the Number will be displayed with the value already defined or blank. Key in the valid numerical value for the Attribute selected.

Member Attributes	
Attribute	Value
Tax Rate *	91377

Attribute based on String Value

The attributes based on the String Value will be displayed with the default alpha numerical value. Enter the valid alpha numerical value in the Value field adjacent to the Attribute name.

Member Attributes	
Attribute	Value
Tax Rate *	91377
Common COA ID	TM LPD Test (700017)
date1	Monday, June 15, 2009
Offset COA ID	TMT:CDs 5-10 mos.
stringq	DELTA12345

After the Dimension, Member Details and Members Attributes are entered, click **Save** in the **New – Member** Details screen to validate the entries and capture the defined Attribute.

The records are inserted successfully and listed in the Dimension Members list.

Click **Cancel** if you want to ignore the entries and return to the Members screen.

OFSAA Hierarchies

Overview of OFSAA Hierarchies

This chapter describes the creation and maintenance of OFSAA Hierarchies. Specifically, this chapter will cover:

- Hierarchy Summary & Detail Screens
- Navigation within the Hierarchy Summary Screen
- Navigation within the Hierarchy Detail Screen

See Overview of OFSAA Infrastructure, page 2-1 for details on how Hierarchies are used in OFS Analytical Applications. See the *Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) Installation and Configuration Guide* for details on bulk loading hierarchies.

Summary & Detail Screens

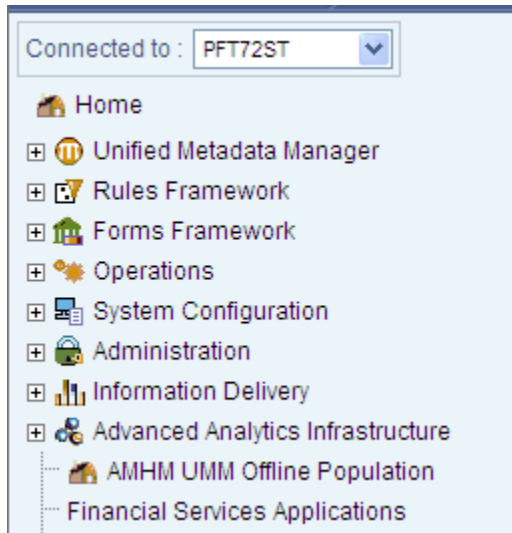
Dimension members may be arranged in levels, with each level representing the aggregated total of the data from the level below. These are called hierarchies. One dimension type can have multiple hierarchies associated with it.

For example: You can build a hierarchy based on the Line Item (product) dimension. The Line Item dimension might have these members: "Adjustable Loans" might be comprised of data from "One-Year ARM" and "Three-Year ARM". So the hierarchy could be built with Adjustable Loans as the parent node, and the other two members as its descendants.

Accessing Hierarchies

Log on to OFSAAI application. The Hierarchies management must be done after the Infodomain is selected. Select Infodomain from the **Connected to** drop-down list.

Click the **Financial Services Applications** function menu in the left pane of the OFSAAI Splash screen.



The **Financial Services Applications** screen appears.



Click **Master Maintenance > Dimension Management > Hierarchies**.

The Hierarchies screen is displayed in the right pane which contains the panels like Dimension, Search and Hierarchies.

Name	Display Level	Created By	Creation Date	Last Modification Date
0002304	1	VISHWA	2009 NOV 11 14:34:21	2009 NOV 11 14:34:21
ALERT_	3	GAUSER	2009 NOV 17 13:28:42	2009 NOV 18 11:45:57
eee	2	GAUSER	2009 NOV 17 10:28:20	2009 NOV 18 15:15:34
SELECT FROM LIKE	1	GAUSER	2009 NOV 17 13:28:07	2009 NOV 17 13:28:07
test 1111	1	GAUSER	2009 NOV 17 09:55:27	2009 NOV 17 10:16:50
test 11111	1	GAUSER	2009 NOV 16 17:24:07	2009 NOV 16 17:24:07
TEST 44	1	GAUSER	2009 NOV 16 14:39:41	2009 NOV 16 16:53:09
test folder	3	VISHWA	2009 NOV 11 15:01:40	2009 NOV 16 11:52:05
test12233	1	VISHWA	2009 NOV 11 14:34:51	2009 NOV 16 11:49:58
test12233df	1	GAUSER	2009 NOV 16 16:55:24	2009 NOV 16 16:55:24
TestHcy	1	GAUSER	2009 NOV 17 01:03:14	2009 NOV 18 15:10:08
TESTHER	1	GAUSER	2009 NOV 17 16:21:30	2009 NOV 17 16:29:18

Navigation within the Summary Screen

When you first navigate to the Hierarchies summary screen, the Hierarchies that are stored within your current default folder and that are associated with your first dimension are presented in a summary grid. The Hierarchies Summary screen has three containers:

- Dimension
- Search
- Hierarchies

Dimension Panel

In the Dimension panel select the required dimension from the dropdown. When clicked on the dropdown the pre-defined key dimensions are listed.

Dimension	
Dimension	Common Chart of Accounts
Search	
Code	Financial Element
	General Ledger Account
	Organizational Unit
	Product

Search Container

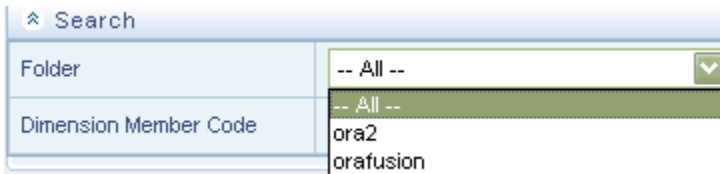
Search Panel

You can search for existing Hierarchy defined for the selected Dimension based on Folder, Hierarchy Name, Dimension Member Code and Dimension Member Name.



Search			
Folder	-- All --	Hierarchy Name	
Dimension Member Code		Dimension Member Name	

Click on the dropdown adjacent to Folder field. The segments mapped to the Infodom selected are displayed. Select the required segment.



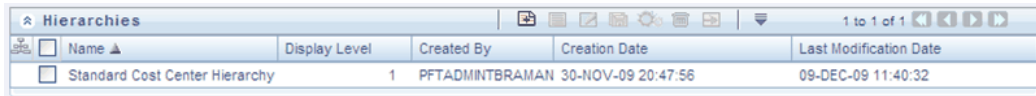
Search	
Folder	-- All --
Dimension Member Code	-- All -- ora2 orafusion

Enter the Hierarchy Name, Dimension Member Code or Dimension Member Name in the respective fields.

After the required search criteria is mentioned click Search. The Hierarchies matching the search criteria will be displayed in the Hierarchies panel.

Hierarchies Container

The Hierarchies container presents a grid containing all of the Hierarchies that meet your search criteria. The Hierarchies summary grid offers several controls that allow you to perform different functions when a Hierarchy is selected.



Hierarchies					
<input type="checkbox"/>	Name ▲	Display Level	Created By	Creation Date	Last Modification Date
<input type="checkbox"/>	Standard Cost Center Hierarchy	1	PFTADMINBRAMAN	30-NOV-09 20:47:56	09-DEC-09 11:40:32

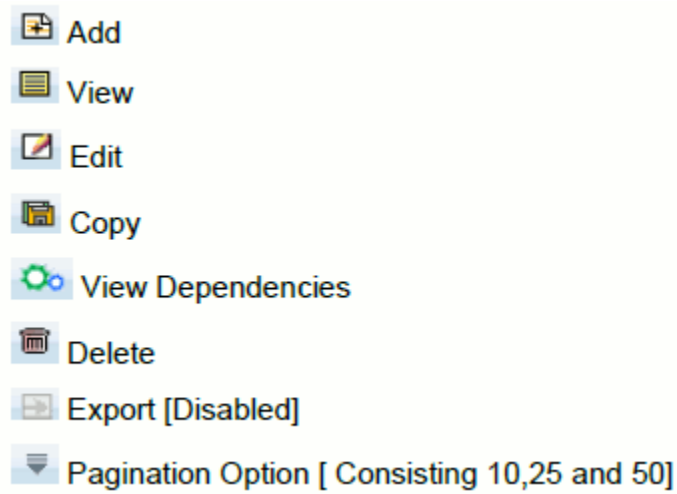
To select a Hierarchy, click on a check box in the first column of the grid. More than one Hierarchy can be selected at a time but this will cause some of the controls to become disabled. Clicking on a check box a second time deselects a Hierarchy.

You may select or deselect all of the Hierarchies in the summary grid by clicking on the check box in the upper left hand corner of the summary grid directly to the left of the Name column header.

Hierarchies Toolbar

The following list comprises the buttons in the tool bar present in the **Hierarchies** panel

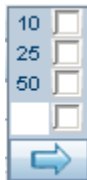
in the Hierarchies screen.



In the default screen only Add and the dropdown buttons are enabled. When the particular Hierarchy is selected then the other buttons are enabled.

Pagination Options

The number of rows to be displayed at a time can be set by clicking the Pagination Options button in the toolbar. The Pagination Options dropdown will be displayed. The available options are 10, 25 and 50 rows. You can also enter the number of rows to be displayed in the empty field provided, select the check box and click Go.



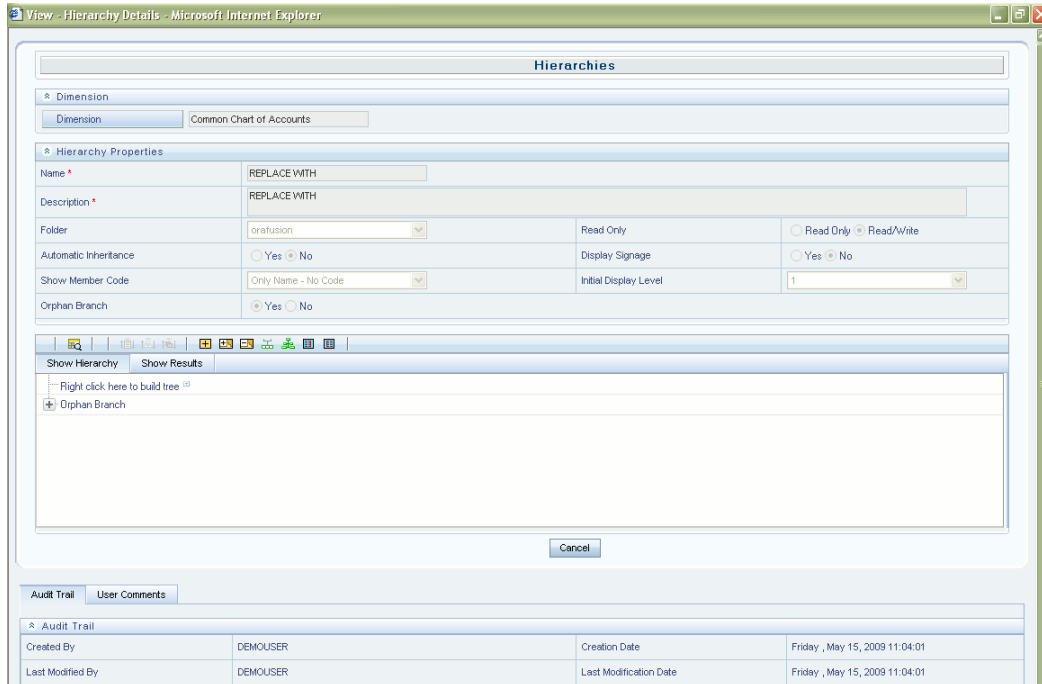
Sorting Options

To sort the Hierarchies in the ascending or descending order, click the Name, Display Level, Created By, Creation Date, and Last Modification Date.

Viewing Hierarchy Definition

Selecting a single row out of the grid enables the View control. Clicking on the View control allows you to view the detailed definition of a Hierarchy on a read-only basis. The View control is only enabled when a single Hierarchy has been selected

Select the Hierarchy you wish to view in the Hierarchies screen and click the View button in the Toolbar to view the details of the selected Hierarchy. The View – Hierarchy Details window is displayed.



Editing Hierarchy Definition

Selecting a single row out of the grid enables the Edit control. Clicking on the Edit control allows you to modify an existing Hierarchy. The Edit control is only enabled when a single Hierarchy has been selected.

Select a Hierarchy and click the Edit button in the toolbar to edit the selected Hierarchy. The Edit – Hierarchy Details window is displayed.

Only the Dimension and Name field cannot be edited in this window. Make the necessary modifications in the fields enabled and click **Apply** to save the changes. You will receive the confirmation message as "Records updated successfully"

The **Audit Trail** grid displays details such as Created By, Creation Date, Last Modified By and Last Modified Date. The 'Created by' and 'Creation date' fields display the Creator name and corresponding date. If a user has made any modification for that particular Attribute Definition, the 'Modified by' and 'Modification date' will reflect the user name and date of modification. If no modifications have been done, then the last modified date will be displayed in these fields.

The **User Comments** grid displays the Comments and the Comments history if any.

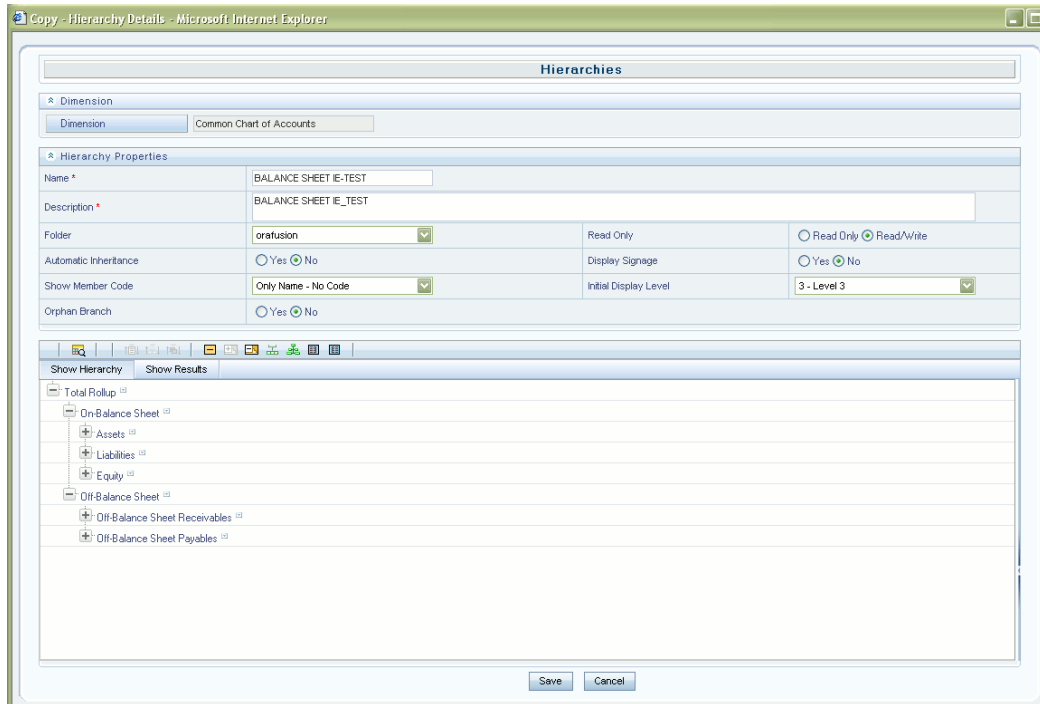
Click on Comments History to view the history. The **History of User Comments** window is displayed with details like User Comments, User Name and Comments Date.



Copying Hierarchy Definition

Selecting a single row out of the grid enables the Copy control. Clicking on the Copy control allows you to create a copy of an existing Hierarchy. The Copy control is only enabled when a single Hierarchy has been selected.

Select a Hierarchy and click the Copy button in the toolbar to save the selected Hierarchy definition details as new definition with required changes. The Copy – Hierarchy Details window is displayed.

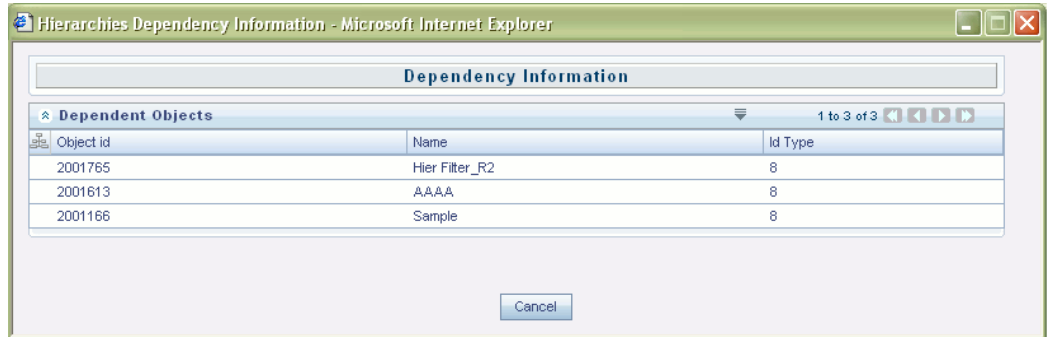


The Hierarchy Properties and the Show Hierarchy can be edited in this screen. Make the necessary changes and click Apply to save the changes. You will receive the confirmation message as "Records updated successfully"

Check Dependencies

To generate a report on the OFSAA rules that utilize a selected Hierarchy, select a single Hierarchy and click on the Check Dependencies control. The Check Dependencies button is only enabled when a single Hierarchy has been selected.

Select a Hierarchy and click the Check Dependencies button in the toolbar to view the Dependent Objects having values for the selected Hierarchy definition. The **Hierarchies Dependency Information** window is displayed.



The details like Name, Created By, Creation Date, Creation Date and Last Modification Date are displayed. After viewing the details, click Cancel or Close to close the window.

Deleting a Hierarchy Definition

Selecting one or more rows out of the grid enables the Delete control.

Select a Hierarchy in the Hierarchies summary screen and click the Delete button in the tool bar to delete a Hierarchy. The Hierarchy will be deleted and a confirmation message will be displayed.

Hierarchies Summary Grid

The following columns categorize each Dimension Member in the summary grid:

- Name
- Display Level
- Created By
- Creation Date
- Last Modification Date

<input type="checkbox"/>	Name ▲	Display Level	Created By	Creation Date	Last Modification Date
<input type="checkbox"/>	Standard Cost Center Hierarchy	1	PFTADMINBRAMAN	30-NOV-09 20:47:56	09-DEC-09 11:40:32

Name

Displays the Hierarchy's Name. Performing a "mouse-over" on a Hierarchy's Name displays the Hierarchy's Description.

Display Level

Display Level is the default level at which a hierarchy is displayed by the application when you open it.

Created By

Created By displays the name of the user who created a Hierarchy. If a Hierarchy is saved as Read Only, only the user who created the rule, i.e., the owner, may modify the rule.

Creation Date

Displays the date and time at which a Hierarchy was created.

Last Modification Date

Displays the date and time at which a Hierarchy was last modified.

Navigation within the Detail Screen

When you Add, Edit, Copy, or View a Hierarchy, the Hierarchies Detail screen is displayed.

Hierarchies Detail Screen

The Audit Trail container is a standard footer container for every OFSAA rule type. It displays Created By, Creation Date, Last Modified By, and Modification Date on the Audit Trail tab. The User Comments tab may be used to add comments to any rule.

Audit Trail		User Comments	
System ID :211074			
Created By	PFTADMINTRAMAN	Creation Date	13-JAN-10 09:52:47
Last Modified By	PFTADMINTRAMAN	Last Modification Date	13-JAN-10 12:01:16

Hierarchy Functionality

See Overview of OFSAA Infrastructure for details on how Hierarchies are used in OFS Analytical Applications.

Dimension Container

For a new Hierarchy, select the dimension upon which you want to build a hierarchy. For an existing Hierarchy, you may not change the dimension.

Hierarchy Properties Container

Specify a Hierarchy Name and Description, select a Folder in which the Hierarchy is to be stored, and specify whether you want the Hierarchy to be "Read/Write" or "Read Only" (Access Type). Naming your Hierarchy is required before it can be saved. Default values for Folder and Access Type are stored in Application Preferences. The Hierarchy Properties container also stores values for Automatic Inheritance, Display Signage, Show Member Code, Initial Display Level, and Orphan Branch.

Hierarchy Properties			
Name *	New GL Hierarchy		
Description	Sample General Ledger Account hierarchy		
Folder	GUISEG	Access Type	<input type="radio"/> Read Only <input checked="" type="radio"/> Read/Write
Automatic Inheritance	<input type="radio"/> Yes <input checked="" type="radio"/> No	Display Signage	<input type="radio"/> Yes <input checked="" type="radio"/> No
Show Member Code	Only Name - No Code	Initial Display Level	3 - Level 3
Orphan Branch	<input checked="" type="radio"/> Yes <input type="radio"/> No		

Entering the Hierarchy Properties

Enter the Valid Name and Description adjacent to the respective fields. Click on the dropdown from the Folder field and select the required segment where the hierarchy has to be stored.

Folder	ora2
	<div style="border: 1px solid black; padding: 2px;"> <div style="background-color: #d3d3d3; padding: 2px;">ora2</div> <div style="padding: 2px;">orafusion</div> </div>

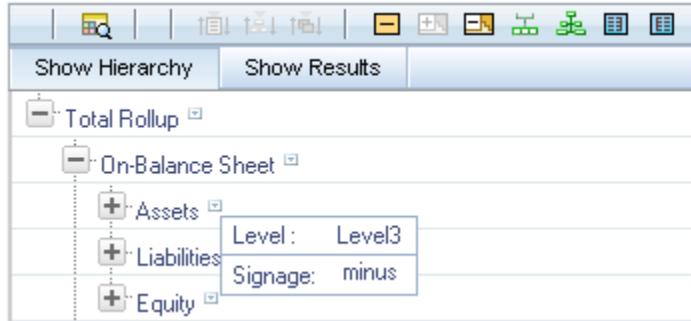
Select the radio button **Read Only** or **Read/Write**. If Read Only is selected then the other users will not be able to edit the defined hierarchy. If Read/ Write option is selected then the other user can edit the defined hierarchy.

Access Type	<input type="radio"/> Read Only <input checked="" type="radio"/> Read/Write
-------------	---

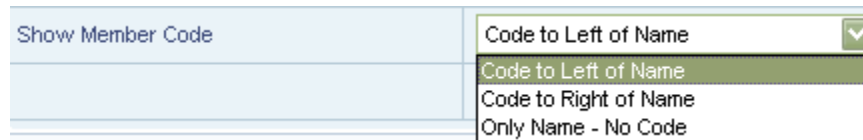
Click Yes or No from the **Automatic Inheritance** field. Click Yes if you want to inherit the hierarchy properties of the parent to the child. Click No if you want to define a new hierarchy.

Click Yes or No adjacent to the **Display Signage** field. This displays the Signage to the right hand side of the member in the Show hierarchy panel.

Display Signage	<input checked="" type="radio"/> Yes <input type="radio"/> No
-----------------	---

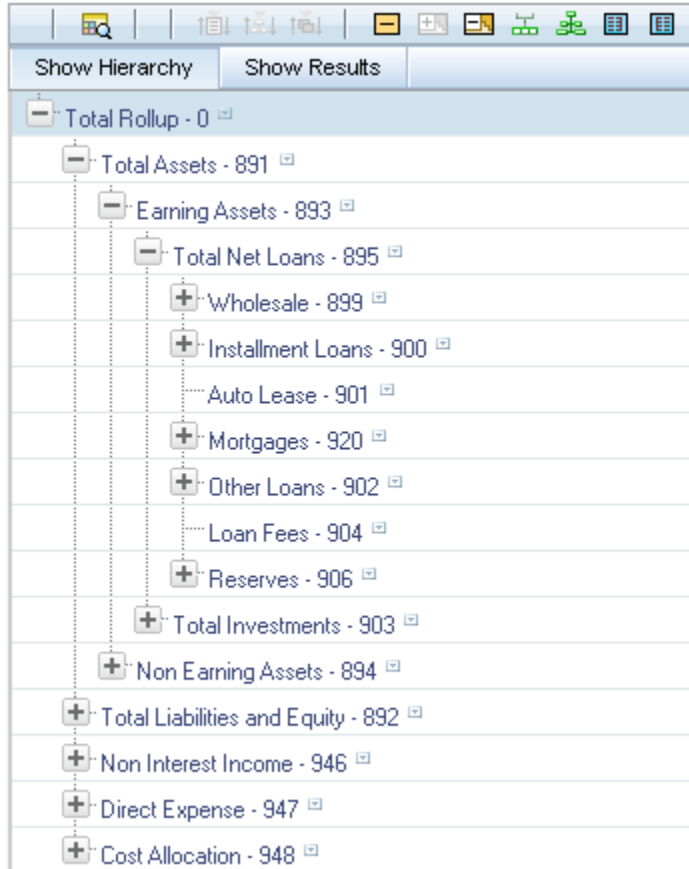


Click on the dropdown adjacent to the **Show Member Code** field. Options like Code to Left of Name, Code to Right of Name and Only Name- No Code are displayed.

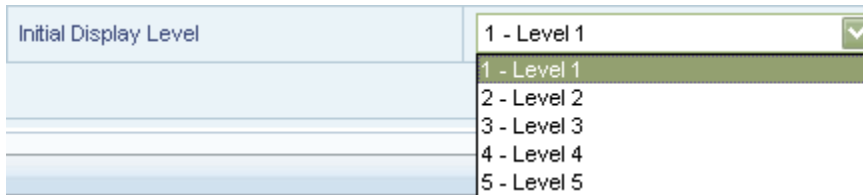


Select the required option from the dropdown. This enables the Member code to be displayed with Member Name in the Show hierarchy panel in the New – Hierarchy Details screen.

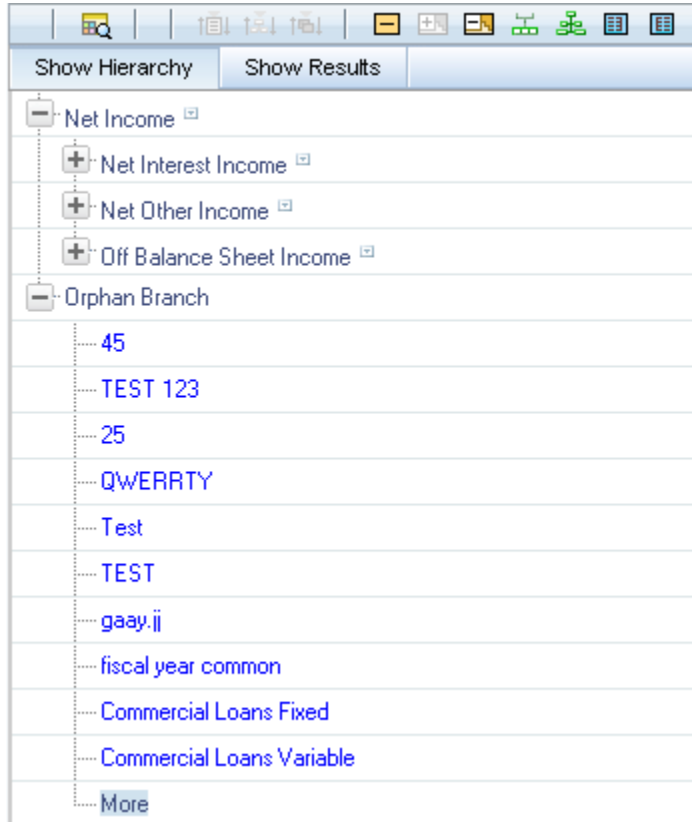
- Code to Left of Name:- Displays Member code on the Left side of Member name.
- Code to Right of Name:- Displays Member code on the Right side of Member name
- Only Name – No Code:- Displays only the Member Name and the not the member code



Click on the dropdown adjacent to Initial Display Level field. You can find the options from Level 1 to Level 5. This displays the number of levels in the Hierarchy in tree Structure.



Click on Yes or No radio button adjacent to Orphan Branch. If Yes is selected than Orphan Branch would be displayed in Show Hierarchy panel in the New – Hierarchy Details screen.

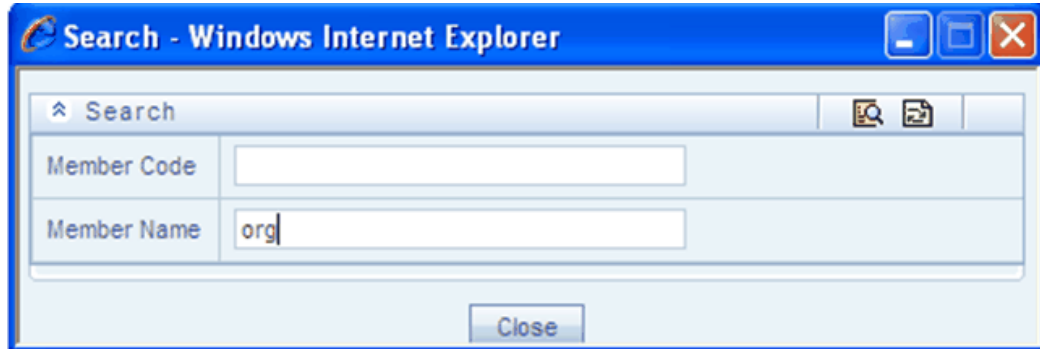


Controlling the Hierarchy Display

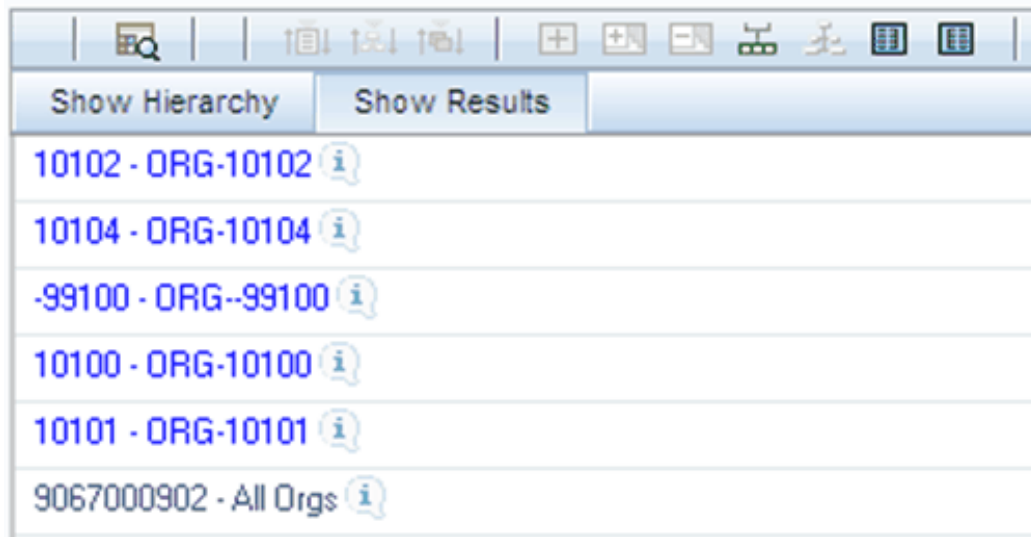
There are a number of controls on the title bar of the hierarchy that allow you to modify how the hierarchy is displayed.

Search

Clicking on the Search control invokes a pop-up dialog in which you can perform wildcard searches for dimension members by Member Code or by Member Name.



When you click on the Search button within the pop-up dialog, the dialog closes, your search is executed, and results are returned within the Hierarchy Display Grid under the heading of Show Results.



When viewing search results under the Show Results heading, you may locate a dimension member within the hierarchy by selecting it and clicking on the Focus control. After selecting a dimension member and clicking on Focus, the application responds by focusing on your selected member under the Show Hierarchy heading (that is, under the normal hierarchy display).

This method of searching for dimension members will only find assigned members, that is, members that are not found in the Orphans Branch.

Expand All / Collapse All

When you initially enter the Hierarchies Detail screen, clicking on this control expands every branch of your hierarchy to display its entire depth. Click on this control a second time to shrink the hierarchy display down to (1) the root node of the hierarchy plus (2) the "Orphans" branch.

- The Orphan branch is only displayed when a hierarchy's Orphan Branch property is set to Yes.
- For very large hierarchies, the Expand All / Collapse All control is disabled. You may define what constitutes a very large hierarchy. For more information, see *Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) Installation and Configuration Guide*.

Expand Branch

When you click on a node member and then click on Expand Branch, your selected rollup node is expanded to its maximum depth.

Collapse Branch

Select a dimension member and then click on the Collapse Branch control to shrink the display of any members beneath the dimension member you have chosen.

Focus and Unfocus

When you click on a node member and then click on the Focus control, only your selected node and its descendents are displayed. Clicking on Unfocus removes the focus that you established using the Focus control described above.

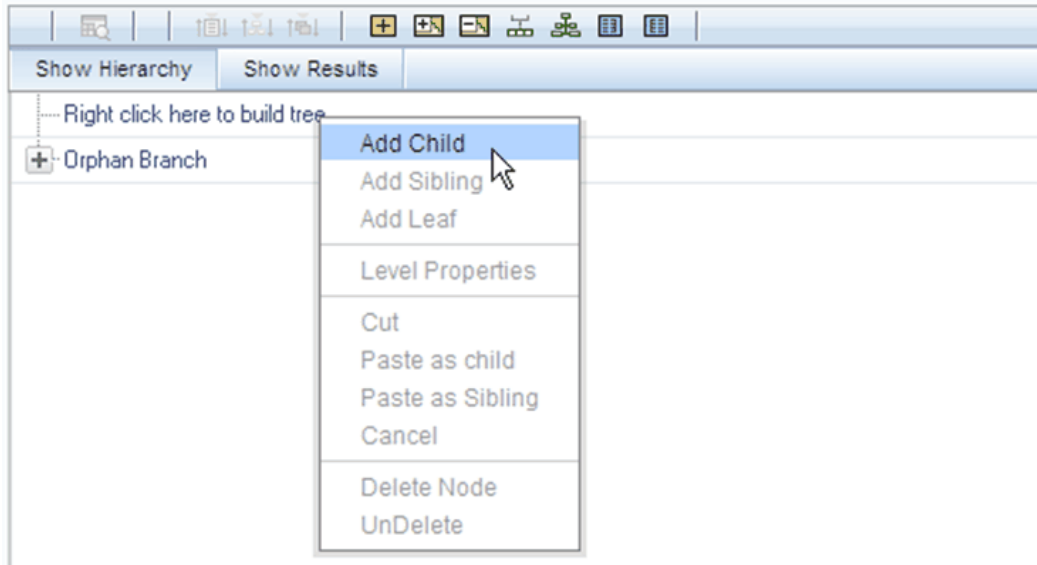
Show Code Values (Left) and (Right)

Click on Show Code Values (Left) to show code values to the left of each dimension member name. Click on Show Code Values (Right) to show code values to the right of each dimension member name. The default behavior for your hierarchy is controlled by the "Show Member Code" property discussed above.

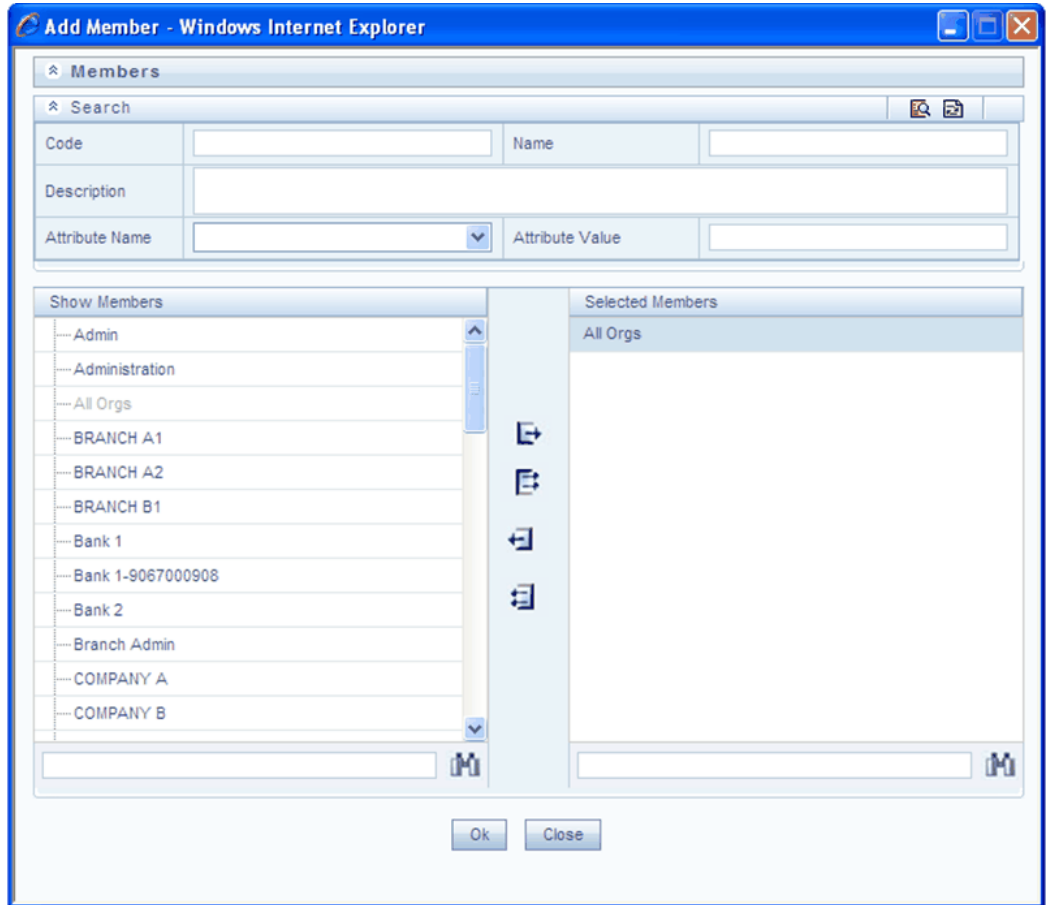
Adding Hierarchies

Click the Add button in the Hierarchies Toolbar to create a new Hierarchy. The New – Hierarchy Details screen is displayed.

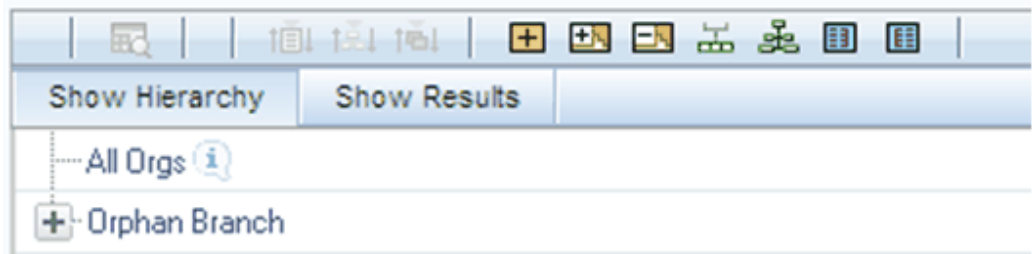
When creating a new hierarchy, you must initially provide a name and, optionally, a description. You must also select the Folder in which you want the hierarchy to be stored, the hierarchy's Read Only vs. Read/Write (Access Type) property and the other Hierarchy Properties described above. Default values for Folder and Access Type are stored in Application Preferences.



To begin the process of building a new hierarchy, right mouse click at the top of the hierarchy (see example above) to invoke a pop-up dialog in which you may select dimension members. Every hierarchy must begin with a top level rollup node. Since you cannot have a leaf member as a top level rollup node, your only choice at this point is Add Child. Clicking on Add Child invokes pop-up dialog in which you may select a rollup node.



Within the Add Member pop-up dialog, use the shuttle box controls to select the member from the left hand side that you want to serve as the root member for your hierarchy. In the example above, the All Orgs dimension member has been selected to serve as the root node for the hierarchy. Note that in this context, the Show Members column only lists rollup members (i.e., a leaf member may not serve as the root of a hierarchy). When you click OK, the Add Member dialog closes and the original hierarchy display is modified to show your selected root member.

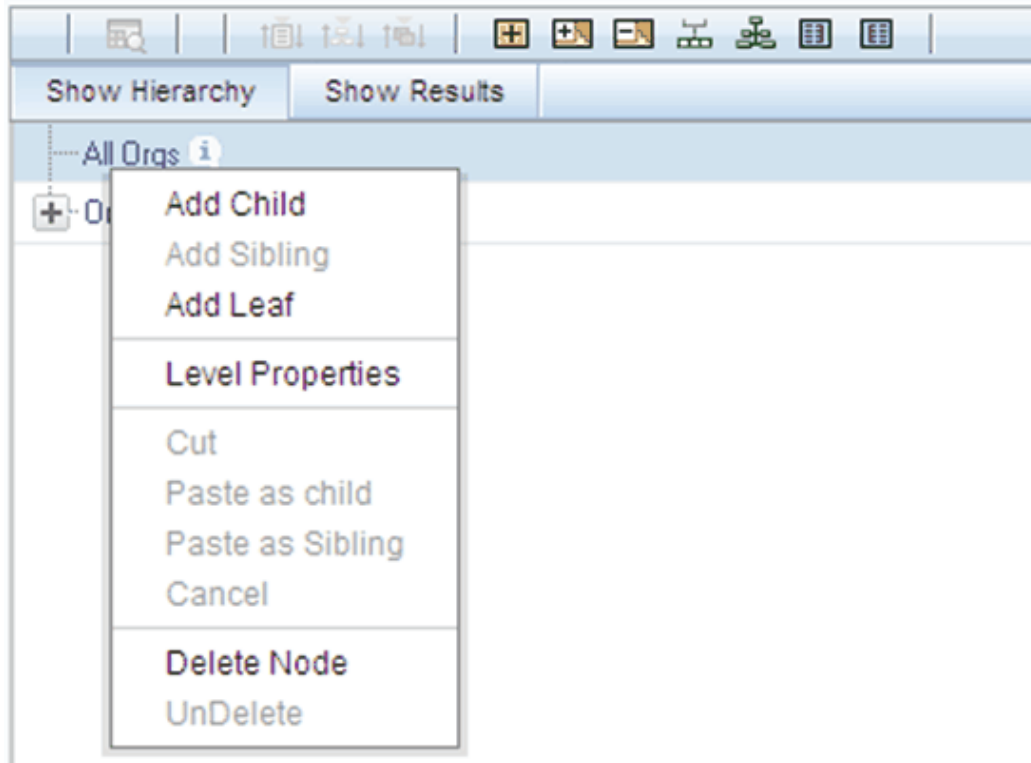


At this point, the process of adding additional dimension members (leaves and rollup nodes) is the same for existing hierarchies as it is for new hierarchies.

Editing Hierarchies

Inserting New Members into a Rollup Node

Select a rollup node member and then right mouse click. This action will display a number of choices including Add Child, Add Sibling, and Add leaf. The following example continues from the above description of creating a new organizational unit hierarchy.



In this current example, we have selected a rollup node member which serves as the root member of the hierarchy. Because OFSAA Infrastructure does not support hierarchies with multiple "tops", you may not add a sibling member (i.e., a member to be stored at the root level of the hierarchy) so the Add Sibling option is disabled.

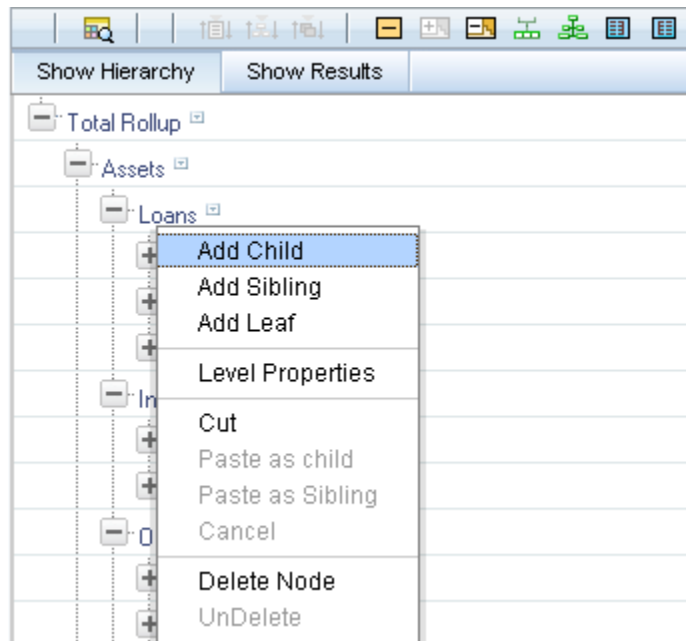
Whenever you select the "Add Child" or "Add Sibling" or "Add Leaf" option, the Add Member dialog is displayed.

Adding Child - Show Hierarchy and Show Results Panel

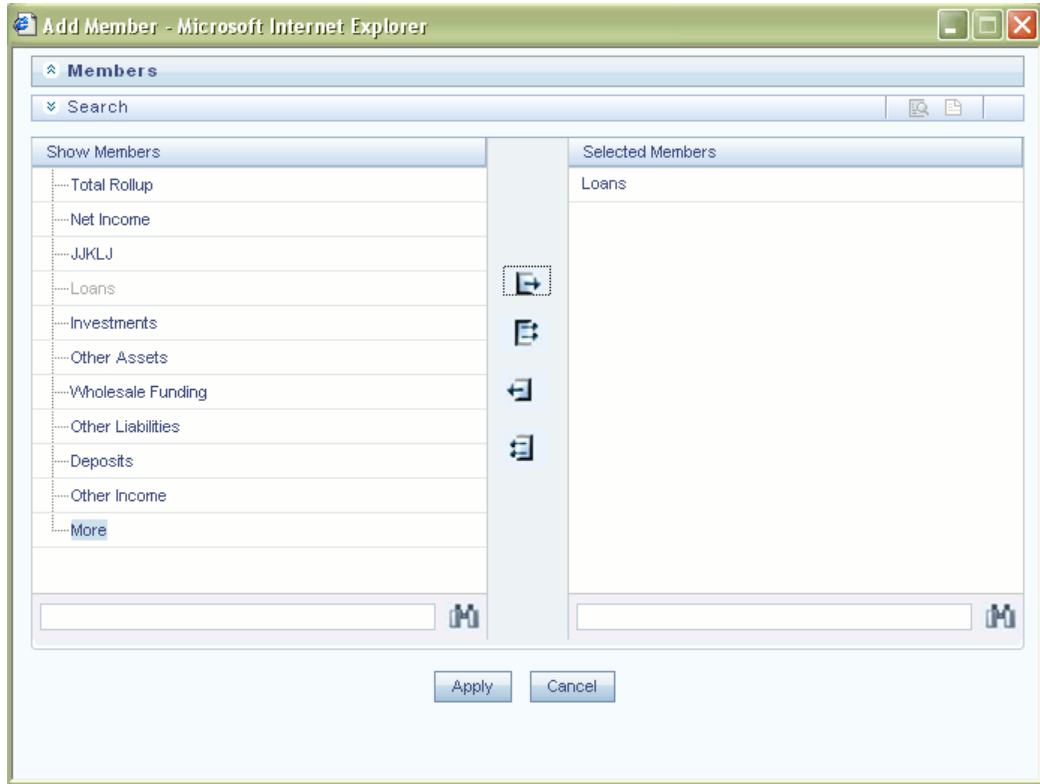
In the Show Hierarchy panel, you can find a message "Right click here to build tree".

Right click on the message. You can find options like Add Child, Add Sibling, Add Leaf, Level Properties, Cut, Paste as child, Paste as Sibling, Cancel, Delete Node and

UnDelete.

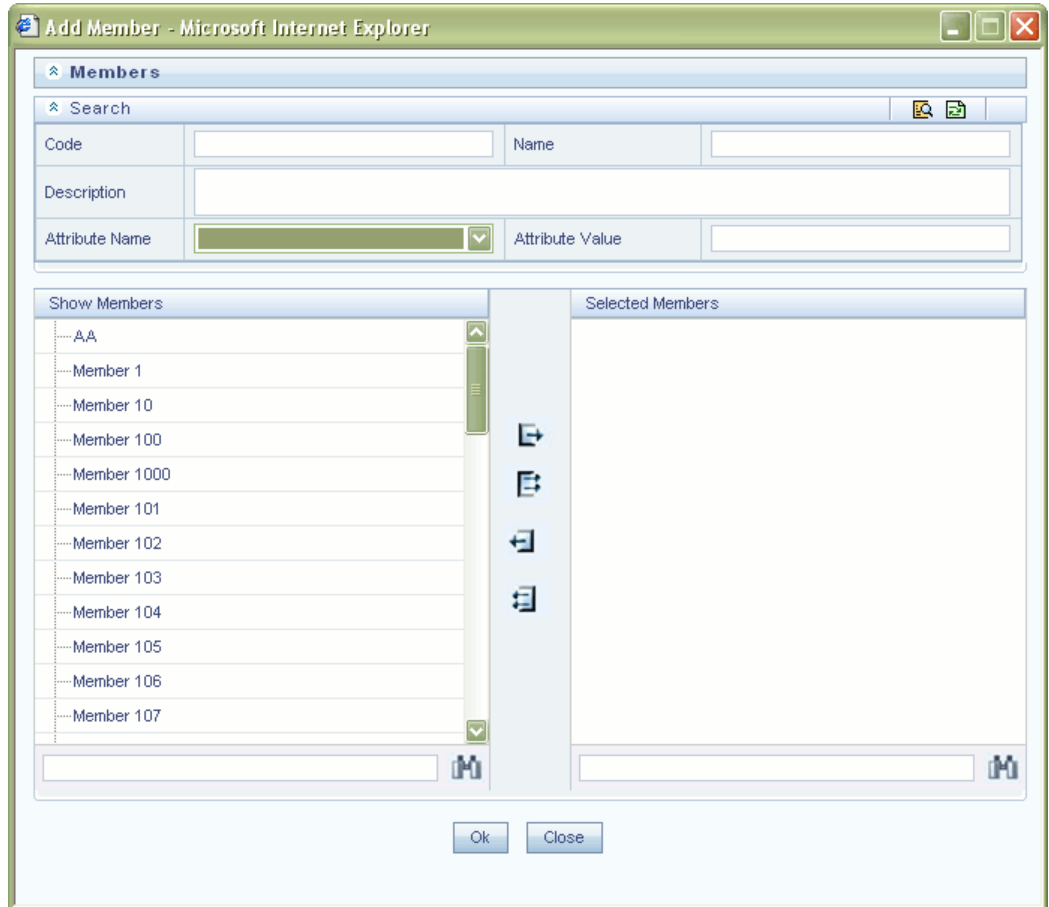


Select **Add Child**. The Add Member window is displayed.



Select the Member from the **Show Members** panel and click the > button to move it to the Selected Members panel.

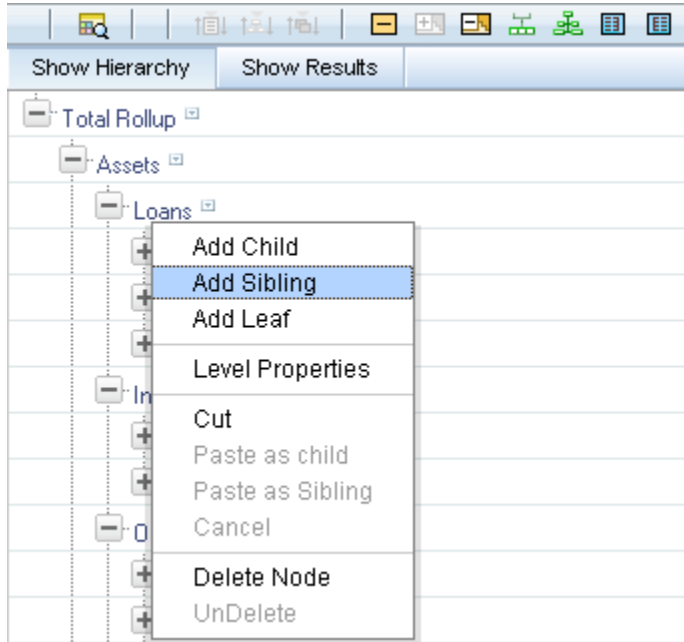
To select all Members click >> button. To move the selected Members from the Selected Members panel back to the Show Members panel. Click the < button. To deselect the members selected click on << button. You can also search for a particular Member. Click Expand button, the Search panel is displayed. Enter the keyword in the Search field and click Search button.



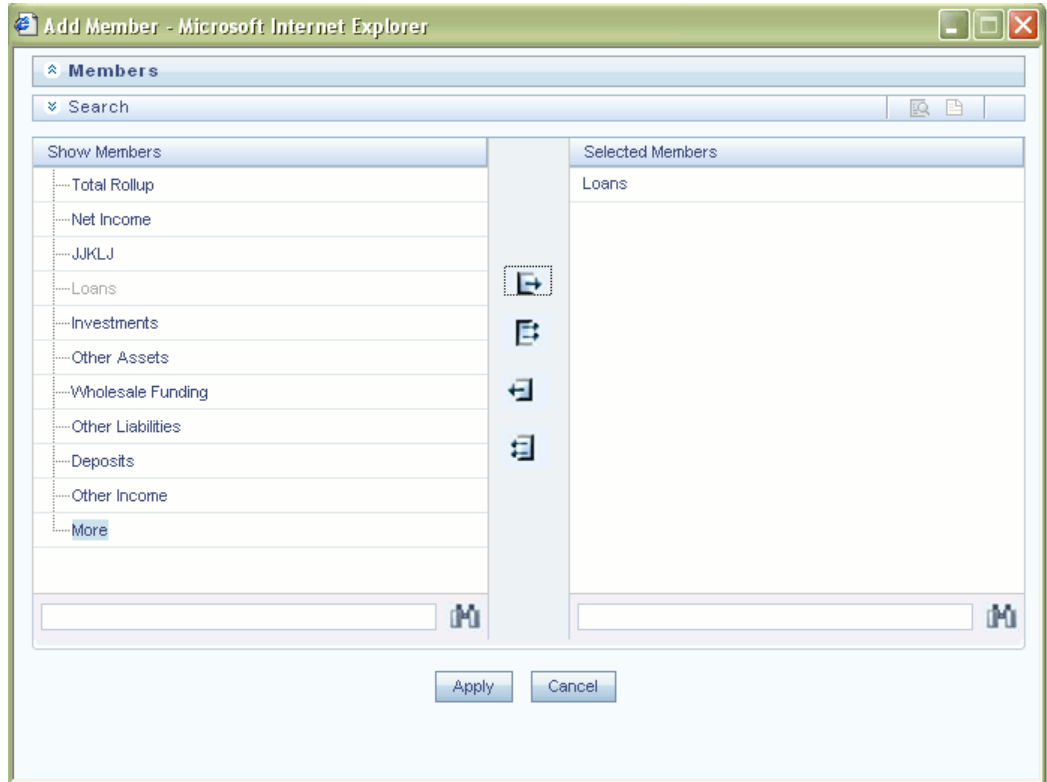
The Member searched will be displayed in the Show Members panel. You can also search using Search button. Once the required Member is selected, click Ok. The selected Member will be displayed as Child under **Show Hierarchy** panel in the **New – Hierarchy** Details screen.

Add Sibling

After adding of child is complete, right click on the Child, select the option **Add Sibling**

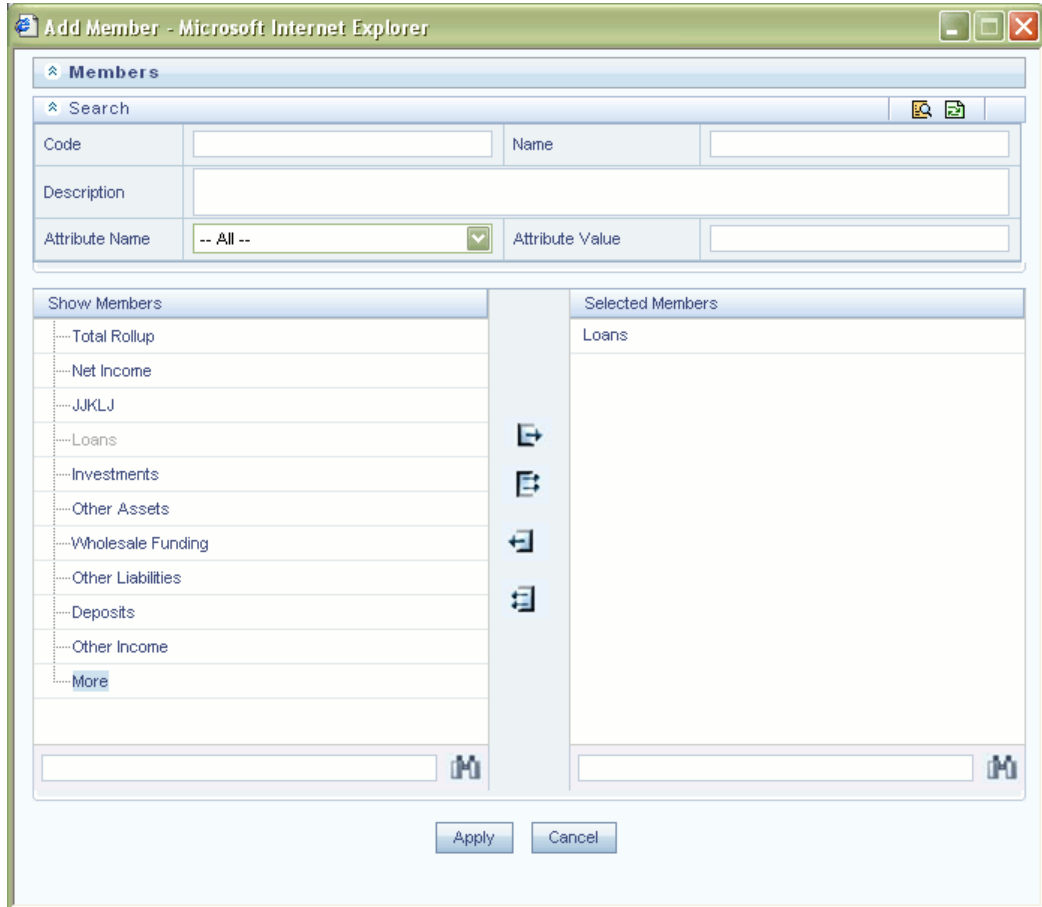


The Add Member window is displayed.



Select the Member from the **Show Members** panel and click the > button to move it to the Selected Members panel.

To select all Members click >> button. To move the selected Members from the Selected Members panel back to the Show Members panel. Click the < button. To deselect the members selected click on << button. You can also search for a particular Member. Click Expand button, the Search panel is displayed. Enter the keyword in the Search field and click Search button.

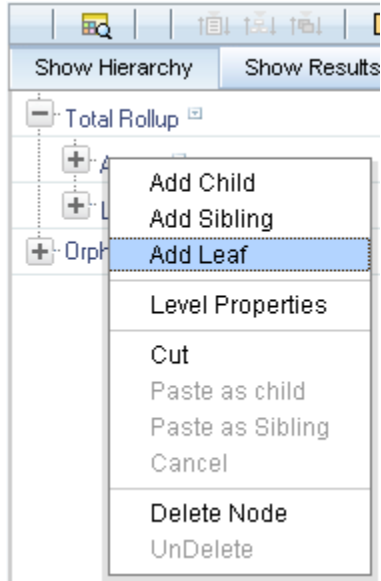


The Member searched will be displayed in the Show Members panel. You can also search using Search button.

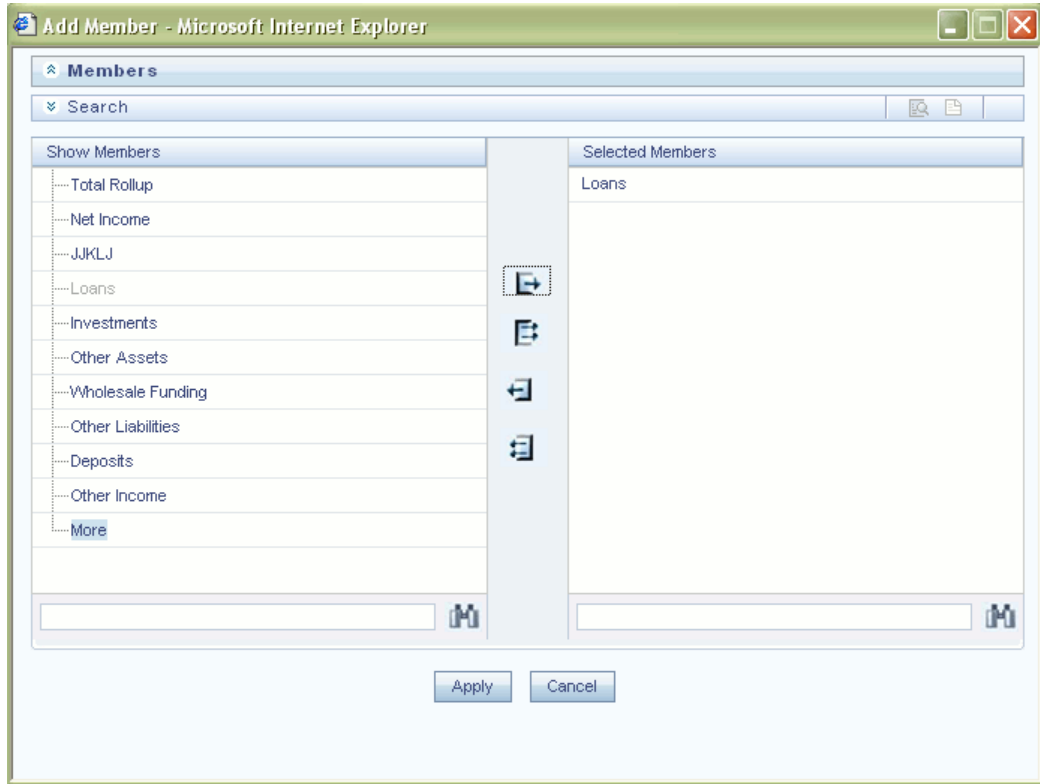
Once the required Member is selected, click **Apply**. The selected Member will be displayed as **Sibling** below the Parent under **Show Hierarchy** panel in the **New – Hierarchy Details** screen.

Add Leaf

Adding of leaf can be under a Parent, Child or Sibling. Right click on the Parent or Child and select Add Leaf.

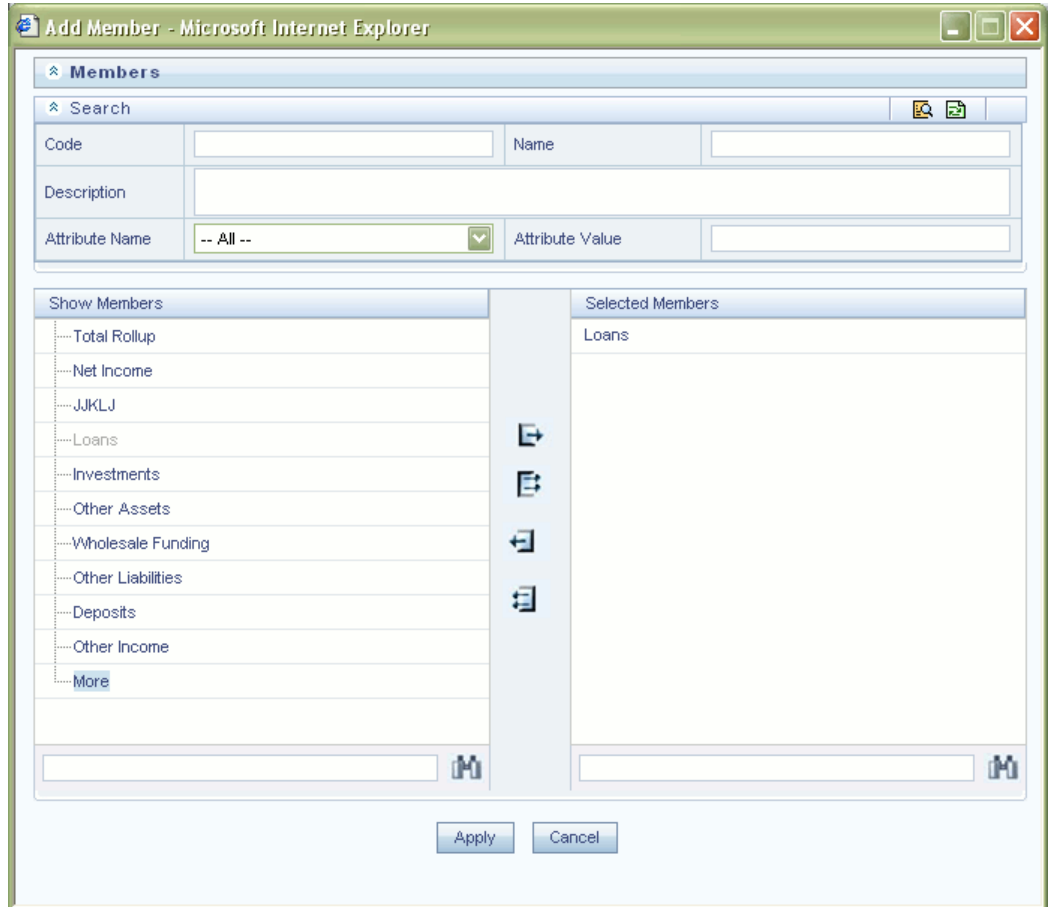


The Add Member window is displayed.



Select the Member from the **Show Members** panel and click the > button to move it to the Selected Members panel.

To select all Members click >> button. To move the selected Members from the Selected Members panel back to the Show Members panel. Click the < button. To deselect the members selected click on << button. You can also search for a particular Member. Click Expand button, the Search panel is displayed. Enter the keyword in the Search field and click Search button.

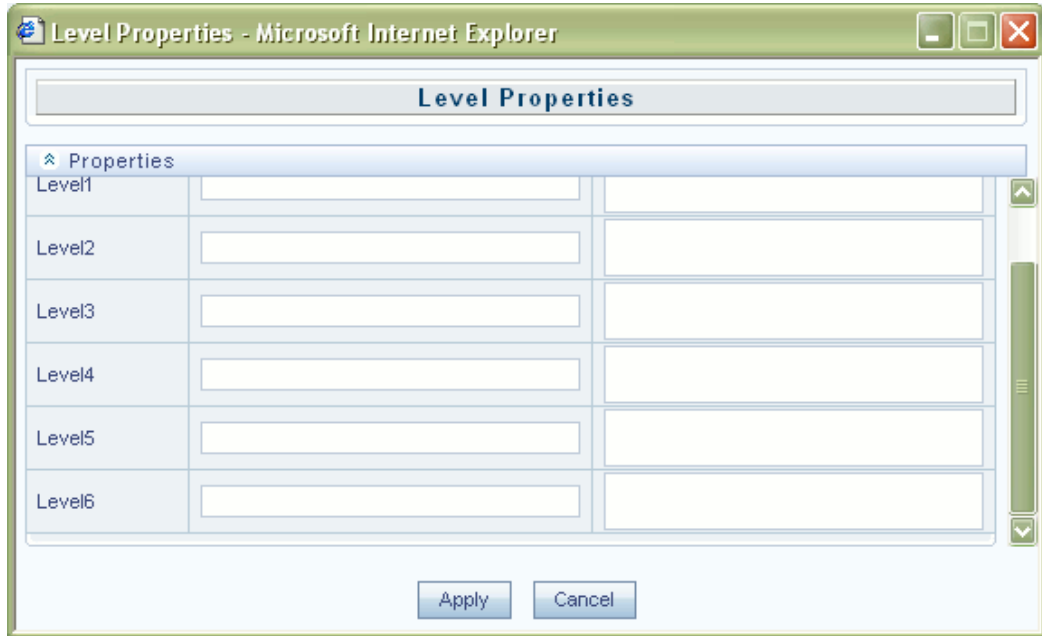


The Member searched will be displayed in the Show Members panel. You can also search using Search button.

Once the required Member is selected, click **Apply**. The selected Member will be displayed as **Leaf** below the Parent under **Show Hierarchy** panel in the **New – Hierarchy Details** screen.

Defining Level Properties

Right click on the Parent, Child, Sibling or Leaf. Select Level Properties from the options. The Level Properties window is displayed.

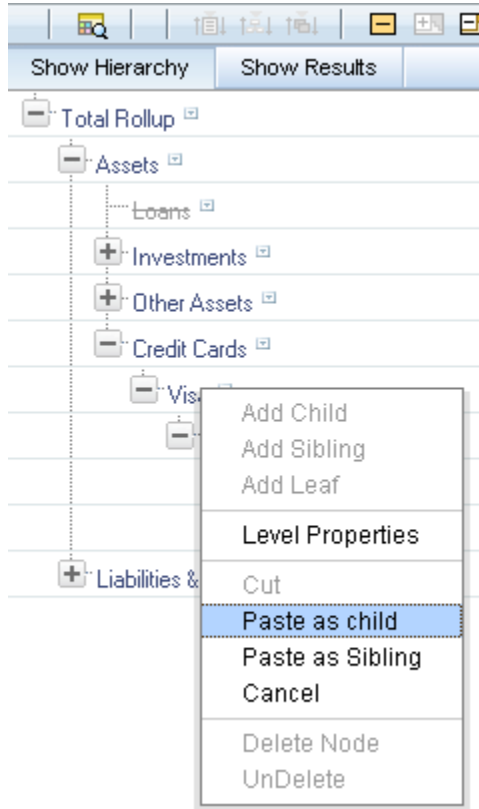


The fields like Level Number, Name and Description are displayed. Enter the valid Name and Description in the respective fields and Click OK or Cancel to go back to the previous screen.

The Levels defined will be displayed in the dropdown in **Initial Level Display** field in **Hierarchy Properties** panel in **New – Hierarchy Details** screen.

Cut and Paste Child or Sibling

Right click on any node and select Cut. Right click on any node and Paste as Child or Paste as Sibling as required.

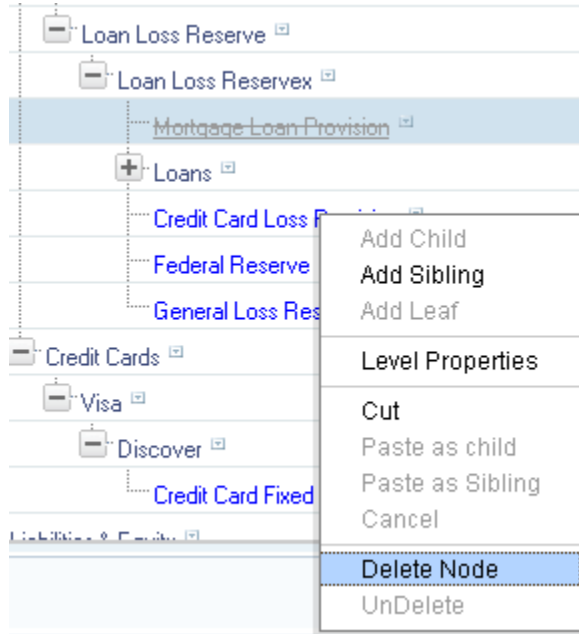


Cancel

The Cancel option is only enabled after you have executed a Cut operation. Once you have Cut a dimension member, you may not perform any other operation except for Paste as Child, Paste as Sibling, or Cancel (you may, however, still invoke Level Properties; see discussion above on Level Properties). Utilizing the Cancel option allows you to select and subsequently Cut another dimension member (i.e., after you have performed a Cancel operation, Paste as Child, Paste as Sibling, and Cancel are disabled).

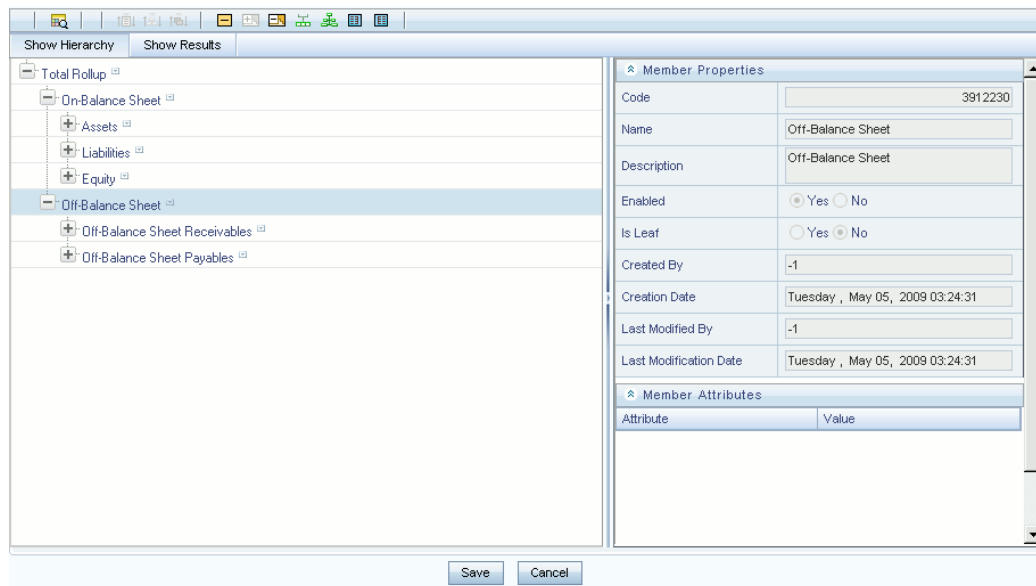
Delete & UnDelete

Right click on the node to be deleted and select **Delete Node**. The node deleted will be seen as a strike out when deleted. To undelete the same right click on the node and select **Undelete**.



Viewing the Member Properties selected

To view the Member Properties in Show Hierarchy panel, click Show Members Property which is a separator bar on the extreme right side and click on the Member, the Member Properties will be displayed to the right pane in the Show Hierarchy panel.



After the Dimension, Hierarchy Properties and Show Hierarchy panels are filled, click on Save in the **New – Hierarchy Details** screen to validate the entries and capture the defined hierarchy.

Click **Cancel** if you want to ignore the entries and return to the Hierarchies screen.

OFSAA Filters

Overview of OFSAA Filters

This chapter describes the creation and maintenance of OFSAA Filters. Specifically, this chapter will cover:

- Filters Summary & Detail Screens
- Navigation within the Filters Summary Screen
- Navigation within the Filters Detail Screen

See Chapter 2: Overview of OFSAA Infrastructure for details on how Filters are used in OFS Analytical Applications.

Summary & Detail Screens

Upon initially navigating to Master Maintenance > Filters, a summary screen is displayed showing a set of Filters. Using search criteria, you can control the set of Filter rules that are displayed. When you Add, Edit, or View a rule, a detail screen is displayed.

Navigation within the Summary Screen

When you first navigate to the Filters summary screen, the filters stored within your current default Folder are presented in a summary grid. The Filters summary screen has two containers: Search and Filters.

Search Container

Your default Folder functions as a search constraint. The value of your default Folder is set in Application Preferences. You may select a different Folder or you may remove the

Folder constraint entirely by selecting the "blank" Folder, i.e., no Folder. You may also search by Filter Name or by Filter Type. Filter Types, shown in a drop down list box, include:

- Data Element Filter
- Hierarchy Filter
- Group Filter

Search Control

Enter your desired search criteria and click on the Search control.

Reset Control

Restores the default Folder, removes any Filter Name or Filter Type constraint you may have specified, and refreshes the screen.

The screenshot shows a window titled "Filters Summary" with a search interface and a table of filter rules. The search interface includes a "Folder Name" dropdown set to "GUISEG", a "Filter Name" text input, and a "Type" dropdown. The table below lists various filter rules with columns for Name, Type, Modification Date, and Modified by.

<input type="checkbox"/>	Name	Type	Modification Date	Modified by
<input type="checkbox"/>	abcprativis	Data Element	27-NOV-09 16:42:59	PFTUSER
<input type="checkbox"/>	Allocations	Data Element	16-NOV-09 18:38:29	FTPUSER
<input type="checkbox"/>	Allocations_LS	Data Element	26-NOV-09 11:42:40	PFTUSER
<input type="checkbox"/>	Allocations_M	Data Element	23-NOV-09 12:35:44	PFTUSER
<input type="checkbox"/>	Annuity Matched Spread	Data Element	12-NOV-09 23:27:19	PFTUSER
<input type="checkbox"/>	Chandra Special	Data Element	18-NOV-09 15:29:30	FTPUSER
<input type="checkbox"/>	CONSOLID_CD_100x	Data Element	26-NOV-09 11:41:19	PFTUSER
<input type="checkbox"/>	Data Portfolio	Data Element	02-DEC-09 13:55:22	PFTUSER
<input type="checkbox"/>	fg	Data Element	04-DEC-09 17:57:03	PFTUSER
<input type="checkbox"/>	GL_101301_TFILT	Hierarchy	09-NOV-09 17:03:24	PFTUSER
<input type="checkbox"/>	Hier filter	Hierarchy	23-NOV-09 15:03:12	GAUSER
<input type="checkbox"/>	Investments - Matched Spread	Data Element	12-NOV-09 23:08:31	PFTUSER
<input type="checkbox"/>	Investments - Matched Spread1	Data Element	27-NOV-09 14:42:20	GAUSER
<input type="checkbox"/>	Lookup3	Data Element	18-DEC-09 10:33:28	PFTUSER
<input type="checkbox"/>	lookup34grp	Group	18-DEC-09 10:35:03	PFTUSER
<input type="checkbox"/>	lookup4	Data Element	18-DEC-09 10:34:07	PFTUSER
<input type="checkbox"/>	Matched Spread	Group	12-NOV-09 23:23:12	PFTUSER

Filters Container

The Filter container presents a grid containing all of the Filter rules that meet your search criteria. The Filter summary grid offers several controls that allow you to perform different functions when a Filter rule is selected.

To select a Filter rule, click on a check box in the first column of the grid. More than one Filter can be selected at a time but this will cause some of the controls to become disabled. Clicking on a checkbox a second time de-selects the Filter.

You may select or deselect all of the Filters in the summary grid by clicking on the check box in the upper left hand corner of the summary grid directly to the left of the Name column header.

Add

Clicking on the Add control begins the process of building a new Filter. The Add control is disabled if any rows in the grid have been selected.

View

Selecting a single row out of the grid enables the View control. Clicking on the View control allows you to view the contents of a Filter on a read-only basis. The View control is only enabled when a single Filter has been selected.

Edit

Selecting a single row out of the grid enables the Edit control. Clicking on the Edit control allows you to modify a previously saved Filter. The Edit control is only enabled when a single Filter has been selected.

Copy

Selecting a single row out of the grid enables the Copy control. Clicking on the Copy control allows you to create a copy of an existing Filter. The Copy control is only enabled when a single Filter has been selected.

Check Dependencies

To generate a report on the OFSAA rules that utilize a selected Filter, select a single Filter and click on the Check Dependencies control. The Check Dependencies control is only enabled when a single Filter has been selected.

Delete

Selecting one or more rows out of the grid enables the Delete control. Clicking on the Delete control deletes the Filter(s) you have selected. OFSAAI will not allow you to delete Filters which have any dependencies (see Check Dependencies above).

Filters Summary Grid

The following columns categorize each Filter in the summary grid:

- Name

- Type
- Modification Date
- Modified By

Name

Displays the Filter's short name. Performing a "mouse-over" on a Filter Name displays the Filter's description.

Type

Displays the Filter's type: Data Element, Hierarchy, or Group.

Modification Date

Displays the date and time at which a Filter was last modified.

Modified By

Displays the name of the user who last modified a Filter.

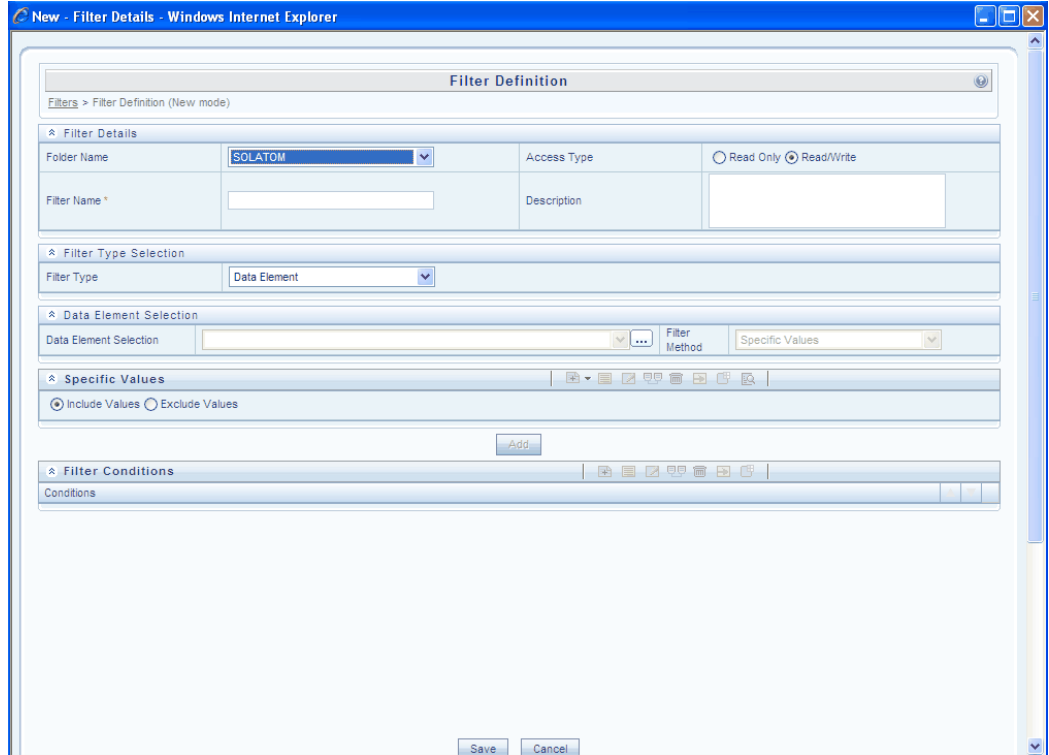
Navigation within the Detail Screen

When you Add, Edit, Copy, or View a Filter, the Filter Detail Screen is displayed.

In addition to Name, Description, Folder, and Access Type, the definition of a new Filter begins with declaring a 'Filter Type'. Supported Filter Types include Data Element, Hierarchy, and Group.

The Audit Trail container is a standard footer container for every OFSAA rule type.

It displays Created By, Creation Date, Last Modified By, and Modification Date on the Audit Trail tab. The User Comments tab may be used to add comments to any rule.



Note: See Chapter 2: Overview of OFSAA Infrastructure for details on how Filters are used in OFS Analytical Applications.

Filter Type Selection Container

Select a filter type from the Filter Type drop down list box.

Data Element

A Data Element Filter is a stored rule that expresses a set of constraints.

For example:

- Balances between 10,000 and 20,000
- Accounts opened in the current month
- Loans with amortization terms greater than 20 years

Data Element Filters can access most instrument columns and most columns in the Management Ledger. Data Element Filters are used within other OFSAA rule types (e.g., Allocation rules, Transfer Pricing rules, Asset | Liability Management rules and so on).

Hierarchy

Hierarchy Filters allow you to utilize rollup nodes within a Hierarchy to help you exclude (filter out) or include data within an OFSAA rule. For example, you might want to process data for a specific set of divisions or lines of business where you have a Hierarchy rule that expresses those divisions or lines of business as rollup nodes.

A Hierarchy Filter could be constructed to "enable" the Commercial and Retail lines of business while NOT enabling the Wealth Management line of business. Each of these lines of business might include a handful or even thousands of cost centers. When incorporated into an OFSAA processing rule, this Hierarchy Filter would include every cost center in the Commercial and Retail lines of business.

Group Filters

Group Filters may be used to combine multiple Data Element Filters with a logical "AND".

For example, if Data Element Filter #1 filtered on mortgage balances greater than 100,000 and Data Element Filter #2 filtered on current mortgage interest rates greater than 6%, you could construct a Group Filter to utilize both Data Filters. In this case, the resulting Group Filter would constrain your data selection to mortgage balances greater than 100,000 AND current mortgage interest rates greater than 6%.

The remaining chapter discusses creation and maintenance of each type of filter.

Data Element Filters

Data Element Selection Container

In this container, specify the columns that you want to include in your Data Filter and for each column, you choose a Filter Method.

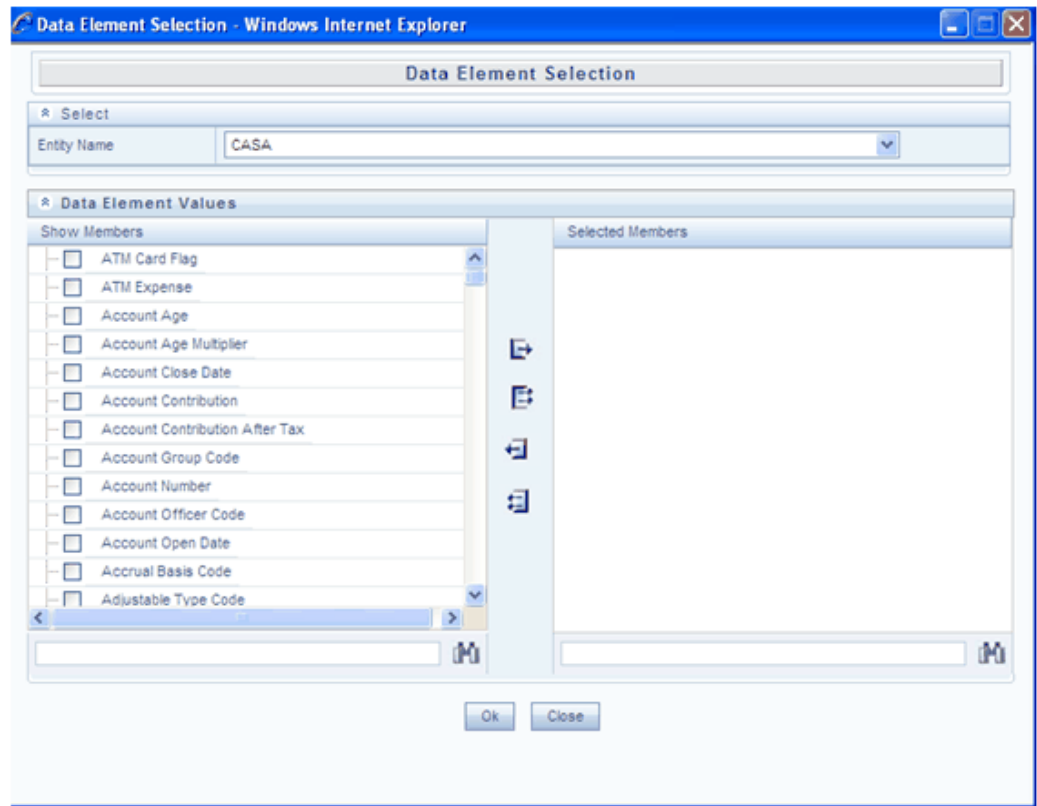
The screenshot shows a software interface for configuring a Data Element Filter. It consists of several stacked sections:

- Filter Type Selection:** A dropdown menu set to "Data Element".
- Data Element Selection:** A dropdown menu for selecting a data element, followed by an ellipsis button and a "Filter Method" dropdown menu set to "Specific Values".
- Specific Values:** Radio buttons for "Include Values" (selected) and "Exclude Values".
- Filter Conditions:** A section with an "Add" button and a table for defining conditions.

Data Element Selection

To select the columns you want to include in your Data Filter, click on the ellipses to

invoke a Data Element Selection pop up window.

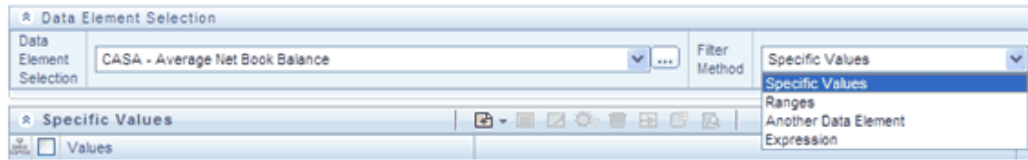


Select an entity (a database table) and then select the columns you wish to include in your Data Filter.

Filter Method

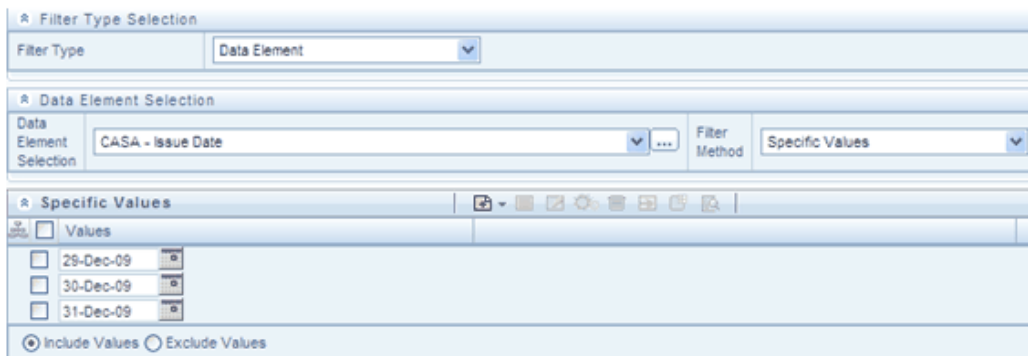
For each column you wish to include in your Data Filter definition, you must specify a Filter Method:

- Specific Values
- Ranges
- Another Data Element
- Expression



Specific Values

Specific Values are used to match a selected database column to a specific value or values that you provide. In this example, qualifying records include any CASA [Checking and Savings Accounts] account issued in the last 3 days of 2009.



You may add additional values by clicking on the Add control and you may reduce the number of Specific Values by clicking on the check box to the left of a value and then clicking on the Delete control.

- When comparing Specific Values for a character type column, you must provide Specific Values that are character strings.
- When comparing Specific Values for a date type column, you must provide Specific Values that are dates (the application displays a Calendar control).
- When comparing Specific Values for a numeric column, you must provide Specific Values that are numbers.

Note: You may either include or exclude Specific Values.

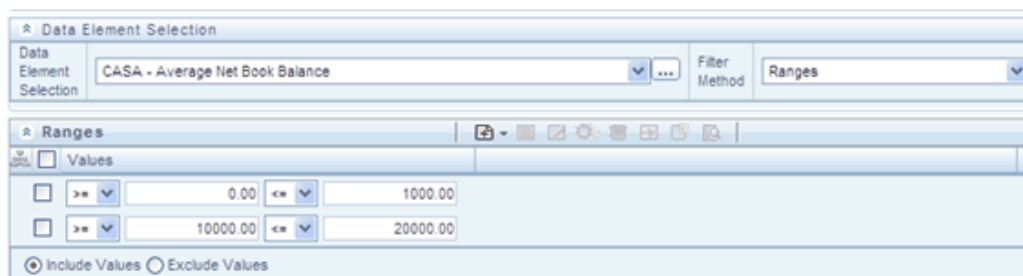
Ranges

Ranges are used to match a selected database column to a range of values or to ranges of values that you provide. In the following example, qualifying records include any CASA account having an Average Net Book Balance between 0 and 1,000 or between 10,000 and 20,000.

You may add additional values by clicking on the Add control and you may reduce the number of Ranges by clicking on the check box to the left of a value and then clicking

on the Delete control.

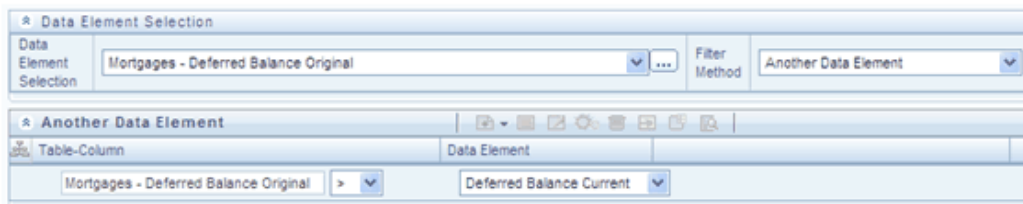
- When comparing Ranges for a character type column, you must provide Specific Values that are character strings.
- When comparing Ranges for a date type column, you must provide Specific Values that are dates (the application displays a Calendar control).
- When comparing Ranges for a numeric column, you must provide Specific Values that are numbers.
 - You may use any of the following operators when choosing the Another Data Element Filter Method : = , <> (meaning " not equal to ") , < , > , <= , or >=
 - You may either include or exclude Range values.



Another Data Element

Another Data Element is used to match a selected database column to another database column. In the example that follows, qualifying records include any Mortgage account having an Original Deferred Balance greater than the Current Deferred Balance.

Note: You may use any of the following operators when choosing the Another Data Element Filter Method: =, <> (meaning "not equal to"), <, >, <=, or >=



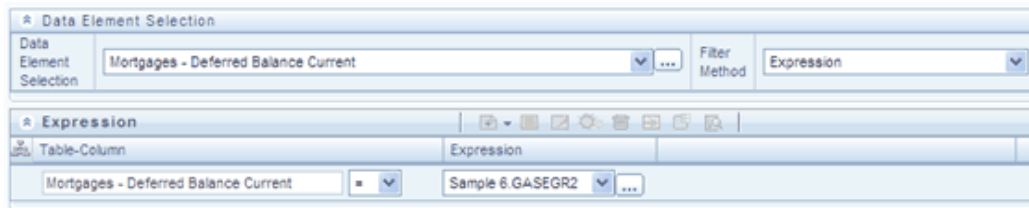
When constructing an Another Data Element Filter Method, you may only compare a column to other columns that you have already selected (the Data Element drop down

list box will only contain columns that you have already selected). In the example above, you must have picked both Deferred Original Balances and Deferred Current Balances.

Note: Only columns that match the data type of your Data Element selection are offered in the Data Element drop down list box.

Expression

Expression is used to match a selected database column to the results of an OFSAA Expression rule (see Chapter 9: OFSAA Expressions).



The above example compares Mortgages.Deferred Current Balances to the results of the Expression rule named Sample 6 (where the Expression is stored in the GASEGR2 Folder). Clicking on the ellipses invokes a read-only view of the underlying Expression. The Sample 6 Expression is a function that calculates Mortgages.Current Par Balance minus Mortgages.Current Book Balance.

Note: You may use any of the following operators when choosing the Expression Filter Method: =, <> (meaning "not equal to"), <, >, <=, or >=

Building Filter Conditions

Each time you complete a Filter Method specification, you must Add it to the Filter Conditions container. The reason you must do so is because you may compare the same columns multiple times. For example, you may compare Deferred Current Balances to a Specific Value and to Another Data Element and to a Range of Data Elements and to an Expression all in the same Data Element Filter rule.

Filter Conditions Container

The screenshot shows the 'Filter Conditions Container' interface. At the top, there is a 'Data Element Selection' section with a dropdown menu set to 'Mortgages - Deferred Balance Original' and a 'Filter Method' dropdown set to 'Another Data Element'. Below this is the 'Another Data Element' section, which contains a table with two columns: 'Table-Column' and 'Data Element'. The 'Table-Column' dropdown is set to 'Mortgages - Deferred Balance Original' and the 'Data Element' dropdown is set to 'Deferred Balance Current'. An 'Add' button is located below the table. At the bottom, there is a 'Filter Conditions' section with a table containing one row: 'Another Data Element : Mortgages - Deferred Balance Original >Deferred Balance Current'.

Once you have created one or more Filter Condition records, you may click on a record in the Filter Conditions container in order to select it. Once you have selected a Filter Conditions record, you may modify your original definition of that Filter Condition and then Update it.

The screenshot shows the 'Filter Conditions Container' interface. The 'Another Data Element' section is the same as in the previous screenshot. The 'Filter Conditions' section now shows a table with one row: 'Another Data Element : Mortgages - Deferred Balance Original >Deferred Balance Current'. An 'Update' button is located below the table.

After you click on Update, your Filter Condition is updated.

The screenshot shows the 'Filter Conditions Container' interface. The 'Another Data Element' section is the same as in the previous screenshot. The 'Filter Conditions' section now shows a table with one row: 'Another Data Element : Mortgages - Deferred Balance Original =Current Net Book Balance'.

Delete

You may delete individual Filter Conditions records by clicking on the Delete control .

View SQL

Click on the View the SQL control to generate a window displaying the SQL equivalent of your Data Element Filter. You may generally copy and paste this SQL into queries that you write. View SQL, however, will not accurately reflect Expression Filter Methods.

Filters Summary				
Filters				
Search				
Folder Name	PFT72SEG	Filter Name		
Type				
Filters				
<input type="checkbox"/>	Name	Type	Modification Date	Modified by
<input type="checkbox"/>	240_TB	Data Element	16-JUL-2009 11:32:57	DEMOUSER
<input type="checkbox"/>	35 YEAR MATURIT	Data Element	14-OCT-2009 15:10:44	DEMOUSER
<input type="checkbox"/>	3_5_TGT_GROWTH	Data Element	17-SEP-2009 20:27:41	DEMOUSER
<input type="checkbox"/>	5.1-Balance Tiers	Data Element	18-DEC-2009 19:29:37	DEMOUSER
<input type="checkbox"/>	5.1-IRFCF	Data Element	15-DEC-2009 15:13:22	DEMOUSER
<input type="checkbox"/>	ACTUAL BAL	Data Element	15-MAY-2009 12:30:53	DEMOUSER
<input type="checkbox"/>	ADJ NEG AM	Data Element	09-SEP-2009 19:49:40	DEMOUSER
<input checked="" type="checkbox"/>	AGE_REP_FREQ	Data Element	15-MAY-2009 12:37:49	DEMOUSER
<input type="checkbox"/>	ALLOCATIONS	Data Element	15-MAY-2009 12:30:53	DEMOUSER
<input type="checkbox"/>	ALLOCATION_PR	Hierarchy	16-JUL-2009 02:21:29	DEMOUSER
<input type="checkbox"/>	ALLOCTNS_PSTLS	Data Element	15-MAY-2009 12:30:53	DEMOUSER
<input type="checkbox"/>	ALLOCTNS_PSTLS1	Data Element	15-MAY-2009 12:30:53	DEMOUSER
<input type="checkbox"/>	ALL_TPCOAS	Data Element	16-SEP-2009 19:39:14	DEMOUSER
<input type="checkbox"/>	Annuity Cur Bus	Data Element	24-JUL-2009 17:58:41	DEMOUSER
<input type="checkbox"/>	ARCTAN_PPMT	Data Element	15-MAY-2009 15:44:36	DEMOUSER
<input type="checkbox"/>	AUTOBAL	Data Element	12-OCT-2009 14:42:03	DEMOUSER
<input type="checkbox"/>	AUTOBAL 4A	Data Element	16-SEP-2009 14:25:24	DEMOUSER
<input type="checkbox"/>	BALANCE TEST	Data Element	15-MAY-2009 15:28:36	DEMOUSER
<input type="checkbox"/>	BALANCE TESTEND	Data Element	15-MAY-2009 15:33:16	DEMOUSER
<input type="checkbox"/>	CF ADJ TESTS	Data Element	15-MAY-2009 15:33:16	DEMOUSER

Hierarchy Filters

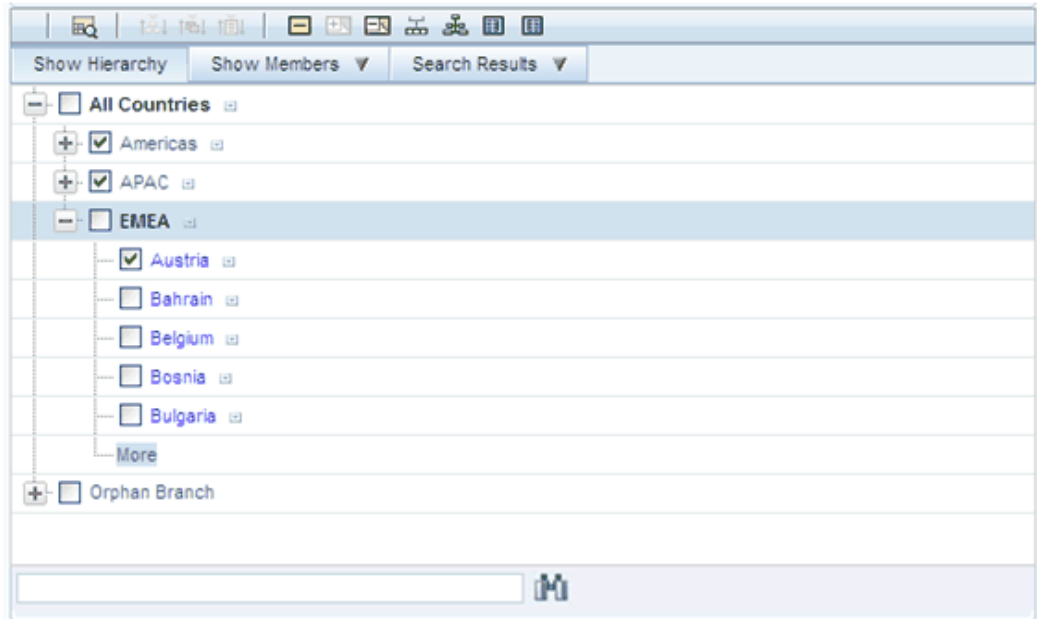
Hierarchy Selection Container

After selecting the Hierarchy Filter Type, select a dimension and a hierarchy from the Hierarchy Selection container that will serve as the basis for your Hierarchy Filter rule.

Filter Type Selection	
Filter Type	Hierarchy

Hierarchy Selection	
Dimension	COUNTRY
Hierarchy	Sample Country Hierarchy

Once you have selected a dimension and a hierarchy in the Hierarchy Selection container, a representation of the hierarchy you selected is displayed.



Select any combination of rollup points and leaf (last descendent child) values. In the example above, the Americas and APAC rollup points have been selected; and the leaf value for Austria has been selected. This Hierarchy Filter includes any country that rolls up to either the Americas or to APAC; it also includes Austria. This Hierarchy Filter excludes all countries that roll up to EMEA except for Austria.

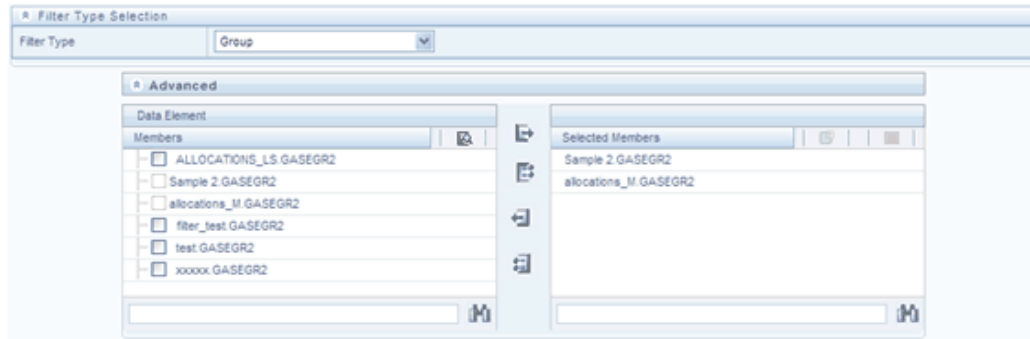
View SQL

Once you have selected one or more leaves and/or rollup nodes, click on the View the SQL control to generate a window that displays the SQL equivalent of your Hierarchy Filter.

Group Filters

Advanced Container

After selecting the Group Filter Type, you may use the Select, De-Select, Select All, and De-Select All controls to choose one or more Data Element Filters ("Selected Members") that will be combined to define your Group Filter.



OFSAA Expressions

OFSAA Expressions

This chapter describes the creation and maintenance of OFSAA Expressions. Specifically, this chapter will cover:

- Expressions Summary & Detail Screens
- Navigation within the Expressions Summary Screen
- Navigation within the Expressions Detail Screen

See Chapter 2: Overview of OFSAA Infrastructure for details on how Expressions are used in OFS Analytical Applications.

Summary & Detail Screens

Upon initially navigating to Master Maintenance > Expressions, a summary screen is displayed showing a set of Expressions. Using search criteria, you can control the set of Expression rules that are displayed. When you Add, Edit, or View a rule, a detail screen is displayed.

Navigation within the Summary Screen

When you first navigate to the Expressions summary screen, the expressions stored within your current default Folder are presented in a summary grid. The Expressions summary screen has two containers:

- Search
- Expressions

Search Container

Your default Folder functions as a search constraint. The value of your default Folder is set in Application Preferences. You may select a different Folder or you may remove the Folder constraint entirely by selecting the 'blank' Folder that is no Folder.

You may also search by Expression Name or by Return Type. Return Types, shown in a drop down list box, include:

- Date
- String
- Numeric

Search Control

Enter your desired search criteria and click on the Search control.

Reset Control

Restores the default Folder, removes any Expression Name or by Return Type constraint you may have specified, and refreshes the screen.

Expressions Container

The Expressions container presents a grid containing all of the Expression rules that meet your search criteria. The Expressions summary grid offers several controls that allow you to perform different functions when an Expression rule is selected.



<input type="checkbox"/>	Expression Name ▲	Folder Name	Return Type	Created By	Creation Date
<input type="checkbox"/>	PFT_ABS	GASEGR2	Numeric	STUSER2	12/10/09 17:42:24
<input type="checkbox"/>	PFT_SUM_1	GASEGR2	Numeric	STUSER2	12/10/09 17:45:24
<input type="checkbox"/>	Sample 6	GASEGR2	Numeric	STUSER2	12/22/09 05:35:01
<input type="checkbox"/>	TEST_EXP	GASEGR2	Numeric	STUSER2	12/09/09 13:19:45

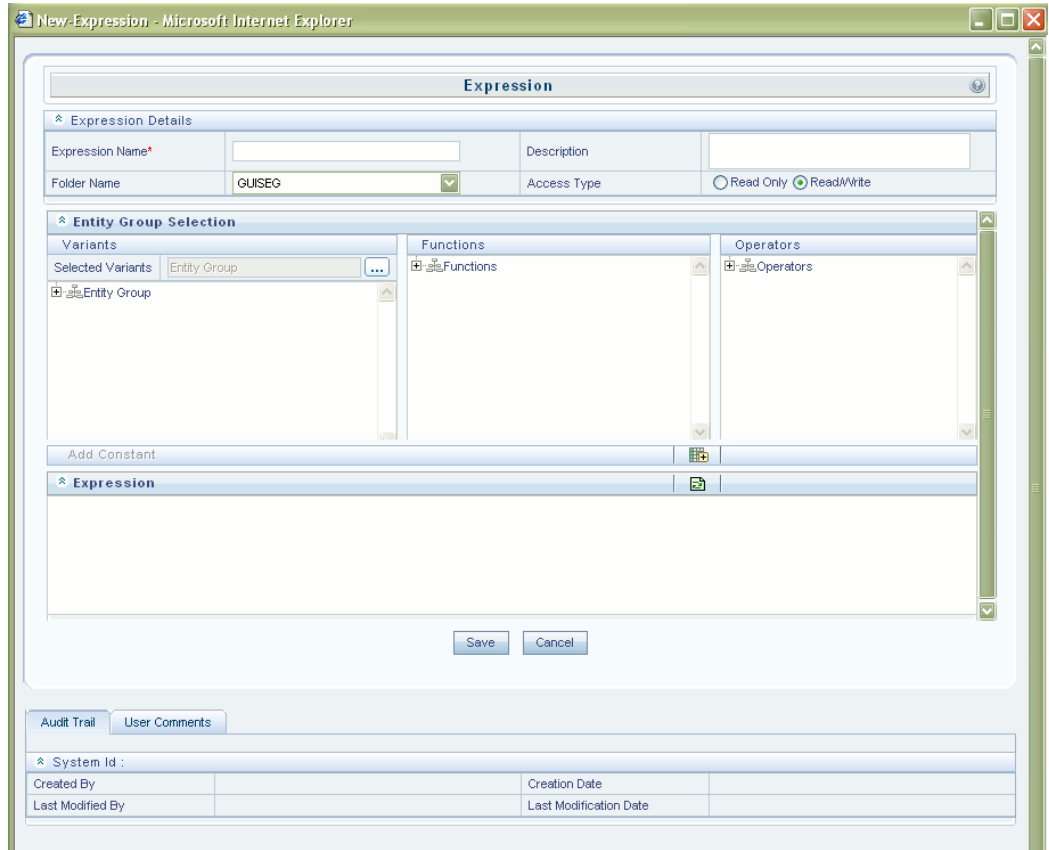
To select an Expression, click on a check box in the first column of the grid. More than one Expression can be selected at a time but this will cause some of the controls to become disabled. Clicking on a checkbox a second time de-selects the Expression.

You may select or deselect all of the Expressions in the summary grid by clicking on the check box in the upper left hand corner of the summary grid directly to the left of the Expression Name column header.

Adding an Expression

Click the Add button in the Available Expressions Toolbar to create a new Expression.

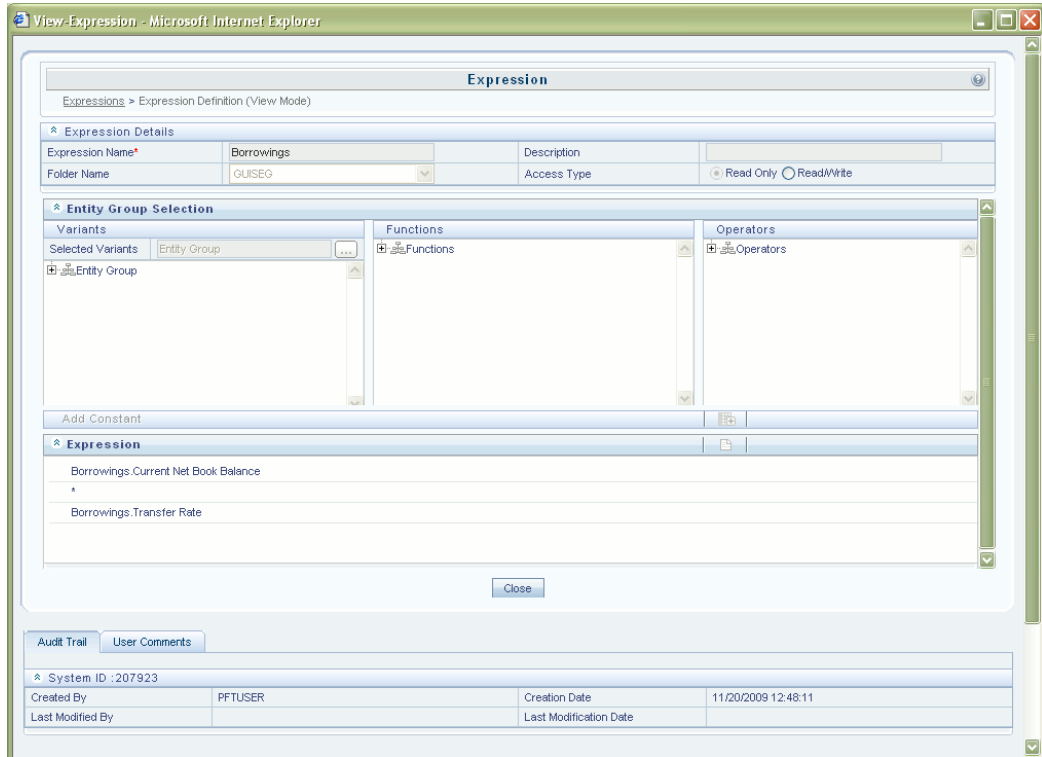
The New - Expression screen is displayed.



Panels like **Expression Details**, **Entity Group Selection – Variants**, **Functions**, **Operators**, **Add Constant** and **Expression** are displayed.

Viewing Expression

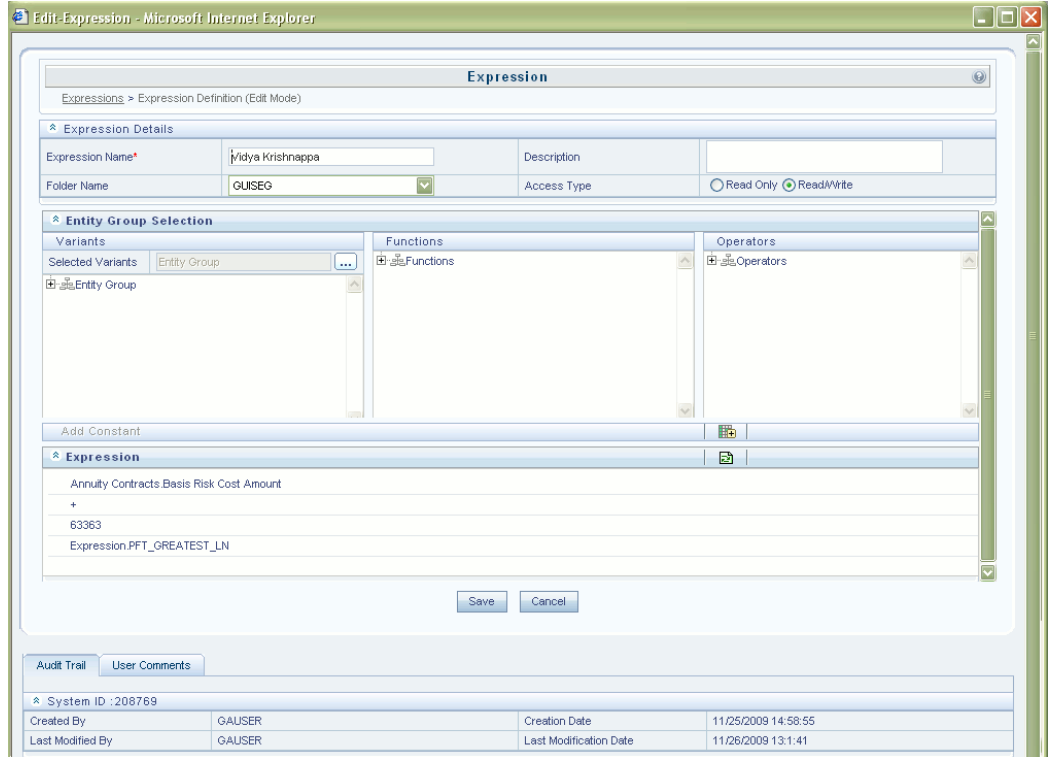
Select the Expression you wish to view in the Expression Summary screen and click the View button in the Toolbar to view the details of the selected Expression. The View-Expression window is displayed.



Details such as **Variants**, **Functions** and **Operators** on which the Expression is based are displayed. These details cannot be modified from this window. After viewing the details, click Close to close the window.

Editing an Expression

Select an Expression and click the Edit button in the toolbar to edit the selected Expression. The Edit – Expression window is displayed.

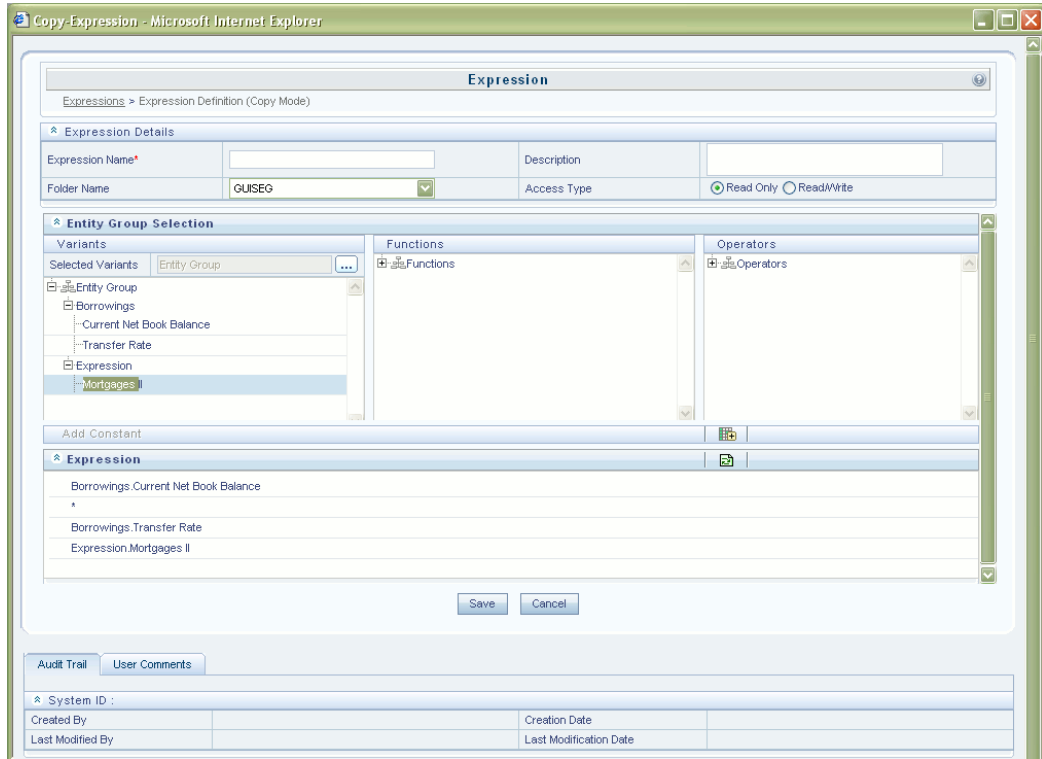


If an expression has defined as **Read Only** in the **Access Type** field then you will receive a message as 'Cannot edit the expression as you have only the read access'. It can be modified only if the access type is defined as Read/Write.

Any field can be modified in this window. Make the necessary modifications and click **Save** to save the changes. The record is updated successfully and is listed in the Expressions list in the Expression Summary screen.

Copying an Expression

Select an Expression and click the Copy button in the toolbar to save the selected Expression definition details as new definition with required changes. The Copy – Expression window is displayed.

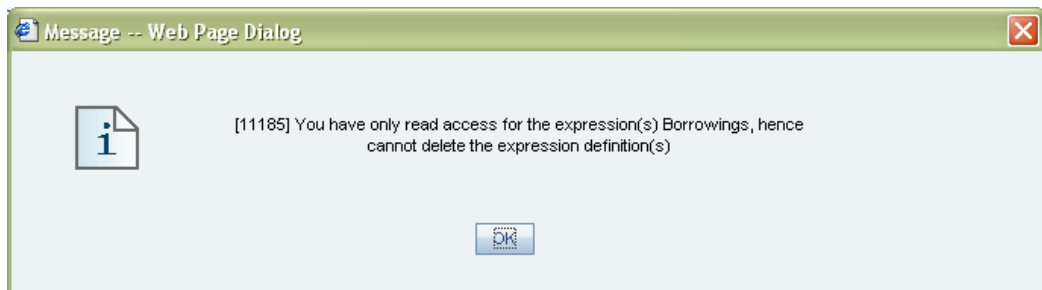


All the fields can be edited in this screen. Make the required changes and enter the new expression name which is mandatory. Click Save to save the changes. The record is updated successfully.

Deleting an Expression

Select an Expression in the Expression Summary screen and click the Delete button in the tool bar to delete an Expression. The Expression will be deleted and a confirmation message will be displayed.

If you have only the read access for the expression defined you will not be able to delete an expression and you'll receive a message as below with an expression name you have tried to delete.



Expressions Summary Grid

The following columns categorize each Expression in the summary grid:

- Expression Name
- Folder Name
- Return Type
- Created By
- Creation Date

Expression Name

Displays the Expression's short name. Performing a "mouse-over" on an Expression Name displays the Expression's description.

Folder Name

Displays the name of the Folder in which a rule is stored.

Return Type

Expression rules operate like SQL function calls in the sense that they return a single data value. Return Type indicates the type of data that is returned by an Express rule: String, Date, or Numeric. See additional discussion below under Expression Functionality.

Created By

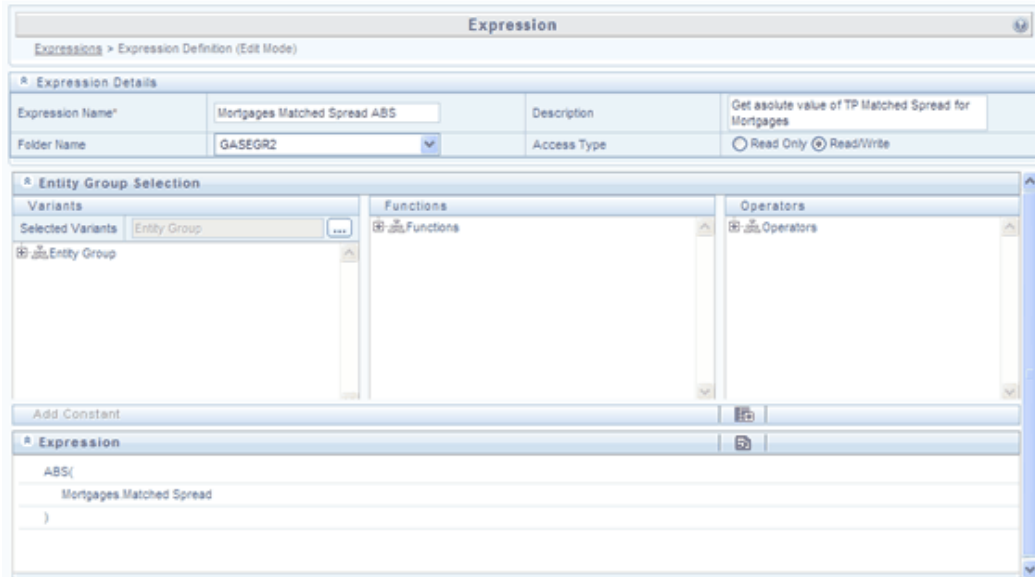
Created By displays the name of the user who created the Expression rule. If an Expression is saved as Read Only, only the user who created the rule, i.e., the owner, may modify the rule.

Creation Date

Displays date and time at which the rule was initially created.

Navigation within the Detail Screen

When you Add, Edit, Copy, or View an Expression, the Expressions Detail Screen is displayed.



The Audit Trail container is a standard footer container for every OFSAA rule type. It displays Created By, Creation Date, Last Modified By, and Modification Date on the Audit Trail tab. The User Comments tab may be used to add comments to any rule.

Audit Trail		User Comments	
System ID : 211074			
Created By	PFTADMINBRAMAN	Creation Date	13-JAN-10 09:52:47
Last Modified By	PFTADMINBRAMAN	Last Modification Date	13-JAN-10 12:01:16

Expression Functionality

OFSAA Expressions operate similarly to SQL function calls in that they apply a formula to one or more database columns in order to return a single value. For example, you might apply a YEAR formula to a date column to yield a numeric return value of a year. For a single instrument row in your data having an origination date of 01/01/2010, this Expression would return the number 2010. As another example, you might construct an Expression that evaluates a balance times a rate times an accrual basis factor to return a current month revenue or expense number.

Expression Details Container

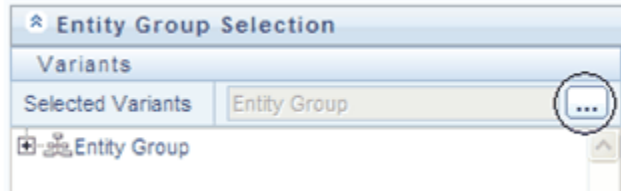
As with any OFSAA rule type, you must supply a Name, Folder, and Access Type; you may optionally supply a Description.

Entity Group Selection Container

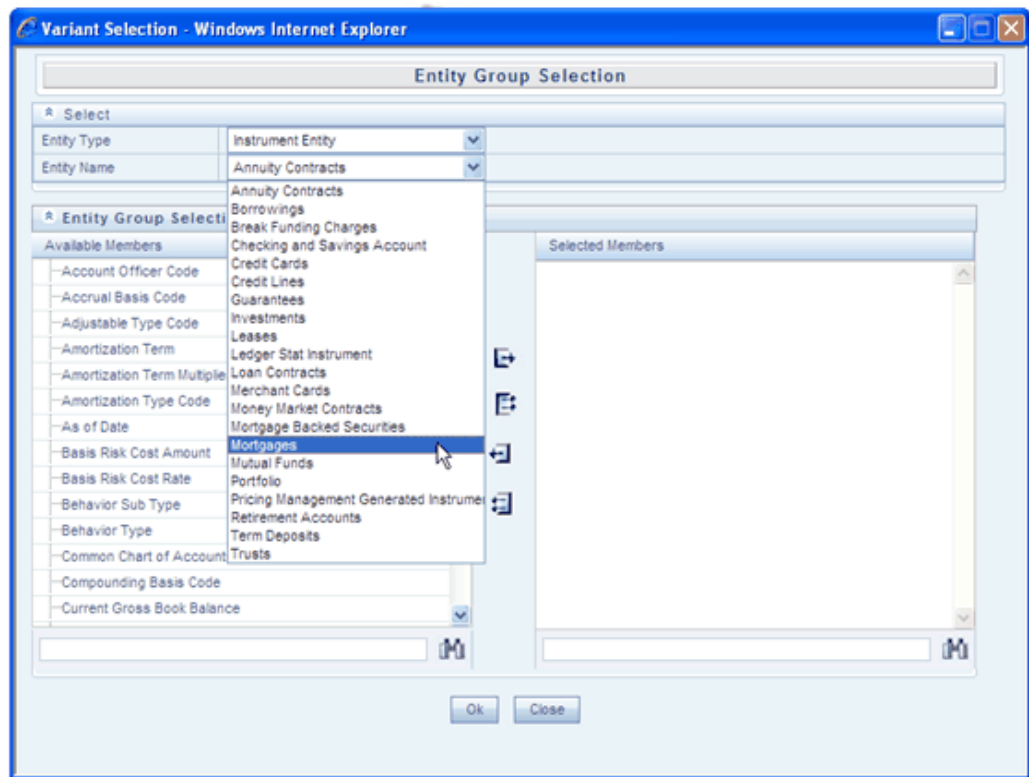
Variants Sub-Container

To begin the process of creating a new Expression rule, you must specify the tables and

columns (or even other expressions) that you want to use in the definition of your new Expression. Click on the ellipses (...) to the right of "Selected Variants" in the Variants sub-container of the Entity Group Selection container.



Clicking on the Selected Variants ellipses invokes an Entity Group Selection pop-up dialog. Here you may select an Entity Type and an Entity Name.



Entity Type & Entity Name Drop Down List Boxes

Entity Types include Instrument Entity, Non- Instrument Entity, and Expression.

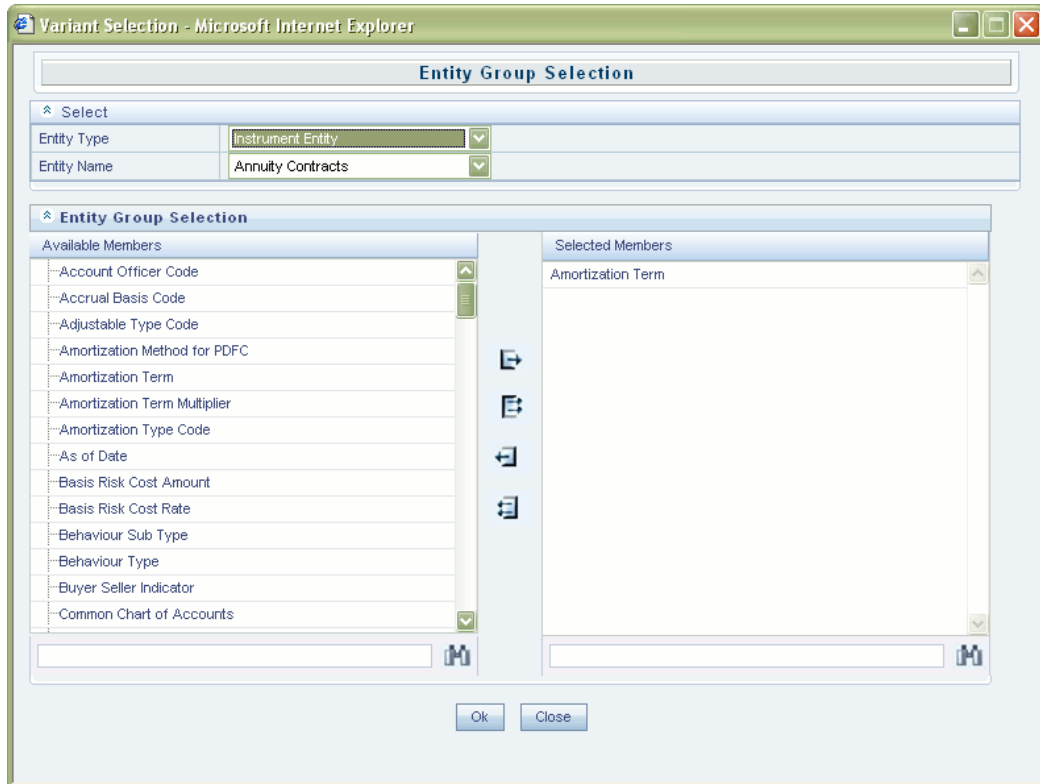
Entity Group Selection - Variants

Click the Add button in the Available Expressions Toolbar to create a new Expression.

Enter the valid name in the Expression Name and Description field. Click on the

dropdown adjacent to Folder Name field and select the required folder. Select the Read Only or Read/Write radio button adjacent to Access Type field. This enables or disables another user to edit the defined Expression.

In the new expression window, go to the Variants panel and click (...) button adjacent to the Selected Variants field. The Variant Selection window is displayed.



In the Select panel adjacent to the Entity Type field select the required entity type from the dropdown which contains entities like Instrumental Entity, Non-Instrumental Entity and Formula.

From the dropdown adjacent to Entity Name field select the required entity name.

Select	
Entity Type	Instrument Entity
Entity Name	Annuity Contracts
Entity Group Selection Available Members	
Account Officer Code	Credit Cards
Accrual Basis Code	Credit Lines
Adjustable Type Code	Guarantees
Amortization Method for P	Investments
Amortization Term	Leases
Amortization Term Multiplie	Ledger Stat Instrument
Amortization Type Code	Loan Contracts
As of Date	Merchant Cards
Basis Risk Cost Amount	Money Market Contracts
Basis Risk Cost Rate	Mortgage-Backed Securities
Behaviour Sub Type	Mortgages
	Mutual Funds
	Portfolio
	Retirement Accounts
	Term Deposits
	Trusts

Select the member from the Available Members panel and click the > button to move it to the Selected Members panel. To select all Members, click >> button. To move the selected Members from the Selected Members panel back to the Available Members panel, click the < button. To clear the members selected, click <<.

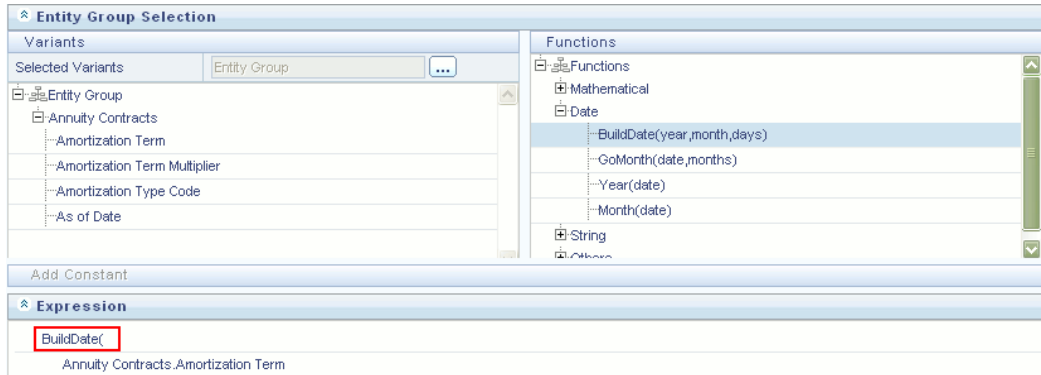
You can also search for a particular Member. Enter the Member name in the search field and click Search. The Member searched will be displayed in the Available Members panel. Click Ok once the members are selected.

The selected Entity Name and Members are displayed in the Variants panel in the New Expression window.

Entity Group Selection	
Variants	
Selected Variants	Entity Group
Entity Group <ul style="list-style-type: none"> Trusts <ul style="list-style-type: none"> Account Number Account Officer Code Account Open Date Accrual Basis Code Adjustable Type Code 	

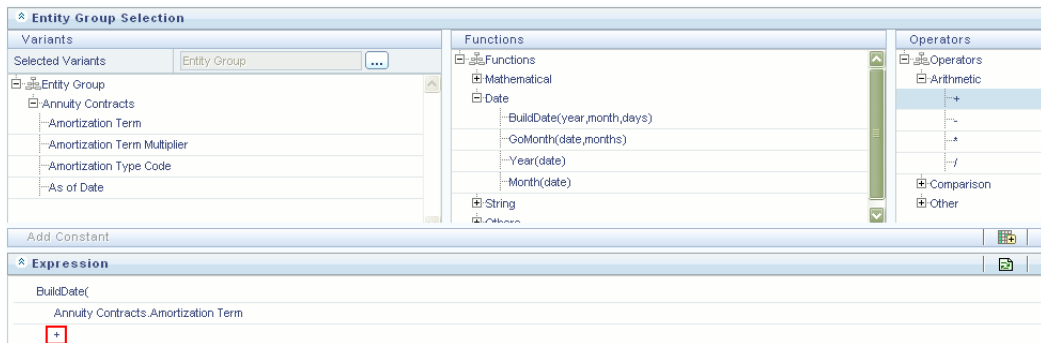
Entity Group Selection – Functions

The type of the function can be selected from the Functions panel. Click + adjacent to the Functions to find the options like Mathematical, Date, String and Others. The selected function will be displayed in the Expression panel.



Entity Group Selection – Operators

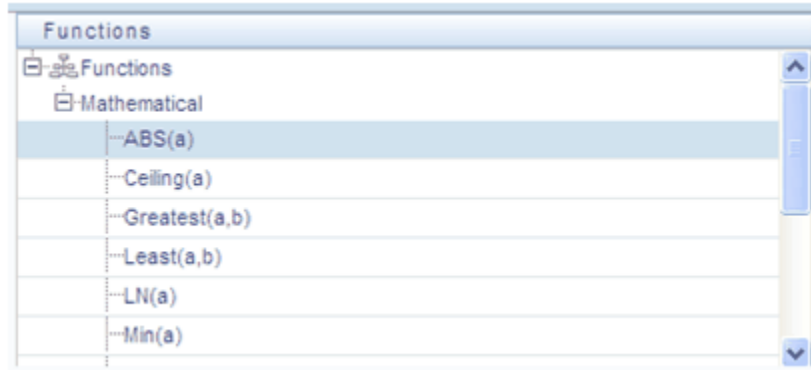
Select the operators from the Operators panel by clicking + adjacent to the Arithmetic, Comparison and Other. The selected operator will be displayed in the Expression panel.



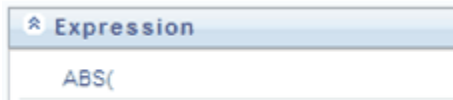
Functions and Operators Sub-Containers

Once you have specified the tables and columns and/or Expressions that you want to utilize within your new Expression rule, you work with Functions and Operators to construct your desired formula.

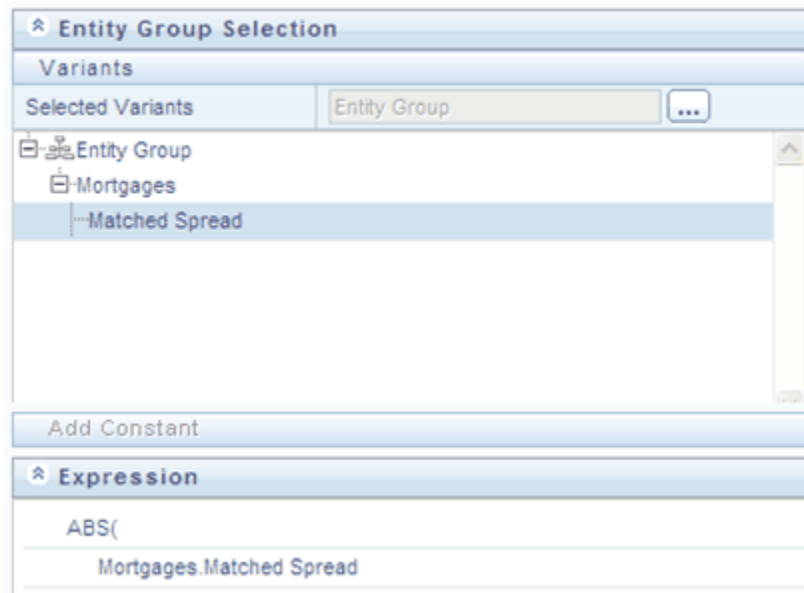
Double click on Variants (tables and columns and/or Expressions), Functions, and Operators to add them into the Expressions container.



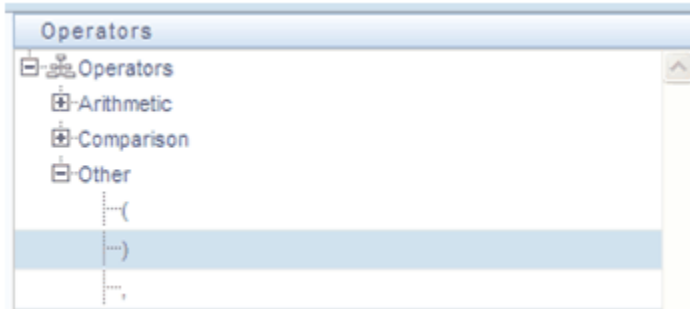
For example, to construct an Expression that returns the absolute value of the Matched Spread column from the Mortgages table, begin by double clicking on the absolute value operator (ABS) in order to add it into the Expression container.



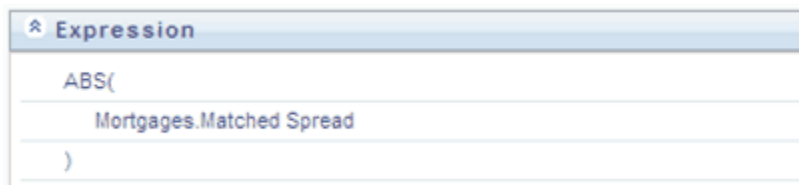
Next, double click on the Matched Spread column from the Mortgages table in order to add the column to the Expression container.



Finally, double click on the Right Parenthesis operator in order to close the expression.



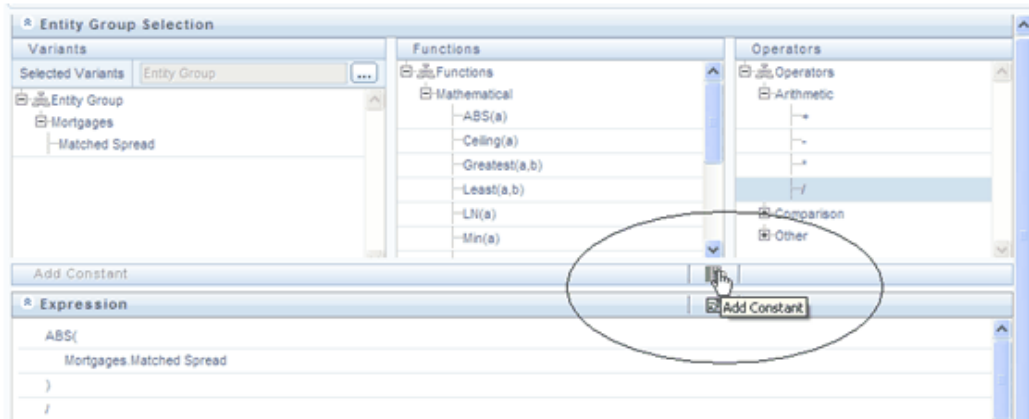
Again, the result of your double clicking operation is to update the formula within the Expression container.



Constants


You may also add constant coefficient values to your formulas. For example, rates are generally stored in the form of percentages where 5.12 in the database means 5.12%.

You may wish to modify your absolute value formula to divide by 100. To do so you would continue by double clicking on the division operator (/). After the formula is updated to include the division operator, click on the Add Constant control located in the first row beneath the Entity Group Selection container.



Enter a constant value and click on the right arrow control, thus completes the expression.

^ Add Constant

Constant Value 

^ Expression 

Annuity Contracts.Basis Risk Cost Amount

+

63363

After the Variants, Functions and Operators are entered, click on Save in the New - Expression screen to validate the entries and capture the defined Expression.

The records are inserted successfully and are listed in Expressions list in the Expression Summary screen. Click Cancel if you want to ignore the entries and return to the Expression screen.

Operator types

The operators available are of 3 types:

1. Arithmetic
2. Comparison
3. Other

Operator type	Notation	Example depicting Usage
Arithmetic	+	CUR_BOOK_BAL = CUR_PAR_BAL + DEFERRED_CUR_BAL
	-	AS_OF_DATE = MATURITY_DATE - REMAIN_TERM_C

Operator type	Notation	Example depicting Usage
	*	Remaining Balance after Offset = Opening balance – (Expected balance on every payment date * Mortgage offset %)
	/	CUR_PAYMENT = ORG_BOOK_BAL/ (ORG_TERM/ PMT_FREQ [in months])
Comparison	=	CUR_PAYMENT = principal + interest
	<>	If ADJUSTABLE_TYPE_CD <> 0, INTEREST_RATE_CD = 001 to 99999.
	>	If ORIGINATION_DATE > AS_OF_DATE, LAST_PAYMENT_DATE = ORIGINATION_DATE.
	>=	AS_OF_DATE >= ORIGINATION_DATE
	<	AS_OF_DATE < NEXT_REPRICE_DATE
	<=	If ORIGINATION_DATE <= AS_OF_DATE, LAST_PAYMENT_DATE >= ORIGINATION_DATE
Other	(Parentheses group segments of an expression to make logical sense.
)	MATURITY_DATE <= NEXT_PAYMENT_DATE + (REMAIN_NO_PMTS_C * PMT_FREQ)

Operator type	Notation	Example depicting Usage
	,	The comma separates statements of a function.

Function Types and Functions

You select the type of function for your expression from the Type list. The choices are:

- Mathematical Functions
- Date Functions
- String Functions
- Other Functions

The type of function you select determines the choices available in the Function box. These unique functions in the Functions Sub-container enable you to perform various operations on the data. The following table lists each available function and Detail on the operations of each function in which it appears.

Function type	Function Name	Notation	Description	Syntax	Example depicting Usage
Mathematical	Absolute	ABS(a)	Returns the positive value of the database column	{ABS(} followed by {EXPR1 without any embedded or outermost left-right parentheses pair} followed by { }	ABS (-3.5) = 3.5. ABS(F), ABS(F + C), ABS(F + C * R + F) are possible. However, ABS((F + C + R)), ABS((F + (MAX * CEILING))) are not possible.

Function type	Function Name	Notation	Description	Syntax	Example depicting Usage
	Ceiling	Ceiling (a)	Rounds a value to the next highest integer	Ceiling(column or expression)	3.1 becomes 4.0, 3.0 stays the same
	Greatest	Greatest(a,b) GREATEST(column or expression, column or expression)	Returns the greater of 2 numbers, formulas, or columns	Greatest(column or expression, column, or expression)	Greatest(1.9,2.1) = 2.1
	Least	LEAST(column or expression, column or expression) Least (a,b)	Returns the lesser of 2 numbers, formulas, or columns	Least(column or expression, column or expression)	Least(1.9,2.1) = 1.9
	Natural Log	LN(number) LN(a)	Returns the natural logarithm of a number Natural logarithms are based on the constant e (2.7182818284 5904).	LN(number) where number is the positive real number for which you want the natural logarithm	LN(86) equals 4.454347 LN(2.7182818) equals 1
	Minimum	Min(a)	Returns the minimum value of a database column	Min(Column)	
	Maximum	Max(a)	Returns the maximum value of a database column	Max(Column)	

Function type	Function Name	Notation	Description	Syntax	Example depicting Usage
	Power	POWER(coeff icient, exponent) Power(a,b)	Raises one value to the power of a second	{POWER({ {EXPR1 without any embedded or outermost left-right parentheses pair followed by {, followed by {EXPR1 without any embedded or outermost left-right parentheses pair} followed by { })}	Valid examples: POWER(F, R) POWER(F + C * R, F / R) Invalid examples: POWER(F + POWER, R) POWER(MAX, C)
	Round	ROUND (number, precision) Round(a,b)	Rounds a value to a number of decimal places	Round(x, n) returns x rounded to n decimal places	Round(10.523 54,2)=10.52
	Sum	Sum(a)	Sums the total value of a database column. Sum is a multi-row function, in contrast to +, which adds 2 or more values in a given row (not column)	Sum(Column)	

Function type	Function Name	Notation	Description	Syntax	Example depicting Usage
	Weighted Average	WAvg (column being averaged, weight column) WAvg(a,b)	Takes a weighted average of one database column by a second Column. WAvg cannot appear in any expression. If you have two formulas called F1 and F2, both of which are WAvg functions, then you can form a third formula F3 as F1 + F2. If F3 is chosen as a calculated column, then an error message appears and the SQL code is not generated for that column. This is similar for nested WAvg functions if F3 is WAvg and it has F1 or F2 or both as its parameters.	WAvg(Column A, Column B)	WAvg(DEPOSITS.CUR_NET_RATE,DEPOSITS.CUR_BOOK_BAL)

Function type	Function Name	Notation	Description	Syntax	Example depicting Usage
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Note:

You cannot use the Maximum and Minimum functions as calculated columns or in Data Correction Rules. The Maximum, Minimum, Sum, and Weighted Average functions are multi-row formulas. They use multiple rows in calculating the results.

Date	Build Date	BuildDate(year,month,day s)	Requires three parameters, (CCYY,MM,DD) (century and year, month, day). It returns a valid data and enables you to build a date from components.	BUILDDATE(CCYY,MM,DD)	BuildDate(95,11,30) is invalid (invalid century). BuildDate(1995,11,30) is valid.
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Caution:
If the parameters are entered incorrectly, the date is invalid.

Function type	Function Name	Notation	Description	Syntax	Example depicting Usage
	Go Month		Advances a date by x number of months. Go Month does not know the calendar. For example, it cannot predict the last day of a month. Typical functionality is illustrated in the following table:	GOMONTH(Date column, Number of months to advance)	GOMONTH(DEPOSITS.O RIGINATIO N_DATE,DE POSITS.ORG _TERM) Valid examples: GOMONTH(F, F + R + C) GOMONTH(F, R) Invalid examples: GOMONTH(F + (R + C), MAX) GOMONTH((F * C), F)
	<u>Example:</u>	Date Column	# of Months	GOMONTH	Comment
		1/31/94	1	2/28/94	Because 2/31/94 does not exist
		1/15/94	2	3/15/94	Exactly 2 months:15th to 15th
		2/28/94	3	5/28/94	Goes 28th to 28th: does not know that 31st is the end of May

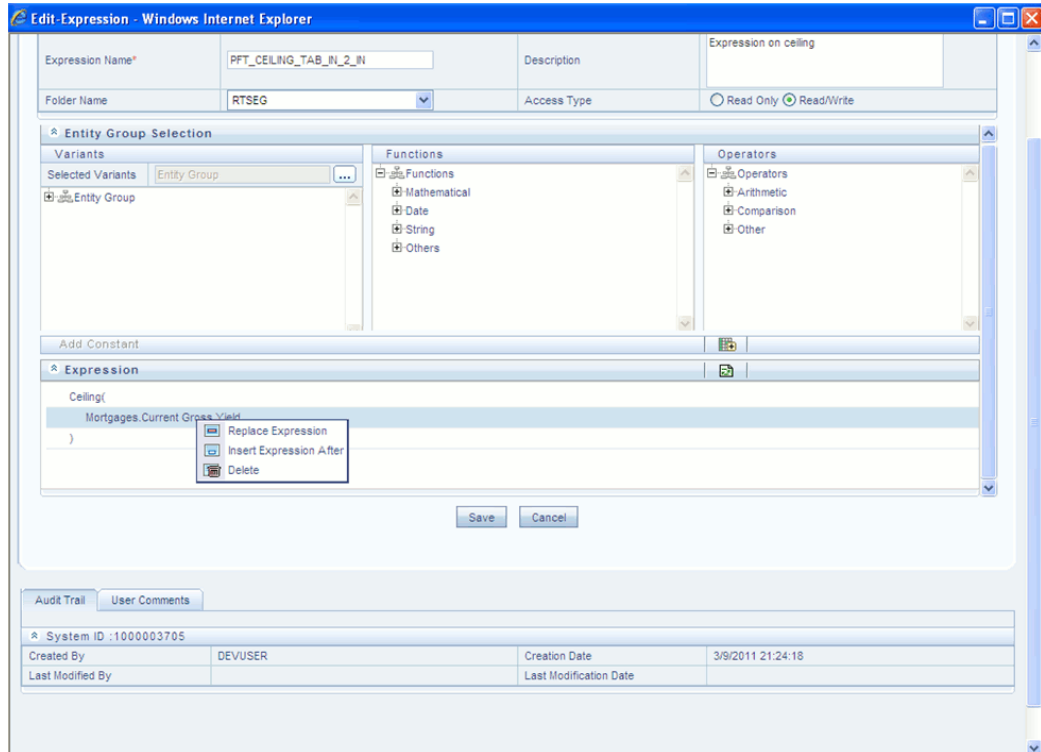
Function type	Function Name	Notation	Description	Syntax	Example depicting Usage
		6/30/94	-1	5/30/94	Goes back 30th to 30th: does not know that 31st is end of May
	Year	Year(date)	Year(x) returns the data for year x.	Year(<i>Column</i>) returns the year in the column, where the column is a date column.	Year(Origination Date) returns the year of the origination date.
	Month	Month(date)	Month(x) returns the month in x, where x is a numbered month.	Month(<i>Column</i>) returns the month in the column, where the column is a date column.	Month(9) returns September. Month(Origination Date) returns the month of the origination date.
String	Trim All	AllTrim(a)		Trims leading and following spaces, enabling the software to recognize numbers (entered in All Trim) as a numeric value, which can then be used in calculating.	

Function type	Function Name	Notation	Description	Syntax	Example depicting Usage
Other	If statement	If(a=b,c,d)	<p>The IF function should always have odd number of parameters separated by commas. The first parameter is an expression followed by a relational operator, which is in turn followed by an expression.</p> <p>Note: Avoid embedding multiple individual formulas in subsequent formulas. This can create an invalid formula.</p>	<p>If(Condition, Value if True, Value if False).</p> <p>{IF(} followed by EXPR2 followed by {> < <> = >= <=} followed by EXPR2 followed by {,} followed by EXPR followed by ,) followed by EXPR}n followed by {}) where n = 1, 2, 3,</p>	<p>If(LEDGER_S TAT.Financia l= 110, LEDGER_ST AT.Month 1 Entry,0) IF(((MAX + SUM) >= 30), F, POWER) are valid.</p>

Function type	Function Name	Notation	Description	Syntax	Example depicting Usage
	Lookup	Lookup(OriginalCol,LookupColumn,...,ReturnedColumn)	Enables you to assign values equal to values in another table for data correction. LOOKUP function should always have an odd number of parameters separated by commas and with a minimum of 3 parameters.	Lookup(O1,L1,O2,L2,...On, Ln,R) where O=Column from Original table L=Column from Lookup table R=Column to be Returned. So the previous statement would read: where O1=L1 and O2=L2... Returned value R	<p>Valid examples:</p> <p>LOOKUP(F, R, R)</p> <p>LOOKUP(F, R, F, F, F)</p> <p>Invalid examples:</p> <p>LOOKUP(F)</p> <p>LOOKUP(F, R)</p> <p>LOOKUP(F + R, (F + R), MAX)</p>
			<p>Note:</p> <p>Lookup is used exclusively for data correction.</p>		

Expression Container

The Expression container displays your formula step-by-step as you build it. When your formula is complete you may save the Expression rule. Saving an Expression rule invokes validation logic to ensure that you have constructed a legitimate formula, that is one that may be legally applied to your database.



In the Expression grid, you can right-click the expression and do the following:

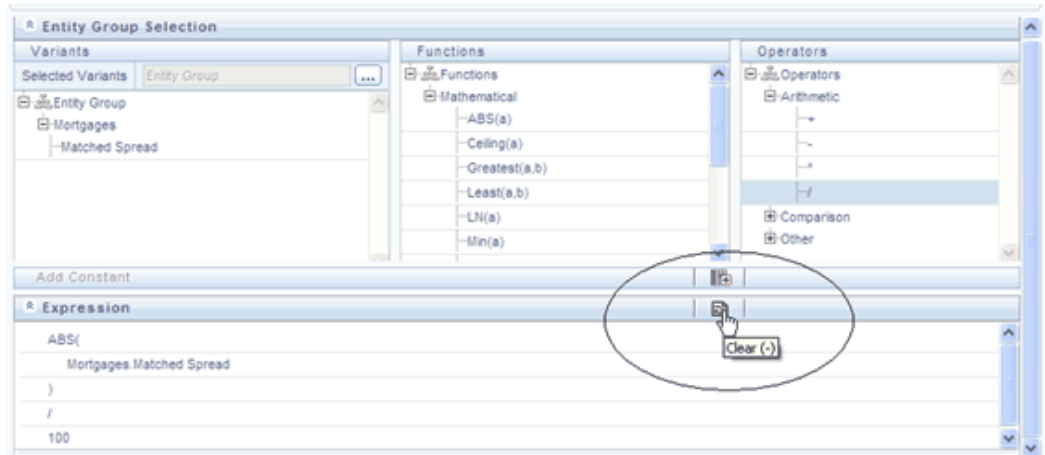
Click **Replace Expression** to replace the expression with a new one.

Click **Insert Expression After** to insert a new expression after the selected expression.

Click **Delete** to delete a selected expression.

You can also click **clear(-)** button in the Expression grid to clear the Expression.

If you encounter errors or if for any reason you want to reconstruct a formula, click on the Clear control at the top of the Expression container.



After clicking on the Clear control, you will be prompted to ensure you wish to clear the formula. If you answer OK, the formula is erased and you may start over in specifying your formula.

OFSAA Rate Management

Overview

OFSAA Rate Management is a comprehensive utility enabling you to manage currencies, yield curves, and interest rate & currency exchange rate data with a high degree of security and control. OFSAA Rate Management also allows you to maintain economic forecasts such as GDP growth, inflation rates, or unemployment projections that may be linked to your models for interest rates, exchange rates, or new business growth.

Historical rate data obtained from OFSAA Rate Management is utilized within all of the Enterprise Performance Management (EPM) applications (OFSAA Funds Transfer Pricing, OFSAA Profitability Management, OFSAA Asset Liability Management, and OFSAA Balance Sheet Planning). Details regarding how each application draws upon Rate Management data are provided in the body of this chapter.

Rate Management Subject Areas

There are four primary subject areas or modules within Master Maintenance > Rate Management:

- Interest Rates
- Currency
- Currency Rates
- Economic Indicators

Interest Rates

The quality and availability of interest rate information varies throughout the world. In many markets, gathering comprehensive rate information is a challenge because of insufficient security types, inconsistent quoting conventions, and lack of liquidity. The

Interest Rates module within OFSAA Rate Management allows you to define and manage complex yield curve definitions using multiple rate formats and other rate attributes to give you data storage capabilities appropriate to your market. The Interest Rates module also supports the entry and maintenance of historical rate data for each yield curve you define.

Historical interest rate data from OFSAA Rate Management is utilized within OFSAA Transfer Pricing to generate transfer rates and option costs. Historical interest rate data is also utilized within OFSAA Asset Liability Management and within OFSAA Balance Sheet Planning in the generation of forecasted interest rate scenarios.

Currency

Financial institutions commonly transact business in more than one currency. Transacting business in multiple currencies demands functional capabilities for multi-currency accounting and currency rate management.

OFSAA Rate Management's Currency module supports the definitions and maintenance of currencies. Currency definitions are fundamental to the definition of both interest rate yield curves and currency exchange rates. A key attribute of every yield curve is the currency with which it is associated; and currency exchange rates can only be established between defined currencies. OFSAA Rate Management provides a comprehensive list of ISO-defined currencies; you may also define and add your own user-defined currencies.

Currency Rates

OFSAA Rate Management's Currency Rates module draws upon the currencies you have defined and activated in the Currency module to support the entry and maintenance of historical exchange rates. Currency exchange rates are utilized within:

- OFSAA Funds Transfer Pricing "Ledger Migration" processes (see the *Oracle Financial Services Analytical Applications Funds Transfer Pricing User Guide*)
- OFSAA Asset Liability Management currency consolidation process (see the *Oracle Financial Services Analytical Applications Asset Liability Management (OFSALM) User Guide*)
- OFSAA Profitability Management multi-currency allocations (see the *Oracle Financial Services Analytical Applications Profitability Management (OFSPM) User Guide*)

Economic Indicators

An economic indicator is any economic statistic such as the Consumer Price Index (CPI), the growth rate of the Gross Domestic Product (GDP), the unemployment rate, the Purchasing Managers Index, indices of consumer confidence, etc. Such macroeconomic statistics tell us how well the economy has behaved in the past. Some economic indicators are referred to as "lagging" indicators while others are classified as

"leading" indicators. Leading indicators may provide insights into the future direction of the economy.

OFSAA Rate Management's Economic Indicators module allows you to define and store such historical indicators. Economic Indicators provide baselines from which OFSAA Asset Liability Management can generate forecasts of future values of economic statistics that can affect new business or other modeling assumptions.

Interest Rates Summary Screen

When you first navigate to Master Maintenance > Rate Management > Interest Rates, an empty screen will be displayed. After you have constructed one or more interest rate curves, navigating to Master Maintenance > Rate Management > Interest Rates will display a summary screen showing each of the interest rate curves that you have previously built.

The screenshot shows the 'Interest Rates' summary screen. At the top, there is a search container with fields for 'Code', 'Name', 'Currency', and 'Rate Format'. Below the search container is a table with the following columns: Code, Name, Rate Format, Compound Basis, Accrual Basis, Currency, Creation Date, Created By, Last Modification Date, and Last Modified By. The table contains 11 rows of data representing different interest rate curves.

Code	Name	Rate Format	Compound Basis	Accrual Basis	Currency	Creation Date	Created By	Last Modification Date	Last Modified By
1	Zero Rate	Zero Coupon Yield	Semiannual	Actual/Actual	US Dollar	05/22/2009 13:15:28	RTUSER	07/21/2010 16:43:20	POORNIMAB
2	Test RC	Zero Coupon Yield	Annual	Actual/Actual	US Dollar	06/09/2010 13:16:59	RTUSER		
4	S4	Zero Coupon Yield	Annual	Actual/Actual	Barbados Dollar	06/11/2009 15:51:55	RTUSER	06/28/2009 15:13:10	RTUSER
7	RC S7	Yield to Maturity	Monthly	Actual/Actual	Netherlands Antillean Guilder	07/02/2009 15:18:30	GUIUSER	06/31/2009 19:13:55	RTUSER
8	Test RC S8	Zero Coupon Yield	Annual	Actual/Actual	Andorran Peseta	07/03/2009 13:07:34	GUIUSER	07/03/2009 13:07:39	GUIUSER
10	Treasury Index	Zero Coupon Yield	Annual	Actual/Actual	US Dollar	05/21/2009 16:24:41	RTUSER	06/01/2009 16:46:33	GUIUSER
11	Single Rate Test (Code 11)	Zero Coupon Yield	Annual	Actual/Actual	US Dollar	05/21/2009 16:25:55	RTUSER	05/21/2009 16:46:01	RTUSER

Search Container

A Search container is provided in which you may search for interest rate curves by Name or by Currency (by ISO currency code).

Search Control

Enter your desired search criteria and click on the Search control.

Reset Control

Clicking on the Reset control removes any Name or Currency constraint you may have specified and refreshes the screen.

Interest Rates Container

The Interest Rates container presents a grid containing all of the interest rate curves that meet your search criteria. The Interest Rates summary grid offers several controls that allow you to perform different functions when an interest rate curve is selected.

To select an interest rate curve, click on a check box in the first column of the grid. More

than one interest rate curve can be selected at a time but this will cause some of the controls to become disabled. Clicking on a checkbox a second time de-selects the interest rate curve.

You may select or deselect all of the interest rate curves in the summary grid by clicking on the check box in the upper left hand corner of the summary grid directly to the left of the Name column header.

Add

Clicking on the Add control begins the process of building a new interest rate curve. The Add control is disabled if any rows in the grid have been selected.

View

Selecting a single row out of the grid enables the View control. Clicking on the View control allows you to view the contents of an interest rate curve on a read-only basis. The View control is only enabled when a single interest rate curve has been selected.

Edit

Selecting a single row out of the grid enables the Edit control. Clicking on the Edit control allows you to modify a previously saved interest rate curve. The Edit control is only enabled when a single interest rate curve has been selected.

Delete

Selecting one or more rows out of the grid enables the Delete control. Clicking on the Delete control deletes the interest rate curves you have selected.

Data Loader

The Data Loader Icon executes a function to import historical rates and parameters for all defined Interest rate Curves. For more information on setting up the automated process, see *Oracle Financial Services Analytical Applications Data Model Utilities User Guide*.

To execute a data load, click Data Loader icon. A warning message will appear "Upload all available Interest Rates and Parameters?" Click ok, and all historical rates and parameters will be loaded.

Interest Rates Summary Grid

The following columns categorize each interest rate curve in the summary grid:

- Name
- Rate Format

- Compound Basis
- Accrual Basis
- Currency
- Creation Date
- Created By
- Last Modification Date
- Last Modified By

Name

Displays the interest rate curve's short name. Performing a "mouse-over" on a row within the grid displays the interest rate curve's detailed description.

Rate Format

Displays the interest rate curve's rate format (zero coupon or yield-to-maturity).

Compound Basis

Displays the interest rate curve's compounding basis (Annual, Semiannual, or Simple).

Accrual Basis

Displays the interest rate curve's Accrual Basis (e.g., 30/360, Actual/Actual, etc).

Currency

Displays the currency (the Reference Currency) to which an interest rate curve is applicable.

Creation Date

Displays the date and time at which an interest rate curve was created.

Created By

Displays the name of the user who created an interest rate curve.

Last Modified Date

Displays the date and time at which an interest rate curve was last modified.

Modified By

Displays the name of the user who last modified an interest rate curve.

Interest Rates Detail Screen

When you Add, Edit, or View an interest rate curve, the Interest Rate Code Detail Screen is displayed. The Interest Rate Code detail screen is comprised of an Interest Rate Code Details container, 5 Interest Rate Code tabs, and an Audit Trail container.

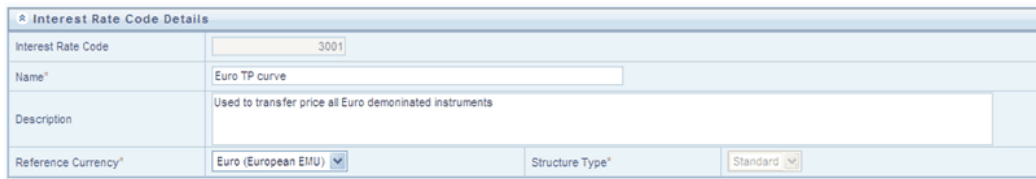
The Audit Trail container is a standard footer container for every OFSAA rule type. It displays Created By, Creation Date, Last Modified By, and Modification Date on the Audit Trail tab. The User Comments tab may be used to add comments to any rule.

Interest Rate Code Details Container

Is explained in detail below.

Interest Rate Code

When constructing a new yield curve, you must specify an Interest Rate Code between 0 and 99,999. Interest Rate Codes are used internally to uniquely identify yield curves. When working with Rate Manager or other OFS Analytical Applications, you generally reference yield curves by Name, not by Interest Rate Codes. Interest Rate Codes, however, are embedded within your instrument data (for example, the INTEREST_RATE_CODE and T_RATE_INT_RATE_CD columns within your instrument data are populated with Interest Rate Codes). Once you have saved a yield curve, you may not renumber its Interest Rate Code.



Interest Rate Code Details	
Interest Rate Code	3001
Name*	Euro TP curve
Description	Used to transfer price all Euro denominated instruments
Reference Currency*	Euro (European EMU) ▼
Structure Type*	Standard ▼

Name & Reference Currency

You must also provide a Name and Reference Currency for your yield curve. Unlike Interest Rate Codes, you may rename or change the reference currency for previously saved yield curves. While you may choose to rename a yield curve, however, it is very unlikely that you will chose to modify a yield curve's Reference Currency. A yield curve's Reference Currency is the currency for which your market rates are valid. For example, the Reference currency for a Prime Rate yield curve would be US Dollars. LIBOR or other internationally quoted rates are always quoted with respect to an underlying reference currency (e.g., US Dollar LIBOR, Euro LIBOR, etc). The drop-down list box for Reference Currencies displays only "Active" currencies. See the

section below entitled Currency for a discussion of Active and Inactive currencies.

Description

You may optionally provide a description of your yield curve; you may modify a yield curve's description at any time.

Structure Type

Another required attribute for each yield curve is its Structure Type. Structure Type supports both Standard and Hybrid yield curve definitions. Hybrid yield curves are re-expressions of one or more pre-existing Standard yield curves. For additional information, see Hybrid Term Structure Tab under Interest Rate Code Tabs below.

Interest Rate Code Tabs

Interest Rate Code tabs are used to define your yield curve and to add, edit, or delete historical interest rate data. The Interest Rate Code tabs are:

- Attributes
- Terms
- Historical Rates
- Parameters
- Hybrid Term Structure



Navigating Between Interest Rate Code Tabs

For new yield curves, you must begin with the Attributes tab. Once you have selected attributes for a yield curve, you will typically not change them. When you have finished assigning attributes, navigate to the Terms tab in order to establish a term structure for your yield curve, i.e., an overnight rate, a one month rate, a three month rate, etc. To navigate to the Terms tab, you may either select the Apply button on the Attribute tab or you may simply click on the Terms tab.

Note: You must have specified an Interest Rate Code, a Name, and a Reference Currency in the Interest Rate Code Details container before you can navigate to the Terms tab.

As with your yield curve attributes, once you have established a term structure for your yield curve you will only rarely come back to change it. The first time you navigate to

the Terms tab, an initial 1 month term point is provided, but even if this is the one and only term point you want for your yield curve, you must select the Apply button to tell the system that you have finished your term structure specification. In future revisions to your yield curve's definition, you may navigate directly to the Historical Rates tab simply by clicking on it, but if you modify your term structure in any way, you must always select the Apply button on the Term tab before you can navigate to the Historical Rates tab.

The Historical Rates tab is used to input interest rate data. This is the tab you will most often return to for maintaining your interest rate database over time. To navigate to the Historical Rates tab, you may either select the Apply button on the Terms tab or you may simply click on the Historical Rates tab if you have already established your term structure.

Note: You must have specified (1) an Interest Rate Code, a Name, and a Reference Currency in the Interest Rate Code Details container and (2) a term structure in the Terms tab before you can navigate to the Historical Rates tab.

Attributes Tab

Yield curve attributes include Rate Format, Compound Basis, and Accrual Basis. Once you have initially saved a yield curve, you typically will not change these attributes, but Rate Management will allow you to do so.

Attributes	Terms	Historical Rates	Parameters	Hybrid Term Structure
Rate Format*	Yield to Maturity			
Compound Basis*	Annual		Accrual Basis*	Actual/Actual
Apply				

Rate Format

As part of your yield curve definition, you must select either the Zero Coupon or Yield-to-Maturity rate format. Regardless of which format you select, rates entered into Rate Management (in the Historical Rates tab) are always entered in nominal form, e.g., 5.125% or 6.875%, not as discount factors. For details on how the two rate formats affect internal cash flow engine calculations, see the *Oracle Financial Services Cash Flow Engine Reference Guide*.

Compound Basis

You must also select a compounding basis for your yield curve: Annual, Semiannual, or Simple. Annual is the most common method. For details on Compound Basis and how different compounding bases affect cash flow calculations in OFSAA, see the *Oracle*

Accrual Basis

You must also select an accrual basis for your yield curve. For details on Accrual Basis and how different accrual bases affect cash flow calculations in OFSAA, see the *Oracle Financial Services Cash Flow Engine Reference Guide*.

Terms Tab

Use the Terms tab to construct your yield curve's term structure. You may specify as many yield curve terms as you wish ranging from 1 day to 100 years.

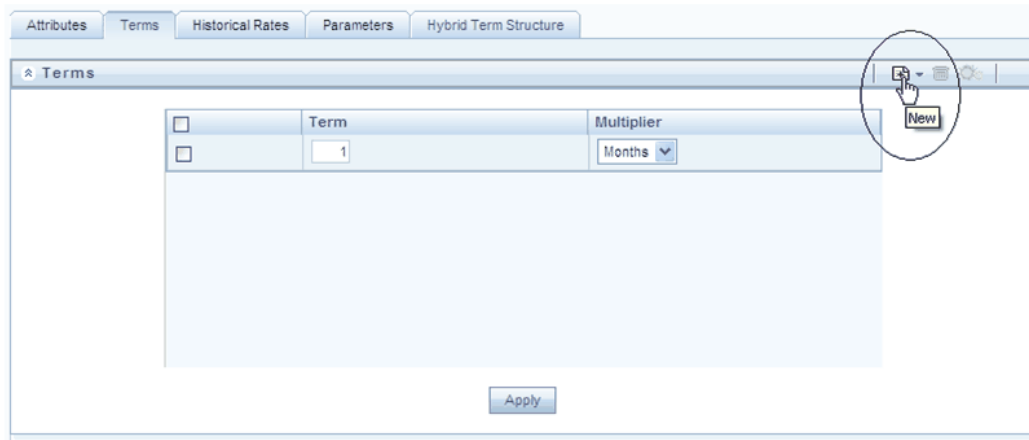
The screenshot shows the 'Terms' tab in the OFSAA interface. The tab is active and displays a table with the following columns: 'Term' and 'Multiplier'. The table contains several rows with values like 1, 2, 3, 4, 5 and multipliers like Days, Months. An 'Apply' button is visible at the bottom.

<input type="checkbox"/>	Term	Multiplier
<input type="checkbox"/>	1	Days
<input type="checkbox"/>	1	Months
<input type="checkbox"/>	2	Months
<input type="checkbox"/>	3	Months
<input type="checkbox"/>	4	Months
<input type="checkbox"/>	5	Months
<input type="checkbox"/>		Months

Apply

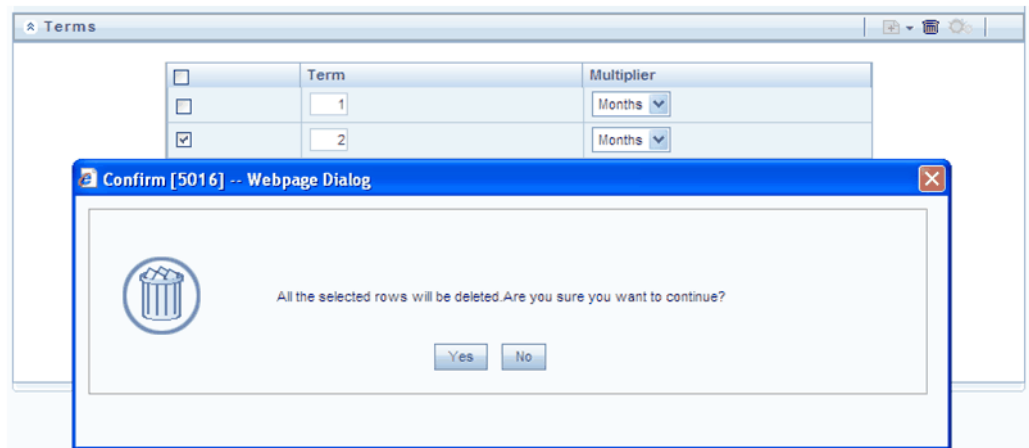
Adding New Term Points

Click on the Add control to add new term points. After clicking on the Add control, select a Term value and a Multiplier (e.g., 7 days, 2 months, 5 years, etc).



Deleting Existing Term Points

If you wish to delete an existing term, select the term point (or terms) you wish to delete and click on the Delete control, and confirm that you want to delete the term (or terms) you have selected.



Historical Rates Tab

Use the Historical Rates tab to enter, modify, or view interest rate data. Data should be entered as simple percentages (e.g., 5.125, 4.875, etc).

Effective Date	1 Days	1 Months	2 Months	3 Months	4 Months	5 Months
04-Dec-2009	3.750000	3.880000	3.965000	4.060000	4.163300	4.261700
07-Dec-2009	3.750000	3.896300	3.975000	4.103300	4.196700	4.296700
08-Dec-2009	3.750000	3.968300	3.996700	4.103300	4.198300	4.296700
15-Dec-2009	3.750000	3.991700	4.075000	4.250000	4.326700	4.418300
16-Dec-2009	3.750000	3.976700	4.065000	4.103300	4.255000	4.333300
23-Dec-2009	3.750000	4.005000	4.065000	4.156700	4.233300	4.336700

By default, the Historical Rates tab will display interest rate data for the past month (i.e., for the 30 days leading up to the current date). Click on the Effective Date Range drop-down list box to expand your view to the last 3 months, 6 months, one year, 3 years, 6 years or all rate data.

Effective Date	1 Days	1 Months	2 Months	3 Months	4 Months
02-Feb-2010	3.750000	4.100000	4.18		
09-Feb-2010	3.750000	3.933300	4.026300	4.150000	4.206700

Rate Lookup Behavior Between Term Points

The OFSAA cash flow engine is common to OFSAA Funds Transfer Pricing, OFSAA Pricing Management (Transfer Pricing Component), OFSAA Asset Liability Management, and OFSAA Balance Sheet Planning. In looking up rates from OFSAA Rate Management, the cash flow engine will, where necessary, perform an interpolation between yield curve term points. For example, in determining a straight term transfer rate (common for products such as time deposits), the engine may need to determine a three month rate from a yield curve that contains only a one month rate and a six month rate. In such a case, the cash flow engine will perform an interpolation to determine the implied three month rate. While each of the above applications supports simple linear interpolation, OFSAA Transfer Pricing and OFSAA Asset Liability Management also support cubic and quartic spline interpolation methods. These more advanced methods will be supported for all OFS Analytical Applications in a future release.

Rate Lookup Behavior Beyond Term Points

In cases where the cash flow engine needs to determine a rate from a yield curve for a term point smaller than the first term point of the yield curve, the engine will utilize the

first term point of the yield curve. For example, if the engine needs to determine an overnight rate from a yield curve whose first term point is one month, the engine will utilize the one month rate. Similarly, in cases where the cash flow engine needs to determine a rate from a yield curve for a term point greater than the longest term point on the yield curve, the engine will utilize the last term point of the yield curve. For example, if the engine needs to determine a 30 year rate from a yield curve whose last term point is 10 years, the engine will utilize the 10 year rate.

Rate Lookup Behavior Between Effective Dates

In looking up rates from OFSAA Rate Management for a business date, the cash flow engine may find that there is no rate data for that specific business date. For example, in generating an original term transfer rate for an instrument with an origination date of June 14, 2010, the cash flow engine may find rate data for May 31, 2010 and for June 30, 2010 but no rate data for any dates between May 31, 2010 and for June 30, 2010. In such cases, the cash flow engine always falls back to the latest available rate data prior to the business date of interest (May 31, 2010 in this case).

Parameters Tab

The following parameters are utilized in stochastic modeling of interest rates in OFSAA Transfer Pricing and OFSAA Asset Liability Management:

- Mean reversion speed
- Long run rate
- Merton volatility
- Vasicek volatility

Merton volatility is utilized in the Merton and Ho & Lee term structure models and Vasicek volatility is utilized in the Vasicek and Extended Vasicek models.

Effective Date	Mean Reversion Speed	Long Run Rate	Merton Volatility	Vasicek Volatility	Rate Data Source
21-Feb-2010	4.000000	4.125000	0.01	0.01	UI

Values for long run rate and volatility are assumed to be percentages. For example, a long run rate of 5% is displayed as 5.000.

To maintain the integrity of your data, Rate Management restricts the input values it accepts. Note the valid range and default setting for each parameter.

Parameter	Valid Range	Valid Range
Mean reversion speed	0 to 10.0	0
Long run rate	0 to 999.9999%	0
Volatility	0.01% to 10.0%	0.01%

For details on term structure models and stochastic processing, see *the Oracle Financial Services Funds Transfer Pricing User Guide, the Oracle Financial Services Asset Liability Management (OFSALM) User Guide, and the Oracle Financial Services Cash Flow Engine Reference Guide.*

Hybrid Term Structure Tab

Hybrid term structures will allow you to specify three types of hybrid yield curves:

- Spread
- Moving Average
- Merged

The screenshot shows a software interface for configuring interest rates. At the top, there are tabs for 'Attributes', 'Terms', 'Historical Rates', 'Parameters', and 'Hybrid Term Structure'. Below the tabs is a section titled 'Interest Rates'. A dropdown menu for 'Hybrid Curve Type' is set to 'Merge'. There are two main list boxes: 'Available Interest Rate Codes' on the left and 'Selected Interest Rate Codes' on the right. The 'Available' list contains codes such as 1: Zero Rate, 2: Treas RC, 10: Treasury Index, 11: Single Rate Test (Code 11), 17: 517, 20: Mid-Period Repricing (Code 20), 30: Prime Weekly (Code 30), 50: 3 Month Treasury, 51: 101 MRR for FP, and 52: 500 - KF Day - FP. Between the lists are buttons for 'Add', 'Add All', 'Remove', and 'Remove All'. Below these is an 'Apply' button. At the bottom of the window are 'Save' and 'Cancel' buttons.

Hybrid yield curves are built up from either one or more standard yield curves. When you add, modify, or delete any historical rate data from a standard yield curve, the data associated with any related hybrid yield curve should also be updated (see Generate Historical Rates below). Once defined, Hybrid Yield Curves are used like any other interest rate curve in the system. You can reference these curves within OFSAA application business rules that allow selection of an Interest Rate Code.

Spread

A Spread hybrid yield curve is defined as the difference between two standard yield curves. The "spread" type of hybrid yield curve may be useful in establishing liquidity risk or basis risk yield curves.

Moving Average

Moving average hybrid yield curves represent moving average data of a single underlying standard yield curve. These curves are typically used in Funds Transfer Pricing.

Merged

Merged hybrid yield curves represent a blending of two or more underlying yield curves. In constructing a "merged" type of hybrid yield curve, you specify the percentage weighting applicable to each of the underlying standard hybrid yield curves.

Defining a Hybrid Curve

To define a hybrid curve select the Source Type: Hybrid, in the Hybrid Term Structure tab, select the Hybrid Curve Type (Spread, Moving Avg., or Merged), and select the Interest Rate Code(s) for the hybrid type. Click on "Apply."

The screenshot displays the 'Interest Rate Code Details' window. The 'Interest Rate Code' is 550, and the 'Name' is 'Hybrid ALM UO'. The 'Reference Currency' is 'US Dollar'. The 'Structure Type' is 'Hybrid'. The 'Hybrid Term Structure' tab is active, showing 'Hybrid Curve Type' as 'Moving Average'. Below this, there are two lists: 'Available Interest Rate Codes' and 'Selected Interest Rate Codes'. The 'Available Interest Rate Codes' list includes: 1: Zero Rate, 2: Test RC, 17: S17, 20: 1/6-Period Replicon (Code 20), 30: Prime Weekly (Code 30), 50: 3 Month Treasury, 51: 1st USD for FP, 52: 600 - KP Day - FP, 53: RC USD Audit, 75: 5.2 - New Test RC3 Replica. The 'Selected Interest Rate Codes' list includes: 10: Treasury Index. Buttons for 'Add', 'Add All', 'Remove', 'Remove All', and 'Apply' are visible.

Generate Historical Rates

Once a hybrid curve is defined, you can generate historical rates as far back as the rate source curves allow. The Generate Frequency determines the frequency of the historical rates populated with the Generate function. If you choose the generate frequency of monthly, it will generate month end values only. If you choose daily, it will generate the maximum number of historical values.

To generate the rates, select the interpolation method (Linear, Cubic or Quartic), select the Generate Frequency (Daily, Weekly, Bi-Weekly, or Monthly) and enter the specific date range (From Date / To Date), Click the "Generate" button. The rates will be populated and you will be directed to the Historical Rates tab to view the results.

Interpolation	Linear Interpolation	Generate Frequency	Monthly
From Date	<input type="text"/>	To Date	<input type="text"/>

Currency

Upon initially navigating to Master Maintenance > Rate Management > Currency, a summary screen displays a comprehensive list of more than 170 seeded ISO currency codes.

Currency				
Search				
Currency Code	<input type="text"/>	Currency Name	<input type="text"/>	
Currencies				
Code	Currency Name	Reference Interest Rate Code	Reporting Currency	Status
<input type="checkbox"/>	000	Default Currency	No	Inactive
<input type="checkbox"/>	001	Functional Currency		
<input type="checkbox"/>	002	Non Currency Basis		
<input type="checkbox"/>	ADP	Andorran Peseta		Inactive
<input type="checkbox"/>	AED	United Arab Emirates Dirham		Inactive
<input type="checkbox"/>	AFA	Afghanistan Afghani		Inactive
<input type="checkbox"/>	ALL	Albanian Lek		Inactive
<input type="checkbox"/>	AMD	Armenia Dram		Inactive
<input type="checkbox"/>	ANG	Netherlands Antillian Guilder		Inactive
<input type="checkbox"/>	AOK	Angolan Kwanza		Inactive
<input type="checkbox"/>	ARS	Argentine Peso		Inactive
<input type="checkbox"/>	ATS	Austrian Schilling	No	Inactive
<input type="checkbox"/>	AUD	Australian Dollar	No	Active
<input type="checkbox"/>	AWG	Aruban Florin		Inactive
<input type="checkbox"/>	AZS	Azerbaijan Manat		Inactive
<input type="checkbox"/>	BBB	Barbados Dollar		Inactive
<input type="checkbox"/>	BDT	Bangladeshi Taka		Inactive
<input type="checkbox"/>	BEF	Belgian Franc		Inactive
<input type="checkbox"/>	BES	Belarus Rouble		Inactive

Search Container

A Search container is provided in which you may search for currencies by Name or by Currency (by ISO currency code).

Search Control

Enter your desired search criteria and click on the Search control.

Reset Control

Clicking on the Reset control removes search constraint you may have specified and refreshes the screen.

Currencies Container

The Currencies container presents a grid containing all of the currencies that meet your search criteria. The Currencies summary grid offers several controls that allow you to perform different functions when a currency is selected.

To select a currency, click on a check box in the first column of the grid. More than one currency can be selected at a time but this will cause some of the controls to become disabled. Clicking on a checkbox a second time de-selects the currency.

You may select or deselect all of the currencies in the summary grid by clicking on the check box in the upper left hand corner of the summary grid directly to the left of the Code column header.

Add

Clicking on the Add control begins the process of adding a new currency. The Add control is disabled if any rows in the grid have been selected.

Edit

Selecting a single row out of the grid enables the Edit control. Clicking on the Edit control allows you to modify an existing currency. The Edit control is only enabled when a single currency has been selected.

Delete

Selecting one or more rows out of the grid enables the Delete control. Clicking on the Delete control deletes the currency or currencies you have selected.

Currencies Summary Grid

The following columns categorize each currency shown in the summary grid:

- Code
- Currency Name
- Reference Interest Rate Code
- Reporting Currency
- Status

Code

For seeded currencies, these are ISO Currency Codes. For user-defined currencies, these may be any pure character string (no numbers) up to a length of 3 characters.

Currency Name

For seeded currencies, these are ISO Currency Codes. For user-defined currencies, these may be any string up to a length of 40 characters.

Reference Interest Rate Code

Reference Interest Rate Code is the Interest Rate Code with which a currency is associated for forecasting purposes. You may define multiple yield curves each of which has the same Reference Currency, but a currency may only have one Reference Interest Rate Code.

Reporting Currency

A reporting currency is an active currency to which balances in other currencies may be consolidated in order to facilitate reporting. Balances in reporting currencies may be, in turn, consolidated to the functional currency. For example, an American multinational bank might consolidate its holdings in Asian currencies to the Japanese yen (reporting currency) and its balances in European currencies to the Euro (reporting currency) after which it might consolidate these reporting currencies to the U.S. dollar (functional currency).

Status

The status of any currency may be either Active or Inactive. You must "activate" a currency before you can:

- Define that currency as a Reference Currency for a yield curve (see Reference Currency above under the section entitled Interest Rates Detail Screen)
- Enter exchange rate data for a currency (see the section below entitled Currency Rates)
- Define Forecast Rates for that currency within OFSAA Asset Liability Management (see Forecast Rates in the *Oracle Financial Services Asset Liability Management (OFSALM) User Guide*)

Special Purpose Currencies

The Currencies container also displays three special-purpose internal currency codes for Default Currency (code 000), Functional Currency (code 001), and Non-Currency Basis (code 002).

The Functional Currency

At the time of installation, Rate Management requires the installer to designate a functional currency for the organization. For example, a Swiss multinational bank

would designate the Swiss franc as its functional currency. Only one functional currency is allowed per organization, and once assigned it cannot be changed. The functional currency is both an active currency and a reporting currency. The 001 functional currency code is utilized within certain OFSAA application interfaces as a synonym for the declared functional currency's ISO Currency Code.

Non-Currency Basis

Every business fact in the OFSAA data model carries with it an ISO Currency Code that describes the currency in which a balance is held. Every instrument row, for example, carries an ISO Currency Code as does every row in the Management Ledger. Particularly in the Management Ledger, you may store statistics such as headcounts, activity counts, square footage, etc. for which there is no meaningful currency basis. Such records utilize the special 002 non-currency basis code.

Editing Currencies

To edit a currency, select a currency and then click on the Edit control. You may not make any modifications the special purpose currencies (000, 001, and 002), and you may not modify any currency Code value. You may, however, modify Currency Name, the Reference Interest Rate Code, the Reporting Currency value (limited to Yes or No), or the currency's Status (limited to Active or Inactive).

You may not inactivate any currency that is:

- Defined as the Reference Currency for any yield curve
- Associated with any exchange rate data
- Utilized within any Forecast Rates rule within OFSAA Asset/Liability Management

Once you have completed your edits, Click on the Save control to save your work.

Adding Currencies

The first row in the Currencies container is an empty row that is ready for you to edit as a new currency. You may select this empty row, click on the Edit control, and generate a new currency. You may also generate a new currency by clicking on the Add control. This will generate another empty row at the top of the Currencies container that is ready for you to edit.

Deleting Currencies

Click on one or more currencies and then select the Delete control. You may not delete any currencies that are utilized elsewhere in the system (see exclusions above under Editing Currencies).

Currency Rates

Upon navigating to Master Maintenance > Rate Management > Currency Rates, the Currency Rates screen is displayed. Within this screen, you may manage historical exchange rates between currencies.



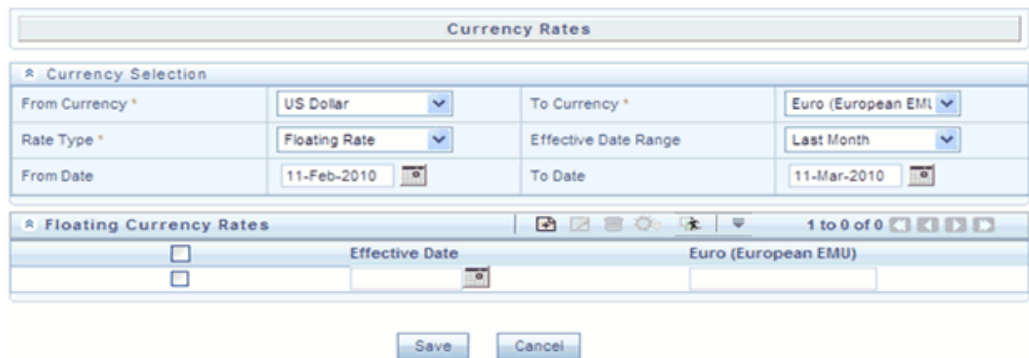
The screenshot shows the 'Currency Rates' application window. The 'Currency Selection' section contains the following fields:

From Currency *	US Dollar	To Currency *	
Rate Type *	Floating Rate	Effective Date Range	Last Month
From Date	11-Feb-2010	To Date	11-Mar-2010

Initially, this screen will only display a Currency Selection container in which the "From Currency" is defaulted to your first Active currency. You may select another From Currency, but the From Currency drop-down list box displays only currencies that are Active.

Preparing to Work with Exchange Rate Data

In order to begin the process of viewing, entering, modifying, or deleting exchange rate data, you must supply a "To Currency" value. As with the From Currency, the To Currency drop-down list box displays only Active currencies.



The screenshot shows the 'Currency Rates' application window with the 'Floating Currency Rates' section expanded. The 'Currency Selection' section is the same as in the previous screenshot. The 'Floating Currency Rates' section includes a table with columns for 'Effective Date' and 'Euro (European EMU)'. There are also 'Save' and 'Cancel' buttons at the bottom.

	Effective Date	Euro (European EMU)
<input type="checkbox"/>		
<input type="checkbox"/>		

After having selected a To Currency value, select a value for Rate Type: Floating Rate or Fixed Rate (the default selection is Floating Rate). Once you have selected a To Currency value, a second container is displayed: Floating Currency Rates (if you have chosen a Rate type of Floating Rate) or Fixed Currency Rates (if you chosen a Rate type of Fixed Rate).

Floating Rates

Floating exchange rates, such as those between the US Dollar (USD), the British Pound

(GPB), the Japanese Yen (JPY), and the Euro (EUR), are market driven and may change from days-to-day, hour-to-hour, or minute-to-minute.

Fixed Rates

Some countries, especially smaller countries or countries that have experienced significant inflation in the recent past, may wish to "peg" their currency to a larger, more stable currency such as the US Dollar, Japanese Yen, or Euro.

Adding Exchange Rate Data

Once you have specified a value for To Currency, the Floating Currency Rates container appears. If you wish to define a Fixed Rate relationship, select the "Fixed Rate" Rate Type and the Floating Currency Rates container will be replaced by the Fixed Currency Rates container.

Both Currency Rates containers initially display a single blank row followed by the most recent month's exchange rate data (if any such exchange rate data already exists). To enter a single new exchange rate data point, enter your data into the blank row and click on the Save control.

The screenshot shows the 'Currency Rates' interface. At the top, there is a title bar 'Currency Rates'. Below it, the 'Currency Selection' section includes: 'From Currency' set to 'US Dollar', 'To Currency' set to 'Euro (European EMU)', 'Rate Type' set to 'Floating Rate', and 'Effective Date Range' set to 'Last Month'. The 'From Date' is '11-Feb-2010' and the 'To Date' is '11-Mar-2010'. Below this is the 'Floating Currency Rates' section, which contains a table with the following data:

Effective Date	Euro (European EMU)
<input type="checkbox"/>	
<input type="checkbox"/> 11-Feb-2010	1.365840
<input type="checkbox"/> 12-Feb-2010	1.363280
<input type="checkbox"/> 13-Feb-2010	1.360510
<input type="checkbox"/> 14-Feb-2010	1.359870
<input type="checkbox"/> 15-Feb-2010	1.354930
<input type="checkbox"/> 16-Feb-2010	1.360970
<input type="checkbox"/> 17-Feb-2010	1.365870
<input type="checkbox"/> 18-Feb-2010	1.370040
<input type="checkbox"/> 19-Feb-2010	1.370560
<input type="checkbox"/> 20-Feb-2010	1.372580

At the bottom of the interface, there are 'Save' and 'Cancel' buttons.

Effective Date

Select the calendar control to choose an effective date for your new exchange rate data point.

Rate Management stores historical exchange rate data. You may not enter exchange rate data for dates greater than the current date. For more information regarding rate forecasts and the relationship between historical exchange rates for forecasted exchange

rates, see *Oracle Financial Services Asset Liability Management (OFSALM) User Guide*. If you have gaps in your historical exchange rate data, any OFS Analytical Application that needs to perform a rate translation function will fall back to the most recent date for which exchange rate data exists. For example, if an OFS Analytical Application needs to translate a rate from USD to EUR for February 22, 2010 and the latest available USD to EUR rate data in the Rate Management database is February 11, 2010, the application will utilize the exchange rate for February 11, 2010.

Currency Exchange Rate

For both Floating Rates and Fixed Rates, units of the From Currency are converted to one unit of the To Currency. For example:

From Currency	To Currency	Approximate Rate
USD – US Dollar	GPB—British Pounds	1.50
USD – US Dollar	EUR – Euro	1.36
USD – US Dollar	JPY – Japanese Yen	0.01105

Adding Multiple Exchange Rates

Click on the Add control to add additional blank rows into which you may enter additional Effective Dates and Exchange Rates. When you have finished adding multiple new exchange rates, click on the Save control.

Editing Exchange Rate Data

Clicking on the check box on the left hand side of any row of data enables the Edit control. After clicking on the Edit control, the row becomes active and you may edit Effective Date and/or the Exchange Rate after which you may Save your changes.

Viewing Exchange Rate Data

By default, both the Floating Currency Rates container and the Fixed Currency Rates container display the most recent month of historical exchange rate data. You can control the amount of data displayed by selecting a different value from the Effective Date Range drop-down list box in the Currency Selection container.

Currency Rates			
* Currency Selection			
From Currency *	US Dollar	To Currency *	Euro (European EMU)
Rate Type *	Floating Rate	Effective Date Range	Last 6 Months
From Date	11-Sep-2009	To Date	Last Month
			Last 3 Months
			Last 6 Months
			Last Year
			Last 3 Years
			Last 6 Years
			All
* Floating Currency Rates			
<input type="checkbox"/>	Effective Date	Euro (European EMU)	
<input type="checkbox"/>			
<input type="checkbox"/>	01-Oct-2009	1.385330	
<input type="checkbox"/>	01-Nov-2009	1.364640	
<input type="checkbox"/>	01-Dec-2009	1.356270	
<input type="checkbox"/>	01-Feb-2010	1.362470	
<input type="checkbox"/>	11-Feb-2010	1.365840	
<input type="checkbox"/>	12-Feb-2010	1.363280	
<input type="checkbox"/>	13-Feb-2010	1.360510	
<input type="checkbox"/>	14-Feb-2010	1.359870	
<input type="checkbox"/>	15-Feb-2010	1.354930	
<input type="checkbox"/>	16-Feb-2010	1.360970	

You may also choose to view a specific range of effective dates by modifying the From Date, the To Date, or both dates within the Currency Rates container.

Currency Rates			
* Currency Selection			
From Currency *	US Dollar	To Currency *	Euro (European EMU)
Rate Type *	Floating Rate	Effective Date Range	
From Date	01-Mar-2010	To Date	11-Mar-2010
* Floating Currency Rates			
<input type="checkbox"/>	Effective Date	Euro (European EMU)	
<input type="checkbox"/>			
<input type="checkbox"/>	01-Mar-2010	1.367210	
<input type="checkbox"/>	02-Mar-2010	1.370240	
<input type="checkbox"/>	03-Mar-2010	1.369290	
<input type="checkbox"/>	04-Mar-2010	1.368420	
<input type="checkbox"/>	05-Mar-2010	1.367310	
<input type="checkbox"/>	07-Mar-2010	1.367290	
<input type="checkbox"/>	08-Mar-2010	1.367260	
<input type="checkbox"/>	09-Mar-2010	1.367280	
<input type="checkbox"/>	10-Mar-2010	1.367230	
<input type="checkbox"/>	11-Mar-2010	1.367230	

Calendar - Windows Intern...

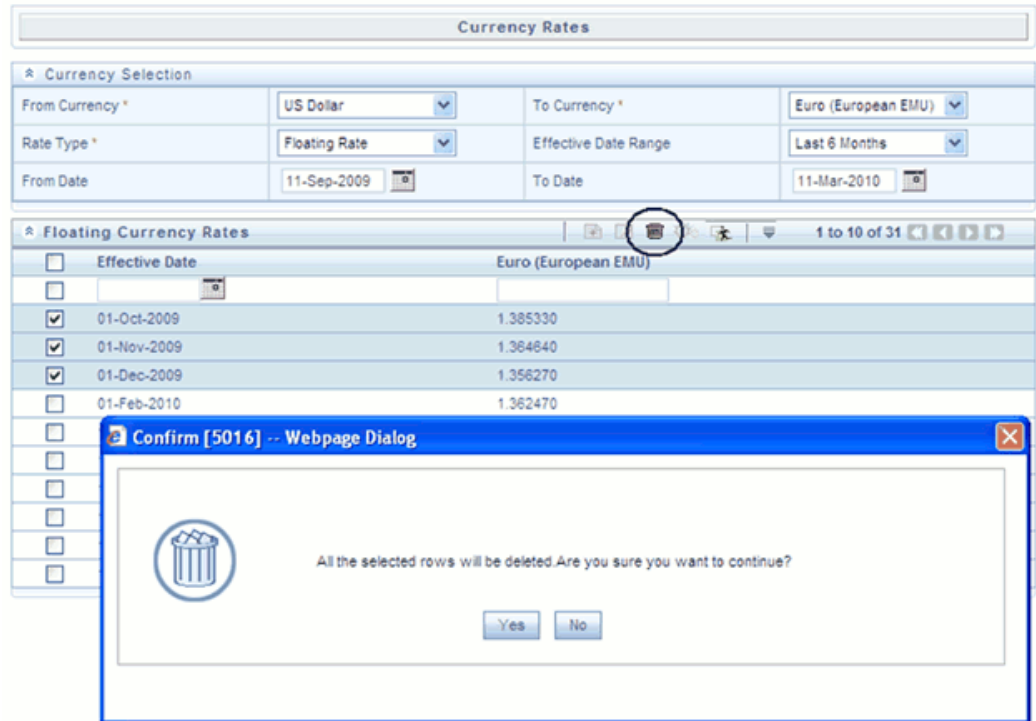
March 2010

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Close

Deleting Exchange Rate Data

Clicking on one or more check boxes on the left hand side of any row of data enables the Delete control. After clicking on the Delete control, you will be asked to confirm that you wish to delete the rows you have selected.



Data Loader

The Data Loader Icon executes a function to import historical Currency rates for all defined Currencies. For more information on setting up the automated process, see *Oracle Financial Services Analytical Applications Data Model Utilities User Guide*.

To execute a data load, click on the Data Loader icon. A warning message will appear "Upload all available Currency Rates?"

Note: Upon clicking on the data loader icon, the loader will execute all currency rates.

Currency Rates			
* Currency Selection			
From Currency *	US Dollar	To Currency *	Euro (European EMU)
Rate Type *	Floating Rate	Effective Date Range	Last Month
From Date	11-Feb-2010	To Date	11-Mar-2010
* Floating Currency Rates			
<input type="checkbox"/>	Effective Date	Euro (European EMU)	
<input type="checkbox"/>			

Currency Exchange Rate Validation

Currency Rate Validation – Overview

Features:

Exchange Rate Validation contains the following features:

- Movement of historical fx rates to the Currency Direct Access table.
- Calculation of inverse fx rates for reporting currencies.
- Calculation of triangulated fx rates where possible.

Note: This feature is equivalent to the Rate Validation capability in OFSA 4.5 Rate Manager.

Exchange Rate Validation – Feature Description

The goal of exchange rate validation is to ensure that exchange rates from all active currencies to all reporting currencies are available for processing in OFSAA applications. Some of these rates may come from the validated direct input, others are calculated based on relationships with other rates. To support triangulation, all fixed exchange rates are available for all currencies that make up a conversion that needs to be triangulated. In addition, a direct exchange rate between each Child currency and each reporting currency is calculated and supplied to support quick access to exchange rates. If a Child currency is a reporting currency, then exchange rates are calculated for all currencies having an exchange relationship with the Parent currency.

Currency Rate Validation – Procedure

1. Load currency rates through the Rate Management UI or by using the Historical Rate Data Loader. Notice the initial status is "Not Yet Validated".
2. Create and Execute the Currency Rate Validation engine as a batch process.

Example

Navigate to: *Operations > Batch Maintenance > Create Batch*

- Component = "Transform Data"

- Rule Name = "Rate_Validation"

- Parameter List (Required) = FROM_DATE and TO_DATE, for example, '2011-01-01', '2011-01-31'

Note: After completion of the batch process, notice the status in the UI changes to "Valid" or in case there is an issue, "Invalid".

3. View both input and calculated results in the FSI_EXCHNG_RATE_DIRECT_ACCESS table.
4. All of the OFSAA processing engines read from this table for sourcing historical exchange rates.

Note: Executing Rate Validation is a **required** step when multi-currency setup is enabled. All of the OFSAA processing engines require exchange rates to be validated through this process in order to convert results from base currency to a selected reporting currency. If exchange rate validation is not run or required exchange rates are not available, the engines will use default exchange rates = 1.

Validating Exchange Rate Relationships

Users should run the exchange rate validation process after adding or modifying exchange rate data. You can run the process immediately or schedule one or more to be run in the future.

Each exchange rate is placed in one of the following statuses:

Status	Description
--------	-------------

Not Yet Validated	The exchange rate has been input or loaded but not yet validated
Valid	The exchange rate has been validated.
Invalid	The exchange rate has violated one or more acceptance rules.

Only exchange rates in Valid status are available for processing and they are not subject to future validation unless you edit them.

The rate validation status is displayed in the Rate Management > Currency Rates UI.

Exchange Rate Validation Criteria

In the rate validation process all exchange rate relationships in the database are examined for compliance with the following criteria. Error messages and warnings are displayed if one or more criteria are not met. (See *Viewing the Messages* section.)

1. If a currency is defined as a Child in a fixed exchange relationship then it must not be in any floating (standard) exchange rate relationship at the same time. Consequently all floating exchange rates to or from the Child currency must be defined through the Parent currency. If this criterion is not met then the following message is displayed : *Invalid fixed relationship – Child currency exists in a standard exchange rate within the same time period.*
2. A Child currency within a fixed relationship must not be a Child currency in any other fixed relationship during the same time period. If this criterion is not met then the following message is displayed : *Invalid fixed relationship – Child currency already exists in a fixed relationship for same time period.*
3. A circular relationship must not exist. In other words, a Child currency cannot link back to its Parent in any other fixed rate relationship within the same time period. If it does, then the following message is displayed : *Invalid fixed relationship creates circular relationship with other fixed exchange rates.*
4. Regarding new floating (standard) exchange rates, From and To currencies must not exist as Child currencies within any fixed exchange rate relationships. If this criterion is not met then the following message is displayed : *From/To/Both currency(ies) in new exchange rate already exist in a fixed relationship for the same time period.*
5. If any exchange rate is equal to 0, then a warning message is displayed. Generally speaking, 0 is a valid value. You can use it, for example, to designate an exchange rate with a currency of a country that no longer exists.

If two exchange rate relationships fail to meet these criteria then both of them will be labeled Invalid. (Exception: if one of the relationships is already in Valid status, then the other one will be labeled Invalid.) For example, if a currency is defined as a Child in a fixed rate relationship and is also defined as being in a floating relationship at the same time, then both fixed and floating rates for that currency will be labeled Invalid.

If there are both direct and inverse floating exchange rates defined for any two currencies (in other words, one currency is both a To and a From currency in relation to the other), then both relationships will be marked Valid.

Running an Exchange Rate Validation

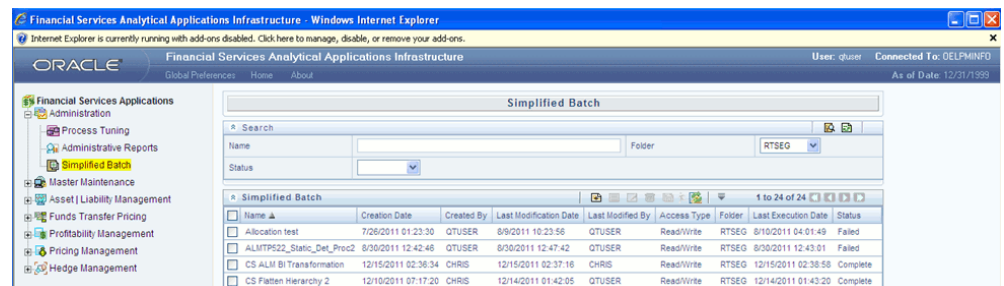
You can run a validation immediately or schedule one or more for later. The validation status shown is as per the user input in the Rate Management > Currency Rates UI.

Running a Validation Immediately

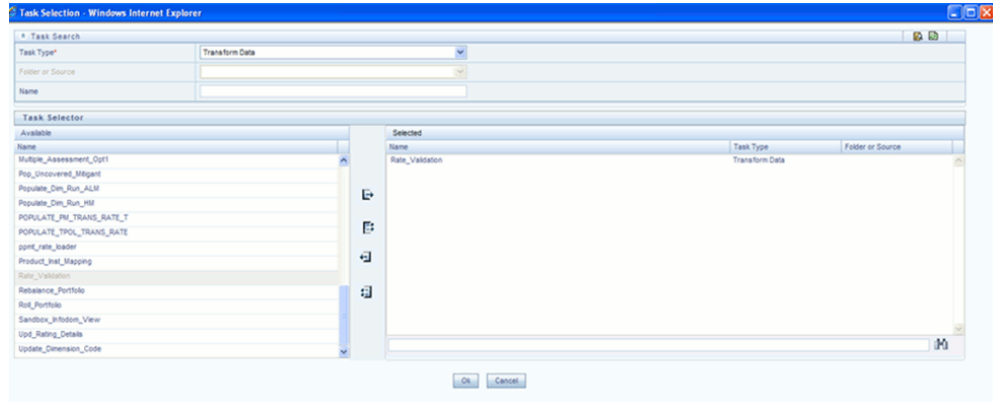
You can execute rate validation using a Simplified Batch process or from the ICC Batch Screen, within the OFSAAI framework.

To run the validation using Simplified Batch, perform the following steps:

1. Click Administration -> Simplified Batch -> Add.



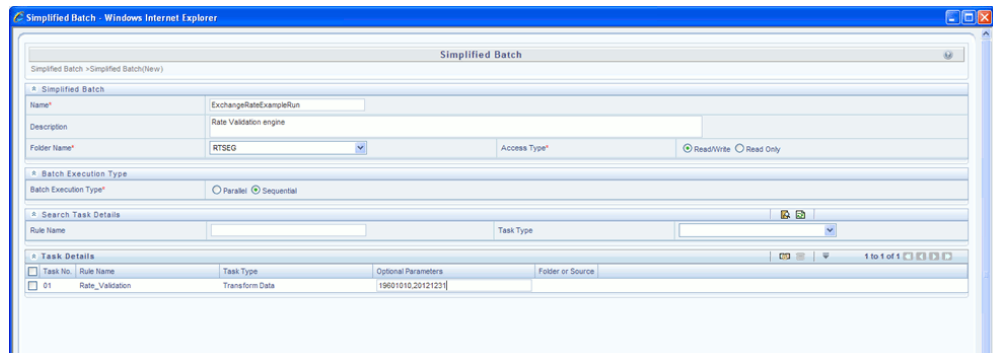
2. From the Task Details block, click Select Task. In the Task Selection window, choose Task Type as Transform Data. Then, click Search. In the Task Selector, Scroll down the left shuttle box (Available tasks) and select Rate_Validation (move to right shuttle box), then click **Ok**.



- Back in the Simplified Batch definition window, enter the optional parameters to specify the From and To dates, using the format 'YYYYMMDD','YYYYMMDD'.

Note: NULL, NULL parameter has to be passed for Release 6.0.

Then click **Save**.



- In the Simplified Batch summary page, search for and select your batch, then click Run.
- Click Yes to confirm you want to continue, enter a date and click **Ok** to continue.
- You will receive a message that it has been successfully launched.
- Click **Ok**. When the batch is complete, optionally navigate to Operations -> View Log to view the processing log.

Any error messages or warnings are displayed in View Log. (See "Viewing the Messages", page 10-32)

Note: Simplified Batch does not yet provide access to logs for

Transform Data tasks.

To run the validation using the ICC Batch Framework, perform the following steps:

1. Navigate to Operations -> Batch Maintenance -> Add, and create a new batch.
2. Search for the above batch, and select it.
3. In the Task Details block (toolbar), click Add. In the Task Selection window, choose Task Type as Transform Data. Then, click Search. In the Task Selector, Scroll down the left shuttle box (Available tasks) and select Rate_Validation (move to right shuttle box), then click **Ok**.
4. Back in the Task definition window, select the Rule Name Rate_Validation and enter the optional parameters to specify the From and To dates, using the format 'YYYYMMDD','YYYYMMDD'.

Note: NULL, NULL parameter has to be passed for Release 6.0.

Then click **Save**.

5. Navigate to Operations -> Batch Execution search for and select your batch, enter Information Date, then click **Execute Batch**.
6. Click **Ok** to confirm you want to continue.
7. A message is displayed stating Batch triggered successfully, also displaying the Batch Run ID.
8. Click **Ok**.
9. To view rates, query the database table FSI_EXCHNG_RATE_DIRECT_ACCESS after the run is complete.

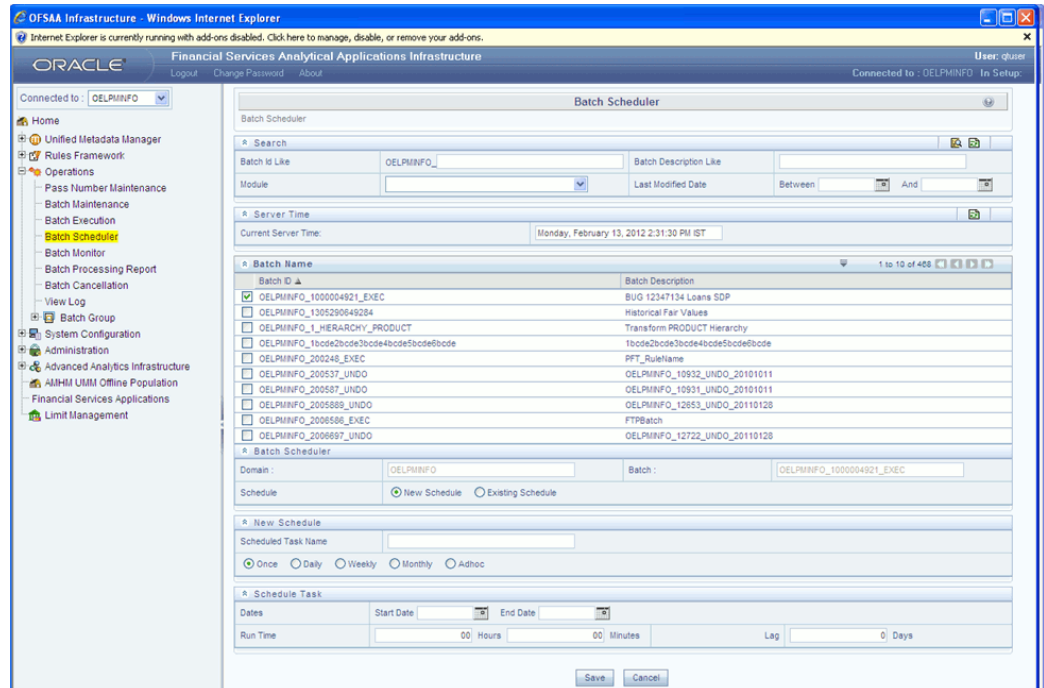
FSI_EXCHNG_RATE_DIRECT_ACCESS: This output table holds the valid currency codes and their exchange rate with respect to the reporting currency for a period of time say "from date" value to optional "to date" value. When Exchange Rate Validation runs, if data already exists for the selected date range, the Rate Validation package will overwrite the existing values. If no dates are given, ('null','null'), the Rate Validation package truncates this table and re-loads data for the entire historical date range. The following describes the structure of the FSI_EXCHNG_RATE_DIRECT_ACCESS table:

Column Name	Nullable	Data Type
FROM_CURRENCY_CD	Not Null	varchar2(15)
TO_CURRENCY_CD	Not Null	varchar2(15)
EFFECTIVE_FROM_DATE	Not Null	Date
EFFECTIVE_TO_DATE	Not Null	Date
EXCHANGE_RATE	Not Null	Number(15,9)
EXCHANGE_RATE_CONV ERT_TYPE_CD	Not Null	Number(5)
EXCHANGE_RATE_CONV _FORMULA	Not Null	Number(15)

- When the batch is complete, optionally navigate to Operations -> View Log to view the processing log.

Any error messages or warnings are displayed in View Log. (See "Viewing the Messages", page 10-32)

Scheduling One or More Validations



To schedule a future validation, or to schedule validations on a recurring basis, do the following:

1. Navigate to Operations -> Batch Scheduler.
The Batch Scheduler window appears.
2. In the Batch Name block, Select the Scheduled Batch ID.
An unchecked box means that no validation is scheduled to run.
3. Select New Schedule or Existing Schedule:
Existing Schedule can be selected only if there are existing schedule batches to view.
If New Schedule is selected, the New Schedule grid appears. Enter the Scheduled task name.
_ To run the validation once, select once. Go to Step 5, page 10-31.
_ To schedule the validation on a recurring basis, select Daily, Weekly, Monthly or Adhoc.
4. In the Schedule Task grid, in the Date field, enter the start date and end date.
5. In the Run Time field, input the time for the next validation to be run.
6. Click **Save** to set the schedule as specified or **Cancel** to drop your changes.

Any error messages or warnings generated during the validation process are displayed in the View Log. (See "Viewing the Messages", page 10-32)

7. To exit the Scheduler, click its exit icon (X).

Viewing the Messages


Any error messages or warnings generated during the exchange rate validation process are displayed in the Log Information window. To access this window: Click Operations -> View Log.

To exit the window, click its Exit icon (X).

These exception messages could also be seen in FSI_MESSAGES_LOG table with the help of the batch_id which was used during execution.

Economic Indicators Summary Screen

When you first navigate to Master Maintenance > Rate Management > Economic Indicators, an empty screen will be displayed. After you have constructed one or more Economic Indicators, navigating to Master Maintenance > Rate Management > Economic Indicators will display a summary screen showing each of the Economic Indicators that you have previously built.



Economic Indicators					
* Search					
Name		Country			
* Economic Indicators					
<input type="checkbox"/> Name	Country	Creation Date	Created By	Last Modification Date	Last Modified By
<input type="checkbox"/> CPI	United States of America	22-Feb-2010 09:18:22	DEMOUSER	12-Mar-2010 07:01:35	DEMOUSER
<input type="checkbox"/> US Core Inflation	United States of America	12-Mar-2010 10:34:53	DEMOUSER	12-Mar-2010 10:35:52	DEMOUSER
<input type="checkbox"/> US Unemployment	United States of America	12-Mar-2010 10:33:09	DEMOUSER	12-Mar-2010 10:37:19	DEMOUSER

Search Container

A Search container is provided in which you may search for Economic Indicators by Name or by Country. Each Economic Indicators rule is specific to one country.

Search Control

Enter your desired search criteria and click on the Search control.

Reset Control

Clicking on the Reset control removes any Name or Country constraint you may have specified and refreshes the screen.

Economic Indicators Container

The Economic Indicators container presents a grid containing all of the Economic Indicators that meet your search criteria. The Economic Indicators summary grid offers several controls that allow you to perform different functions when an Economic Indicators is selected.

To select an Economic Indicators, click on a check box in the first column of the grid. More than one Economic Indicators can be selected at a time but this will cause some of the controls to become disabled. Clicking on a checkbox a second time de-selects the row.

You may select or deselect all of the Economic Indicators in the summary grid by clicking on the check box in the upper left hand corner of the summary grid directly to the left of the Name column header.

Add

Clicking on the Add control begins the process of building a new Economic Indicator. The Add control is disabled if any rows in the grid have been selected.

View

Selecting a single row out of the grid enables the View control. Clicking on the View control allows you to view the contents of an Economic Indicator on a read-only basis. The View control is only enabled when a row has been selected.

Edit

Selecting a single row out of the grid enables the Edit control. Clicking on the Edit control allows you to modify a previously saved Economic Indicator. The Edit control is only enabled when a single row has been selected.

Delete

Selecting one or more rows out of the grid enables the Delete control. Clicking on the Delete control deletes the Economic Indicators you have selected.

Data Loader

The Data Loader Icon executes a function to import historical economic indices for all defined Economic Indicators. For more information on setting up the automated process, see *Oracle Financial Services Analytical Applications Data Model Utilities User Guide*.

To execute a data load, click on the Data Loader icon. A warning message will appear "Upload all available Economic Indicators?" Click ok, and all historical indices will be loaded.

Economic Indicators Summary Grid

The following columns categorize each Economic Indicator in the summary grid:

- Name
- Country
- Creation Date
- Created By
- Last Modification Date
- Last Modified By

Name

Displays the Economic Indicator's short name. Performing a "mouse-over" on a row within the grid displays the Economic Indicator's detailed description.

Country

Displays the Country to which an Economic Indicator applies.

Creation Date

Displays the date and time at which an Economic Indicator was created.

Created By

Displays the name of the user who created an Economic Indicator.

Last Modification Date

Displays the date and time at which an Economic Indicator was last modified.

Modified By

Displays the name of the user who last modified an Economic Indicator.

Economic Indicators Detail Screen

When you Add, Edit, or View an Economic Indicator, the Economic Indicator Detail Screen is displayed. The Economic Indicator detail screen is comprised of an Economic Indicator Details container, an Economic Indicators – Historical Data Container, and an Audit Trail container.

The Audit Trail container is a standard footer container for every OFSAA rule type. It displays Created By, Creation Date, Last Modified By, and Modification Date on the Audit Trail tab. The User Comments tab may be used to add comments to any rule.

Economic Indicator Details Container

When creating a new Economic Indicator, you must supply a Name, a Frequency, a Value Type, and a Country. You may optionally provide a Description.



The screenshot shows a web form titled "Economic Indicator" with a sub-section "Economic Indicator Details". The form contains the following fields:

Name *	<input type="text"/>		
Description	<input type="text"/>		
Frequency *	Monthly ▾	Value Type *	Numeric ▾
Country *	United States of America ▾		

Name

The name you give to your Economic Indicator is the means by which you will subsequently refer to your rule within other OFS Analytical Applications. You may not rename existing Economic Indicators.

Frequency

The frequency of your Economic Indicator should match the frequency which with the indicator's data is made public. Unemployment statistics, for example, are generally released on a monthly frequency. Select a frequency from the Frequency drop-down list box. Available frequencies are Weekly, Monthly, Quarterly, Semi-Annually, and Annually.

Value Type

Select a Value Type from the Value Type drop-down list box. Available Value Types are Numeric, Percentage, and Amount.

Country

Select a country to which your Economic Indicator applies from the Country drop-down list box. The value set of Countries is drawn from the seeded Country dimension. OFSAA is seeded with over 70 country values, and you may also add your own user-defined countries (see Chapter 6: OFSAA Dimension Members).

Economic Indicators – Historical Data Container

Once you have made your selections in the Economic Indicator Details container, you may save your new rule. To build out your historical data, you must enter data within

the Economic Indicators – Historical Data container.

	Start Date	End Date	Value
<input type="checkbox"/>			0.000000
<input type="checkbox"/>			

The Economic Indicators – Historical Data container initially displays a single blank row followed by the most recent period's data (if data has previously been stored in the database).

Start Date & End Date

Select the calendar control immediately adjacent to the End Date to choose an ending date for your Economic Indicator data point. The application will automatically populate the Start Date based on your Economic Indicator's frequency. For example, if your Economic Indicator is an unemployment statistic that has a monthly frequency, select an end date that is the last day of the month that the unemployment rate describes. In this example, the application will automatically populate the Start Date with the first day of the month you have chosen.

Value

Enter the value for your Economic Indicator (e.g., the unemployment rate).

Adding Multiple Data Points

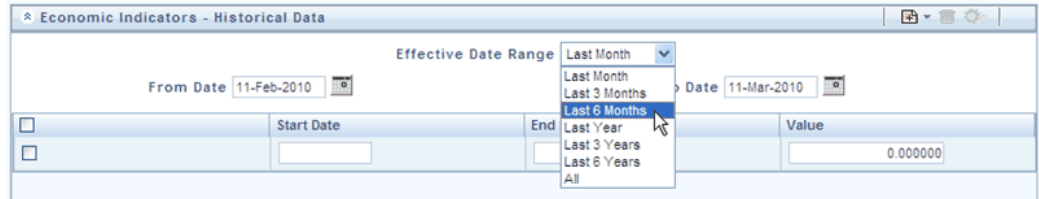
Click on the Add control to add additional blank rows into which you may enter additional Economic Indicator data. When you have finished adding data, click on the Save control.

Editing Economic Indicators – Historical Data

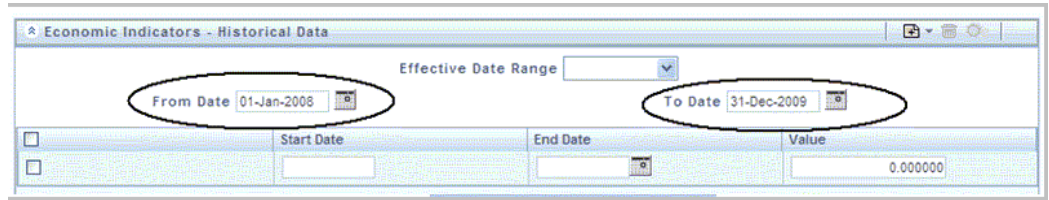
Clicking on a single check box on the left hand side of any row of data enables the Edit control. After clicking on the Edit control, the row you have selected becomes active. You may edit this row and subsequently save your changes.

Viewing Economic Indicators – Historical Data

By default, the Economic Indicators – Historical Data container displays the most recent month of historical data. You can control the amount of data displayed by selecting a different value from the Effective Date Range drop-down list box.



You may also choose to view a specific date range by modifying the From Date, the To Date, or both dates within the Economic Indicators – Historical Data container.



Deleting Economic Indicators – Historical Data

Clicking on one or more check boxes on the left hand side of any row of data enables the Delete control. After clicking on the Delete control, you will be asked to confirm that you wish to delete the rows you have selected.

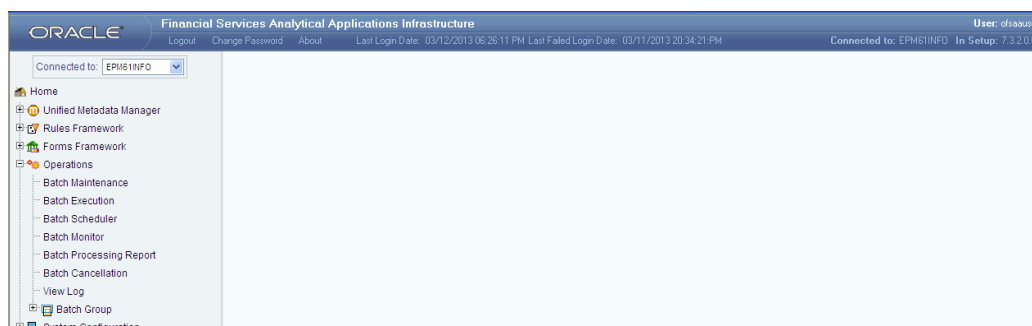
Simplified Batches

Overview of Simplified Batches

Simplified Batches provide a streamlined version of the functionality available in the broader standard Oracle Financial Services Analytical Applications (OFSAA) Infrastructure batch module (Financial Services Analytical Applications Infrastructure > Operations). The Simplified Batch feature is designed to facilitate creation, maintenance, and execution of batches for the application engines and various other OFSAA components. Users will find its drag-and-drop approach to task selection especially helpful in the management of large batches.

Standard OFSAA Infrastructure Batching Functionality

You may view, execute, schedule, and monitor Simplified Batches within the broader OFSAA Infrastructure Operations batching framework. However, Simplified Batches may be built and maintained only through summary and detail screens with Financial Services Applications > Administration > Simplified Batch user interfaces.



Batch Maintenance

You may view Simplified Batches here, but they will be noneditable. You can create and modify them within the Simplified Batch screens.

Batch Execution

Simplified Batches may be executed either from the Simplified Batch summary screen (see details as follows) or from OFSAA Infrastructure > Operations > Batch Execution.

Other Operations Batch Functionality

Other Operations batch functionality including Batch Scheduler, Batch Monitor, Batch Processing Report, Batch Cancellation, and View Log apply equally to Simplified Batches and to batches that have been built under OFSAA Infrastructure > Operations > Batch Maintenance.

The remainder of this module describes the creation, maintenance and execution of Simplified Batches.

- Simplified Batch Summary and Detail Screens
- Navigation within the Simplified Batch Summary Screen
- Navigation within the Simplified Batch Detail Screen
- Task Selection
- Running a Simplified Batch
- Viewing the Task Logs of a Simplified Batch
- Additional Batch Options

Summary and Detail Screens

When you initially navigate to Financial Services Applications > Administration > Simplified Batch, it displays a summary screen listing any existing Simplified Batch rules. Using search criteria, you can control the set of batches that are displayed.

When you Add, Edit, or View a rule, a detail screen is displayed.

Navigation within the Summary Screen

The Simplified Batch summary screen presents two containers: a Search container and Simplified Batch container (the summary grid). When you first navigate to the Simplified Batch summary screen, the batches stored within your preferred Folder are presented in a summary grid. Your **preferred** Folder is determined by the set of Application Preferences that were last saved in which you selected the **Active for Master Maintenance** checkbox.

Search Container

The Search container allows you to restrict the batches visible within the summary grid by any combination of Name, Folder, or Status. Searches by Name are wildcard searches, that is, searching for Name like *pricing* will find all batches that include *pricing* within their names.

Search Control

Enter your desired search criteria and click the **Search** control.

Reset Control

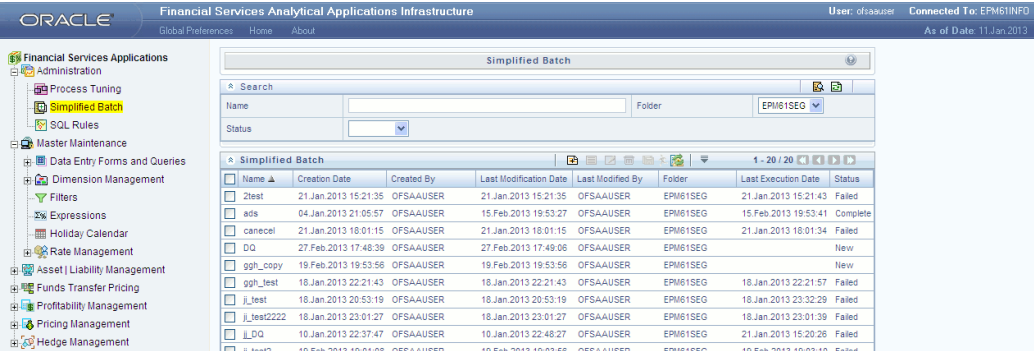
Click the **Reset** control to clear any search criteria you may be using and refresh the Simplified Batch summary grid.

Simplified Batch Container

The Simplified Batch container presents a grid containing all of the batches that meet your search criteria. The Simplified Batch summary grid offers several controls that allow you to create a new batch or perform different functions when a batch is selected.

To select a batch rule, click a checkbox in the first column of the grid. More than one batch can be selected at a time but this will cause some of the controls to become disabled. Clicking on a checkbox a second time deselects the batch. You may select or deselect all of the batches in the summary grid by clicking on the checkbox in the upper left hand corner of the summary grid directly to the left of the Name column header.

You can sort on any column in the summary grid by clicking on the column header (the column name).



The screenshot displays the Oracle Financial Services Analytical Applications Infrastructure interface. The main window is titled "Simplified Batch" and contains a search bar and a table of batches. The search bar has fields for Name, Folder (set to EPM61SEG), and Status. The table has columns for Name, Creation Date, Created By, Last Modification Date, Last Modified By, Folder, Last Execution Date, and Status. The table contains several rows of batch data, including "ztest", "ade", "cancel", "DQ", "ggh_copy", "ggh_test", "j_test", "j_test2222", "j_DQ", and "j_test2".

Name	Creation Date	Created By	Last Modification Date	Last Modified By	Folder	Last Execution Date	Status	
<input type="checkbox"/>	ztest	21.Jan.2013 15:21:35	OFSAAUSER	21.Jan.2013 15:21:35	OFSAAUSER	EPM61SEG	21.Jan.2013 15:21:43	Failed
<input type="checkbox"/>	ade	04.Jan.2013 21:05:57	OFSAAUSER	15.Feb.2013 19:53:27	OFSAAUSER	EPM61SEG	15.Feb.2013 19:53:41	Complete
<input type="checkbox"/>	cancel	21.Jan.2013 18:01:15	OFSAAUSER	21.Jan.2013 18:01:15	OFSAAUSER	EPM61SEG	21.Jan.2013 18:01:34	Failed
<input type="checkbox"/>	DQ	27.Feb.2013 17:48:39	OFSAAUSER	27.Feb.2013 17:49:06	OFSAAUSER	EPM61SEG		New
<input type="checkbox"/>	ggh_copy	19.Feb.2013 19:53:56	OFSAAUSER	19.Feb.2013 19:53:56	OFSAAUSER	EPM61SEG		New
<input type="checkbox"/>	ggh_test	18.Jan.2013 22:21:43	OFSAAUSER	18.Jan.2013 22:21:43	OFSAAUSER	EPM61SEG	18.Jan.2013 22:21:57	Failed
<input type="checkbox"/>	j_test	18.Jan.2013 20:53:19	OFSAAUSER	18.Jan.2013 20:53:19	OFSAAUSER	EPM61SEG	18.Jan.2013 23:32:29	Failed
<input type="checkbox"/>	j_test2222	18.Jan.2013 23:01:27	OFSAAUSER	18.Jan.2013 23:01:27	OFSAAUSER	EPM61SEG	18.Jan.2013 23:01:39	Failed
<input type="checkbox"/>	j_DQ	10.Jan.2013 22:37:47	OFSAAUSER	10.Jan.2013 22:48:27	OFSAAUSER	EPM61SEG	21.Jan.2013 15:20:26	Failed
<input type="checkbox"/>	j_test2	19.Feb.2013 19:01:08	OFSAAUSER	19.Feb.2013 19:03:56	OFSAAUSER	EPM61SEG	19.Feb.2013 19:03:10	Failed

Add

Clicking on the **Add** control begins the process of building a new Simplified Batch. The Add control is disabled if any rows in the grid have been selected.

View

Selecting a single row in the grid enables the **View** control. Clicking on the View control allows you to view the detailed definition of a Simplified Batch on a read-only basis. The View control is only enabled when a single batch has been selected.

Edit

Selecting a single row in the grid enables the Edit control. Clicking on the **Edit** control allows you to modify an existing Simplified Batch. The Edit control is only enabled when a single batch has been selected.

Delete

Selecting one or more rows in the grid enables the Delete control. Clicking on the **Delete** control deletes the batch or batches you have selected.

Copy

Selecting a single row in the grid enables the Copy control. Clicking on the **Copy** control allows you to create a copy of an existing Simplified Batch. The Copy control is only enabled when a single Simplified Batch has been selected. You can also duplicate a batch using the Save As option from the detail page.

Run

Selecting a single row in the grid enables the Run control. Clicking on the **Run** control executes the selected Simplified Batch rule. The Run control is only enabled when a single Simplified Batch rule has been selected. The As-of-Date and other parameters applicable to each task within a Simplified Batch will vary by task type (for details, see Specifying Task Parameters module in *Oracle Financial Services Analytical Applications Infrastructure User Guide*).

Refresh

Click the **Refresh** control to refresh the Simplified Batch summary grid, including updates to the Last Execution Date and Status.

Simplified Batch Summary Grid

The following columns categorize each Simplified Batch in the summary grid:

- Name
- Creation Date
- Created By
- Last Modification Date

- Last Modified By
- Folder
- Last Execution Date
- Status

Name

Displays the Simplified Batch rule's short name. Performing a **mouse-over** on a batch name displays the rule's system identifier, long name, and description. Note that the rule's long name consists of a concatenation of the Information Domain (InfoDom) and the rule's short name. This long name is the name under which the batch is submitted internally through Oracle Financial Services Analytical Applications (OFSAA) Infrastructure.

Creation Date

Displays the date and time at which a Simplified Batch rule was created.

Created By

Displays the name of the user who created a Simplified Batch rule.

Last Modification Date

Displays the date and time at which a Simplified Batch rule was last modified.

Last Modified By

Displays the name of the user who last modified a Simplified Batch rule.

Folder

Displays the name of the Folder in which a Simplified Batch rule is stored.

Last Execution Date

Displays the date and time at which a Simplified Batch was last executed.

Status

Displays the latest status for a batch rule and includes the following possible values:

- Complete
- Failed
- New
- Ongoing

- Cancelled

Navigation within the Detail Screen

When you Add, Edit, or View a batch, the Simplified Batch Detail Screen is displayed. The detail screen presents five containers for defining and maintaining your batch:

- Simplified Batch - header level information such as Rule Name, and so on
- Batch Execution Type - Sequential vs. Parallel
- Search Task Details - Search container
- Task Details - Task Details grid
- Audit Trail

The Audit Trail container is a standard footer container for every OFSAA rule type. It displays Created By, Creation Date, Last Modified By, and Modification Date on the Audit Trail tab. The User Comments tab may be used to add comments to any rule.

The detail page also provides action buttons specific to the mode you are using (Add, Edit, or View). In View mode, you can duplicate the rule using the Save As button. This will allow you to specify the basic identifiers for the new rule, for example, Name, Description, Folder, and the Access Type selection.

Simplified Batch Container

Specify the Simplified Batch Name and Description, select a Folder in which the batch is to be stored, and specify whether you want the batch rule to be **Read/Write** or **Read Only** (Access Type). Naming your batch is required before it can be saved.

Note:

- Unlike other OFSAA rules, you cannot edit the Name after you have created the rule.
- The maximum length for the Name is based on len (name+infodom), subject to the total length not exceeding 42 characters. Underscore (_) is the only special character allowed for simplified batch name.
- The maximum length for the Description is 300 characters. Allowed special characters for Simplified Batch description are underscore (-), hyphen (-), Colon(:), Dot(.) ,Space().

Batch Execution Type Container

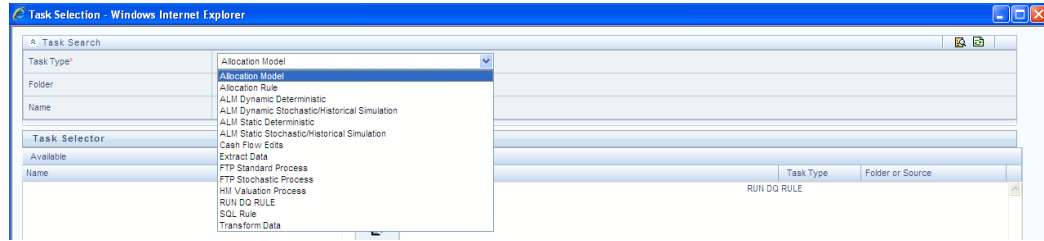
Select whether you want the tasks in your batch to run in Parallel or to run Sequentially. Should you wish to run some tasks sequentially and some in parallel, you must utilize the OFSAA Infrastructure Operations batching framework to construct your batch. The Simplified batching framework provides a simpler and faster pathway to specify many of the batches that you will require, but the Infrastructure Operations framework offers you more flexibility.

Search Container

You may sometimes construct batches containing dozens or even hundreds of tasks. In such cases it may become difficult to isolate a specific task. The Search container allows you to **focus** the Task Details display to a specific task name or task type. The Rule Name search is a wildcard search. Click the **Search** control to execute a search. Click the **Refresh** control to remove your search criteria and refresh the Task Details Container to display all tasks within the batch.

Task Details Container

For a new batch rule, the Task Details container will initially be empty. Through the use of the Task Selector described below, you will populate the Task Details container with the processes that you wish to run in your batch. Following is a sample batch that begins with an ALM (Asset Liability Management) Dynamic Deterministic Process that is followed by Profitability Management, FTP, HM, and Data Transformation tasks. For a Sequential batch, the Task Details container presents the tasks in the order in which they will be run. For a Parallel batch, all tasks will be initiated in parallel.



Task Number

Each task is itemized serially by task number.

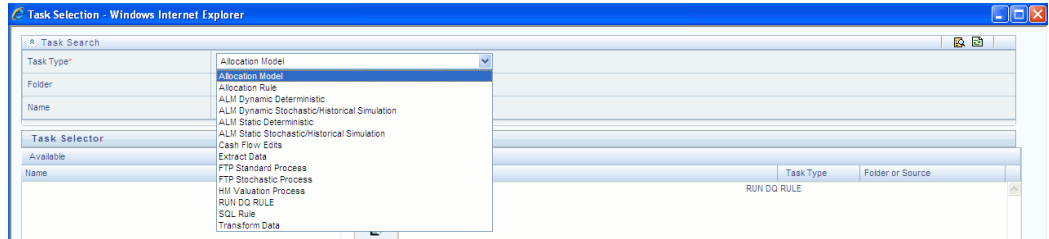
Rule Name

Displays the task's short name, such as an Allocation rule name. The complete or **long name** under which the task is submitted for execution (becoming the task's Batch Run ID) is a concatenation of several identifiers, as noted below in the View Log section.

Task Type

Using Simplified Batches you may submit different tasks for each of the application engines and various other components. The task types you may submit within a Simplified Batch include:

- ALM Dynamic Deterministic
- ALM Dynamic Stochastic
- ALM Static Deterministic
- ALM Static Stochastic
- Allocation Rule
- Cash Flow Edits
- Extract Data
- FTP Standard Process
- FTP Stochastic Process
- HM Valuation Process
- Run DQ Rule
- SQL Rule
- Transform Data



As of Dates and Additional Parameters

The As-of-Date applicable to each task within a Simplified Batch will vary by task type. Some task types also accept runtime parameters. For additional information on task parameters, see *Specifying Task Parameters* module in *Oracle Financial Services Analytical Applications Infrastructure User Guide*.

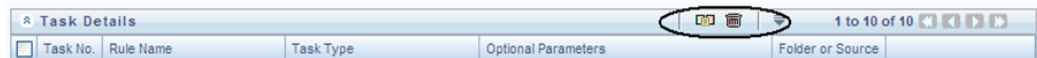
Folder or Source

For Extract Data tasks, values in this column represent Sources. For Transform Data tasks, this column is not applicable and is left blank. For all other task types, values in this column represent the Folder in which a rule is stored.

Task Selection

Controls on the Task Details Container

The Task Details container provides a Task Selector control that invokes a pop-up screen to support the maintenance of tasks in your batch. The Task Details container also provides a Delete control for removing tasks from your batch.



Delete

Selecting one or more rows out of the Task Details grid enables the Delete control. Clicking the **Delete** control deletes the task or tasks that you have selected. You can also remove tasks through the Task Selection pop-up screen.

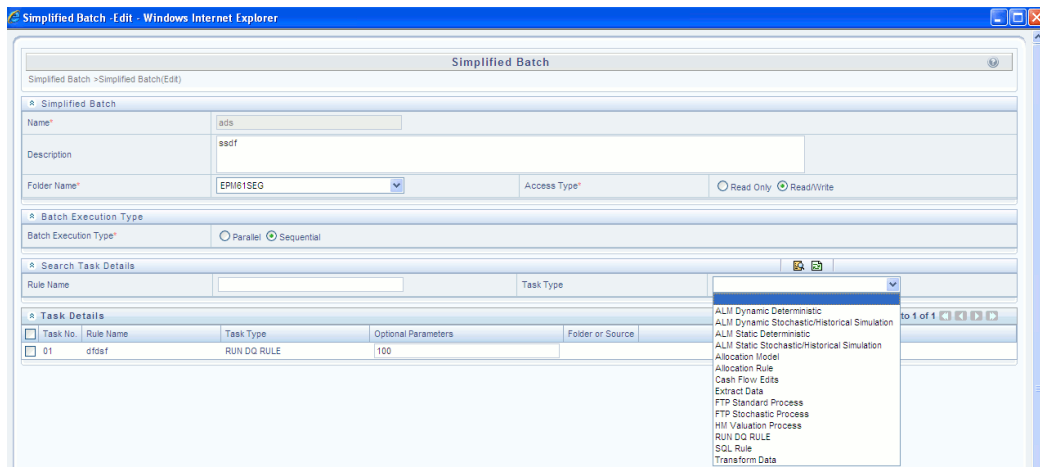
Task Selector

The Task Selector control is always enabled. Clicking the **Task Selector** invokes the Task Selection pop-up screen.

Navigation within the Task Selection screen

Use the Task Selection screen to:

- Choose tasks to include in your batch
- Remove tasks from your batch
- Re-order tasks within your batch



Task Search Container

When you initially invoke the Task Selection screen, the list of **Available** tasks on the left-hand side of the Task Selector container is blank. To populate the list of available tasks, you must execute a search using the Search control. Prior to clicking the Search control, you must select a specific type of task from the Task Type list box, and optionally specify search criteria for Folder (or Source) and Name, where applicable to the task type.

Selecting Task Types

The available task types include:

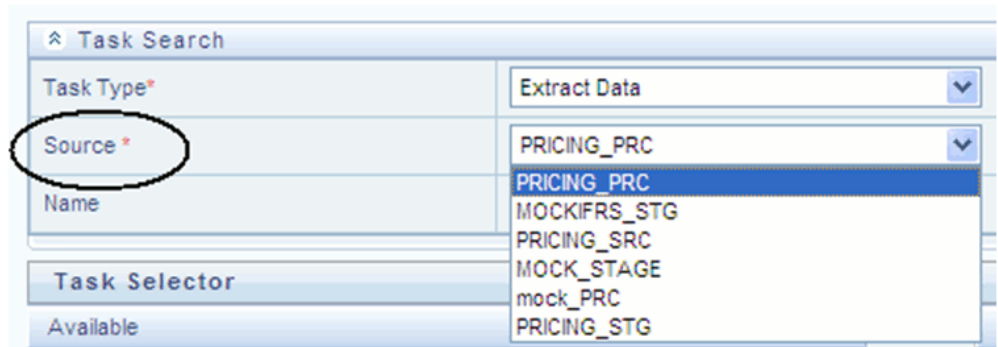
- ALM Dynamic Deterministic
- ALM Dynamic Stochastic/Historical Simulation
- ALM Static Deterministic
- ALM Static Stochastic/Historical Simulation
- Allocation Rule
- Cash Flow Edits
- Extract Data

- FTP Standard Process
- FTP Stochastic Process
- HM Valuation Process
- Run DQ Rule
- SQL Rule
- Transform Data
- Allocation Model

Source or Folder

- Extract Data Task

When you choose the Extract Data task, you must select a data source prior to executing your search.



- Transform Data Task

When you choose the Transform Data task, it is not necessary for you to select a Folder prior to executing your search.

Note: TP Break Identification Process is batchable. Following two parameters (in ProcessID = 100786, UserId = TPUSER format) are required for this:

Break Detection Sys ID

Application User Name

- All Other Task Types

When you select any other Task Type, you may constrain your search to a

particular folder. Alternatively, you may search for your tasks in all Folders by selecting **blank** (all folders).

Task Search	
Task Type*	Allocation Rule
Folder	EPMMOCKSEG
Name	EPMMOCKSEG RTSEG
Task Selector	

Executing a search for tasks always refreshes the Available list of tasks, but never has any impact on tasks that you have already selected (tasks on the right-hand side of the screen entitled **Selected**).

Name

You may further refine your search by entering a task Name. Searches by Name are wildcard searches, that is, searching for Name like *rate* will find all tasks that include *rate* within their Name.

Task Selector Container

Navigating the list of Available tasks

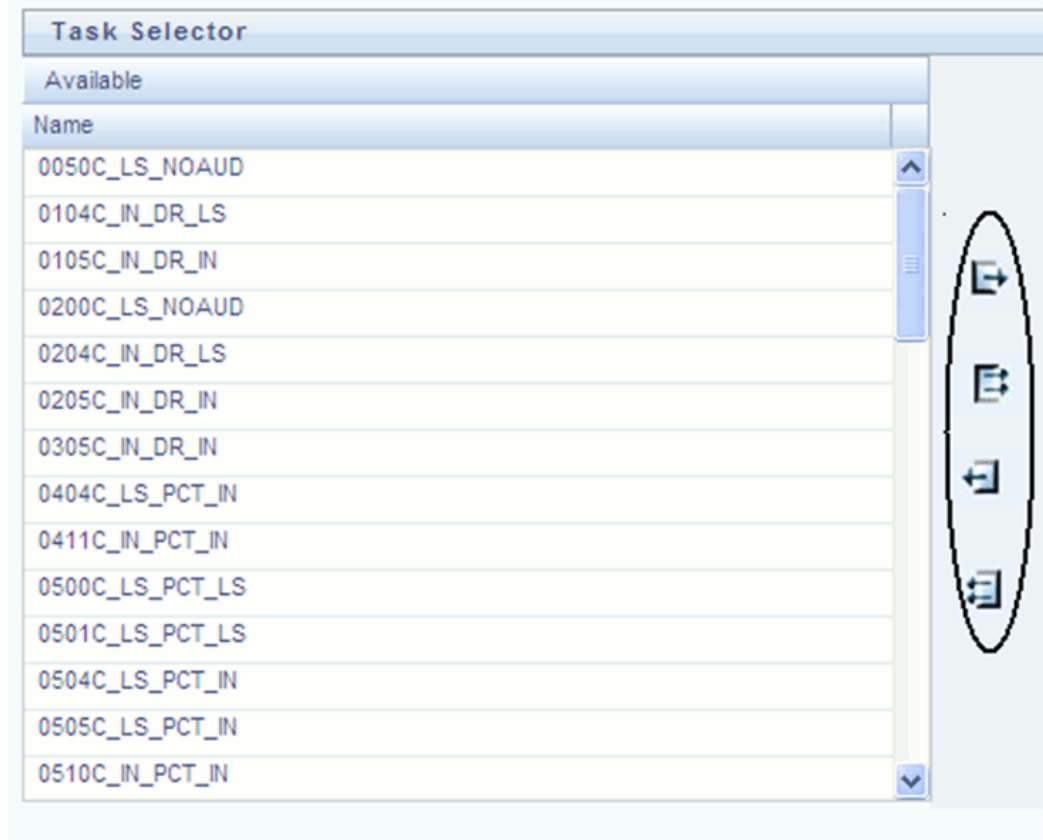
For task types with potentially large volumes of tasks, the Available list is divided into pages. Use the vertical scrollbar to navigate to the bottom of each page, then click **more** to display the names in the next page. To navigate back a page, scroll to the top of the page and click the hyperlink to return to the Previous page. You can control the number of tasks listed per page by changing the setting in `SIMPLE_BATCH_PAGE_SIZE` parameter in `FusionApps.properties` file in `WEB-INF/props` under context root. The recommended default value is 50 records/page. As you increase the value over a certain amount, you will start to see a slower response in the UI.

Moving tasks between the Available and Selected lists

You may use the Select or Select All shuttle controls to move rules from the displayed page of the Available list to the Selected list or vice versa. The Select control moves rules from the left to the right, adding rules from the Available list to the bottom of the Selected list. Moving rules from the right to the left removes rules from the Selected list. You can also use the drag-and-drop feature (described as follows) to place the rules in a specific position in the Selected list to specify execution order for a Sequential type batch.

On both the Available side and the Selected side, you may highlight multiple tasks. To select a range of tasks, click the first task, hold down the Shift key, and then click the

last task. To select a non-sequential list of tasks, you may select them individually while holding down the Control key.



Tasks within the Available list of tasks are disabled (greyed-out) once they have been selected (that is, included within the Selected list of tasks).

Drag and Drop Operations

The Task Selector also supports drag and drop operations for choosing Available tasks, removing Selected tasks, or rearranging the sequence of your Selected tasks.

- You may click an Available task and then drag and drop it anywhere within the Selected list, where the targeted placement is displayed in red line.
- Dragging a task from the Selected list and dropping it into the Available list removes that task from the Selected list.
- To select or deselect a range of tasks, click first task in the range to be selected, hold the Shift key down, click last task in the range to be selected, and then drag and drop your set of tasks.
- To select or deselect a set of tasks which are not in sequence, click each task

individually while holding down the Control key; after clicking the last task you may drag and drop the set of tasks.

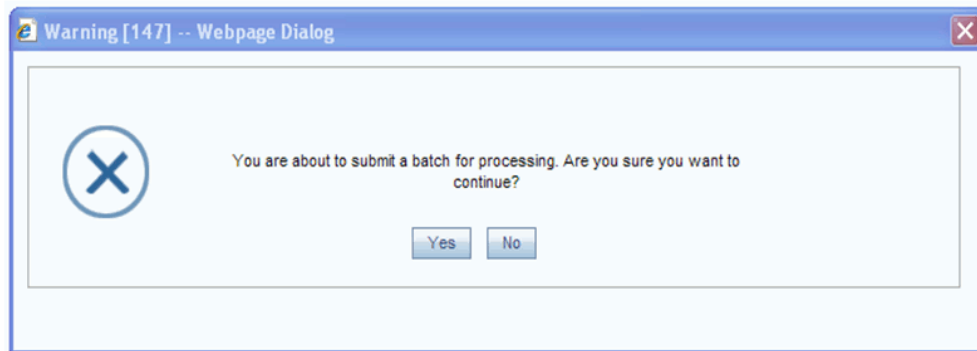
Finding a Selected Task

To search for any of your selected tasks, enter the task name or partial name in the field under the Selected list, then click the **adjacent** button to find each successive match.

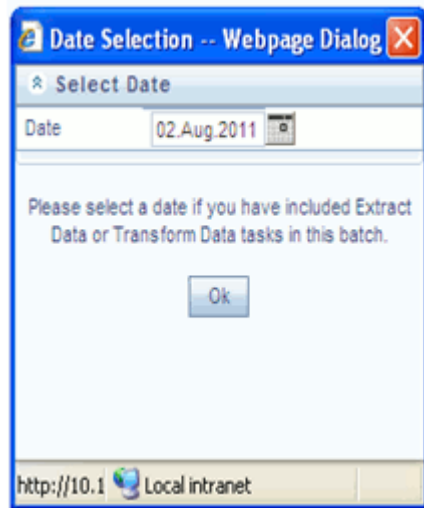
Running a Simplified Batch

To run a Simplified Batch from the Simplified Batch summary page, complete the following steps:

1. Select a Simplified Batch from the summary grid.
2. Click **Run** to execute the batch.
3. A popup window will appear asking for confirmation before proceeding. Click **Yes** to proceed, or **No** to return to the summary page.



4. If you clicked **Yes** to proceed, you will see a Date Selection popup. If you have included any Extract Data or Transformation Data tasks in your batch, select the appropriate date for use in processing (it will ignore this date for all other task types). The date defaults to the system date. If you wish to change the date, you can either directly enter a date in the format displayed, or you can use the Calendar tool to select a date.



5. Click **Ok** to proceed.
6. You will now see a message indicating the batch has been launched. Click **Ok** to proceed.



7. You can monitor the status from the summary grid or detail page.
 1. To monitor from the summary grid, click **Refresh**. The summary grid will update the Last Execution Date with the current date and the Status at completion (for example, **Complete**, or **Failed** if there was a critical problem).
 2. To monitor from the detail page, please refer to the section on Viewing the Task Logs.

Note: This currently applies to all task types except Extract Data and Transform Data.

Viewing the Task Logs

Note: This currently applies to all task types except Extract Data and Transform Data.

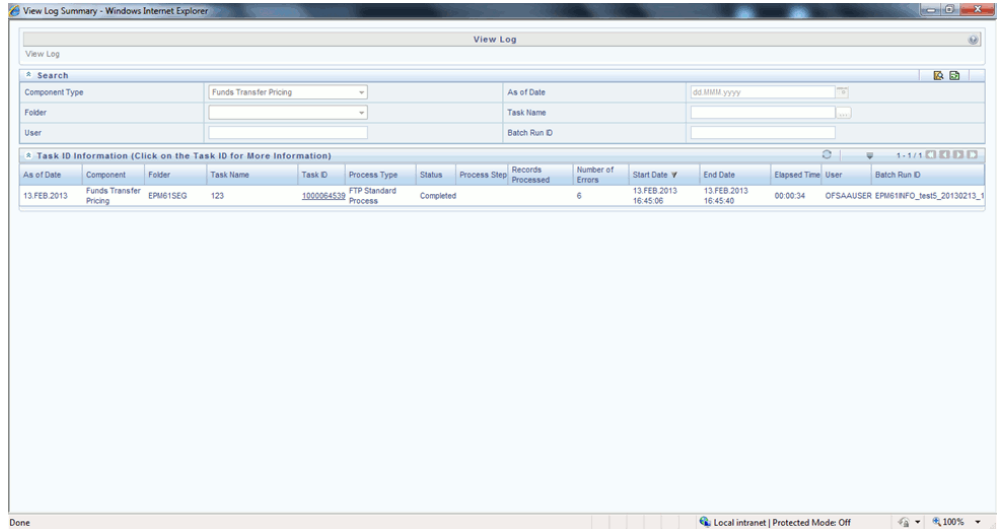
To view the processing log for each task in your batch, you can navigate to the log from the Simplified Batch detail page:

1. Select your batch from the summary grid.
2. Click **View** to navigate to the detail page.
3. For a specific task in the Task Details container, navigate to the processing log through View Log.

The screenshot displays the 'Simplified Batch' configuration interface. The main area contains several sections:

- Simplified Batch:** Fields for Name (emb alloc2), Description (another quick test), Folder Name (RTSE0), and Access Type (Read/Write, Read Only).
- Batch Execution Type:** Radio buttons for Parallel and Sequential.
- Search Task Details:** Fields for Rule Name and Task Type.
- Task Details:** A table with columns: Task No., Rule Name, Task Type, Optional Parameters, Folder or Source, and View Log. The table contains one row: 01, SMB FTP Charge Credit Cards 1, Allocation Rule, [empty], RTSE0, and a View Log link.
- Audit Trail:** A table with columns: System ID, Created By, Creation Date, Last Modified By, and Last Modification Date. The data row shows: 40016278, QTUSER, 08/06/2011 05:36:34, QTUSER, 08/06/2011 05:36:34.

4. In the View Log page, you can drill down to the log details through the Task ID hyperlink.



The Task ID represents the System ID of the task (for example, in Profitability Management, an Allocation Rule's System ID).

The task's Batch Run ID is a concatenation of several identifiers. For example, Batch Run ID 'OELPMINFO_Task1_smb alloc2_20110805_2' represents the following:

- Information Domain name (for example, OELPMINFO)
- Task sequence within the Simplified Batch (for example, Task1)
- Simplified Batch rule name (for example, smb alloc2)
- The run date in YYYYMMDD format and the sequential run number for that date (for example, 20110805_2, for the second execution on August 5, 2011).

Additional Batch Options

As noted in the Overview for this module, you may also view, execute, schedule, monitor, cancel, and view task logs for Simplified Batches within the broader OFSAA Infrastructure Operations batching framework.

OFSAA Administrator Console

Introduction

This document explains the impact that OFSAAI Server Administrator Console will have on the current approach to server maintenance. It gives a brief outline on how the Console operates and how it makes the maintenance of OFSAAI Servers easy and efficient.

Features

The OFSAAI installation entails the installation of three vital components: **Database Server**, **Application Server**, and **Web Server**.

These components can be installed on a single machine, as a two-tier set up or a three-tier setup.

The Application layer of the OFSAAI system is maintained by a single server called Application server. The Application layer houses shared services, sub system services, ICC server etc to manage the warehouse operations. The scenario prior to OFSAAI Server Administrator Console was that the distributed warehouses are supported with the application server being in a single machine. The application layer is responsible for activities such as metadata management and batch scheduling.

This OFSAAI Server Administrator Console provides a centralized monitoring unit for all servers running in OFSAAI installations viz. Web server, OFSAAI servers, ICC server, Router, Am, Message server and OLAP data server.

OFSAAI Server Administrator Console enables efficient management of OFSAAI servers and has the following features:

- OFSAAI Application servers are networked enabling the management of the servers fast and efficient.
- Provides a centralized control of servers.

- Load balancing is achieved by the distribution of services among application servers.
- It is not necessary to have OFSAAI servers installed in the same machine.
- User can map any number of infodoms within a single application server.
- A new XML file, LookupServices.XML has been created, which has all the server related information and mapping details.
- Editing the LookupServices.XML file through the new GUI console to rearrange the services between servers is possible.
- The new GUI allows editing the configuration and properties of the servers.
- The new approach enables restarting the services individually without disturbing the servers.
- The OLAP FTP area is never distributed.
- It is mandatory to define a bucket infodom (** infodom) in the set up. It can be served by multiple servers. The servers will not start up without the bucket infodom.
- The i18N and SMS services are serviced by the bucket infodom. The ** infodom should have all the services defined/hosted in it.

OFSAAI Server Administrator Console

This section elucidates the login process of OFSAAI Server Administrator Console and provides information in using the system to its potential.

Access to OFSAAI Server Administrator Console

OFSAAI Server Administrator Console is a standalone application that can be accessed by executing or double-clicking the **AdminConsole.sh** / **AdminConsole.bat** file.

Note: Make sure that only ONE instance of OFSAAI Server Administrator Console is running at a time. If more than one instance is up and running, it could seriously affect the whole setup.

OFSAAI Server Administrator Console Login

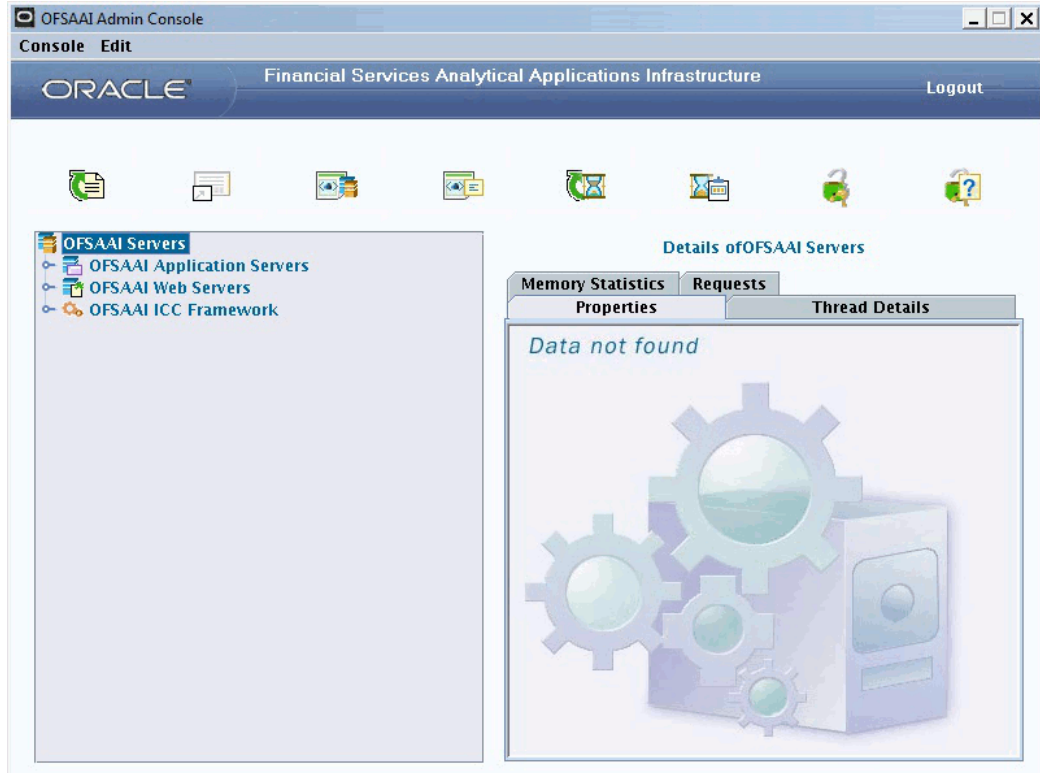
On executing/double-clicking the AdminConsole.bat / AdminConsole.sh file, the Enter Password window is displayed.



Enter the password in the **Password** box and click **Login**. The Server Administrator Console is displayed. Click the **Forgot Password** button in case you have forgotten the password. The Forgot Password window is displayed.



Enter the answer to the Security Question displayed and click **Login**. The **Server Administrator Console** window is displayed.

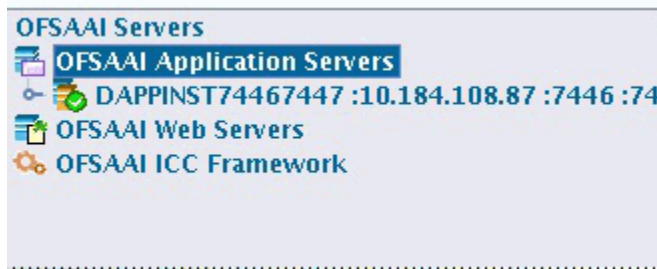


OFSAAI Server Admin Console

The LHS pane of the **OFSAAI Server Administrator Console** displays all the OFSAAI Application Servers, Web Servers and ICC Servers.




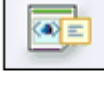






Click the above sign to expand the LHS options and view the servers in the current setup. The Servers that are running have green buttons adjacent to them and those that are not running have their display buttons in red.



OFSAAI Server Admin Console Toolbar

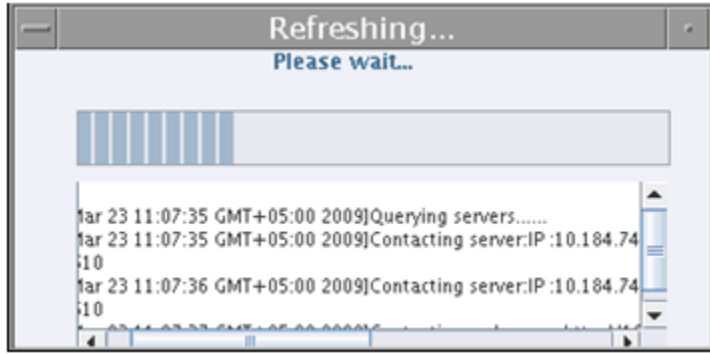
The top panel displays the OFSAAI Server Admin Console toolbar.

Button	Action
	Click the Refresh button to refresh the server status.
	Click the Launch Log Viewer button to open the Log4J Log Viewer window.
	Click the Upload LookupServices.XML button to upload new LookupServices.XML file.
	Click the Upload DynamicServices.XML button to upload new DynamicServices.XML file.
	Click the Console Refresh Rate button to set the time interval in which the console should refresh the status automatically.
	Click the Console Socket Timeout button to set the time for timeout for contacting Server in milliseconds.
	Click the Change Password button to change the password for logging on to the Oracle Reveleus Server Admin Console.
	Click the Change Security Question button to change the question set as the security question to be used in case the user clicks on the Forgot Password link.

These buttons are described in detail below.

Refresh

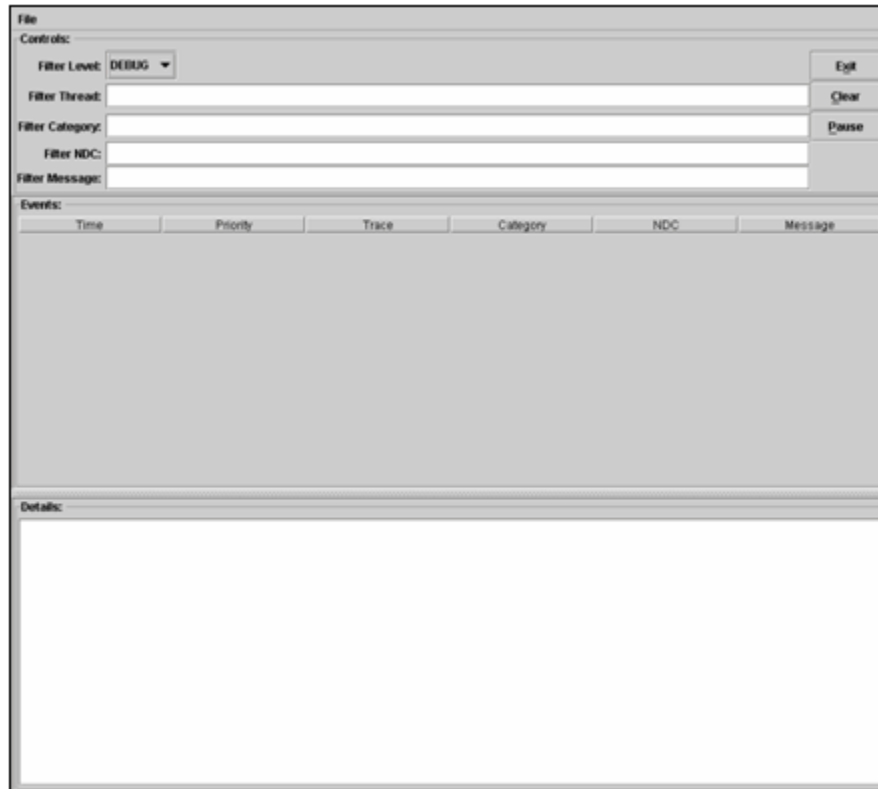
The following window is displayed on clicking the **Refresh** button.



The status of servers in the setup and the batches under ICC Servers are refreshed and displayed in the OFSAAI Server Administrator Console.

Launch Log Viewer

The following window is displayed on clicking the **Launch Log Viewer** button



It is possible to redirect your log files to Log4J Viewer console for viewing. Refer to Log4J documentation for more information.

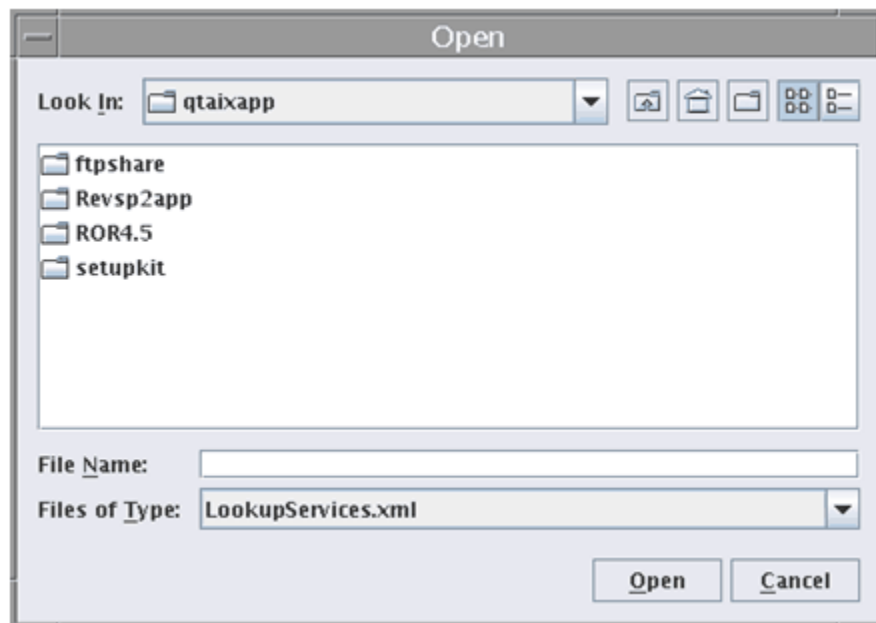
Click **Exit** to close this window.

Upload LookupServices.XML

Uploading of LookupServices.xml can happen only in a global level as the LookupServices.XML should be the same for all servers. This file contains all the server information and all the instances of the OFSAAI Servers.

Click the **Upload Lookup Services** button to upload a new LookupServices.XML file into the setup. The Open dialog box is displayed. Browse to the required folder and select the LookupServices.XML file to be uploaded and click Open.

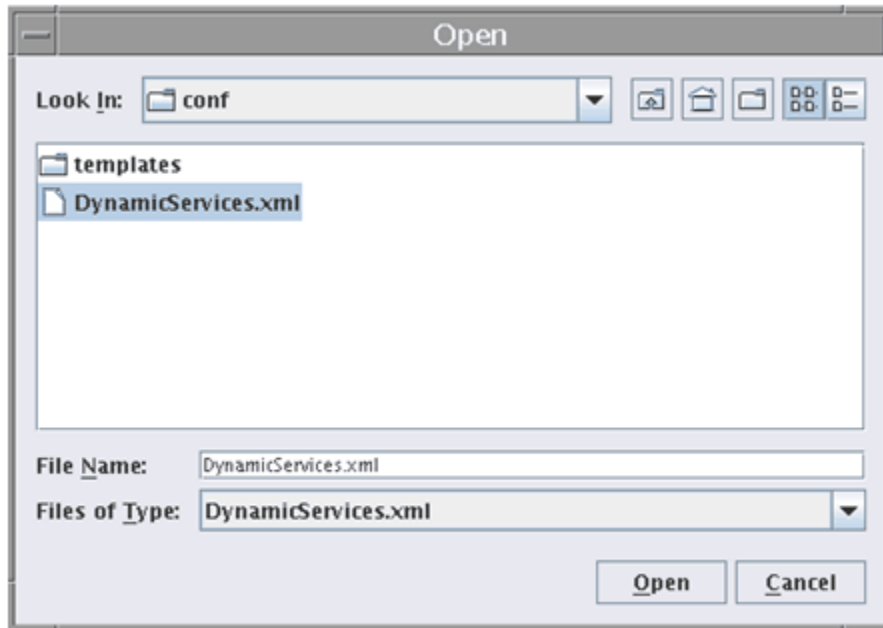
Note: Make sure that the LookupServices.XML file is configured correctly and not corrupt before uploading. If the uploaded LookupServices.XML file is corrupt, it will bring down the whole setup.



Note: On uploading a new LookupServices.XML file, all the OFSAAI servers will restart automatically.

Upload DynamicServices.XML

You can upload the DynamicServices.xml globally or specifically to each server. Click the **Upload DynamicServices** button to upload a new DynamicServices.XML file into the setup. The Open dialog box is displayed. Browse to the location where the updated DynamicServices.XML file is saved and click Open. The file will be uploaded to the server.

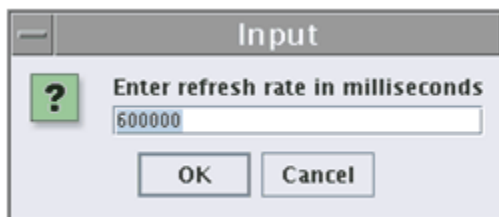


Depending on whether the uploading of DynamicServices.xml was done globally or specifically to each server, either all or the specific server will restart automatically.

Note: Make sure that the DynamicServices.XML file is configured correctly and not corrupt before uploading. If the uploaded DynamicServices.XML file is corrupt, it will bring down the entire setup.

Console Refresh Rate

Click the **Console Refresh Rate** button to set the time interval in which the console should refresh the status automatically. An Input window is displayed.

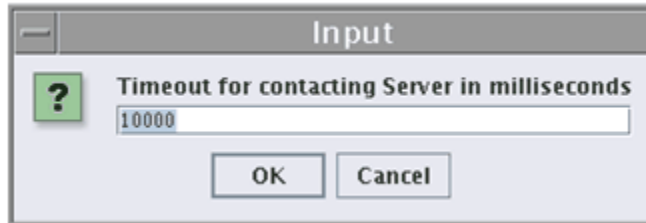


Enter the time in milliseconds in the Enter refresh rate in milliseconds box. Click OK. Click Cancel to close the window without saving the changes.

Console Socket Timeout

Click the **Console Socket Timeout** button. An Input window is displayed. Enter the time in milliseconds in the Timeout for contacting Server in milliseconds to set the time

for Timeout for contacting Server in milliseconds. The text field initially displays a default value of 10000.



Click OK. Click Cancel to close the window without saving the changes.

Change Password

Click **Change Password** the button. The Change Password window is displayed.

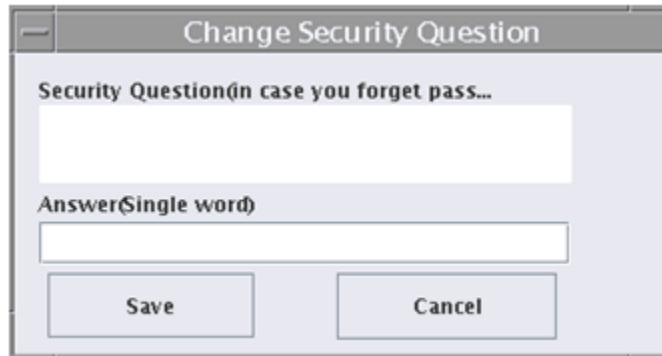


Enter the new password for logging on to the OFSAAI Server Admin Console in the **New Password** field. Enter the same password in the **Confirm Password** field.

Click **Save** to confirm the changes. Click **Cancel** to close the window without saving the changes.

Change Security Question

Click the **Change Security Question** button. The Change Security Question window is displayed.

A dialog box titled "Change Security Question" with a grey header. It contains two text input fields. The first field is labeled "Security Question(in case you forget pass..." and the second is labeled "Answer(Single word)". Below the fields are two buttons: "Save" and "Cancel".

Enter the question to be set as the security question in the **Security Question** (in case you forget password). Enter the answer to the above question in the **Answer** (Single word) field. Ensure that the answer is only one word.

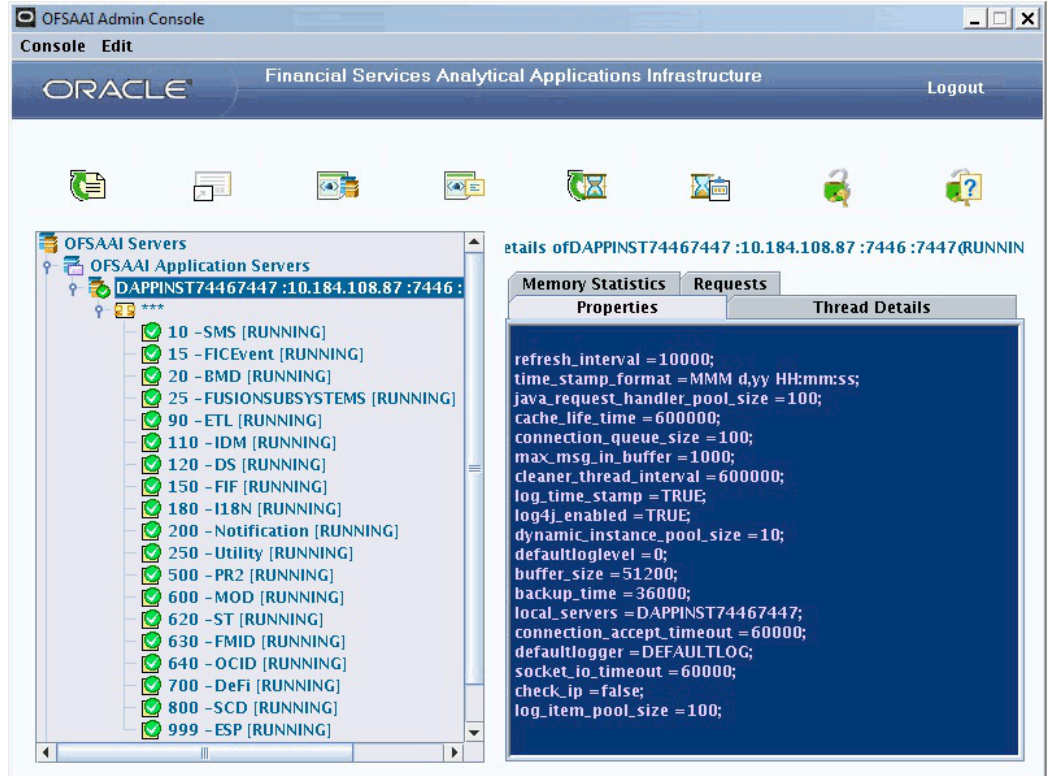
This question will be used in case the user clicks on the Forgot Password link. Click **Save** to save the security question and answer.

OFSAAI Application Servers

The Left panel of the OFSAAI Server Administrator Console displays all the OFSAAI Servers in the setup.



Click the above key symbol sign next to OFSAAI Application Servers to view all the OFSAAI App Servers in the current setup. The Servers that are running have green buttons adjacent to them and those that are not running have their display buttons in red.

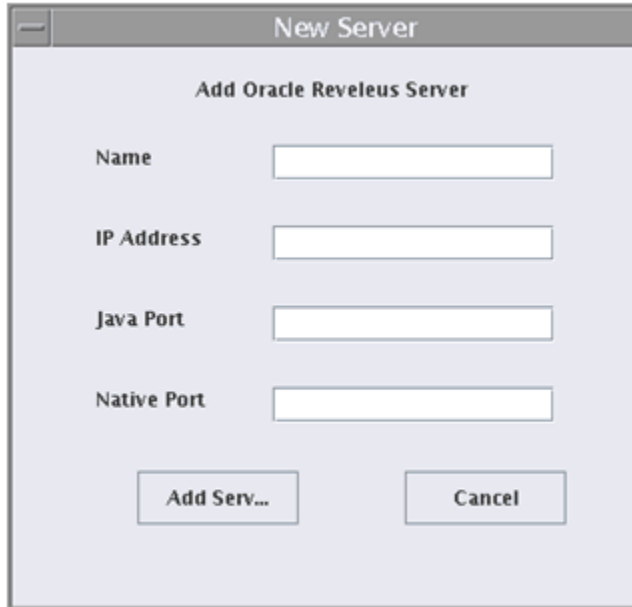


Right-click the top level **OFSAAI Application Servers** option. The options available in the menu are **Add Server** and **Add Infodom**.



Adding Servers

Select the **Add Server** option to map an application server to the setup. The **Add OFSAAI Server** window is displayed.



Enter the name of the OFSAAI Application Server in the **Name** field. Enter the IP Address of the server in the **IP Address** field.

Enter the Java Port in the **Java Port** field. Enter the native port in the **Native Port** field

Click **Add Server**. Click **Cancel** to cancel this window without adding a server.

All the OFSAAI Servers will restart automatically. The newly mapped server gets added to the list of available OFSAAI Application Servers.

Adding Infodoms

Right-click the top level OFSAAI Application Servers option. Select Add Infodom. The Add Infodom window is displayed. The information domains which were created through OFSAAI can be mapped to the OFSAAI Server Admin Console using this option.

On clicking **Add Infodom**, a message window is displayed as given below:



Click **OK** to proceed with the mapping of the information domain.

Code	Service Name	Server Selection
15	FICEvent	DAPPINST...
20	BMD	DAPPINST...
90	ETL	DAPPINST...
110	IDM	DAPPINST...
120	DS	DAPPINST...
150	FIF	DAPPINST...
200	Notification	DAPPINST...
250	Utility	DAPPINST...
500	PR2	DAPPINST...
600	MOD	DAPPINST...
700	DeFI	DAPPINST...
800	SCD	DAPPINST...
999	ESP	DAPPINST...

Enter the name of the information domain in the **Infodom Name** field. The window displays the code and name of the services.

You can map the server to which the requests for a particular service are to be routed in this window. Select the server from the drop-down list available against each service to specify which server the request for a particular service is to be routed.

Click **Add**. The infodom gets added to the list of information domains available in the OFSAAI Server Admin Console. All the OFSAAI Servers will restart automatically.

Click **Cancel** to close the window without adding the infodom.

Server Details Pane

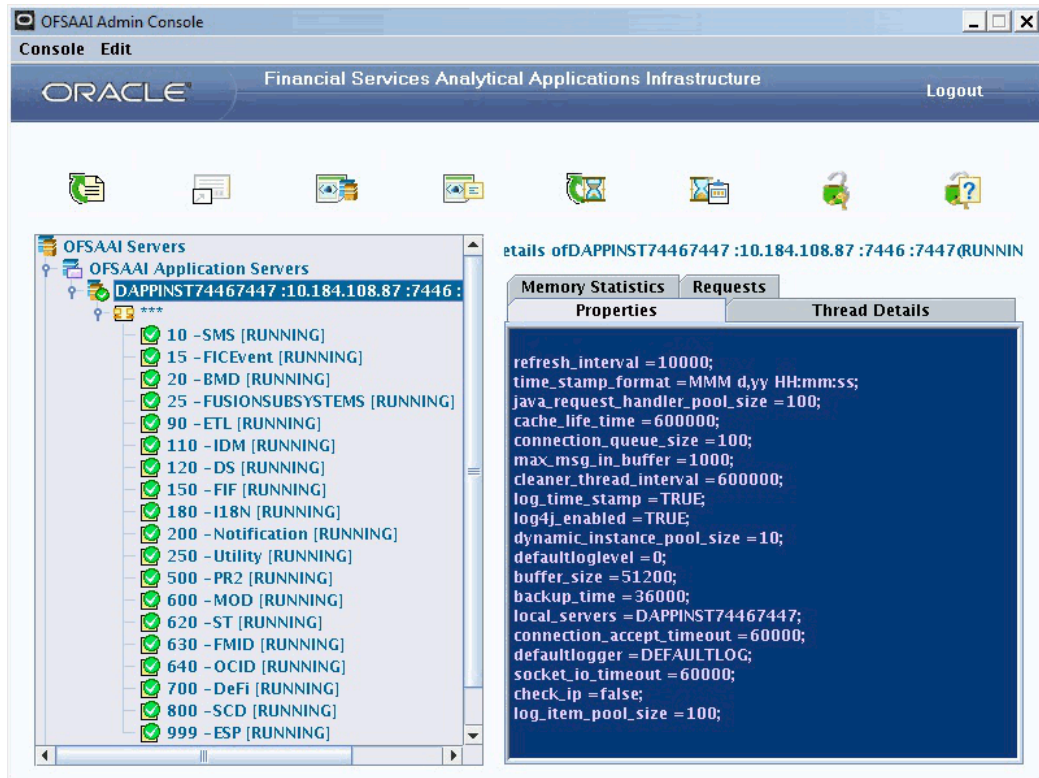
The right pane of the Server Admin Console displays the details of the server selected in the left pane. The right pane has four tabs, namely: **Properties**, **Thread Details**,

Memory Statistics and Requests.

Note: These details will be displayed only if the selected Server is running.

Properties

The Properties tab in the right pane displays the server property details. This tab is selected by default when you select a server in the left pane.

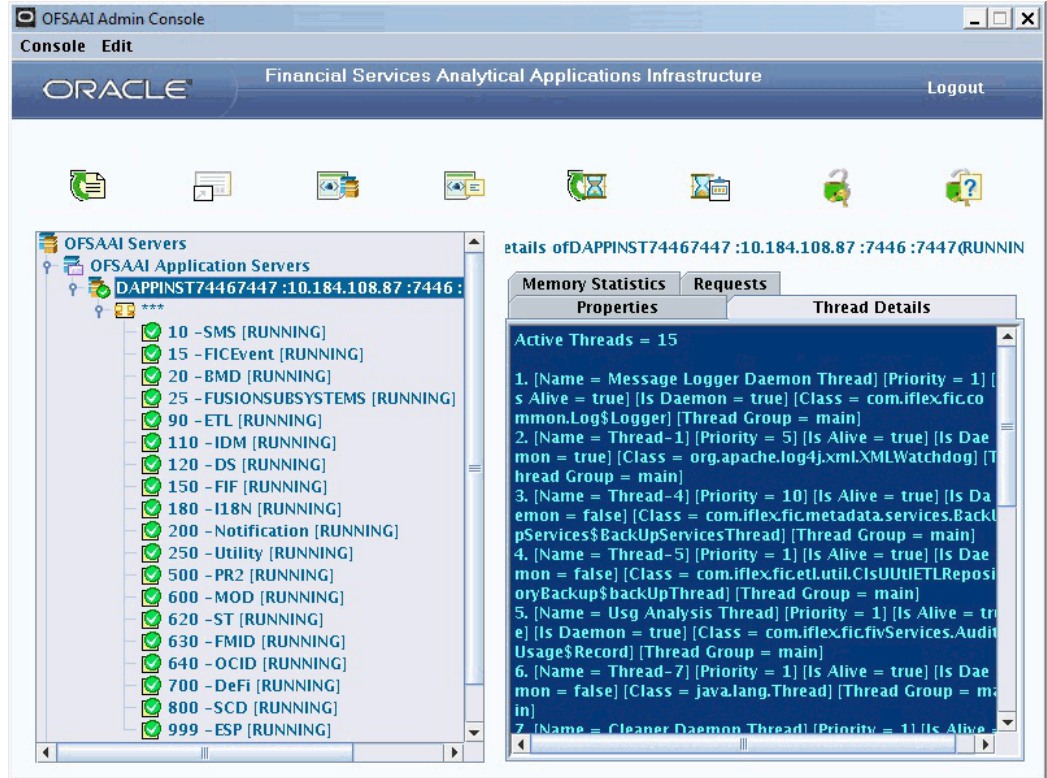


The screenshot displays the OFSAAI Admin Console interface. The left pane shows a tree view of 'OFSAAI Servers' with 'DAPPINST74467447 :10.184.108.87 :7446 :7447' selected. The right pane shows the 'Details of DAPPINST74467447 :10.184.108.87 :7446 :7447 (RUNNING)' with the 'Properties' tab selected, displaying the following configuration:

```
refresh_interval = 10000;
time_stamp_format = MMM d,yy HH:mm:ss;
java_request_handler_pool_size = 100;
cache_life_time = 600000;
connection_queue_size = 100;
max_msg_in_buffer = 1000;
cleaner_thread_interval = 600000;
log_time_stamp = TRUE;
log4j_enabled = TRUE;
dynamic_instance_pool_size = 10;
defaultloglevel = 0;
buffer_size = 51200;
backup_time = 36000;
local_servers = DAPPINST74467447;
connection_accept_timeout = 60000;
defaultlogger = DEFAULTLOG;
socket_io_timeout = 60000;
check_ip = false;
log_item_pool_size = 100;
```

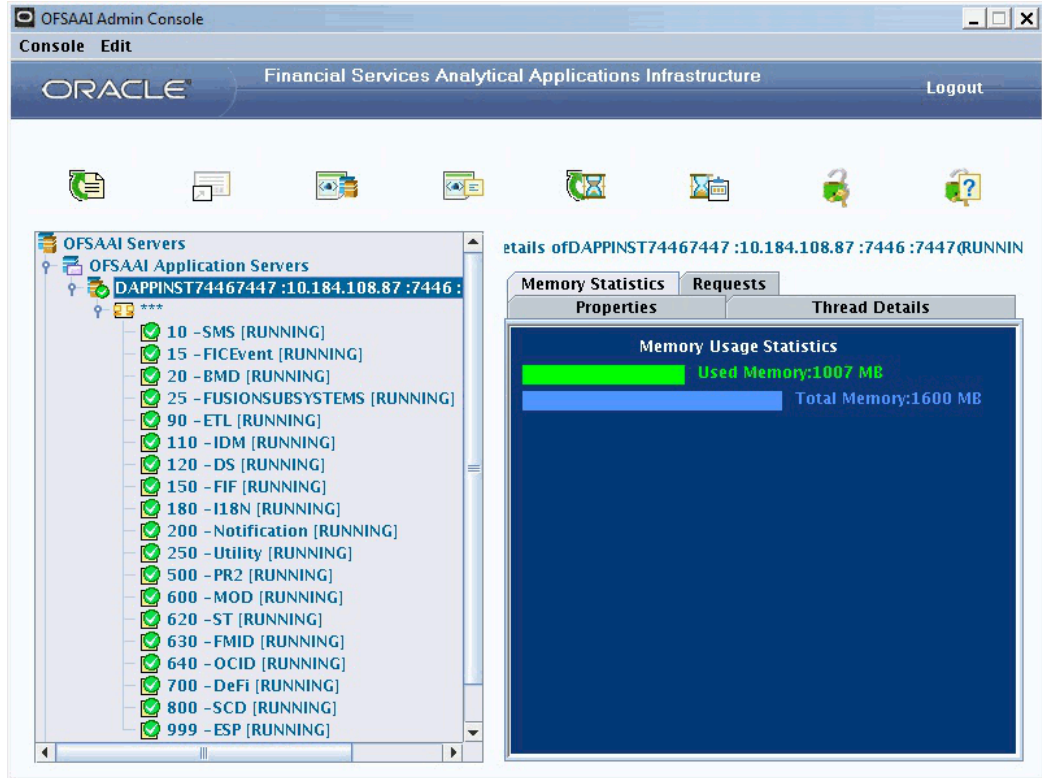
Thread Details

The Thread Details tab displays the details of all the current active threads.



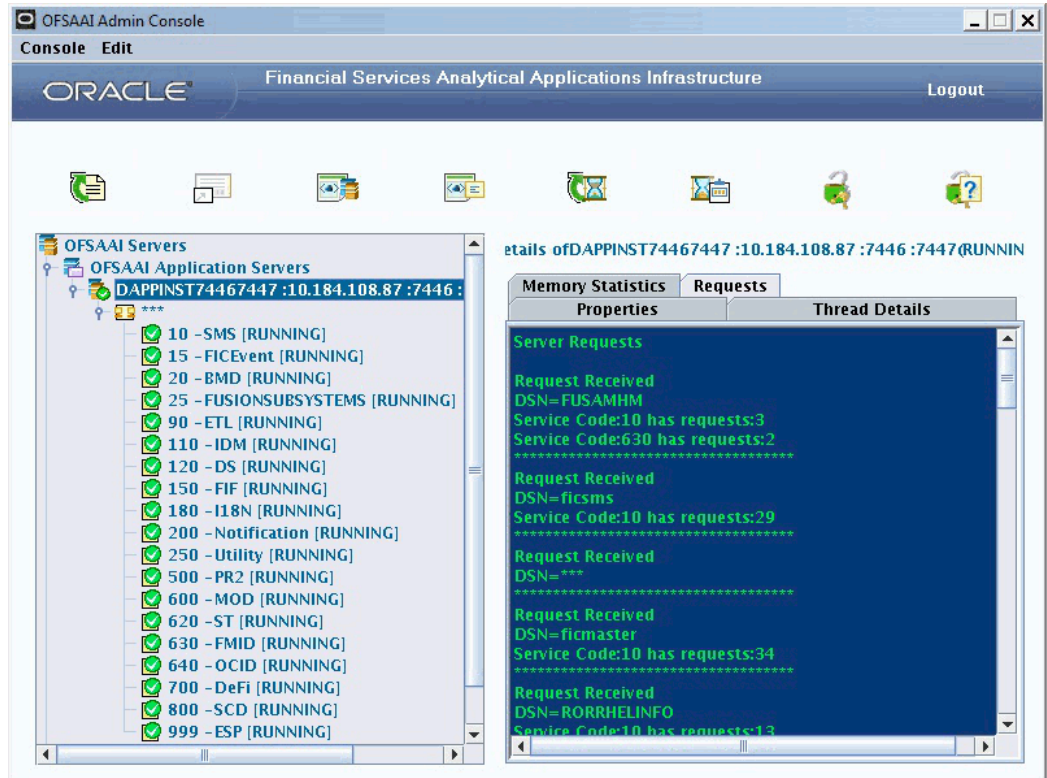
Memory Statistics

The Memory Statistics tab displays the total memory and the used memory of the selected server.



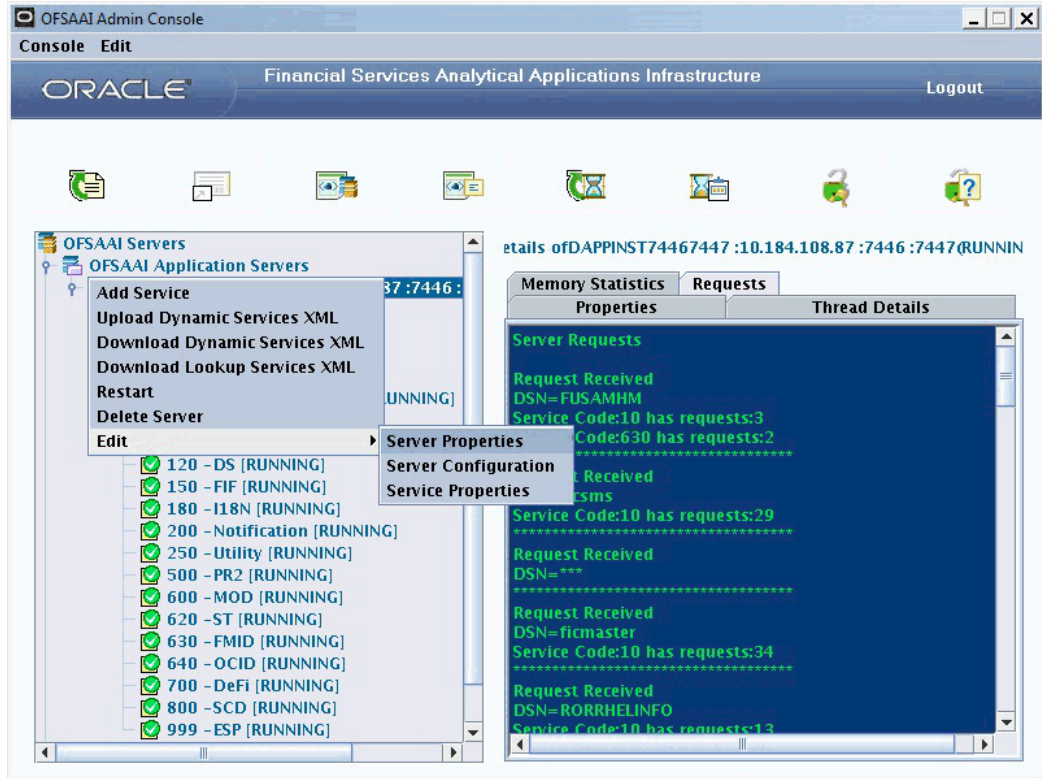
Requests

The Requests tab displays **Server Requests** details and **Summary** details such as **Number of Native Requests** and Number of Requests for each **Service Code**.



Server Specific Menu Options

Right-click a server to view the server specific menu options. The shortcut menu available to each server is displayed. This menu displays options to add a service, upload and download DynamicServices.XML file and also download LookupServices.XML file. The servers can be restarted or deleted using this menu. There is also the option to edit the server properties and configuration and service properties.



Adding Services

Right-click a Server. In the short-cut menu displayed, select Add Service. The Add Service window is displayed.



Select the Service Code and Infodom Name to which the service is to be added from the respective drop-down lists and click Add. The newly added service will appear in the list of services under the infodom.

The Add Service feature can also be used for moving a service from a server to another. If a service running in a server for a particular infodom is added to another for the same infodom, the service gets deleted from the first server and gets added to the second

server.

Upload and Download Options

You can upload the DynamicServices.xml globally or specifically to each server. Downloading of the DynamicServices.xml must be done at each server level as it could be different for each server. Select the Upload DynamicServices.XML option in the short-cut menu to do this. This works the same way as when the Upload DynamicServices button in the top toolbar is clicked.

Refer Upload DynamicServices.XML section for more details.

Click Download DynamicServices.XML to download the file specific to that server. You can make the necessary modifications to the downloaded file and upload the same using the Upload DynamicServices.XML option. The Save As dialog box is displayed. Specify the file name and location to save the file. Click **Save** to save the file.

Downloading of LookupServices.xml also can be done at each server level through this short-cut menu. Select Download LookupServices.XML. The Save As dialog box is displayed. Specify the file name and location to save the file. Click Save to save the file.

However, it is not possible to upload the LookupServices.XML file at each server level as the file should be the same for all servers. Uploading of LookupServices.xml can happen only in a global level from the Edit menu of the OFSAAI Server Admin Console.

Note: Make sure that the files are configured correctly and not corrupt before uploading. If the uploaded files are corrupt, it will affect the entire OFSAAI setup.

Restarting a Server

Right-click a server name to view the server specific menu. Select Restart to restart the server.

Deleting a Server

Right-click a server and select Delete Server from the menu displayed. A confirmation window will be displayed. Click Yes to delete the mapped server from the OFSAAI Server Administrator Console. On deleting the mapped server, all the OFSAAI servers will go for a restart automatically. If the server being deleted hosts any service for the default infodomain, it will have to be moved before deletion.

Editing Server Properties

Right-click a server and select Edit>Server Properties. The Change Server Properties window is displayed.



The image shows a dialog box titled "Change Server Properties". It contains four text input fields, each with a label to its left: "Server Name" with the value "DAPPINST56105611", "IP Address" with "10.184.74.53", "Java Port" with "5610", and "Native Port" with "5611". At the bottom of the dialog, there are two buttons: "Change" and "Cancel".

If required, edit the Name of the OFSAAI Application Server, the IP Address of the server, the Java Port and the Native Port details. Click Change to save the modifications. Click Cancel to close this window without saving the changes. On clicking Change, all the servers will go for a restart automatically.

Editing Server Configuration

Right-click a server and select Edit>Server Configuration. The OFSAAI Server window is displayed.

Parameter	Value
Buffer Size	51200
Check IP	false
Local Servers	DAPPINST5610561
Connection Queue Size	100
Connection Accept Timeout	60000
Socket IO Timeout	60000
Cache Lifetime	600000
Cleaner Thread Interval	600000
Dynamic Instance Pool Size	10
Java Request Handler Pool ...	100
Log Item Pool Size	100
Log Timestamp	TRUE
Timestamp Format	MMM d,yy HH:mm:ss
Max Message in Log Buffer	1000
Backup Time	36000
Log4j Props Refresh Inter...	10000
Default Logger	DEFAULTLOG
Default Log Level	DEBUG

Make the required modifications and click Update to save the changes. Click Cancel to close this window without saving the changes. On clicking Update, the server whose configuration has been changed will go for a restart automatically.

Editing Service Properties

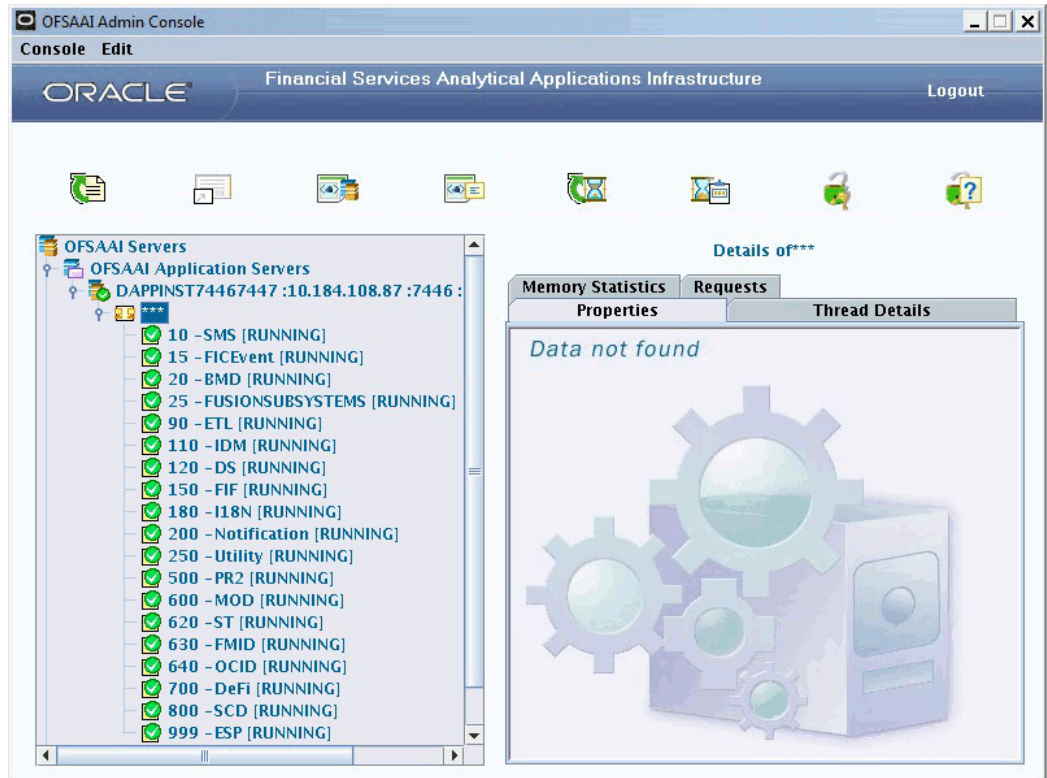
Right-click a server and select Edit>Service Properties. The Edit Service Properties window is displayed.

Click Add Parameter to add a new parameter. The New Parameter Name window is displayed.

Enter the name of the new parameter in the Enter Parameter Name field. Click OK to save. Make the necessary changes in the Edit Service Properties window and click Save to save the changes. Click Cancel to close the window without saving the changes. On clicking Save, the service whose property has been edited will go for a restart automatically.

Information Domain Details

Click the key symbol sign next to the Application server name to expand it. The information domains mapped to the server are listed.

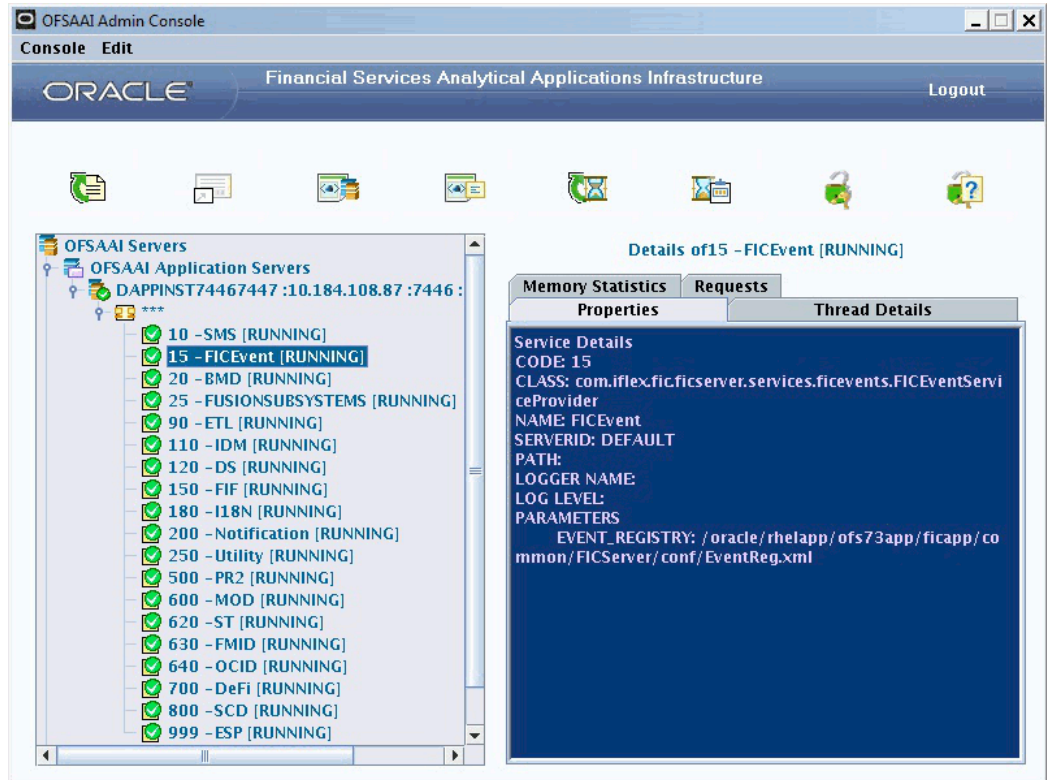


The *** infodom is the default or bucket infodom and it is mandatory to have one and only one *** infodom. Click an infodom name to see the services mapped to it.



The services that are running have a green button next to them and the status is displayed as [RUNNING]. The services that are not running have a red button adjacent to it and the status is displayed as [NOT RUNNING].

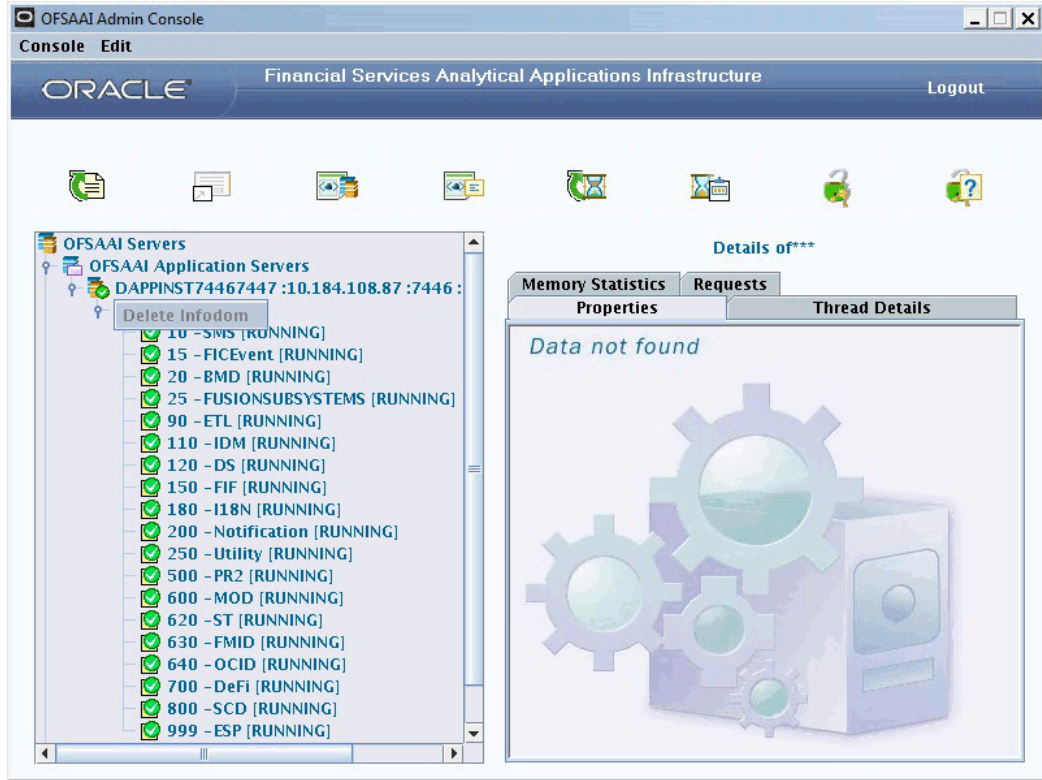
Select a service that is running. The right pane of the OFSAAI Server Admin Console window displays the server **Properties**, **Thread Details**, **Memory Statistics** and **Requests**.



The right tab details are the same as that of OFSAAI Application Servers. Refer to the Server Details Pane section for more details.

Deleting/Unmapping Infodoms

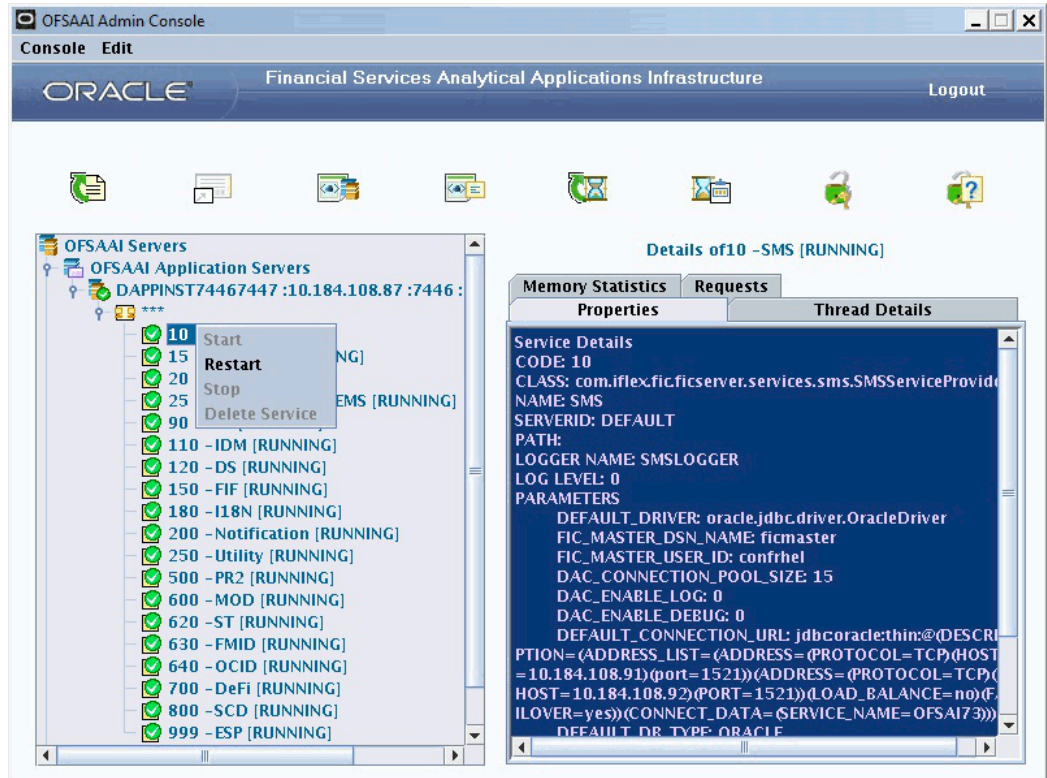
To unmap an information domain from a server, right-click an infodom, and select Delete Infodom from the menu displayed.



A message window will be displayed asking you to confirm the deletion. Click Yes to delete the mapping of the information domain. The infodom will be removed from the list of infodoms available in the OFSAAI Server Admin Console.

Starting/Restarting/Stopping/Deleting a Service

To start or restart a stopped service, right-click the particular service and select Start or Restart from the menu displayed.



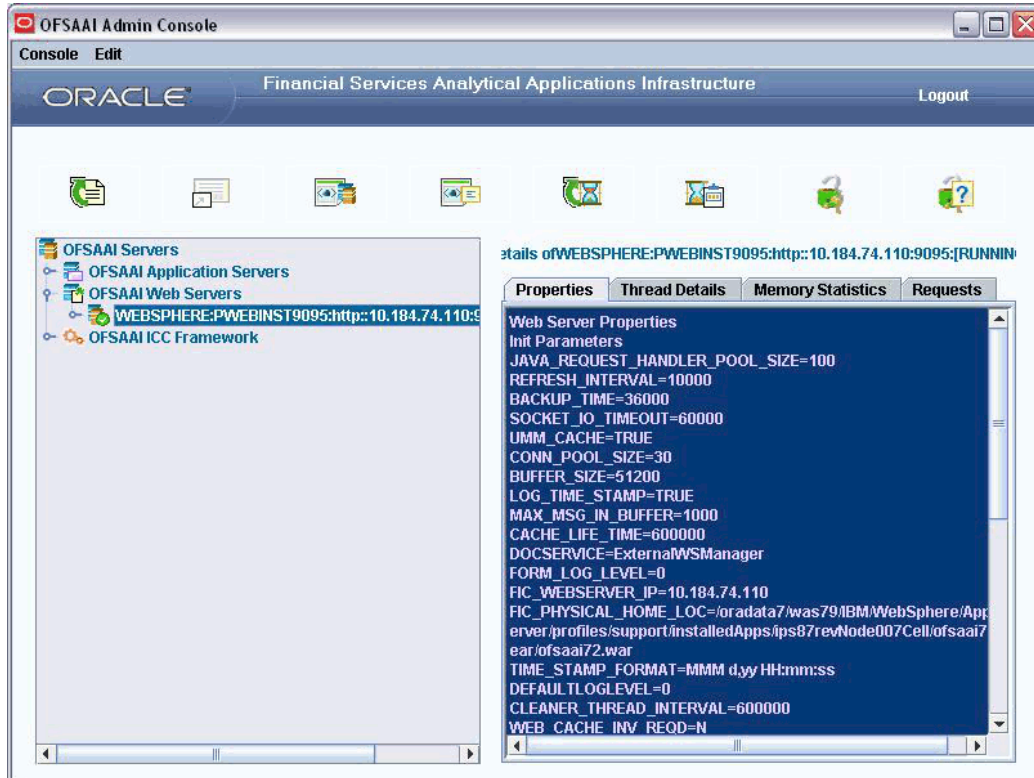
You can also stop a service that is running by clicking Stop in the menu displayed when you right-click a service that is started. Prior to the OFSAAI Server Admin Console, to stop a service that is running, it would have been necessary to stop the server itself on which the service was running.

To delete a service, right-click the service and click **Delete Service** in the menu displayed. A confirm window will be displayed. Click **Yes** to confirm the deletion.

OFSAAI Web Servers

The Left panel of the OFSAAI Server Administrator Console also displays all the OFSAAI Web Servers in the setup.

Click the key symbol sign next to **OFSAAI Web Servers** to view the Web Server details. The Servers that are running have green buttons adjacent to them and those that are not running have their display buttons in red.



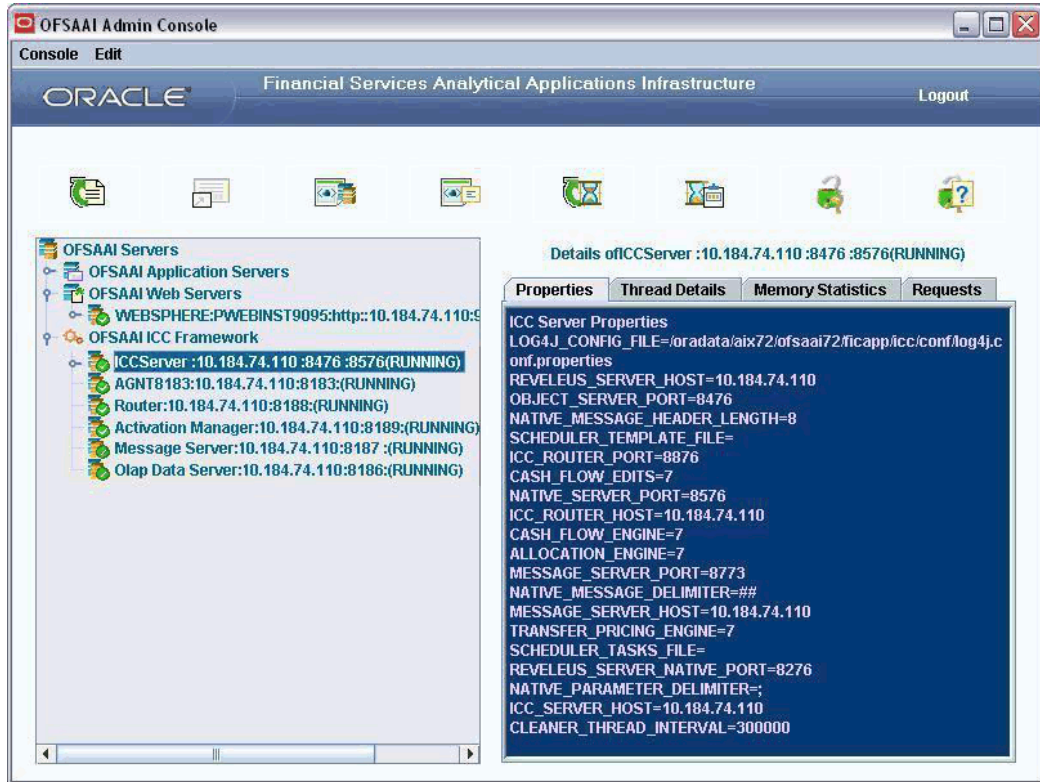
When the OFSAAI Web Servers tree view is expanded it will display the Web Server details (Tomcat / WebSphere), the Instance name, Context Name and Web Services.



The right pane displays four tabs: Properties, Thread Details, Memory Statistics and Requests. These tabs are the same as that of OFSAAI Application Servers. Refer to the Server Details Pane section for more details.

OFSAAI ICC Framework

The left panel of the OFSAAI Server Administrator Console also displays all the servers in the OFSAAI ICC Framework.



Click the above key symbol sign next to OFSAAI ICC Framework to view all the OFSAAI ICC Servers in the current setup.

This includes the **ICC Server**, **Router**, **Message Server** and **OLAP Data Server**. The Servers that are running have green buttons adjacent to them and those that are not running have their display buttons in red.

When the OFSAAI ICC Framework tree view is expanded it will display:

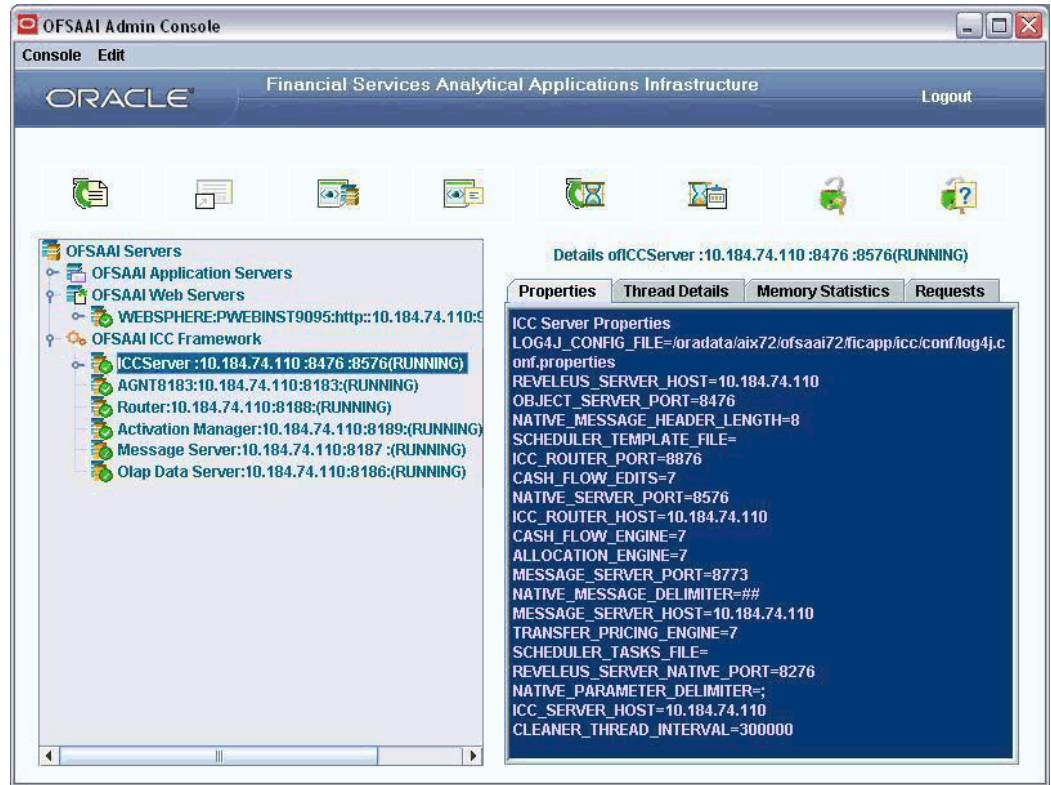
- ICC Server
- OFSAAI Agent Server
- Router
- Activation Manager
- Message Server
- OLAP Data Server

The right pane of the console will display four tabs: Properties, Thread Details, Memory

Statistics and Requests.

ICC Server

Select an ICC Server from OFSAAI ICC Framework.

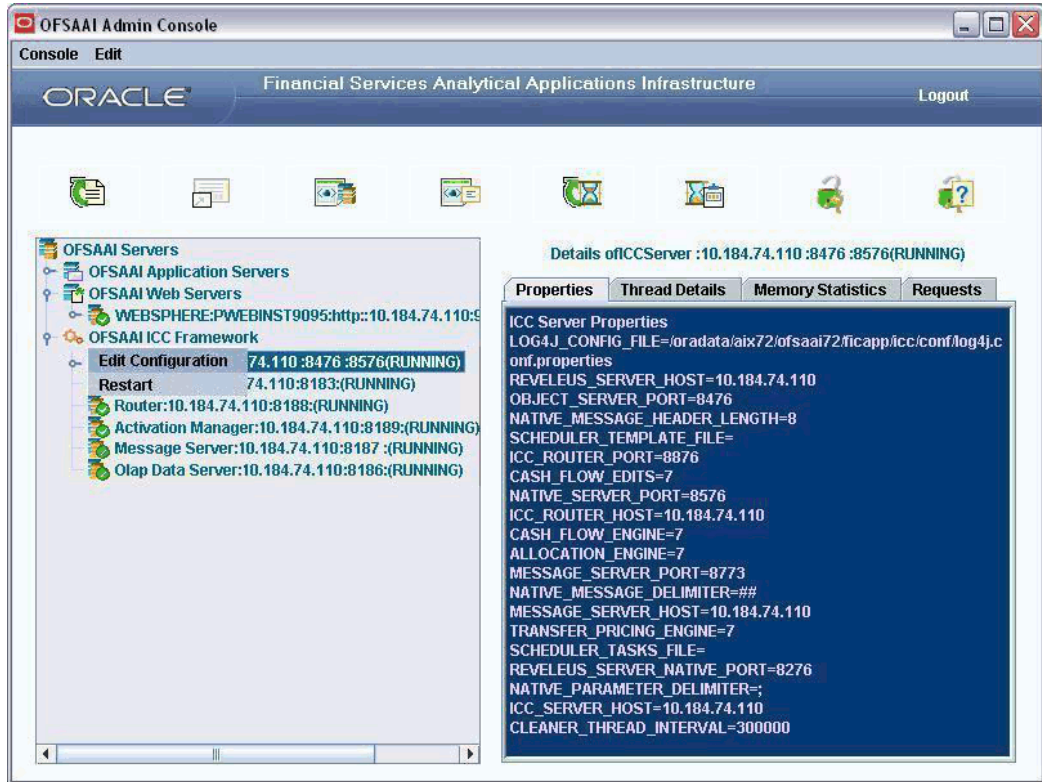


In the right pane, the Properties tab will display details such as Server Port Details, Host Details and LOG4J file path. The Thread details tab will display the number of Active Threads and their details.

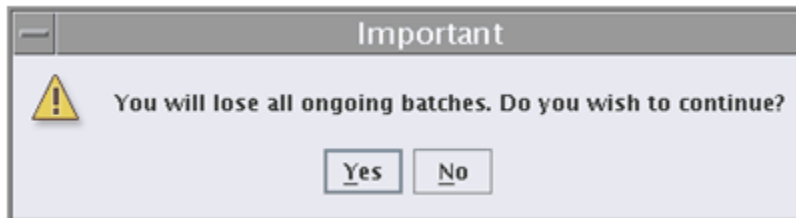
The Memory Statistics tab will display the Memory Usage Statistics i.e, the Used Memory and the Total Memory in MB. The Requests tab will display 'Data Not Found.'

Edit Configuration

Right-click the ICC Server link. The options **Edit Configuration** and **Restart** are displayed.



Right-click the ICC Server link and select Edit Configuration. An alert message is displayed saying "You will lose all ongoing batches. Do you wish to continue?"



Click Yes. The ICC Server Configuration window is displayed.

The screenshot shows a dialog box titled "ICC Server Configuration". It contains three input fields with the following values:

- ICC Server IP: 10.184.74.53
- ICC Server Object Server P...: 5613
- ICC Server Native Server P...: 5614

At the bottom of the dialog, there are two buttons: "Change" and "Cancel".

Make the necessary modifications in the ICC Server IP, ICC Server Object Servlet and ICC Server Native Servlet fields. Click Change to update the ICC Server Configuration details. The ICC Server will be restarted automatically. Click Cancel in the ICC Server Configuration screen to close the window without making any modifications.

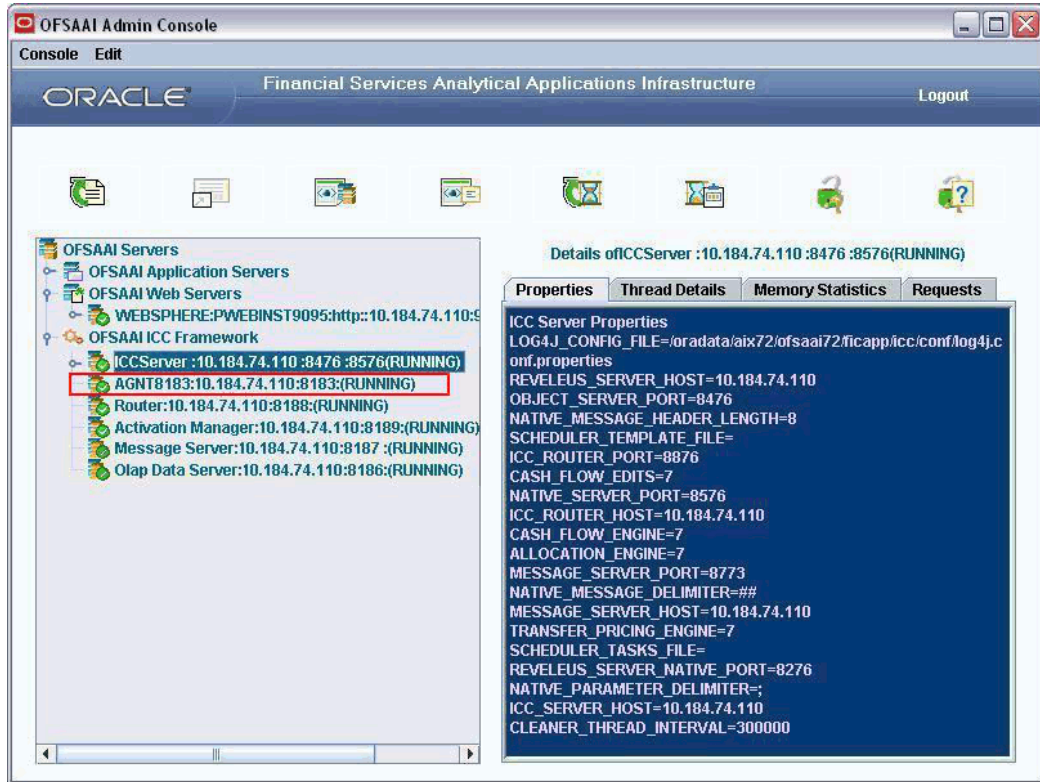
Restarting ICC Server

Right-click the ICC Server link and select the Restart option. An alert popup will be displayed with the message saying "You will lose all ongoing batches. Do you wish to continue?" Click Yes to restart the ICC Server.

Note: After triggering a batch, if the ICC Server is restarted, all the ongoing batches will get stopped.

OFSAAI Agent Server

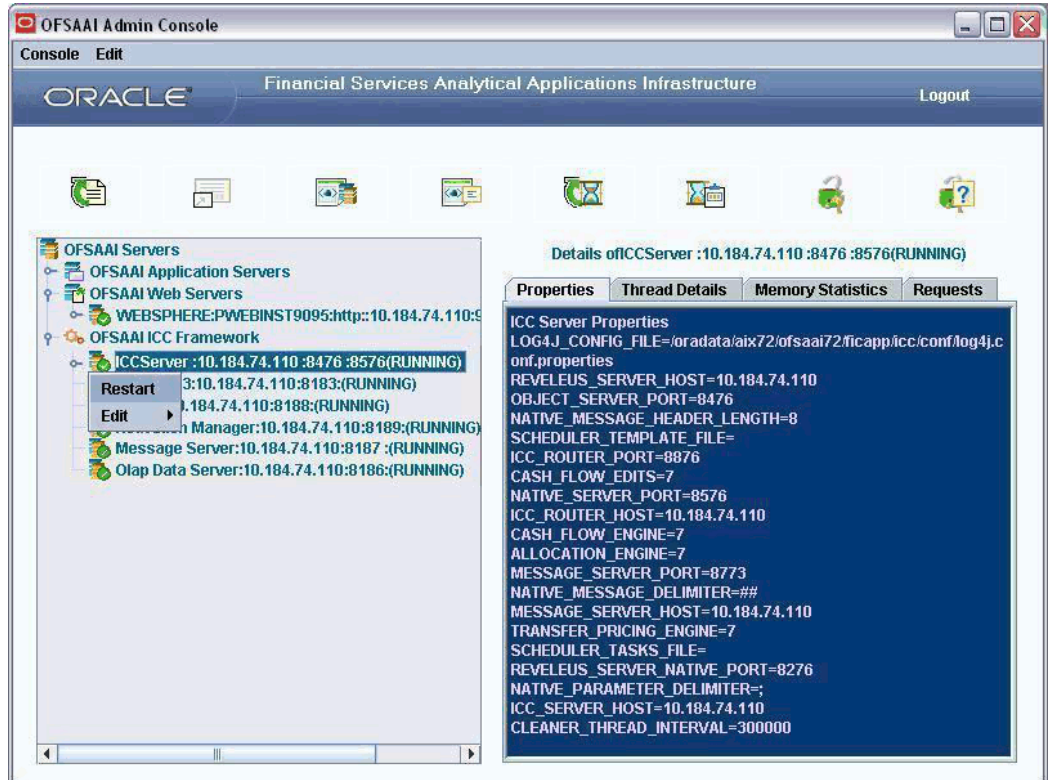
Select the OFSAAI Agent Server link. The right pane displays four tabs: Properties, Thread Details, Memory Statistics and Requests.



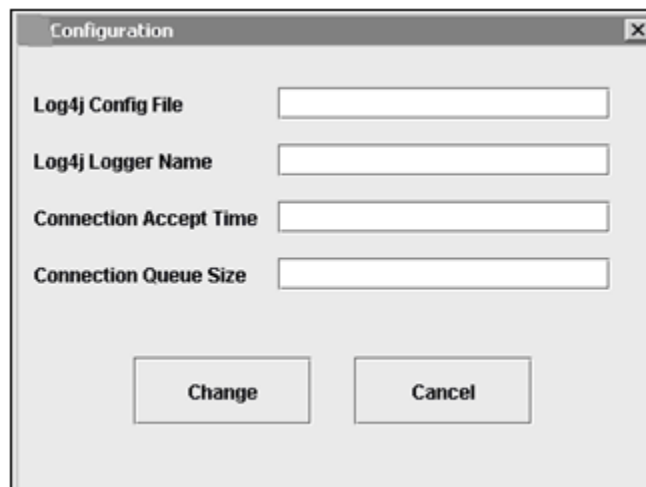
The Properties tab will display the LOG4J file name, Logger name, Accept timeout and Conn_q_size details. The Thread Details tab will display the number of Active Threads and their details. The Memory Statistics tab will display the Memory Usage Statistics i.e., the Used Memory and the Total Memory in MB. The Requests tab will display the Requests Received, Requests Served and Details of Requests Successfully Served.

OFSAAI Agent Server – Restarting and Editing

Right-click the Agent Server link. The short-cut menu displays the Restart and Edit options. The Edit option has Configuration and Properties as its sub menu.

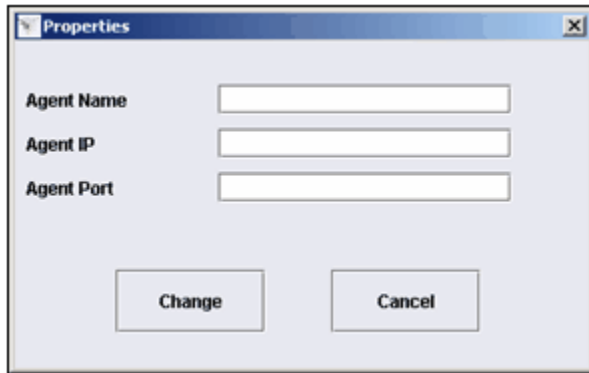


Select Restart. The Router, AM, MessageServer, OLAP servers will be restarted. Right-click Agent server link and select Edit > Configuration. The Configuration window is displayed.



Make the required modifications in the Log4J Config File, Log4J Logger Name, Connection Accept Time and Connection Queue Size fields. Click Change to save the modifications. Click Cancel to close the window without saving any changes. On clicking Change, the Agent server will restart automatically.

Right-click Agent server link and select Edit > Properties. The Properties window is displayed.

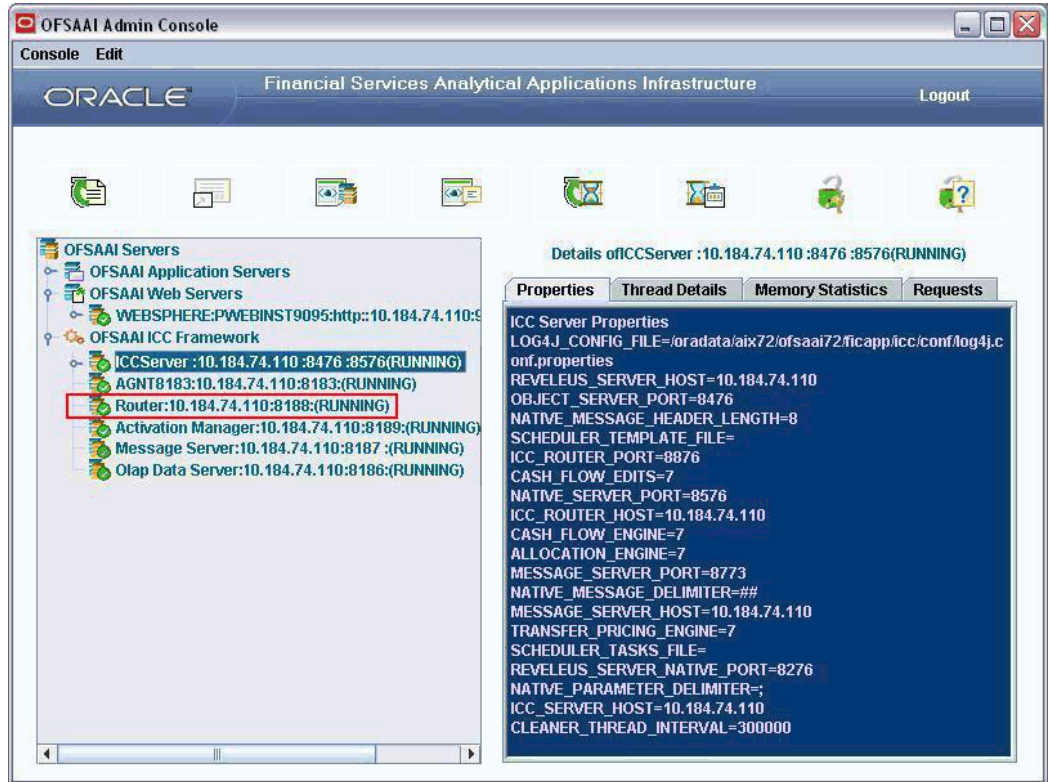


Make the required modifications in the Agent Name, Agent IP, and Agent Port fields and click Change to save. Click Cancel to close the window without saving.

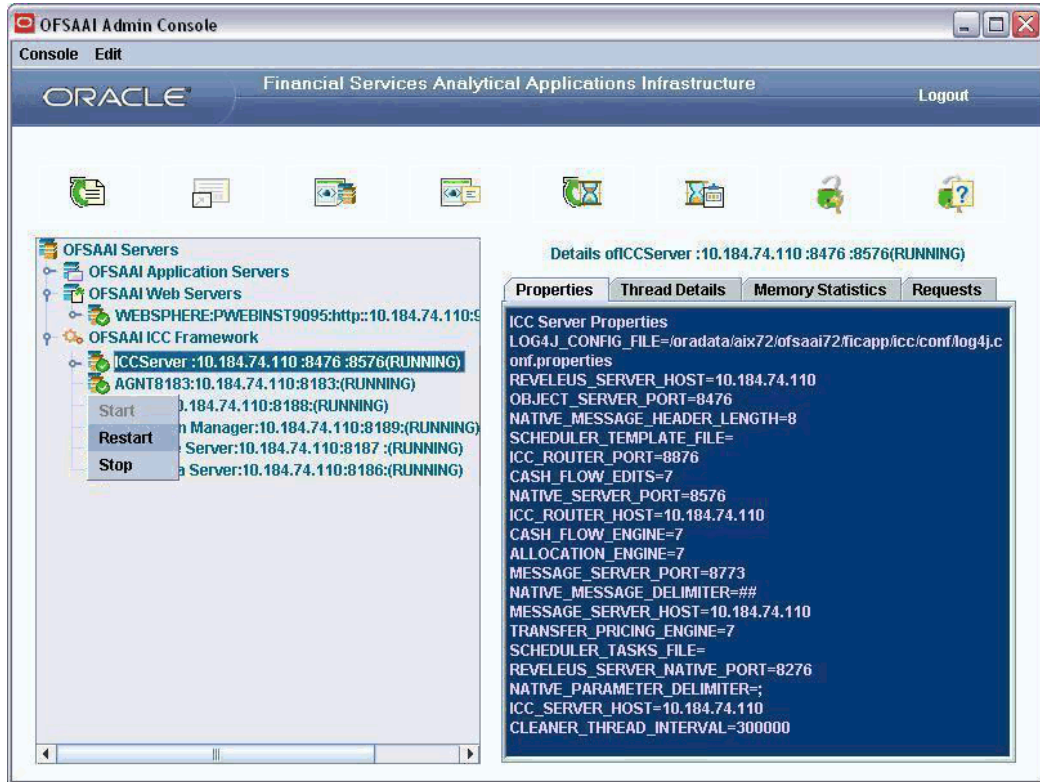
Note: Changing the Configuration or Properties for OFSAAI Agent Server will restart the Agent Servers.

Router Server

Select the Router Server link in the left pane. All the four tabs in the right pane: Properties, Thread Details, Memory Statistics and Requests will be blank.



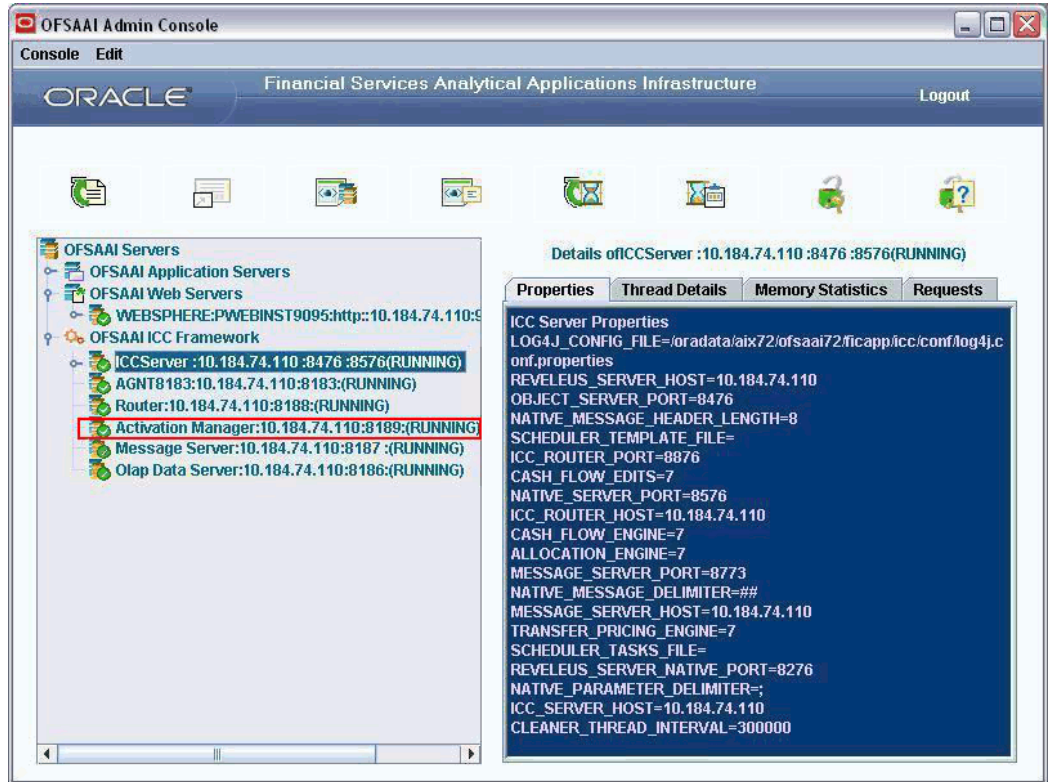
Right-click the Router Server link. The short-cut menu displays the Restart and Stop options.



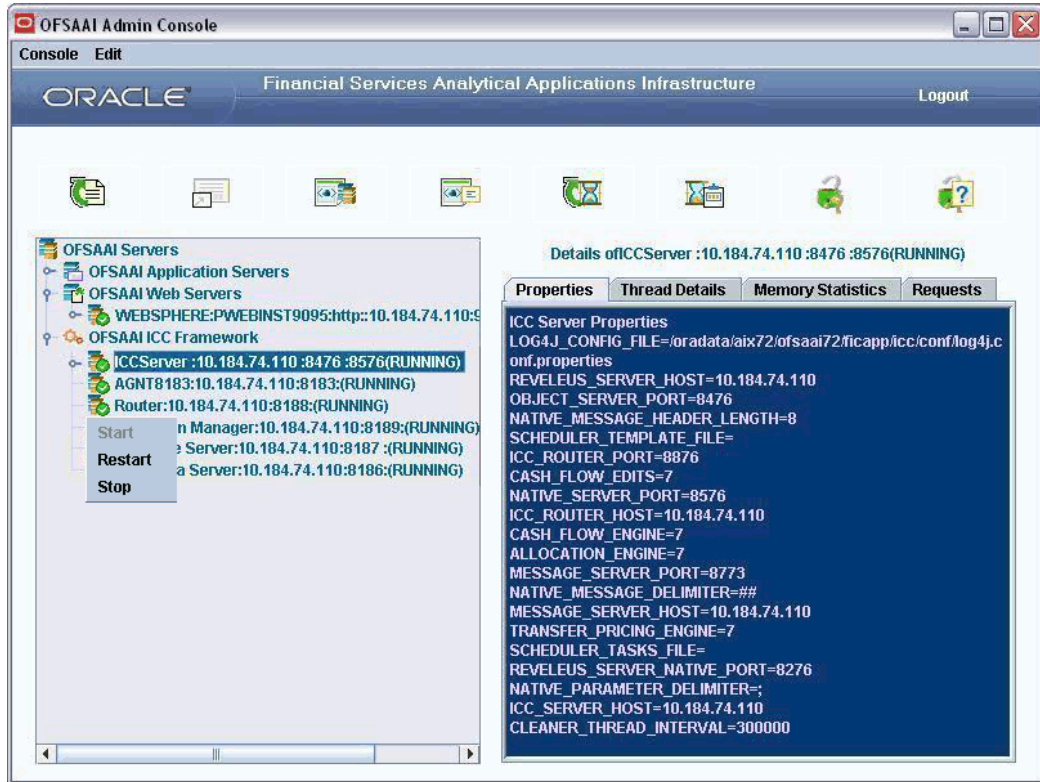
Select Restart. The Router, AM, Message and OLAP servers will be restarted. Selecting Stop will stop the Router, AM, Message and OLAP servers. If the Server is in a stopped state, the Start option will be enabled and Restart and Stop options will be disabled in the right-click menu.

Activation Manager Server

Select the Activation Manager Server link in the left pane. The Properties tab in the right pane will display AM info, Router info and Component details. The Thread Details, Memory Statistics and Requests tab will be blank.



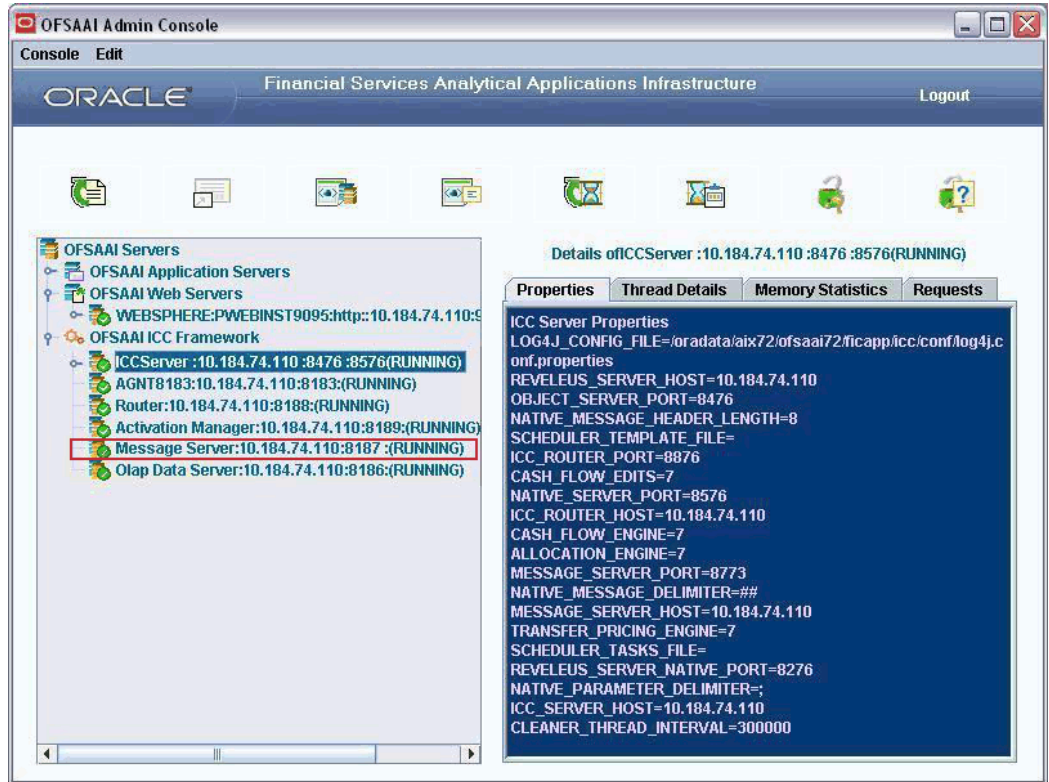
Right-click the Activation Manager Server link. The short-cut menu displays the Start, Restart and Stop options.



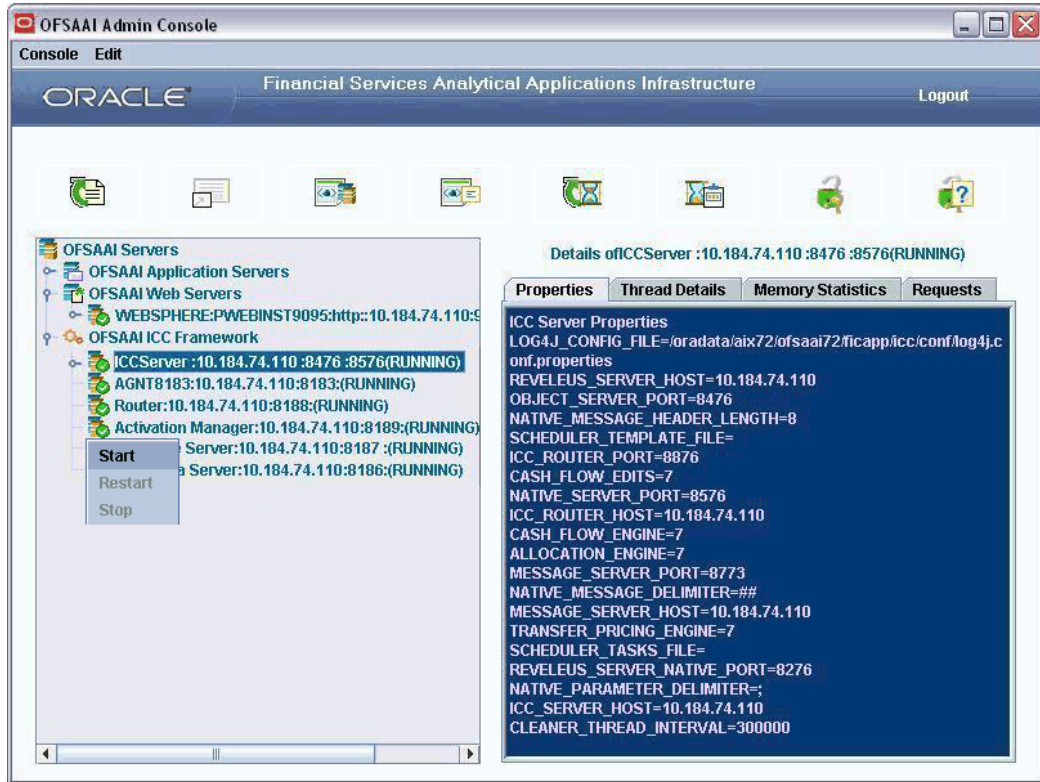
Select Restart. The Activation Manager, Message and OLAP servers will be restarted. Select Stop. The Activation Manager, Message and OLAP servers will be stopped. The Start option will be enabled only when the Server is in a stopped state. Then, Restart and Stop options will be disabled in the right-click menu.

Message Server

Select the Message Server link in the left pane. All the four tabs in the right pane: Properties, Thread Details, Memory Statistics and Requests will be blank.



Right-click the Message Server link. The short-cut menu displays the Start, Restart and Stop options.

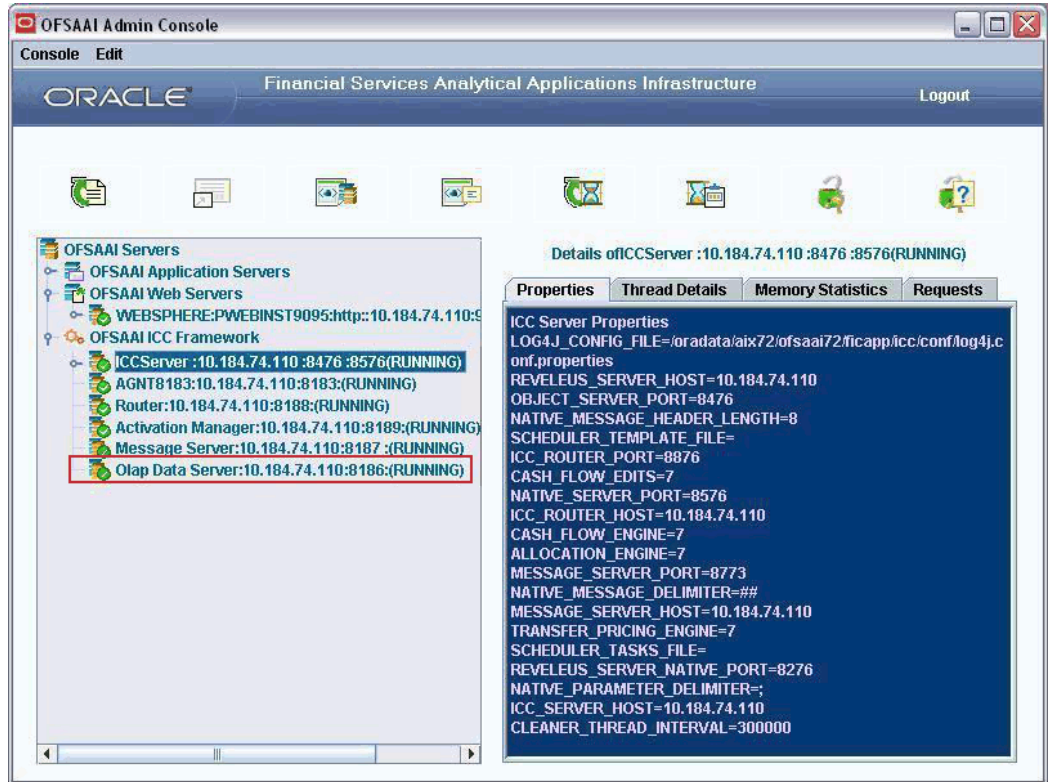


Select Start. Both Message Server and OLAP Server will be started. The Start option will be disabled and the Restart and Stop options will be enabled when the server is running.

Select Restart. Both Message Server and OLAP Server will be restarted. Select Stop. Both Message Server and OLAP Server will be stopped.

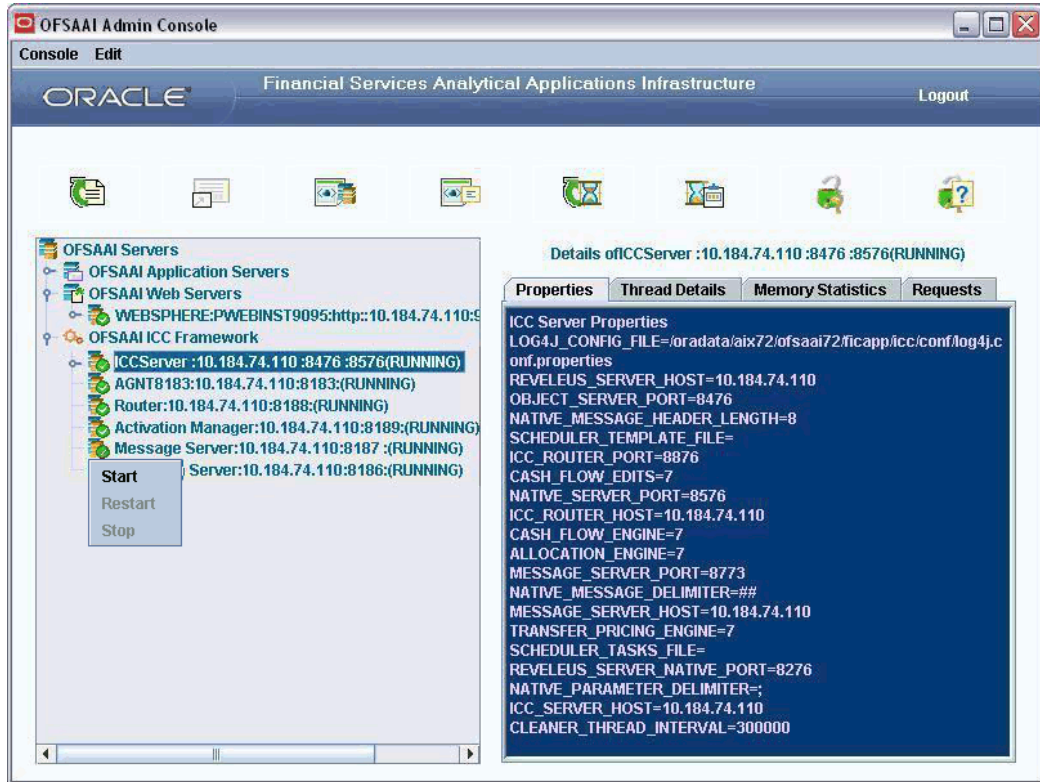
OLAP Data Server

Select the OLAP Data Server link in the left pane.



The Properties tab in the right pane will display the OLAP Data Server Details, Thread Pool Properties, Data Service instances, Log Level and MDB Details along with timeout requests and Garbage Collections. The Thread Details, Memory Statistics and Requests tabs will be blank.

Right-click the OLAP Server link. The short-cut menu displays the Start, Restart and Stop options.



Select Start. The OLAP server will be started.

The Restart and Stop options will be available only when the OLAP server is in a running state. Select Restart. The OLAP server will be restarted. Select Stop. The OLAP server will be stopped.

Console Menu

The menu bar of the OFSAAI Server Administrator Console has two options: **Console** and **Edit**

Select Console. The menu displays the following options:

- Refresh
- Change Password
- Change Security Question
- Launch Log4j Console
- Exit



These menu options have the same functionality as the respective buttons in the tool bar. Click the options for more details.

Click Exit to log off the OFSAAI Server Administrator Console and close the window.

Note: Clicking the LOGOUT button will also log you off the OFSAAI Server Administrator Console and close the window.

Edit Menu



The Edit menu displays the following options:

- Refresh Rate
- Upload DynamicServices.XML
- Upload LookupServices.XML
- Console Socket Timeout

These menu options have the same functionality as the respective buttons in the tool bar. Click on the options for more details.

Unified Logging in OFSAAI

It is possible to view the log files of OFSAAI at the various Service levels using the Unified Logging feature of OFSAAI. Logs can be generated for the various backend services such as AM, Router, Message Server, OLAP Engine, OLAP Utility etc. You can also configure the levels, type of logging required etc. This is done by making the required configurations in the Config.ini.

If no settings are specified, the log file will be displayed according to the settings given

in the default logger.

The following are the available configuration settings:

appendertype: This can be set as simple, rolling, console or null. If it is set as simple the log file will be generated as a Text file. If the appendertype is set as Rolling, the log file will be generated after clearing the existing contents. If the appendertype is Console, then log file will be generated for viewing in the OFSAAI Console. If the appendertype is Null, then no log file will be generated.

multithreaded: This can be either true or false. If it is set as true, after execution of a run, if any log file generation is going on it will wait for that to complete and then will generate the log for the execution. If multithreaded is set to false, after execution of a run, if any log file generation is going on, it will not wait for it to be completed. A New log file will get generated simultaneously.

path: The path where the log files are to be generated is to be specified here.

Example

/db2/REV70/Rev70AppDB/ficdb/log/default.log

level: The levels of log that is to be displayed can be set here. It can be info, warn, severe, all, or none. If level is set as info, the log file will contain the messages pertaining to Severe, Warn and Info. If it is set as warn, the log file will contain the messages pertaining to Severe and Warn. If severe is set, the log file will contain the messages pertaining to Severe. If it is set as all, the log file will contain all the messages pertaining to Severe, Warn, Info and Debug. If the level is set as none, none of the messages will be displayed in the log.

maxfilesize: This is to set the maximum size of the log file in bytes. Once the maximum size limit is reached, the log file will be truncated and no backup will be taken before truncating the file.

mode: The available options for mode is truncate and append. If mode is set as truncate, after execution of a run, the log file will open after truncating the existing contents. If the mode is set as append, after execution of a run, the log file will open by showing the statements appended to the existing contents. In both the cases, it will not generate new file for each execution.

formatter: The available formatting is either simple or xml.

pattern: The log file will be displayed depending on the pattern set. The available options are:

%d = date

%t = time

%c = component

%e = severity

%s = source

%l = line number

%m = message

Example

If pattern is set as %d, the beginning of the log will display the date.

xslpath: The path for the rev_log.xsl is to be specified here.

Example

/db2/REV544ST/Rev544AppDB/ficdb/conf/rev_log.xsl

backupfolder: = The path for the back up folder for the log files is to be given here.

Example

/db2/REV544ST/Rev544AppDB/ficdb/log/back_log/

Please contact OFSAAI Support for more information on the Unified Logging framework of OFSAAI.

OFSAAI Logging

The OFSAAI Logging feature provides you with module level logging. It is possible to view the log files for specific OFSAAI Modules such as UMM, SMS, ETL, PR2, DeFi etc.

The DynamicServices.xml and RevLog4jConfig.xml files have to be configured in order to achieve this. Based on the service specified in the DynamicServices.xml, and the service that is called in the RevLog4jConfig.xml, log file specific to that service is generated.

Please contact OFSAAI Support for more information on the module specific OFSAAI Logging feature.

Unified Metadata Manager

Introduction to Mart Builder

This chapter provides you with information of how the Mart Builder works and its processes and benefits. This information is essential to the business users who are instrumental in decision-making. It would also be useful to users who will be utilizing the **Active Portal** and **Insight** components of Oracle Infrastructure, to view reports/cubes and perform query and analysis.

Mart Builder

The **Mart Builder** creates data marts for the storage of logically grouped information within the warehouse infrastructure. The **Data Mart** contains subject-specific information. It can contain data related to customer relationship, sales, product, finance, and so on. A typical example would be a Customer Relationship Management (CRM) data mart containing customer information like name, age, gender, address, transaction details, product holding details, and so on.

Aggregated data marts can be of two types:

- **Relational Data Mart** – these are created as star or snowflake schemas on relational databases.
- **Multi-dimensional Mart** – these are cubes in multi-dimensional databases or OLAP Servers.

The mart builder process involves:

- Defining the Metadata.
- Defining Data Marts based on these metadata definitions.

To understand how a Mart Builder works, it is preferred that you understand the basics of the Data Integrator.

The **Data Integrator** component is the ETL tool, which extracts data from the source and loads it into the destination table. This process also involves transformations and data quality checks (please refer to the Chapter Data Integrator in the User Manual for more details).

Before getting into the process-flow of the Mart Builder, it is essential to understand the process of Business Metadata Management.

What is Metadata?

Metadata is the data you need to have about data to be able to use that data. You can use data, if you know how/where to find and if you understand what it means.

Metadata is the catalog of all the business terms familiar to business analysts and their mapping to tables and columns in the various data stores. Maintaining this metadata centrally helps achieve two objectives that's creation of multiple but consistent data stores in the warehouse eco-system and potentially help reduce redundancy by providing adequate information about the location of information.

The Unified Metadata Manager

Unified Metadata Manager function menu contains Import Model, Data Integrator Framework, Data Entry Forms and Queries, Business Metadata Management, Metadata Browser and Metadata Restore/Archive submenus.

Import Model submenu contains the process of uploading a business model.

Data Integrator Framework submenu contains the **Warehouse Designer, Post Load Transformation** and **Data Quality** options. Data Integrator Framework provides details of the physical structure of the data stores including the transformation of data from one source to the final destination data store. It is primarily related to the data Extraction, Transformation, and Loading (ETL) processes. It contains data about rules and processes associated with the transformation and quality rules set up in the Data Integrator module (please refer to the Chapter Data Integrator in the User Manual for more details).

Data Entry Forms and Queries submenu contains the data entry process. (Please refer to the Chapter OFSAA Data Entry Forms and Queries in the User Manual for the functionality and details)

Business Metadata Management submenu contains Aliases, Derived Entity, Data Sets, Business Measures, Business Hierarchy, Business Dimensions, Cubes, Computed Measures, Hierarchy Attribute and Business processors options. Business Metadata on the other hand, provides business analysts a catalog of data present in the data warehouse, as well as business definitions of this data. It contains business names and descriptions for columns, tables and groupings, query and report definition, join-specification tool settings, security definitions and the like.

Metadata Browser submenu contains the Metadata Browser option.

Metadata Restore Archive submenu allows you to backup and restore metadata. (Please refer to the Metadata Restore Archive User Manual for the functionality and details.)

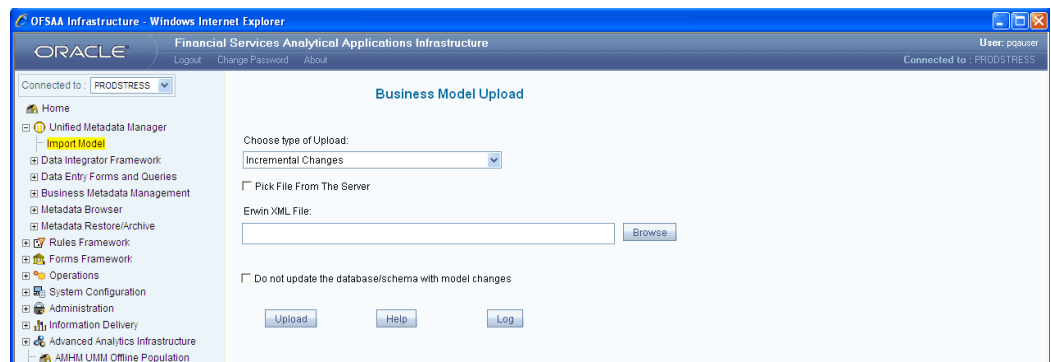
Users who are mapped to Business Analyst role, user can use Unified Metadata Manager (UMM) function.

The **Mart Builder** is based on the **Unified Metadata (UM)** framework that manages the Business/Technical metadata provided by the users. The Unified Metadata Manager (UMM) is generic metadata layer across all the data storage types including supported OLAP servers and database types. All key processes involved in building a data mart are metadata driven, thereby providing one consistent view of information to all users. The UMM allows administrators and users to customize metadata in a controlled manner, thus simplifying mart and warehouse construction and usage.

Business Model Upload

Importing the Business Model

With the Import business model, you will be able to choose the type of upload and specify the ERwin XML File Path.



Uploading a New Model

This is the only option available for the user whenever a model is uploaded for the first time for an information domain.

Incremental Changes

This option is available for all subsequent models-uploads, and captures all incremental changes made to the model. All changes made will be traced to the existing metadata for impact. Certain changes to the model are not allowed.

Complete Model Re-build

A complete model re-build will remove the existing model and treat the model being uploaded currently as a new model.

Click to select the type of load from the drop-down presented in the screen.

Use the Browse option or enter the **ERWin XML File Path** in the field provided.

If you are using a third party tool to create the database schema then you must select the option '**Do not update the database / schema with model changes**'. A warning message "Not updating the database may result in possible synchronizing issues at a later stage. Do you want to continue?" is displayed. Choosing this option will only create the metadata that can be viewed using the Metadata Browser.

Database consistency details are not maintained when this option is selected. Your DBA must ensure that the schema is updated thus ensuring consistency.

Note: If you choose the 'Do not update / schema with model changes' option the first time and later on and you wish to perform an Incremental Changes / Complete Model Re-build operation without this option, you must ensure that the schema has been updated by your DBA. It is recommended to use this option only in the event of co-existing with another ETL tool that manages your schema updates.

Click **Upload** to upload the model. A Notification message is displayed.

Note: If required, you may access the backup of the database XML, which is stored in the Erwin folder.

Click **OK** to acknowledge the completion notification. The Import Status is a percentage indicator that displays the process of uploading. On completion of this process, you will be notified of the status of the data model upload through a system message, which reads **Uploaded Data Model successfully**.

Click the **Log** button to view the log file. In the window that is displayed on clicking the Log button, click Open to view the log file or click Save to save it.

Click **Help** to access the help screen.

Business Metadata Manager

Functional Features

The Unified Metadata Manager (UMM) has a unique feature some of which are common to the Metadata definition processes. They are as follows:

Authorization

The **Authorization** feature of the **Mart Builder** enables the user to inspect and authorize various business definitions created by other users. This ensures adequate checks and balances on the definitions introduced in the warehouse. It also tracks dependencies of business definitions across the warehouse eco system to check for impact of change in any single business definition to another. As an example, a change in the definition of a

hierarchy can affect dimensions to which the hierarchy has been mapped as well as the multi dimensional mart that uses the hierarchy/dimension definition.

Roll Up

The **Roll Up** feature (option) presents data to the user at the total level i.e. it calculates measure values at all levels (intermediate and total). This feature intelligently thereby optimizes the time taken to view the information.

Example

In the following scenario, the total Sales (Measure) is calculated across Product (Dimension):

Measure –	<i>Total Sales</i>		
Dimension –	<i>Loan Product</i>		
	Home Loan	Personal Loan	Auto Loan
	1000	1500	500

If the **Roll Up** option is selected (please refer Creating a Business Measure), the total will be displayed as 3000. This is called the additive roll-up type.

In a non-additive roll-up, in case of the above example, the roll-up will be different based on the measure.

Measure –	Maximum Sales		
Dimension –	<i>Loan Product</i>		
<hr/>			
Home Loan	Personal Loan	Auto Loan	
1000	1500	500	

If the **Roll Up** option is selected, the maximum total will be displayed as 1500. Similarly, if the measure is minimum total, the total displayed will be 500.

Another example of a non-additive roll-up would be, a scenario where you want to calculate the total number of customers (Measure) across time (Dimension) which is displayed in the illustration below:

Measure – Number of Customers

Dimension – Time

Jan	- 1000 customers
Feb	- 2000 customers (which includes 1000 from Jan)

If the **Roll Up** option is selected, the total will be displayed as 2000. If the feature is deselected, then the total displayed will be 1000.

Mart Builder Process Flow

As mentioned earlier in this chapter, the mart builder process flow involves defining the metadata. The Metadata definitions required to build data marts are:

- Data Sets
- Measures
- Hierarchies
- Dimensions

One of the primary tools for analyzing of information to aid decision-making is the viewing of metrics of facts in multiple dimensions. Aggregated data stores are a very convenient way of seeing through the clutter of large detailed data to derive insights from information lying in granular form.

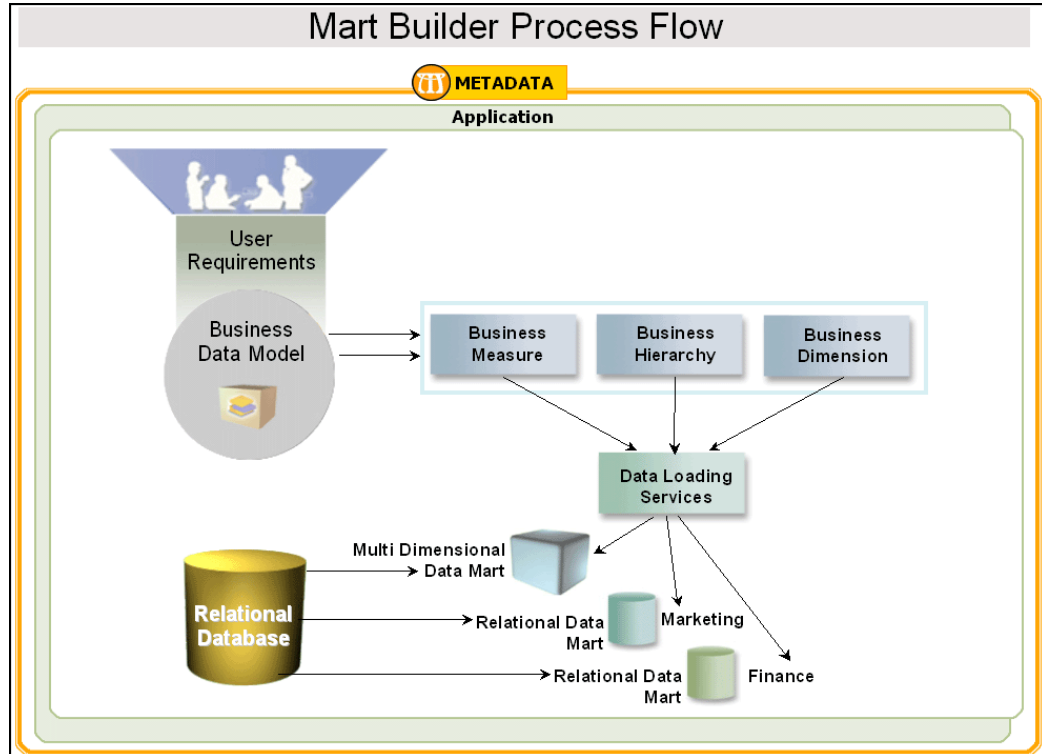
The creation of these multi dimensional views of information needs some fundamental definitions as mentioned below:

- The definition of facts or metrics or what are commonly called Measures.
- The definition of some additional classification structure to observe this fact at a larger granularity and these classification structures are what is called Hierarchies.
- The definition of some display constructs of the combination of facts and hierarchies, commonly called Dimensions. Though normally synonymous with hierarchies, dimensions can house multiple unrelated hierarchical constructs.
- The definition of a combination of measures and dimensions for the purposes of creating a new data store either as **Cubes** (in Multi Dimensional OLAP servers) or as Star Schemas in relational Marts.
- The definition of physical tables and joins conditions that are defined by the combination of facts and hierarchies used in an aggregated data store. These are conveniently called Data Sets that are used in any mart definition.

The following sections will cover each of these definitional ideas and its management in some detail to enable you to create the necessary definitions required to create marts in a combination of technology choices.

Note: All BMM metadata objects are identified through Codes accompanied with Short Descriptions. These fields are user inputs. Special characters other than '_' are not permitted while defining such metadata objects.

The **Data Mart** is defined based on the above metadata definitions. These data marts are used for analytics. A typical example of a multi-dimensional data mart is an analysis of number of customers acquired classified using different classification schemes (multi-dimensional analysis) – age, income, location and so on. This will enable the analyst to understand the metric number of customers in its multi-dimensional entirety – and answer questions like how many customers in the age group of 20 – 35 with income larger than USD 100,000 and living in New York, joined us as customers last month.



As Mart Builder Process Flow diagram depicts, based on the user requirements a Data Model is created.

A **Data Model** is a logical map that represents the inherent properties of the data. It defines the relationships between data elements and structures. The model shows data elements grouped into records, as well as the association around those records. A data model that is built to define and analyze data requirements needed to support the business functions of an enterprise is called the Business Data Model. These data requirements are recorded as a conceptual data model with associated data definitions.

The **Business Data Model** is uploaded into the database. Based on the data model, metadata definitions such as the Data Set, Measure, Hierarchy, and Dimensions are defined (the metadata definitions are explained separately in different chapters in this manual).

Based on the metadata definitions, **Relational Data Marts** are created based on Data Set based approach and a Cube based approach. Similarly, **Multi-Dimensional Data Marts**, popularly known as Cubes are created. These data marts are built for the purpose of query, reporting, and analysis.

Defining Aliases

Introduction

This chapter explains a table Alias and elucidates the process involved in its creation. The table Alias function allows you to create an alternate name for a table. This enables querying for varied analytic requirements.

What is an Alias?

An Alias in simple terms refers to an assumed name or pseudonym. OFSAA Infrastructure supports the definition of an Alias for a table.

Example

A table DIM_MEMBER could have aliases like BUYER and SELLER.

Note: The User should be mapped with the **Business Analyst** role and **View Alias** function, to have the Alias sub menu option to be displayed in the LHS Menu. Alias is supported **only** at an entity name and not at an attribute name.

Why Define an Alias?

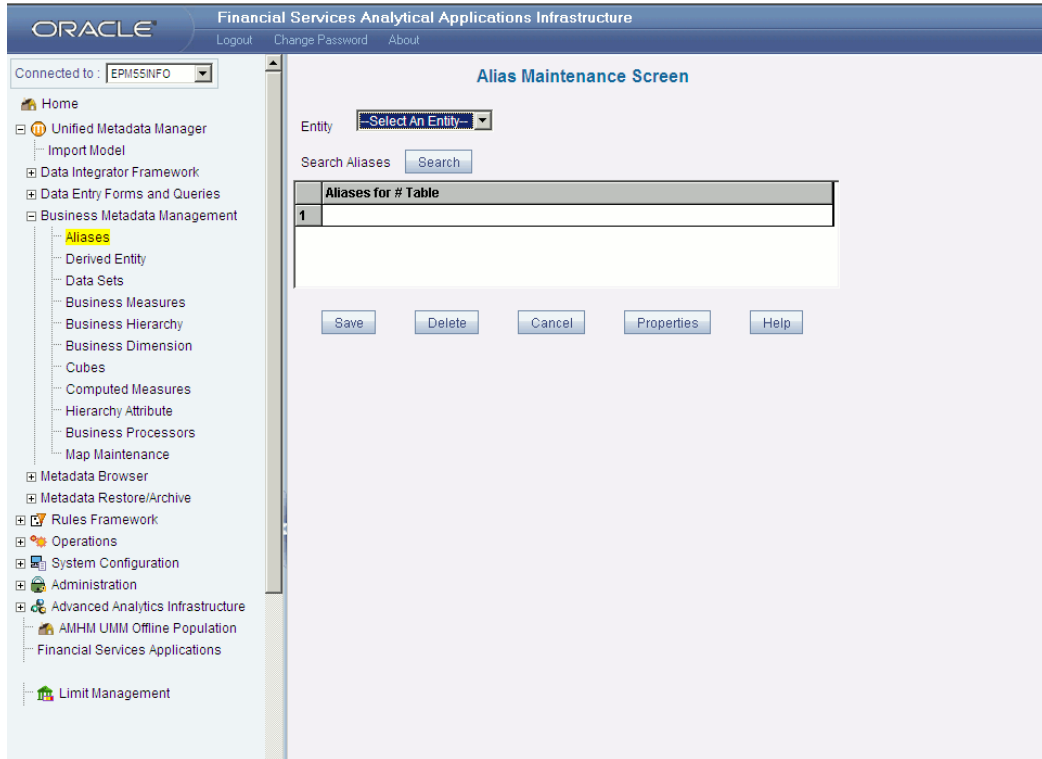
The creation of aliases will allow multiple joins from the fact table to the dimension table.

Defining an Alias

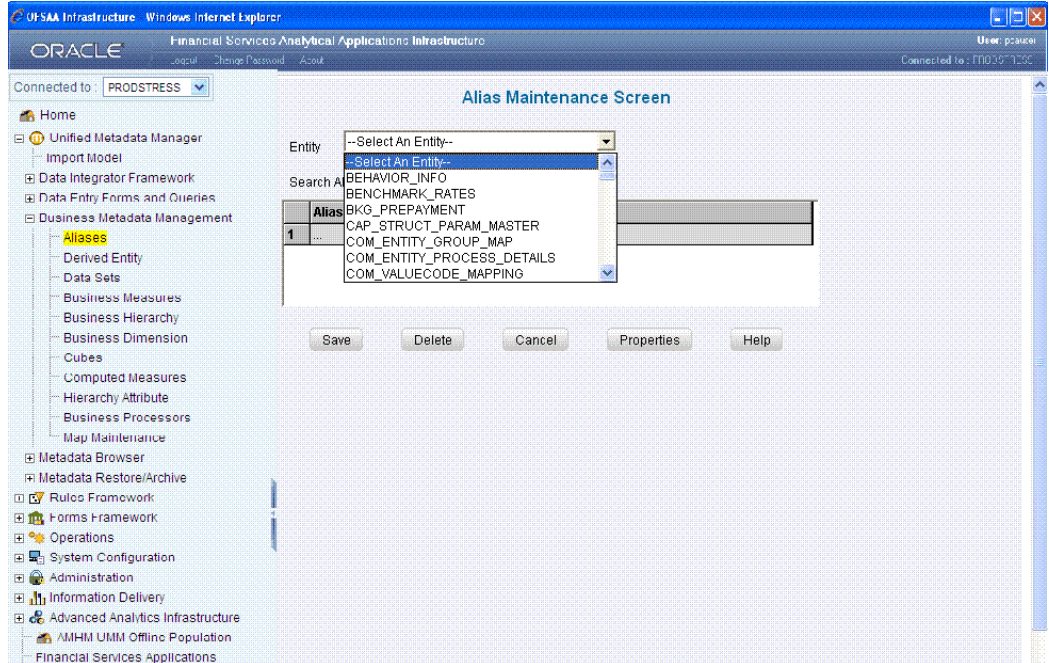
In the **Alias** screen, the user is required to select the table to which the user wants to define an Alias. The user has the option of selecting an existing Alias or defining a new one by entering the Alias name in the definition row.

Note: The User should be mapped with the **Add Alias** function to define new Alias definitions.

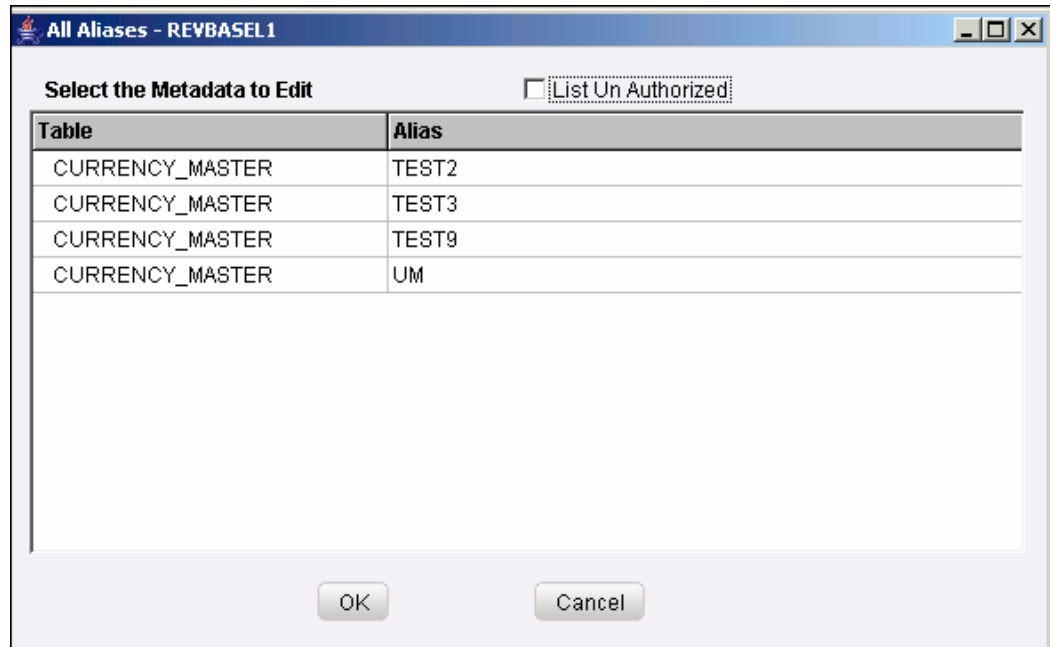
To create a table **Alias**, click Aliases option to open the screen.



Click **Entity** to open the drop-down list to view all the tables that are uploaded will be displayed. Select the table name.



Click **Search Aliases** to open the **All Aliases** pop-up to view Aliases for all the tables in the selected information domain.



Select (or) Check the **List Un Authorized** checkbox to view all the un authorized alias definitions. By default, the search dialog will display all the authorized alias definition codes.

In UnAuthorized state, the modified alias definitions and the alias definitions to be

authorized by the user will be displayed.

Note: In Unauthorized state, the users having Authorize Rights will be able to view all the unauthorized alias definitions.

Select an existing Alias by selecting it from the **All Aliases** pop-up and click **OK**. To exit the pop-up without selecting an Alias, click **Cancel**.

In the **Alias Maintenance** screen, double-click the **Definition Row** to enter Alias for the selected table.

Example

CUST_ALIAS1

CUST_ALIAS2

Aliases for DIM_CUSTOMER	
4	CUST99_SBSBSBS
5	CUST_ALIAS1
6	CUST_ALIAS2
7	-

Note: Oracle Infrastructure will not allow duplicate Alias names to be defined. The Alias should have a maximum of thirty characters in length; it can be alphabetical, numerical (only 0-9) or alphanumerical characters.

Saving a Table Alias

On creating a new table Alias, click **Save** to save the new Alias. A message will be displayed prompting you to confirm saving of the defined Alias. Click **Yes** to save the definition or **No** to discard the defined Alias.

Once the user defines an Alias for a table, the same information will appear in the Alias pop-up. All the entity drop-down lists throughout Oracle Infrastructure will display the newly defined Alias. The user can define all business metadata (measures, hierarchies, dimensions, data sets, measures, cubes and data marts) based on these aliases.

Example

If we have two tables – Dim_member and Fct_trade

Dim_member which holds the Member Information such as MemberID, Member Name contains the table data:

Member ID	Member Name
1	Member 1
2	Member 2
3	Member 3
4	Member 4
5	Member 5
6	Member 6

Fct_trade which holds the Trade data such as BMEM (Buy Member ID), SMEM (Sell Member ID), Amount (Transaction Amount) contains the table data:

BMEM	SMEM	Amount
1	2	1000
2	1	1000
3	2	1000
1	3	1000
3	4	1000
5	2	1000
2	4	1000
2	5	1000
4	1	1000
4	2	1000
1	2	2999

Measures (query on these tables) show number of transactions between members and amount transacted between members as result :

Amount	Trans Count	BUYERNAME	SELLERNAME
3999	2	Member1	Member2
1000	1	Member1	Member3
1000	1	Member2	Member1
1000	1	Member2	Member4
1000	1	Member2	Member5
1000	1	Member3	Member2
1000	1	Member3	Member4
1000	1	Member4	Member1
1000	1	Member4	Member2
1000	1	Member5	Member2

Note: Only a user who has rights to define a data set can define an Alias. An Alias can be defined only when the data model is uploaded. However, it is not necessary to define a data set in order to be able to define an Alias. If a table on which an ALIAS is defined is used in a cube definition, all metadata objects that are based on the underlying table must necessarily be defined on the ALIAS.

Deleting a Table Alias

You can delete an Alias by selecting it from the definition row and click **Delete**. The delete function permanently deletes the Alias so it is important that you check carefully if you really want to delete it. On clicking Delete, you are prompted to confirm deletion. Click **OK** to confirm deletion, but if you are unsure of deleting the Alias, click **Cancel**. You can delete an Alias only if you are authorized to do so or if you have created it.

- The User should be mapped to the **Delete Alias** function to delete

the Alias definitions.

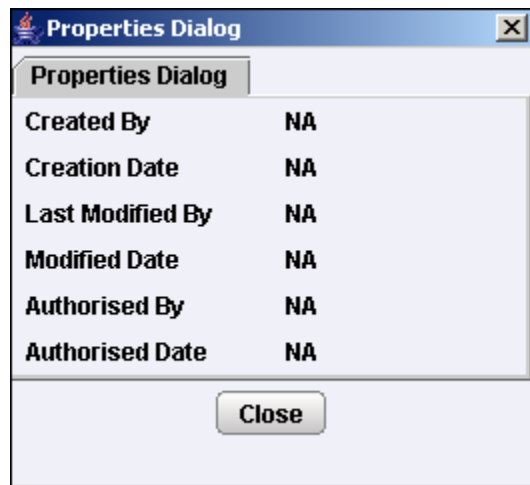
- A table could have multiple aliases defined on it. However, two tables cannot have the same Alias defined.
- An Alias can be deleted provided it is not used in any metadata definition like data set, hierarchy and so on.

To reset a defined Alias, click **Cancel**. Click Close to close the screen.

Properties

Click the **Properties** button. The **Properties Dialog** window will be displayed.

The window displays the name of the user who has created the definition along with the date and time of creation. It also displays the name of the user who has last modified the definition along with the date and time of the last modification, along with the authorizer name who authorized it and the data and time of authorization.



Click **Close** to close the **Properties Dialog**.

Opening Help for the Alias screen

To open help for the **Alias Maintenance** screen, click **Help**.

Defining Derived Entity

This section explains what a Derived Entity means and elucidates the process involved in its creation and modification.

Note: The User should be mapped to the **View Derived Entities** function to have the Derived Entity sub menu option displayed in the LHS Menu of the Oracle Infrastructure main screen.

What is a Derived Entity?

An entity is the table in which data is stored. Derived Entities are defined as entities that are populated through a series of data transformation processes using data from other source systems.

Why Define a Derived Entity?

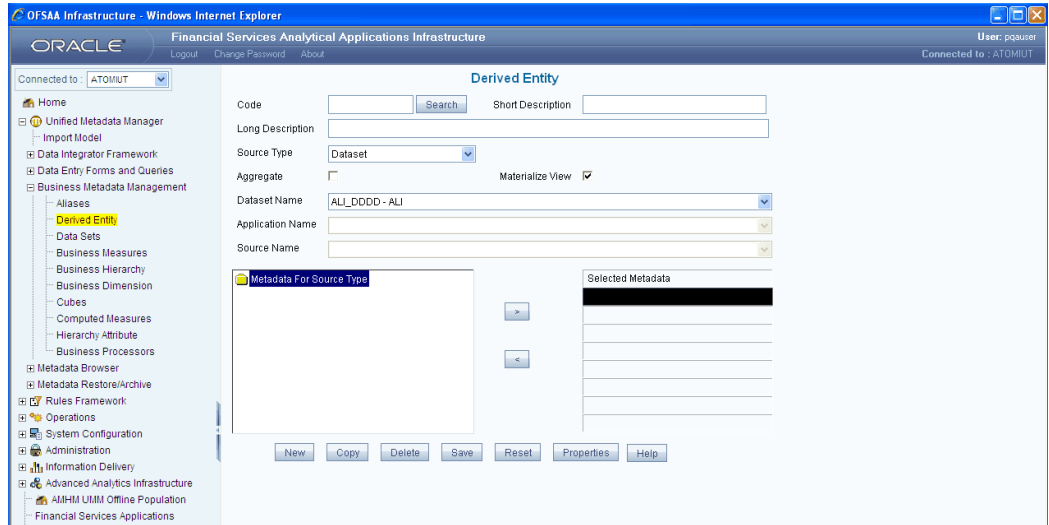
The Derived Entity function allows you to create an entity that is derived from an existing dataset or Source Application.

Once the user defines a derived entity, the same information will appear in all the Entity drop-down lists throughout Oracle Infrastructure. The user can define all business metadata (measures, hierarchies, dimensions, data sets, measures, cubes and data marts) based on these derived entities.

Creating a Derived Entity

In the **Derived Entity** screen, the user is required to enter a **Derived Entity** code and a description when defining it for the first time. You can also authorize a Derived Entity created by another user if you have the authorizer rights.

To create a Derived Entity, click **Derived Entity** option in the OFSAAI LHS menu to open the **Derived Entity** screen.

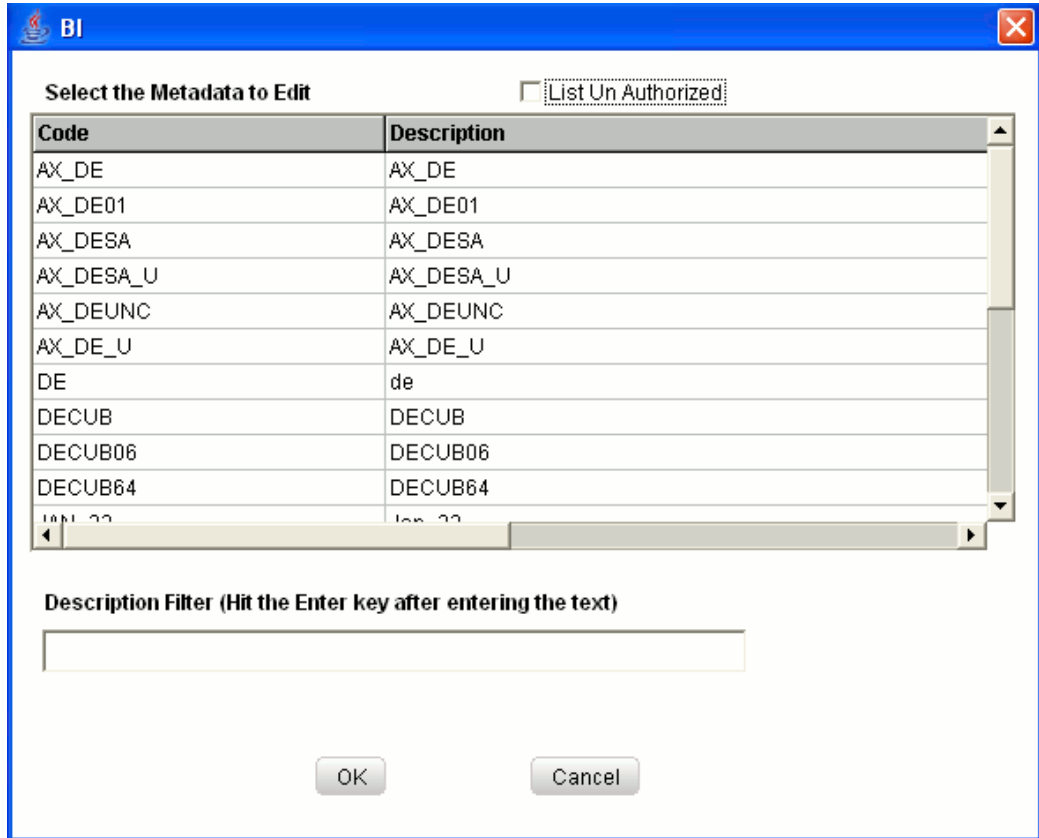


Note: The user should be mapped to the **Add Derived Entity** function to define a new Derived Entity. In case the user is not mapped to the **Add Derived Entity** function, the New button will be disabled.

Entering the Derived Entity Code

While creating a new Derived Entity, you need to define a distinct identifier or code. It is recommended that you define a code that is descriptive or indicative of the type of Derived Entity being created. The Derived Entity created here will be displayed in the Entities list in all the Oracle Infrastructure screens.

If you want to search any existing code, click the **Search** button beside the Code field. A pop up window will be displayed with the list of available Derived Entities. Double-click the code and the code and description value will be displayed in respective fields of the **Derived Entities** screen.



There is an option to search the derived entity using the Description filter. To do so, enter the description for the required Derived Entity in the **Description Filter** box and press **Enter**. The Derived Entity code that matches the search filter will be displayed.

Select the **List Un Authorized** checkbox to view all the un authorized metadata. By default the Search window will display all the authorized metadata definition codes.

In Unauthorized state, the modified metadata and the metadata to be authorized by the user will be displayed.

- The Code can be a minimum of one character and a maximum of 30 characters in length; it can be alphabetical, numerical (only 0-9) or alphanumeric characters.
- The Code CANNOT contain special characters with the exception of the underscore symbol.
- Once the Code and Short Description have been saved, it cannot be changed.
- You cannot use the following as either Codes or Short Description

for an Essbase installation:"\$\$\$UNIVERSE\$\$\$", "#MISSING", "#MI", "CALC", "DIM", "ALL", "FIX", "ENDFIX", "HISTORY", "YEAR", "SEASON", "PERIOD", "QUARTER", "MONTH", "WEEK", "DAY".

- In Unauthorized state, the users having Authorize Rights will be able to view all the unauthorized Metadata.

Entering the Short Description

Short descriptions of definitions are useful in understanding the content of the Derived Entity you are creating. Enter a **Short Description** based on the code you have defined for the Derived Entity.

Note: It is mandatory to enter a Short Description. The Short Description should be a minimum of one character and a maximum of **eighty** characters in length. The Short Description **CANNOT** contain special characters with the exception of the underscore symbol.

Entering the Long Description

Entering the **Long Description** is helpful when creating subject-oriented Derived Entity. It could show the user for whom the Derived Entity has been created by or any other details that gives a brief about the type/subject of the Derived Entity.

Note: The **Long Description** can be a minimum of one character and a maximum of **hundred** characters in length.

Selecting the Source Type

From the **Source Type** drop-down list, select the source based on which this derived entity is to be created. The two options available are **Dataset** and **Source Application**.

Aggregating the Data

Select the **Aggregate** check box to have the information aggregated for this Derived Entity definition.

Selecting the Dataset

If Dataset is selected as the Source Type, the **Dataset Name** field becomes enabled. Click Dataset Name field to open the drop-down list. The list of available datasets for the selected Information Domain will appear in the drop-down list. Select a Dataset from

this list.

Note: The Short Description of the Datasets as entered in the Datasets screen under Business Metadata Management will be reflected in the drop-down list.

Selecting the Application and Source

If Source Application is selected, the Application Name and Source name fields will be enabled.

Click the **Application Name** field to open the drop-down list. The list of available Applications for the selected Information Domain will appear in the drop-down list. Select an Application from this list.

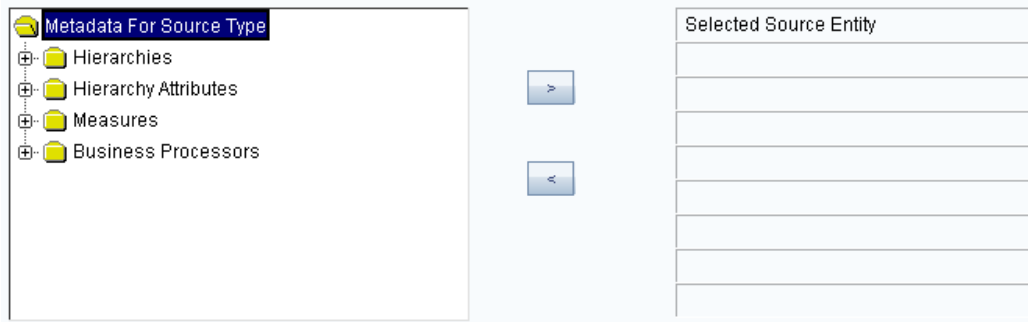
Depending on the Application selected, the related Sources will be displayed in the **Source Name** drop-down list. Select a Source from this list.

Note: Grant permissions should be given to the user for the particular Source Application in the Atomic schema to be able to define a Derived entity based on it.

If Materialized View checkbox is checked, a Materialized View will be created with the name as that of short description given for the Derived Entity.

Selecting the Metadata

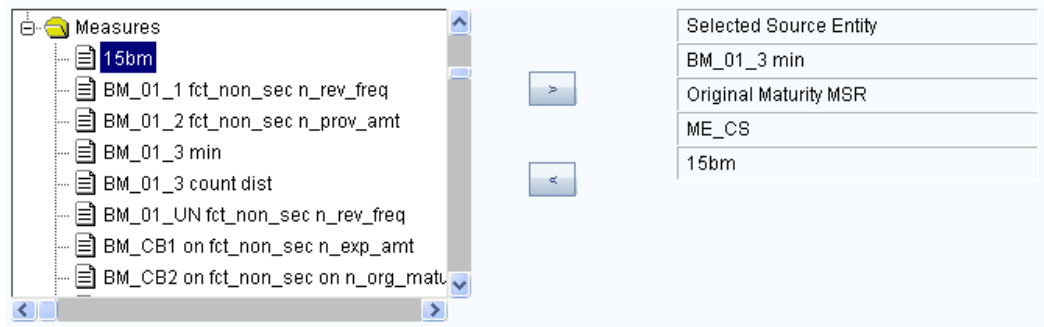
On selecting the dataset name or the Application and Source Names in the respective fields, the **Metadata for Source Type** is displayed in the left pane of the display grid.



Double-click on **Metadata for Source Type**. The list of Metadata that is defined on the selected Dataset or Application and Source is displayed.

Click the + sign to expand the folders. Select the required metadata for defining the Derived Entity and click >. The selected metadata will be moved to the Selected Metadata pane in the right.

To move a selected metadata back to the left pane, click <.

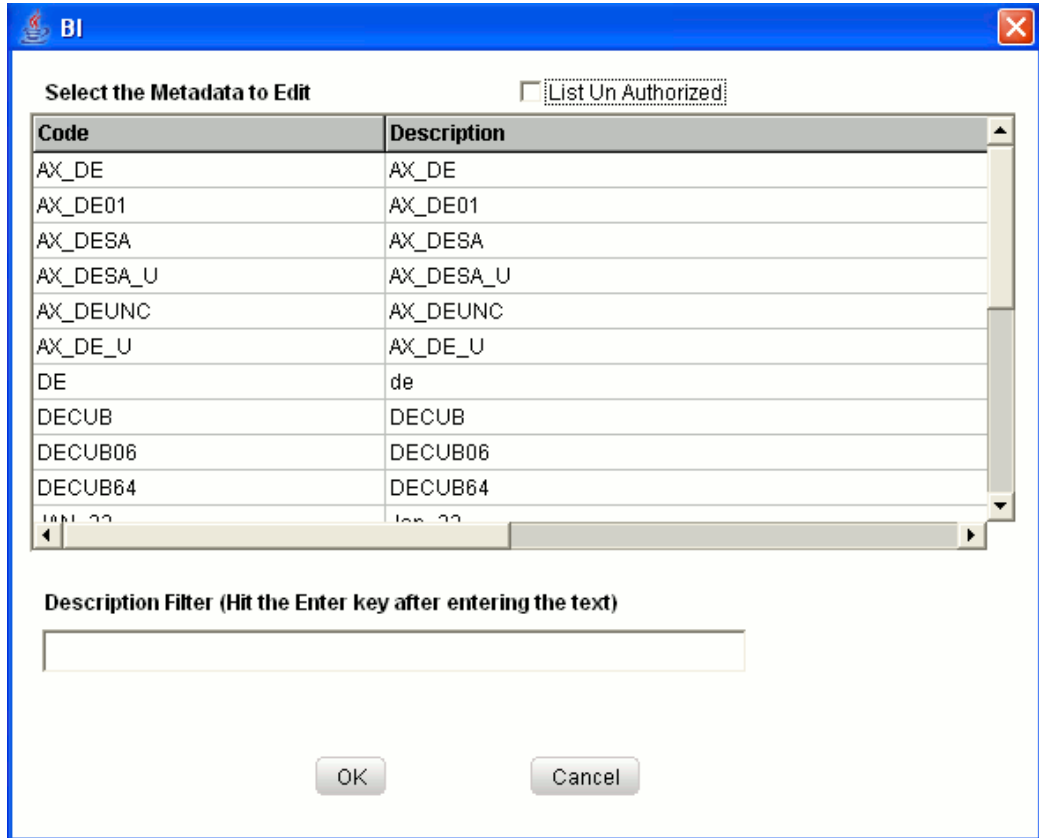


Click **Save**. A message window will be displayed saying Operation Successful. The saved **Derived Entity** screen is displayed with non-editable **Code** and **Short Description** fields.

Modifying a Derived Entity

There is an option to search the Derived Entity code. To do so, enter the description filter in the **Description Filter** box and click **OK**. The Derived Entity code that matches the search filter will be displayed

Note: The user should be mapped to the **Modify Derived Entity** function to edit/modify the Derived Entity definitions. When the Derived Entity definition selected for modification is in the un-authorized state (modified by another user) the definition cannot be modified.



Select the **List Un Authorized** checkbox to view all the un authorized Derived Entity definitions. By default the search dialog will display all the authorized Derived Entity definition codes.

In Unauthorized state, the modified Derived Entity and the Derived Entity to be authorized by the user will be displayed.

Note: In Unauthorized state, the users having Authorize Rights will be able to view all the unauthorized Derived Entity definitions.

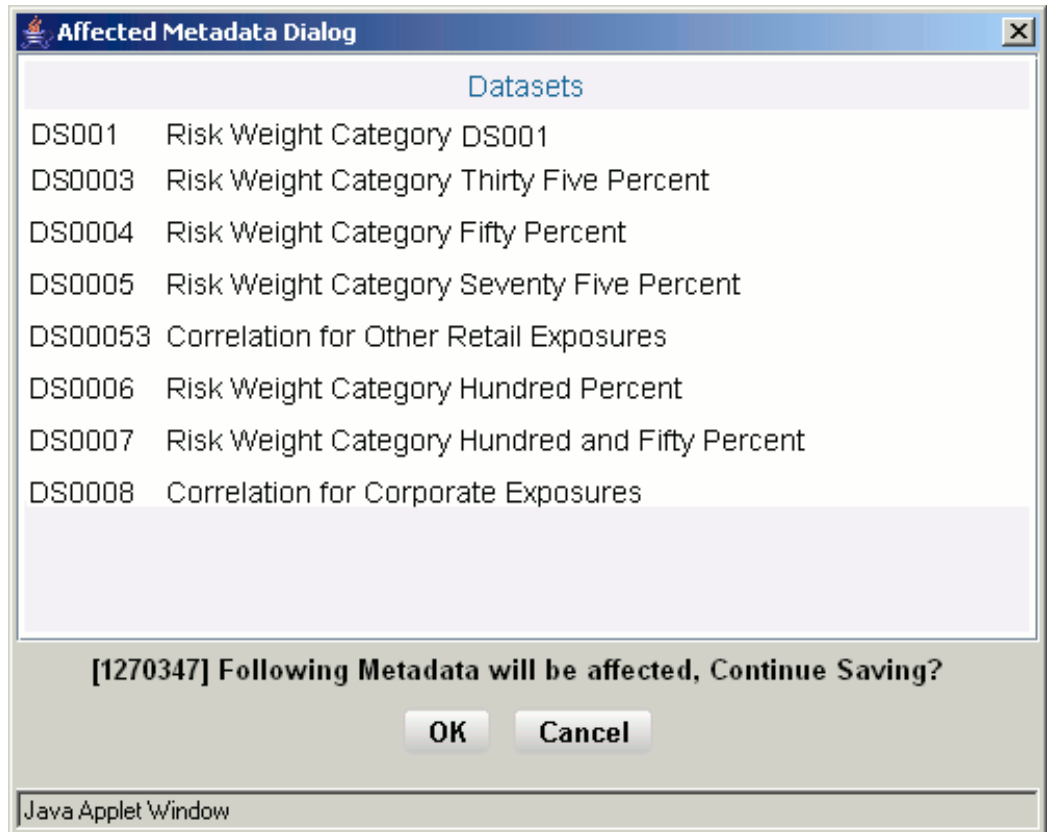
Select a Derived Entity code, which you want to modify and click OK. This will cause the pop-up to close and the selected Derived Entity will be displayed in the **Code** field in the **Derived Entity** screen. You can also double-click selected code and description to populate it in respective fields.

Click Cancel to exit the window without saving the selection.

The procedure of modifying a Derived Entity is similar to that of creating it. For more information, see *Creating a Derived Entity*, page 13-16 for the procedure. To create a new Derived Entity after you have modified an existing one, click **New**. This will display a new screen for you to create one.

Note: You cannot modify the Derived Entity Code or its Short Description.

When the user tries to modify a Derived Entity definition which is mapped to other metadata definition and save the definition, the **Affected Metadata Dialog** will be displayed.



The **Affected Metadata Dialog** displays all the base metadata / business definitions to which the selected Derived Entity definition is mapped.

Click **OK** to save the modifications made to the Derived Entity definition. Click **Cancel** to discard the operation.

Copying a Derived Entity

A feature that is common to the metadata definitions is that you have the option of copying details of one definition to create another. There is an option to search the Derived Entity code. To do so, enter the description filter in the Description Filter box and press the Enter key. The Derived Entity code that matches the search filter will be displayed. Click **Copy**. You will receive a confirmation message, which reads 'Copy Successful'.

Now you can change the Derived Entity **Code** and **Short Description** to create a new one. The **Copy** functionality is similar to the **Save As** functionality.

Note: The user should be mapped to the View Derived Entities, Add Derived Entity, and Modify Derived Entity functions to be able to copy the Derived Entity definitions.

Deleting a Derived Entity

To delete an existing Derived Entity, search the Derived Entity code to be deleted. To do so, enter the description filter in the Description Filter box and press the Enter key. The Derived Entity code that matches the search filter will be displayed. The details of the selected Derived Entity will be displayed in the **Derived Entity** screen.

Click Delete to delete the Derived Entity. The delete function permanently deletes the Derived Entity from the database so it is important that you check carefully if you really want to delete the Derived Entity. On clicking Delete, you are prompted to confirm deletion. Click OK to confirm deletion, but if you are unsure of deleting the Derived Entity, click Cancel. You can delete a Derived Entity only if you are authorized to do so or if you have created it.

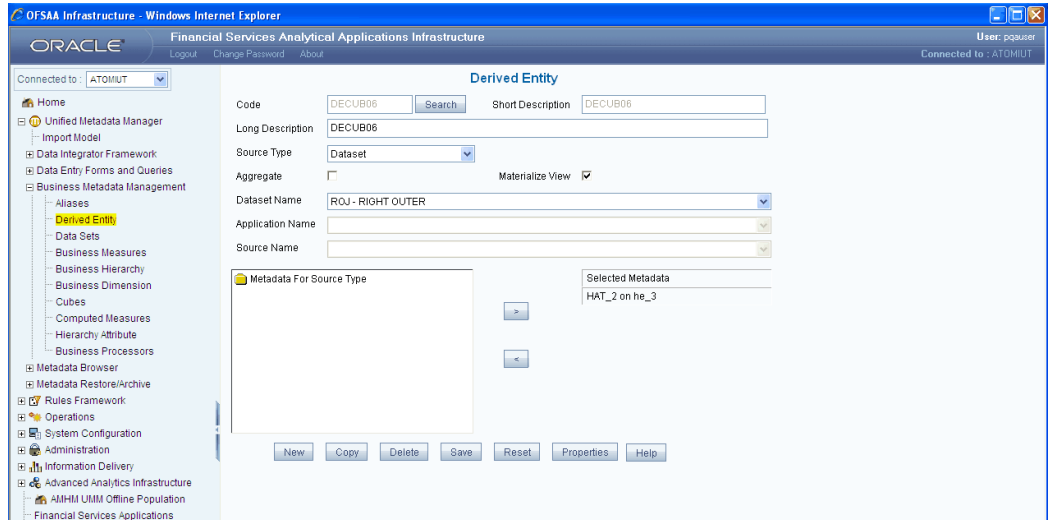
When the user clicks Delete, the Derived Entity definition will be marked for deletion and won't be accessible to the users. Then the deletion should be Authorized / Rejected by the authorizer. On Authorization the Derived Entity definition selected for deletion will be purged. On Rejection the Derived Entity definition selected will be reverted back to authorized state. On deletion the un-authorized Derived Entity definition will be deleted, and further modification to the definition will not be allowed before authorizing / rejecting the deletion.

Note: The User should be mapped to the View Derived Entities, Add Derived Entity and Delete Derived Entity functions to delete the Derived Entity definitions. When the Derived Entity definition selected for deletion is in the un-authorized state (modified by another user) the definition cannot be deleted.

Saving a Derived Entity

On creating a new Derived Entity or modifying an existing one, click **Save** to save the new Derived Entity or the changes.

You will receive a confirmation reading 'Operation successful'.

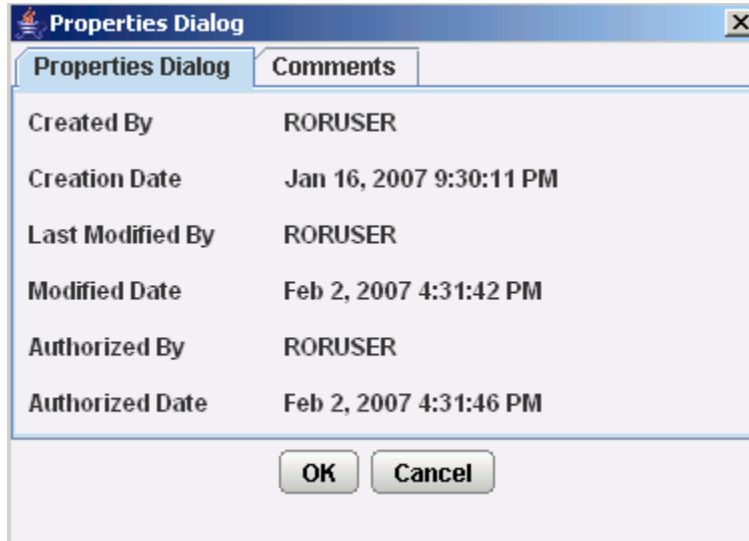


The saved Derived Entity screen is displayed with non-editable **Code** and **Short Description** fields.

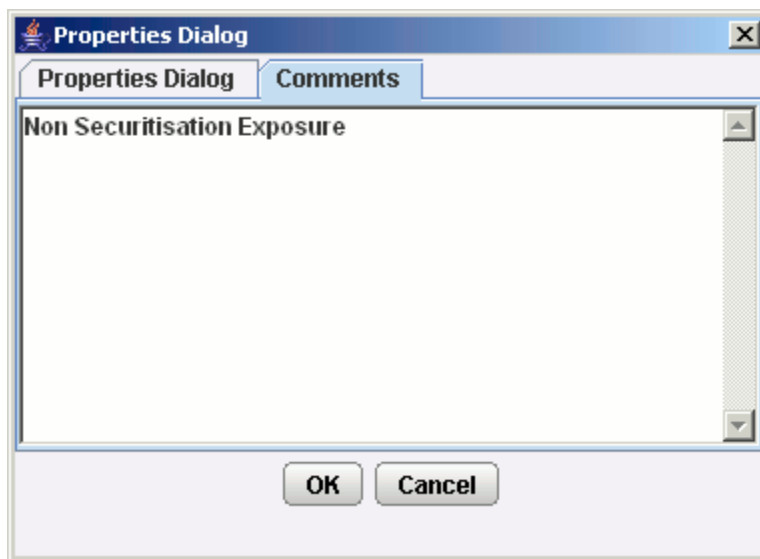
Note: If the Is authorization required for Business Metadata? check box is selected in the information domain maintenance screen during the information domain creation and if the user is assigned with the authorizing rights, the metadata definition created will be saved in the authorized state.

Properties

Click the **Properties** button to view the Derived Entity definition details. The **Properties Dialog** window will be displayed. The window displays the name of the user who has created the definition along with the date and time of creation. It also displays the name of the user who has last modified the definition with the date and time of the last modification, along with the name of the authorizer who has authorized it and the date and time of authorization.



Click the **Comments** tab provided in the **Properties Dialog** window to enter the comments about the created Derived Entity definition.



Click **OK** to save the definition with the comments given. Click **Cancel** to discard the operation.

Opening Help for the Derived Entity Screen

To open help for the **Derived Entity** screen, click **Help**. The help option will open the help specific to the Derived Entity screen but will also give you the option of selecting help on related topics.

Defining Data Sets

Introduction

This chapter explains what a **Data Set** means and elucidates the process involved in its creation and modification.

The Data Set function allows you to create data sets for a cube. It enables you to specify rules that fine-tune the information for querying, reporting, and analysis.

Note: The User should be mapped with the Business Analyst User Screen function and View Dataset function, to have the dataset sub menu option to be displayed in the LHS Menu.

What is a Data Set?

A Data Set is a group of tables whose inter-relationship is defined by specifying a join condition between the various tables. It is a basic building block for the creation of queries to be executed on the data warehouse for a large number of functions including creating marts as well as running queries and creating reports.

Example

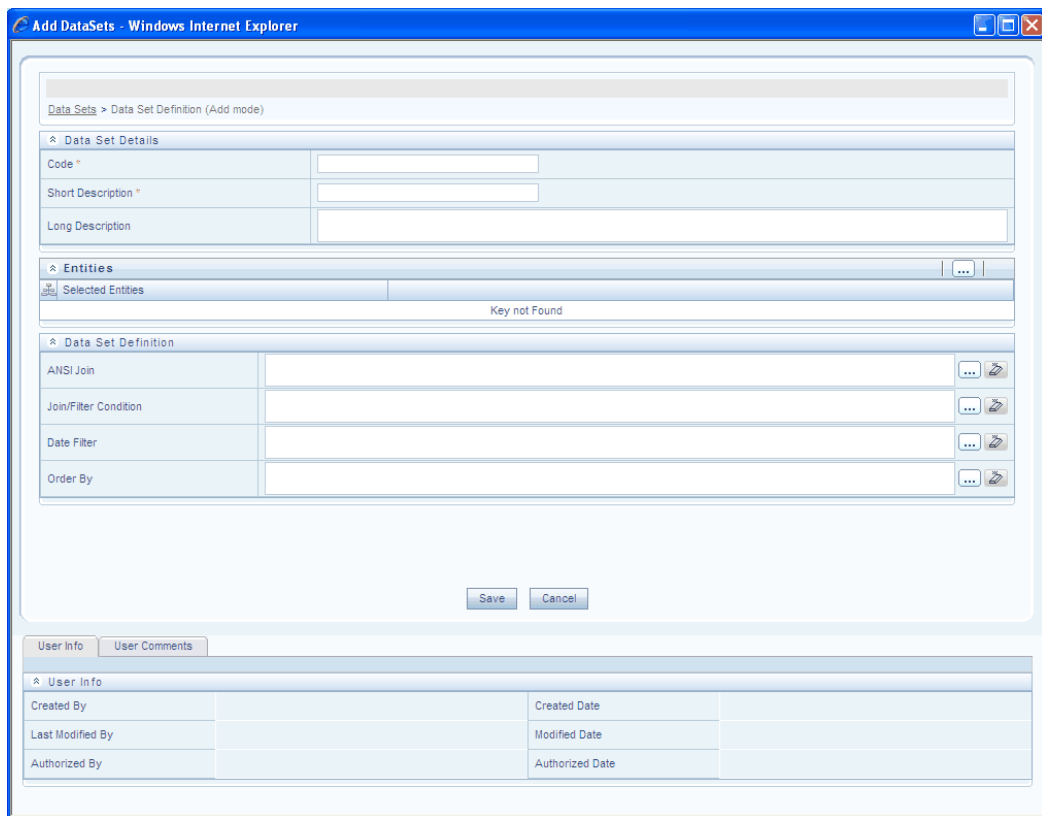
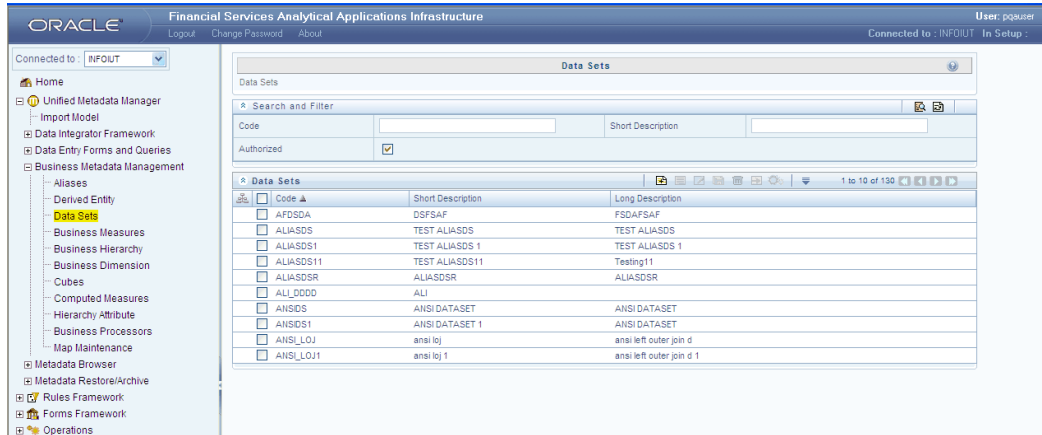
A user might want to analyze the Customer Relationship Management through various profiles of a customer as against the kinds of transaction and channels of transaction through which the actual transaction happened. This information is maintained in relational tables. In a typical Star Schema implementation of the relations, the Customer profiles like Age, Gender, Sex, Residence, Region and so on is maintained in Individual Dimension tables. Similarly, the transaction types, channels would also be maintained in a separate Dimension tables. The actual transaction performed by the Customers will be stored in a Fact table. The **Data Set** allows the users to collate all these tables with a valid join condition. The tables defined in the data set would form the **FROM** clause while aggregating for the Cube.

Why Define a Data Set?

The creation of data sets enhances query time by pre-defining the names of tables required for an operation like aggregation as well as provides the ability to optimize the execution of multiple queries on the same table set.

Creating a Data Set

Select **Data sets** option on the LHS. The Data Sets page opens. Click **Add** in the Data Sets panel. The **Add Data Sets** window opens.

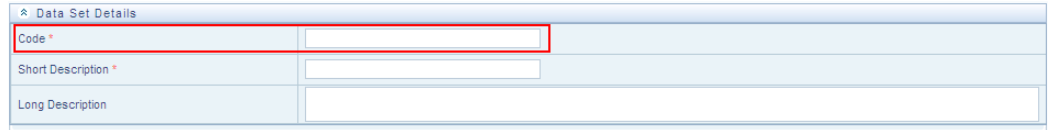


In the Data Set Details panel, you will find the below options:

- Code
- Short Description
- Long Description

Entering the Data Set Code

While creating a new Data Set, you need to define a distinct identifier/Code. It is recommended that you define a code that is descriptive or indicative of the type of data set being created. This will help in identifying it while creating relational and multi-dimensional data marts.



The screenshot shows a web form titled "Data Set Details". It has three input fields: "Code *", "Short Description *", and "Long Description". The "Code *" field is highlighted with a red rectangular border.

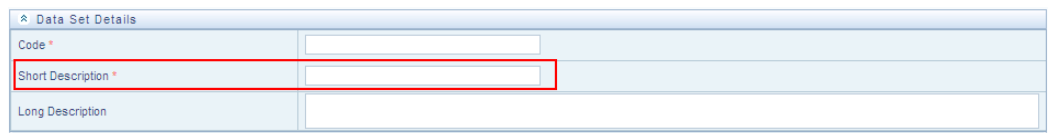
Example

CMPVAL_DS

- The Code should be a minimum of one character and a maximum of eight characters in length; it can be alphabetical, numerical (only 0-9) or alphanumeric characters.
- The Code cannot contain special characters with the exception of the underscore symbol.
- Once the Code and Short Description have been saved, it cannot be changed.
- You cannot use the following as either Codes or Short Description for an Essbase installation: "\$\$\$UNIVERSE\$\$\$", "#MISSING", "#MI", "CALC", "DIM", "ALL", "FIX", "ENDFIX", "HISTORY", "YEAR", "SEASON", "PERIOD", "QUARTER", "MONTH", "WEEK", "DAY".
- In Unauthorized state, the users having Authorize Rights will be able to view all the unauthorized Metadata.

Entering the Short Description

Short descriptions of definitions are useful in understanding the content of the Data Set you are creating. It would help if you could enter a **Short Description** based on the code you have defined for the Data Set.



The screenshot shows the same "Data Set Details" form. In this view, the "Short Description *" field is highlighted with a red rectangular border.

Example

Compensation Value DS

- It is mandatory to enter a Short Description.
- The Short Description should be a minimum of one character and a maximum of **eighty** characters in length.
- The Short Description cannot contain special characters with the exception of the underscore symbol.

Entering the Long Description

Entering the Long Description is helpful when creating subject-oriented Data Sets. It could show the user for whom the Data Set has been created by or any other details that gives a brief about the type/subject of the Data Set.

Data Set Details	
Code *	<input type="text"/>
Short Description *	<input type="text"/>
Long Description	<input type="text"/>

Example

Compensation Value DS

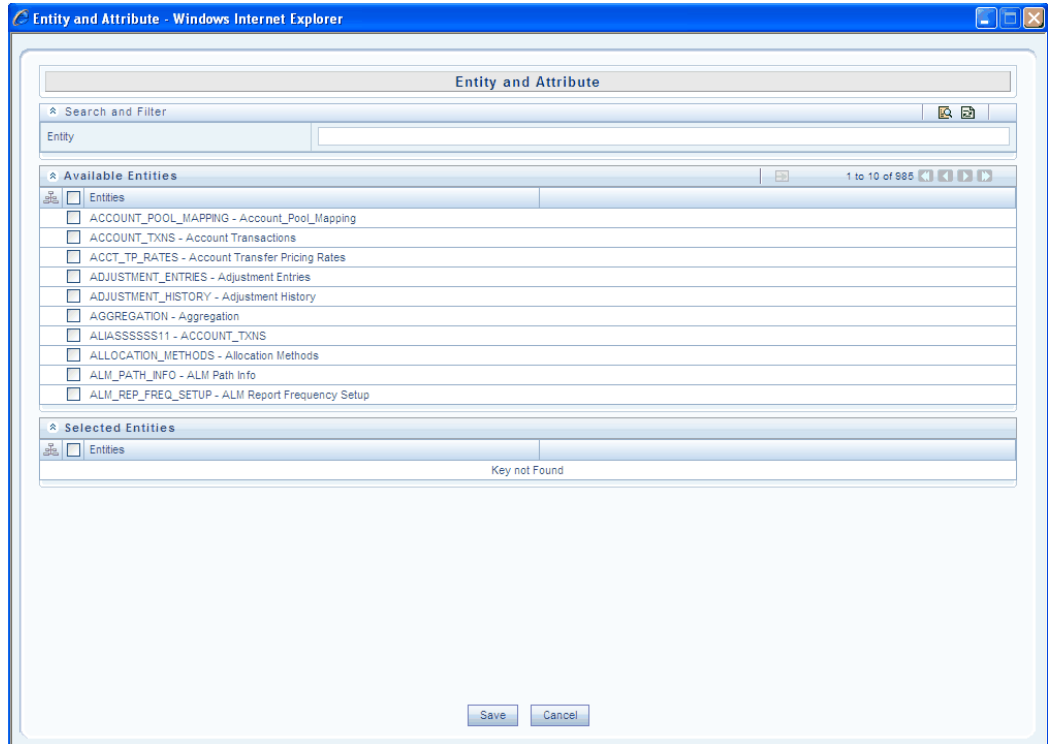
- The Long Description should be a minimum of **one** character and a maximum of **hundred** characters in length.

Choosing the Entities

The most important elements of a Data Set are the list of available tables. The **Entity and Attribute** window lists the table groups and all the tables that are a part of it. Click **Browse** in the Entities panel as shown below.

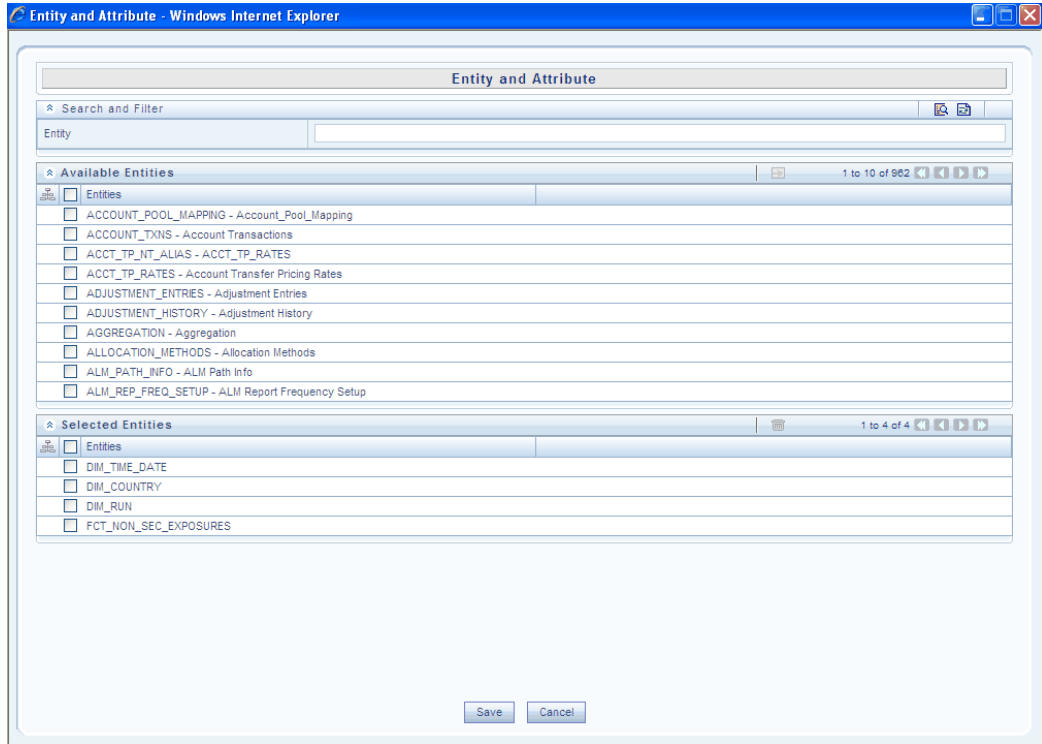
Entities	
Selected Entities	<input type="button" value="Browse"/>

The Entity and Attribute window opens.



You need to select the **Fact** table to which you want to join the dimension tables. You need to select one or more **dimension** tables, which you would want to link with a join condition to the fact table.

To select an entity/table, choose it from the **Available Entities** panel and click --> in the same panel. Choose the other entities/tables in the same manner. The selected Entities will be displayed in the **Selected Entities** panel.

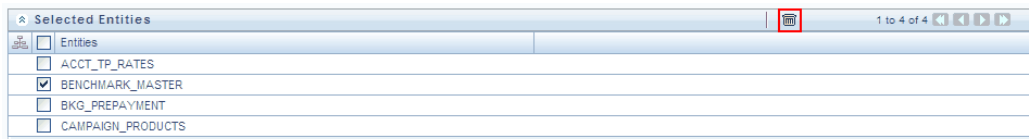


Example

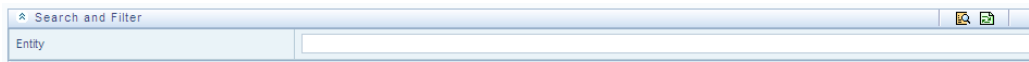
DIM_RUN

FCT_NON_SEC_EXPOSURES

If you wish to delete an entity you have selected from the **Selected Entities** panel, select the entity and click **Delete**.



You can also search/filter for an entity by entering the entity name in the Entity field and click **Search** in the **Search and Filter** panel.



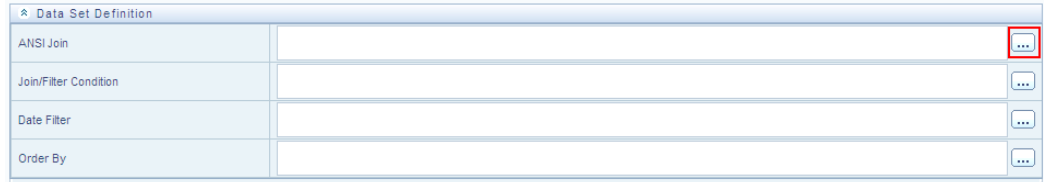
Searching for an entity

On clicking **Save**, the **Entity** will be populated in the Entities panel in the **Add Data Set** screen. If you click **Cancel**, any unsaved data will be lost.

Defining the ANSI Join Condition

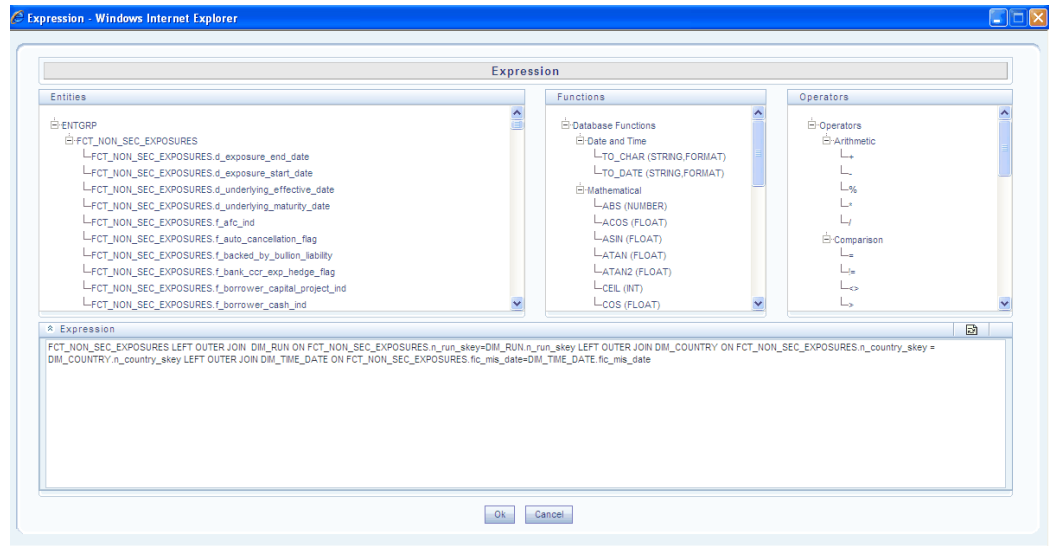
The **ANSI Join** clearly defines which set of data have been joined and what the relationships are. It also describes the exact operations to be performed while the sets of data are being joined.

In ANSI join, the join logic is clearly separated from the filtering criteria.



You can either type in the expression in the ANSI Join Condition field or click **Enter Expression** in the **Data Set Definition** panel under the **Add Data Sets** window.

The **Expression** window opens.



The **Expression** contains three panels and one field.

The Expression screen

Following explains the panels in the expression screen:

The Entities Panel

This contains the **Entities** folder with the list of tables that you selected from the **Entity Groups** folder. Double-click the Entities folder to view the selected dimension tables, namely, the **Product** and **Segment** tables.

Select the entity of the fact table to which you want join the dimension entities.

Example

FCT_NON_SEC_EXPOSURES.d_exposure_end_date

The Functions Panel

This contains functions that are specific to databases like Oracle and MS SQL Server. You can use these functions along with Operators to specify the join condition. The Functions categories are displayed based on the database types. Transact SQL is specific to MS SQL server, which consists of Date & Time, Math and System functions.

SQL OLAP is specific to Microsoft OLAP, which consists of Array, Dimension, Hierarchy, Logical, Member, Number, Set, and String functions.

SQL is specific to Oracle, which consists of Character, Conversion, Date and Numeric functions.

Note: It is not mandatory to specify a Function for a join condition.

The Operators Panel

This contains the **Operators** folder. Double-click the folder to view the list of available operators.

There are different categories of operators which are as follows:

Arithmetic – Arithmetic operators are +, -, %, * and /

Example

Plus sign -- (balance + interest_computed)

Minus sign -- (actual_balance – minimum_balance)

Comparison – Comparison operators are '=', '!=', '<>', '>', '<', 'IN', 'NOT IN', 'ANY', 'SOME', 'LIKE' and 'ALL'.

Example

= -- (account_status = O) IN -- account_status IN {O, A, C}

Logical – Logical operators are 'NOT', 'AND' and 'OR'

Example

'NOT' -- „NOT□ (account_status = O)

'AND' -- (actual_balance – inimum_balance) >1000 'AND' (actual_balance – minimum_balance) <2000

'OR' -- (actual_balance > 1000 'OR' <2000)

Set - Set operators are UNION, UNION ALL, INTERSECT and MINUS

Others – The Other operators are 'PRIOR', '(+)', '(' and ')'.
(+), (, and)

Now select the operator, which you want to use for the join condition.

Example

Comparison that is =

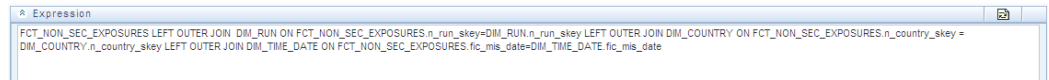
Now select the second entity from the Entities pane that you want to join with the first

entity that was selected.

Note: You can choose more than one dimension table to link to the fact table but it is not mandatory.

The Expression Field

The join condition that you specify will be shown in the Expression field.



After you have specified the join condition, click **OK** to save it and return to the Data Set screen. Click **Cancel** to exit the **Specify Expression** screen without saving the changes. Click **Clear** to reset the join condition that you defined. This is applicable only when you are defining a new expression. While modifying an existing expression, click **Clear** to return to the existing condition.

Note: In case of SQL Server/Esbase, Oracle/Esbase the definition of data set is important. Since multiple cubes can be built with a single pass, the underlying data set definition should be the same for all the cubes mapped in that Pass number. This will reduce the aggregation time considerably.

Defining the Join/Filter Condition

The main objective of creating Data Sets is handled by defining the **Join/Filter Condition**. Creating of data sets with tables linked with the join conditions help in hastening the query time. There are two ways to define the join condition.

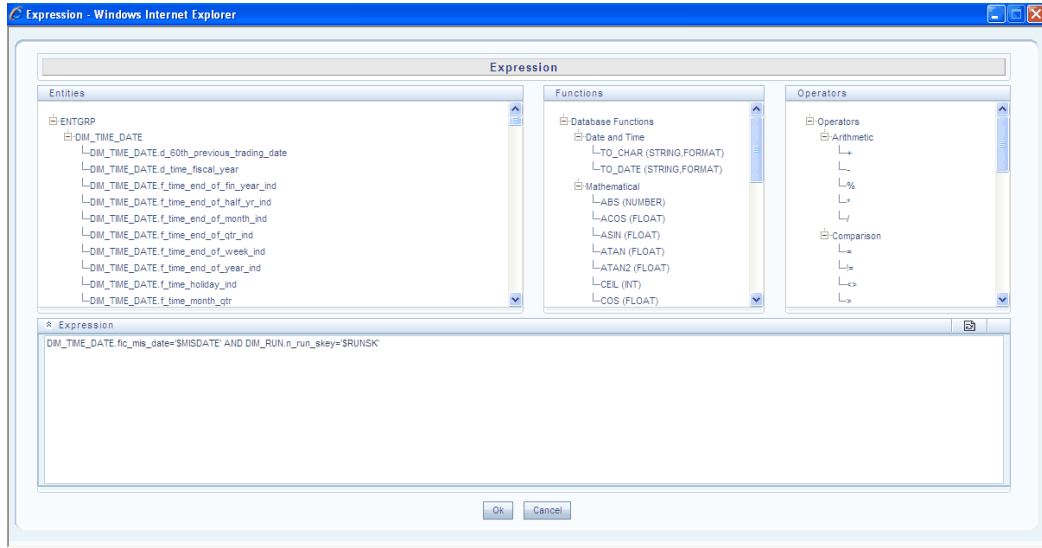
You can either type in the expression in the **Join/Filter Condition** field or click **Enter Expression** in the **Data Set Definition** panel under the Add Data sets window to open the **Specify Expression** screen to specify it.



Click the above button to reset the options.



The **Expression** window opens.



For more information, please see Expression, page 13-33 section on how to select options in this screen.

- The JOIN condition for a data set, in case of SQL Server/SQL OLAP combination cannot contain any other condition other than EQUI JOIN. This is a requirement by SQL OLAP.
- In case of SQL Server/Esbase, Oracle/Esbase the definition of data set is important. Since multiple cubes can be built with a single pass, the underlying data set definition should be the same for all the cubes mapped in that Pass number. This will reduce the aggregation time considerably.

Defining the Date Filter

To define the date filter for the selected data set, click **Enter Expression** against the Date Filter field in the Dataset screen to open the Expression screen.

For more information, please see Expression, page 13-33 section on how to select options in this screen.

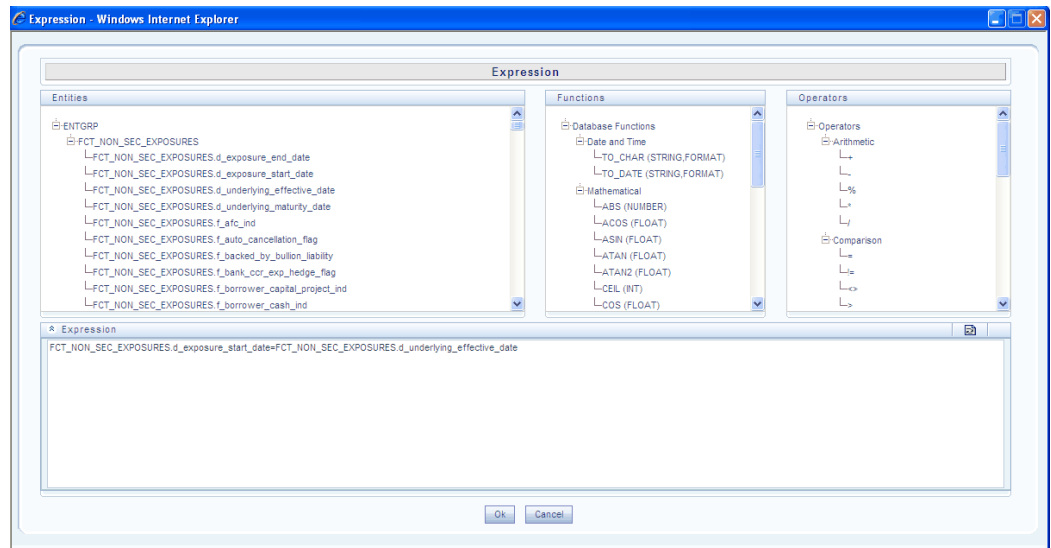


Click the above button to reset the options.

The cubes that are using the data set with the date filter specified will be cascaded with the date filter details as specified in the **Dataset Screen**. Select the operator you want to use for the date filter along with the condition and date.

Example

FCT_NON_SEC_EXPOSURES.d_exposure_start_date=FCT_NON_SEC_EXPOSURES.d_underlying_effective_date



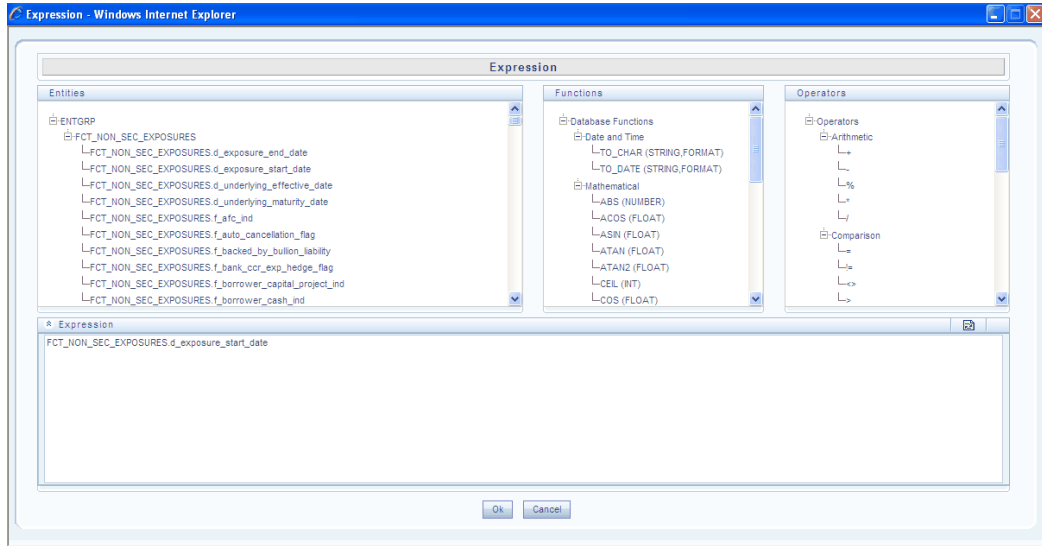
After you have specified the date filter, click **OK** and return to the Dataset screen. Click **Cancel** to exit the **Specifying Expression** screen without saving the changes.

Click **Reset** to reset the filter condition that you defined. This is applicable only when you are defining a new expression. While modifying an existing expression, click **Cancel** to return to the existing expression.

Defining the Order By Condition

You can enter the **Order By** condition or click **Enter Expression** to open the Specify Expression screen to where you can specify the Expression for the procedure. For more information, please see Expression, page 13-33 section on how to select options in this screen.

The Order By condition enables the user to sort the dimension data in order. The order of the Dimension nodes will be maintained only for **Business Intelligence Enabled Hierarchies**.

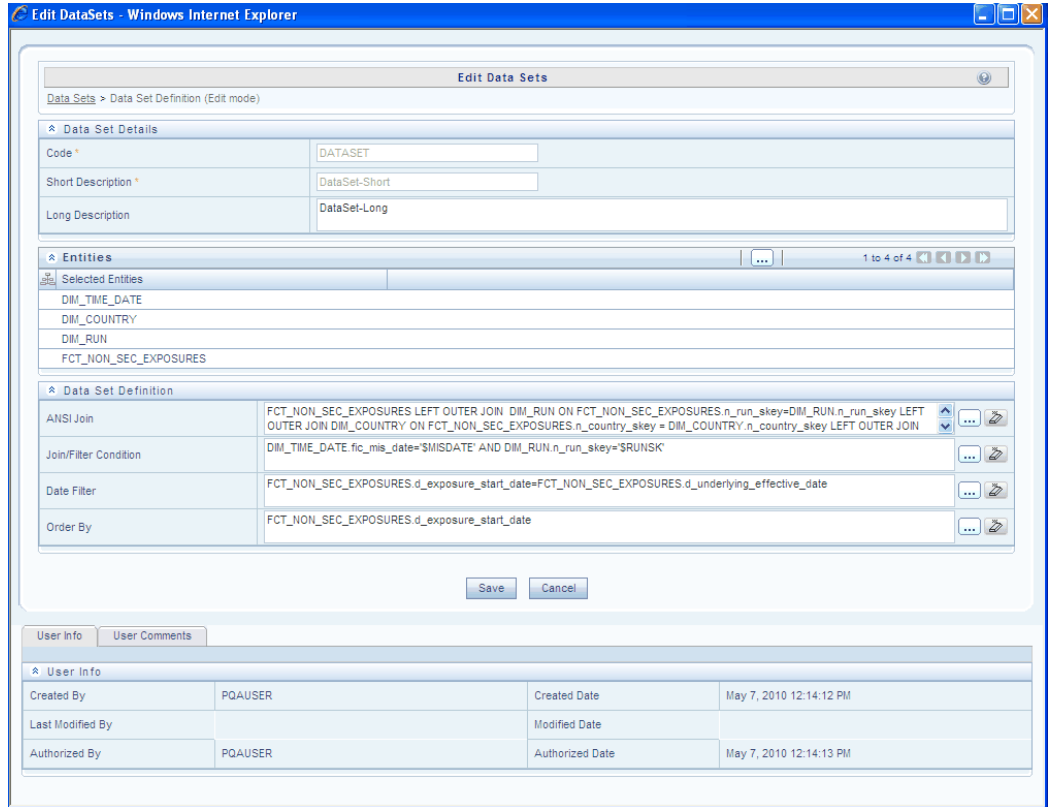


Click the above button to reset the options.

Note: The Order By condition is specific to the Essbase database.

Editing a Data Set

To Edit a Data Set, click **Edit** in the Data Sets panel. The **Edit Data Sets** window appears.



Note: You cannot edit Code and Short Description options. All other options are editable.

Copying a Data Set

A feature that is common to the metadata definitions is that you have the option of copying details of one definition to create another. There is an option to search the data set code. To do so, enter the description filter in the Short Description field and click **Search**.

The data set code that matches the search filter will be displayed. Click **Copy**. You will receive a copy confirmation message, which reads 'Copy Successful'. Now you can change the Data Set Code and Short Description to create a new one. You can also change add/remove tables to apply the join or order by conditions. In this, the Copy functionality is similar to the **Save As** functionality.

Example

DATA SET for SCHEDA Cube copied and renamed as **DatasetCube**

Note: The User should be mapped with the Add Dataset function to copy the dataset definitions. All fields are editable

Deleting a Data Set

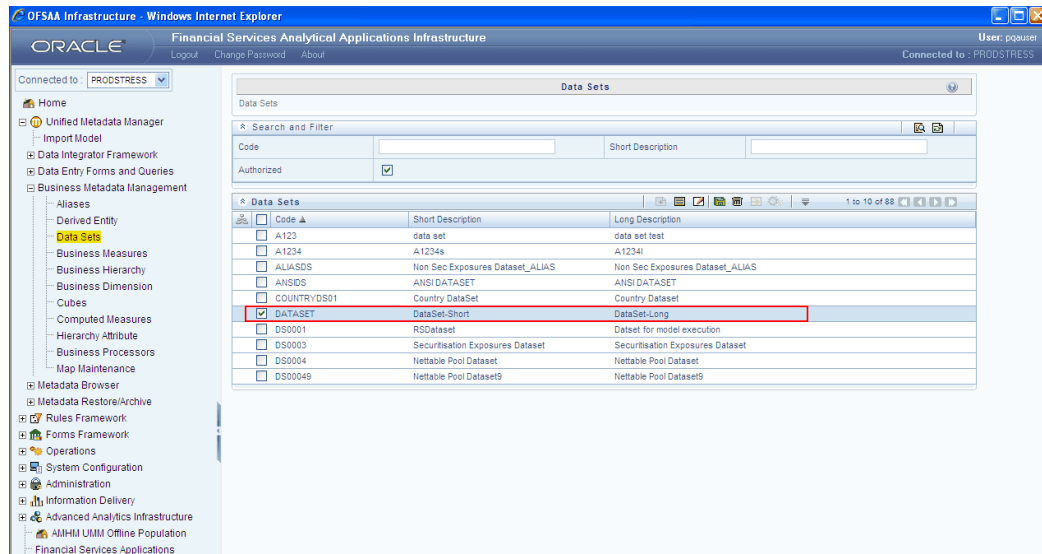
To delete an existing data set, search the data set code to be deleted. To do so, enter the description filter in the Short Description field and click Search.

The data set code that matches the search filter will be displayed. The details of the selected data set will be displayed in the Data Set screen. Click **Delete** to delete the data set. The delete function permanently deletes the data set from the database so it is important that you check carefully if you really want to delete the data set. On clicking Delete, you are prompted to confirm deletion. Click OK to confirm deletion, but if you are unsure of deleting the data set, click Cancel. You can delete a data set only if you are authorized to do so or if you have created it.

When the user clicks delete, the dataset definition will be marked for deletion and won't be accessible to the users. Then the deletion should be Authorized / Rejected by the authorizer. On Authorization the dataset definition selected for deletion will be purged. On Rejection the dataset definition selected will be reverted back to authorized state. On deletion the un-authorized dataset definition will be deleted, and further modification to the definition will not be allowed before authorizing / rejecting the deletion.

Saving a Data Set

On creating a new data set or modifying an existing one, click Save to save the new data set or the changes.



The saved Data Set screen is displayed with non-editable Code and Short Description fields in the Data Sets list.

The saved data set will be stored as the metadata definition based on which the relational / multi-dimensional data mart will be generated.

Defining Business Measures

Introduction

This section describes what a **Business Measure** is and explains the process involved in its creation and modification. The measure discussed in this chapter is the base/business measure.

The Business Measure function allows you to create measures based on the area of analysis. In creating a measure, you can choose the aggregation type and apply business exclusions based on your query/area of analysis.

What is a Business Measure?

A Business Measure is the data element that is useful to the user. It reflects a data element of relevance as well as the naming of this data element uniquely within the warehouse eco system. It typically implies aggregated information as opposed to information at a detailed granular level that is available before adequate transformations. Measures can be stored as base and derived/computed measures.

For more information, please see Defining Computed Measures.

A **base measure** refers to a measure where the aggregation is done directly on the raw data from the database. It represents some operation on the actual data available in the warehouse and its storage in its aggregated form in another data store. This is different from metrics that is not stored in physical form, but as functions that can be operated on other measures at viewing time. The choice of base or computed measure is based on the user's requirement of a design issue on storage optimality as it is on query response speeds desired. These functions defined on other measures are called **Computed Measures** and dealt with separately. It is the metric definition like amount of sales or count of customers.

Example

Number of existing customers or balance of amount from existing customers is a base measures.

Note: The User should be mapped with the Business Analyst User Screen function and View Measure function, to have the Business Measures sub menu option to be displayed in the LHS Menu.

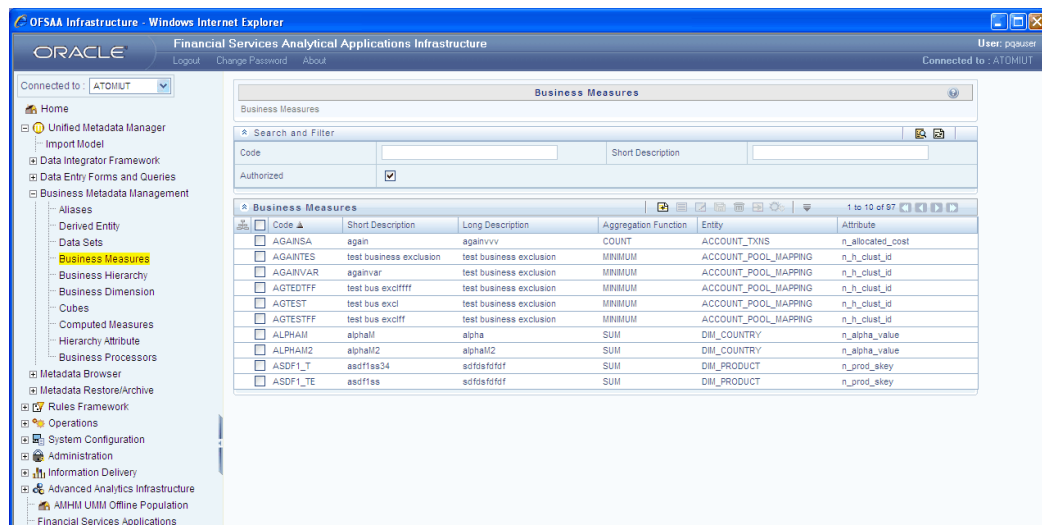
Why Define a Business Measure?

A business measure refers to a unique definition of a fact in the data warehouse that can be used in defining views of the data in the warehouse. When business measures are combined with hierarchies of relationships, they can be used to create various multi-dimensional stores of information in multiple technologies (OLAP servers and RDBMS). A business measure represents a unique definition element and can be reused in defining many multi dimensional stores and query using the various modules of

Creating a Business Measure

The **Measure** screen allows the user to create base measures. The user is required to enter a Measure code and a description when the user is defining it for the first time. The user can enter a short and long description for the measure. Based on the aggregation function that the user selects, the data type is displayed. The user can authorize the measure based on the authorization rights and specify the roll up and is hidden options (which will be dealt with in detail later in this chapter). The user can choose the entity (table) and attribute (column) to which the user wants to define a filter/condition.

To create a measure, click the Business Measures option to open the screen.



Note: The User should be mapped with the Add Measure function to define new Business Measure definitions.

Search and Filter

You can search for a code by entering the code name and click on **Search**.

Authorized check box

If this check box is selected and if the user is assigned with the authorizing rights the metadata definition created will be saved in the authorized state.

Adding a Business Measure

Click **Add** the button in the Business Measures panel. The **Add Business Measures** window will be displayed.

Entering the Measure Code

While creating a new Measure, you need to define a distinct identifier/Code. It is recommended that you define a code that is descriptive or indicative of the type of measure being created. This will help in identifying it while creating multi-dimensional data marts.

Example

BM Age

- The Code should be a minimum of one character and a maximum of eight characters in length; it can be alphabetical, numerical (only 0-9) or alphanumeric characters.
- The Code cannot contain special characters with the exception of the underscore symbol. Once the Code and Short Description have

been saved, it cannot be changed.

- You cannot use the following as either Code or Short Description for an Essbase installation: "\$\$\$UNIVERSE\$\$\$", "#MISSING", "#MI", "CALC", "DIM", "ALL", "FIX", "ENDFIX", "HISTORY", "YEAR", "SEASON", "PERIOD", "QUARTER", "MONTH", "WEEK", "DAY".

Entering the Short and Long Description

Short or Long descriptions of definitions are useful in understanding the content of the Measure you are creating. It would help if you could enter a Short Description based on the code you have defined for the Measure.

Short Description *	BM Age
Long Description	BM Age Long

Example

Outflows – BM Age

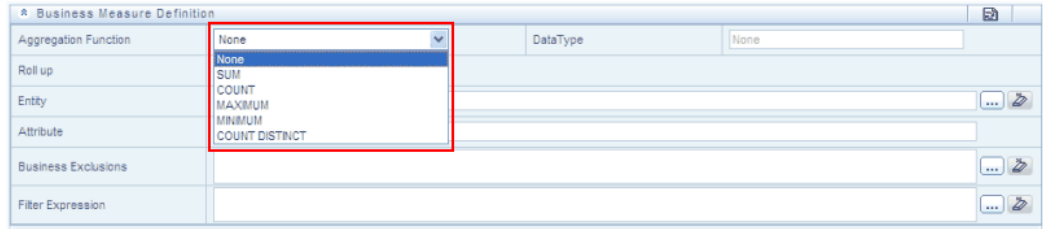
Outflows – BM Age Long

- It is mandatory to enter a Short Description.
- The Short Description should be a minimum of one character and a maximum of **eighty** characters in length.
- The Short Description cannot contain special characters with the exception of the underscore symbol.
- The Long Description should be a minimum of **one** character and a maximum of **hundred** characters in length.

Selecting the Aggregation Function

You can choose the metric based on which you want the measure to be aggregated. This option you can select by selecting the Aggregation Function.

To select the aggregation function, click Aggregation Function field to open the drop-down list. Select the aggregation function by clicking on it. By default, the aggregation function display will be <None>.



Example

MAXIMUM

The aggregation functions available are SUM, COUNT, MAXIMUM, MINIMUM, and COUNT DISTINCT.

The COUNT Function

The **COUNT** aggregation function counts the records for the data element to get the measure value or counts the number of occurrences

Example

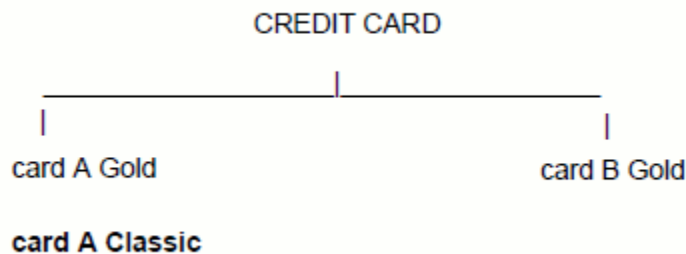
Number of Open Accounts

The COUNT DISTINCT Function

The **COUNT DISTINCT** aggregation function is different from a simple count aggregation function. The peculiarity of these measures is that they are linked to the dimensions and they vary across the hierarchies of these dimensions. In a Count Distinct aggregation, function a simple roll cannot determine the values at the intermediate nodes in the hierarchies up of their leaf level values.

Example

A customer may have more than one type of credit card. For instance, customer1 could have credit card A Gold and A Classic and customer2 could have credit card B Gold.



So when the measure 'number of customers having credit cards' is to be determined, the Count Distinct aggregation function intelligibly counts customer1 and customer2 as two customers and not three based on the number of cards customer1 is holding.

The SUM Function

The **SUM** aggregation function sums up the attribute or data element to get the

measure value. Sum measure counts the actual value.

Example

Sum of Balances

The MAXIMUM Function

The **MAXIMUM** aggregation function acquires the maximum of the data element to get the measure value.

Example

Maximum account balance of customers

The MINIMUM Function

The **MINIMUM** aggregation function obtains the minimum of the data element to get the measure value.

Example

Minimum account balance of customers

Automatic Data Type Selection

Based on the aggregation function, the Data Type is automatically selected for the base measure. There are only two data types DECIMAL and INTEGER. For aggregation functions SUM, MAXIMUM and MINIMUM the data type DECIMAL is automatically chosen. INTEGER data type is chosen for COUNT and COUNT DISTINCT aggregation function.

INTEGER Type – This data type is chosen when the measure aggregation returns a numerical value. This data type supports values ranging from a negative value to a positive one.

Example

Number of new customers in the bank

DECIMAL Type – This data type is chosen when the measure aggregation returns a decimal value.

Example

Currency of the Sultanate of Oman

Rials 10000.500 baizas

Selecting the Roll Up Option

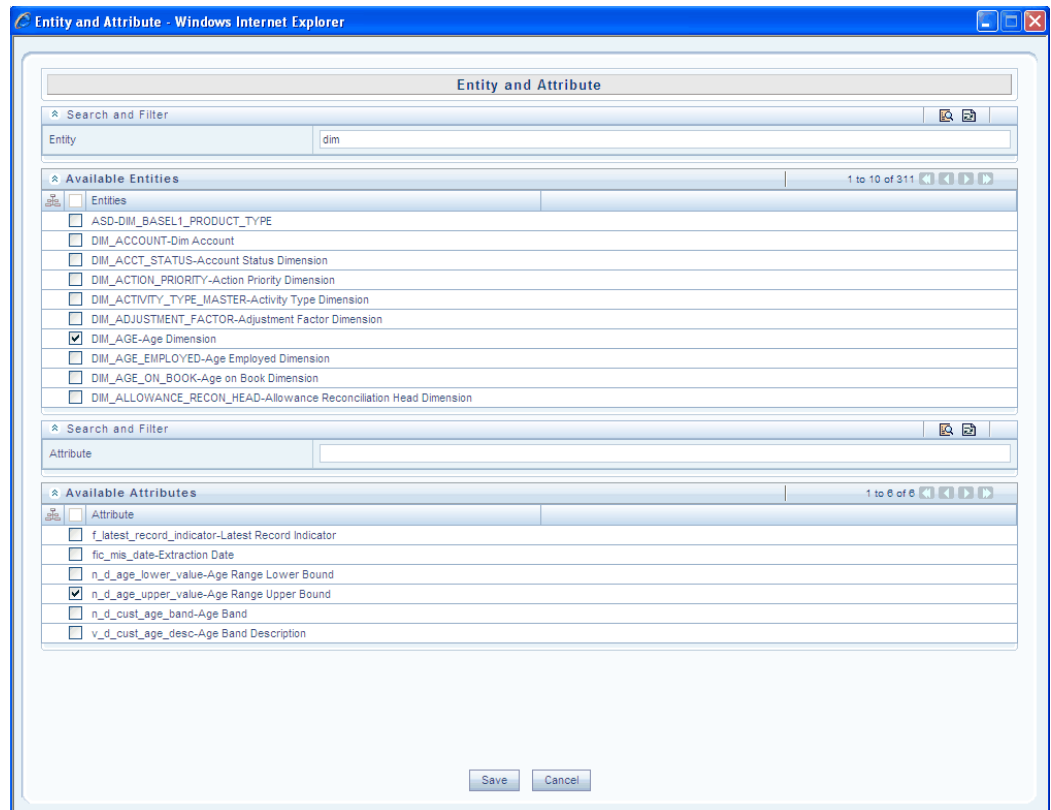
The **Roll Up** option displays the nodes at the total level. This option is often selected when the aggregation type is Maximum, Minimum, Count, and Sum. When you select the Roll Up option, it calculates the measure values at all levels (intermediate and total). Certain measures such as Percentage measures would result in a wrong value at the intermediate and total levels, if the Roll Up option were selected.

Selecting an Entity/Attribute

The data for the measure is picked from the selected entity and attribute. Click **Select Entities** in the Entity field. The **Entity and Attribute** window opens.

You will find two panels for Entity:

- **Search and Filter:** You can enter the name of an Entity and search for the same by clicking on **Search**. Click **Reset** in order to **Reset**.
- **Available Entities:** You will have a list of all the available entities listed under this option. Click the required Entity and its corresponding Attributes will be displayed in the Available Attributes panel. Select the required Attribute from the list.



Click **Save** to save the changes. Click **Cancel** to close the window without saving. On clicking save, the selected **Entity** and **Attribute** will be displayed in the Entity and Attribute field in the **Add Business Measures** screen.

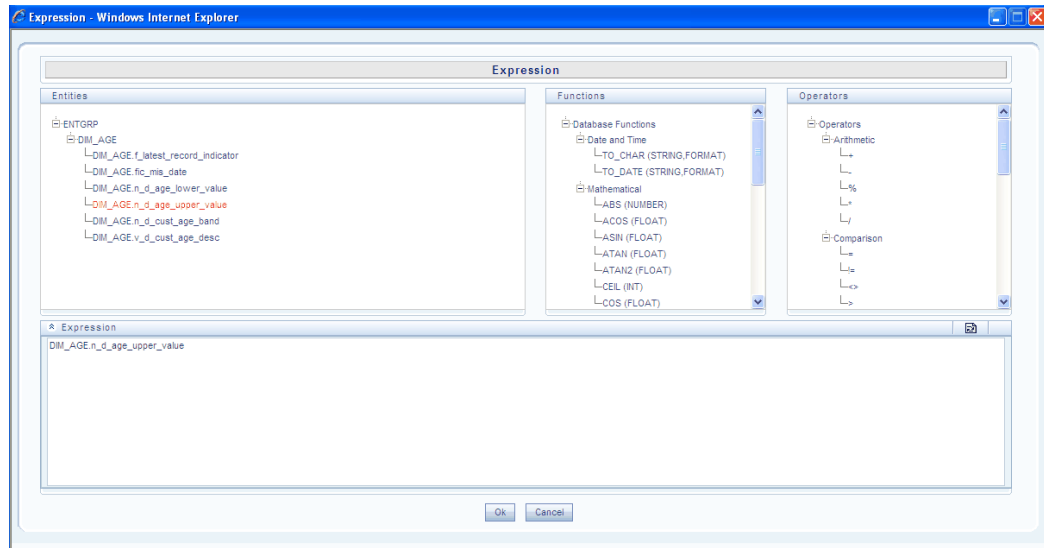
Note: The Entity list is dependent on the data model that is imported.

Applying Business Exclusions

You can apply rules or **Business Exclusions** to the measure that you are defining to filter the aggregation process. To specify the exclusion, you can either type in the expression in the Business Exclusions field or click **Enter Expression** to open the Expression screen to specify it.

For more information, please see Expression, page 13-33 section on how to select the

options..

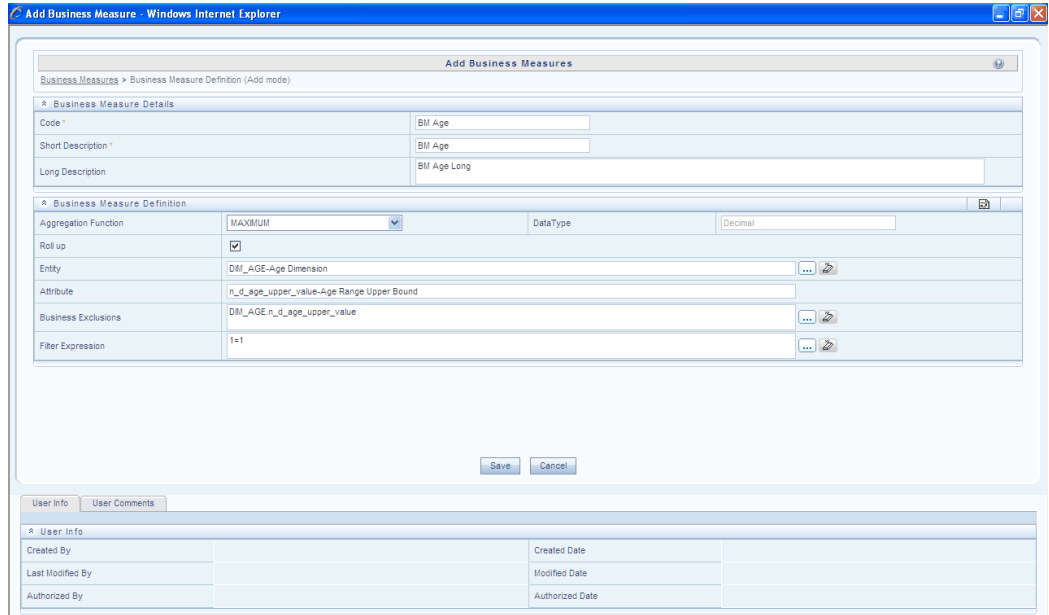


After you have specified the filter condition, click **OK** to save it and return to the Add Business Measure screen. Click **Cancel** to exit the Specify Expression screen without saving the changes.

On clicking OK, the selected Filter Expression will be displayed in the Filter Expression field in the **Add Business Measure** screen.

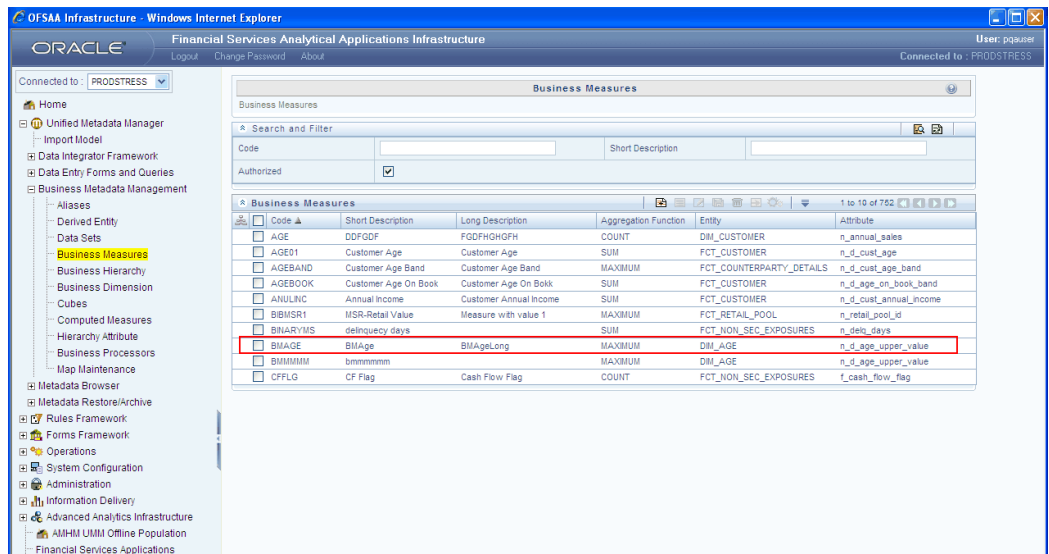


Click the above button to reset the filter condition that you defined. This is applicable only when you are defining a new expression.



Saving a Measure

On creating a new measure or modifying an existing one, click Save to save the new measure or the changes.



The saved measure will be displayed in the **Business Measures** list in Business measure screen.

Note: If the **Authorized** check box is selected in the information domain maintenance screen during the information domain creation, and if the user is assigned with the authorizing rights the metadata definition

created will be saved in the authorized state.

Copying a Measure

A feature that is common to the metadata definitions is that you have the option of copying details of one definition to create another. The details of the selected measure will be displayed in the Business Measure panel. Click **Copy**.

The screenshot shows a web application window titled "Copy Business Measure - Windows Internet Explorer". The main content area is titled "Copy Business Measures" and contains two main sections: "Business Measure Details" and "Business Measure Definition".

Business Measure Details:

Code *	BIMAGE
Short Description *	BMAge
Long Description	BMAgeLong

Business Measure Definition:

Aggregation Function	MAXIMUM	Data Type	Decimal
Roll up	<input checked="" type="checkbox"/>		
Entity	DIM_AGE-Age Dimension		
Attribute	n_d_age_upper_value-Age Range Upper Bound		
Business Exclusions	1 = 1		
Filter Expression	1 = 1		

At the bottom of the definition section are "Save" and "Cancel" buttons.

Below the main content area are tabs for "User Info" and "User Comments". The "User Info" tab is selected and shows the following fields:

Created By		Created Date	
Last Modified By		Modified Date	
Authorized By		Authorized Date	

All options are editable in this screen. Now you can change the Measure **Code** and **Short Description** to create a new one. You can also create another measure.

Example

Max Cum Outflow copied and renamed as **MaxOutflow1**

Note: The User should be mapped with the **Add Measure** function to copy the Business Measure definitions.

Deleting a Measure

To delete an existing measure, search/select the measure code to be deleted. The measure code that matches the search filter will be displayed. The details of the selected measure will be displayed in the **Business Measure** panel.

Click **Delete** to delete the measure. The delete function permanently deletes the measure from the database so it is important that you check carefully if you really want to delete the measure.

On clicking **Delete**, you are prompted to confirm deletion. Click **OK** to confirm deletion, but if you are unsure of deleting the measure, click **Cancel**. You can delete a measure only if you are authorized to do so or if you have created it.

1. When the user clicks delete, the measure definition will be marked for deletion and won't be accessible to the users.
2. Then the deletion should be Authorized / Rejected by the authorizer. On **Authorization** the measure definition selected for deletion will be purged. On Rejection the measure definition selected will be reverted back to authorized state. On deletion the un-authorized measure definition will be deleted and further modification to the definition will not be allowed before authorizing / rejecting the deletion.

Note: The User should be mapped with the Delete Measure function to delete the Business Measure definitions. When the measure definition selected for deletion is in the un-authorized state (modified by another user) the definition cannot be deleted.

Editing a Measure

To edit a measure, click **Edit**. The Edit Business measure window appears. Other than the **Code** and **Short Description** option, all other options are editable.

Edit Business Measure - Windows Internet Explorer

Edit Business Measures

Business Measures > Business Measure Definition (Edit mode)

Business Measure Details

Code *	BMAge
Short Description *	BMAge
Long Description	BMAgeLong

Business Measure Definition

Aggregation Function	MAXIMUM	DataType	Decimal
Roll up	<input checked="" type="checkbox"/>		
Entity	DIM_AGE-Age Dimension		
Attribute	n_age_upper_value-Age Range Upper Bound		
Business Exclusions	1 = 1		
Filter Expression	1 = 1		

Save Cancel

User Info User Comments

User Info

Created By	POAUSER	Created Date	May 7, 2010 11:16:02 AM
Last Modified By		Modified Date	
Authorized By	POAUSER	Authorized Date	May 7, 2010 11:16:02 AM

Viewing a Measure

To edit a measure, click **View**. The View Business Measure window appears.

Opening Help for the Measure Screen

To open help for the Measure screen, click **Help**.

Note: The help option will open the help specific to the **Measure** screen, but will also give you the option of selecting help on related topics.

When number of measures is more than 1000 cache size in dynamicservices.xml under measure cache size tag needs to be increased to 2000.

Defining Business Hierarchies

Introduction

This section describes what a **Business Hierarchy** is and explains the process involved in its creation and modification.

The Business Hierarchy function allows you to create hierarchies for a measure/s. It gives you the flexibility of choosing the business intelligence enabled for a quicker roll up, thereby hastening the query time.

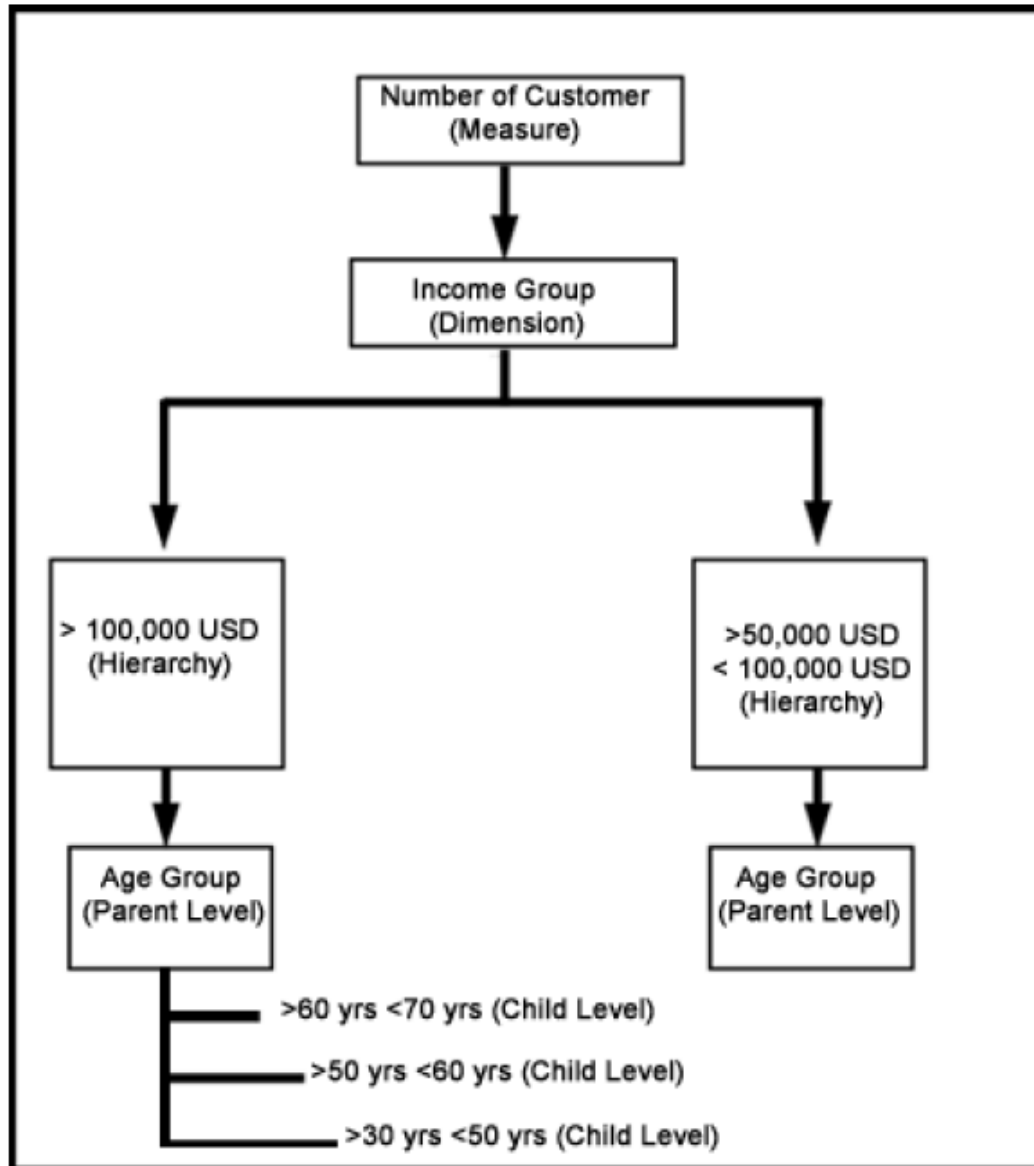
What is a Business Hierarchy?

A **Business Hierarchy** is the organization of data into a logical tree structure. It represents the groupings and relations among various levels at which measure can be viewed. The value of any measure can be viewed at different levels depending upon the hierarchy breakdown of the dimension category of the measure. While number of customers is a metric, it is useful when viewed based on some categorization such as customer income profile or customers having an annual income of over USD 100,000 per annum, to provide better quality of information.

Example

User wants to see Number of Customers (Measure) across Income Profile (Dimension), which is further broken down by different age groups (Hierarchy).

Note: The User should be mapped with the **Business Analyst User Screen** function and **View Hierarchy** function, to have the Business Hierarchy sub menu option to be displayed in the LHS Menu.



In a hierarchy, each level is connected to levels below and above it. A higher level is called **Parent** of the levels falling below and connected to this level. Levels, which contribute to parent levels, are called Child levels. A level can be parent as well as a child. Usually values at the bottom most level, also called Leaf level, are collected and aggregated to get the results at subsequent higher levels. A dimension can have more than one hierarchy.

A hierarchy can have multiple levels based on the user requirement. The user has to define the parentage structure for a hierarchy. Oracle Infrastructure allows the user to define relationships through a tree structure in case of a normal hierarchy. The hierarchy nodes should be mutually exclusive of each other. This would enable valid data values in all the intersection of a measure. In case of hierarchies where the nodes are not mutually exclusive, the data presented ultimately will be not right at all the

nodes.

Example

a) Gender Hierarchy – Total

Male -- Dim_gender.gend_code = 'M'

Female -- Dim_gender.gend_code = 'F'

In the above case, both male node and female node are mutually exclusive. A record from the RDBMS tables, which satisfies the first node, will not satisfy the second and vice versa.

b) Gender Hierarchy – Total

Male -- Dim_gender.gend_code = 'M'

Male & Female -- Dim_gender.gend_code IN ('M','F')

In the above case, both male node and female node are not mutually exclusive.

A record from the RDBMS tables, which satisfies the first node, will not satisfy the second node. A hierarchy design like the above will result in wrong aggregated data.

Different types of Hierarchy

You can define different hierarchies based on the user requirements.

The types of hierarchies are as follows:

- **Regular Hierarchy**

In a regular hierarchy, the hierarchy leaves displayed are not measures.

- **Measure Hierarchy**

In a measure hierarchy, the hierarchy defined has the measure as nodes.

- **Time Hierarchy**

In a time hierarchy, the hierarchy defined has leaves/nodes of high time granularity.

- **Business Intelligence (BI) Enabled**

The Business Intelligence hierarchy type is enabled only in case of three probabilities - If the hierarchy structure is not known prior to definition time, if the hierarchy structure can be directly selected from RDBMS columns, or if the hierarchy information is volatile. The BI enabled option automatically detects the values based on the actual data.

The user can define three levels through BI Enabled hierarchies. Like, **Region** at the first level, **State** at the second level and **Place** at the third level. The application would generate the hierarchy as given below.

Level One (Region)	Level Two (State)	Level Three (City)
West		
	Maharashtra	
		Bombay
		Pune
	Ahmedabad	
		GandhiNagar

South		
	TamilNadu	
		Madras
	Karnataka	
		Bangalore
	Andhra Pradesh	
		Hyderabad
North		
	Punjab	
		Chandigarh

The user will be prompted to specify if a Total node is required for BI enabled hierarchy. The user may not want a Total for a BI enabled hierarchy.

Example

Time dimension

A measure **Number of Customers** during Jan 2000 is 10000; Feb 2000 is 20000 adding 10000 to 20000 might not make business sense. In such an instance, the user may choose not to have a Total node for this hierarchy.

The system handles BI enabled hierarchies differently based on the OLAP types.

In a SQLOLAP, the hierarchy is formed of all the values in the table irrespective of whether a fact table for that combination exists or not.

In Essbase, the hierarchy is formed based on the return values of the data set condition of the Cube to which this hierarchy is mapped.

- **User Defined**

In a non Business Intelligence Enabled hierarchy, the user is required to add levels. The levels defined will form the hierarchy.

Example

The table DIM_REGION has three columns:

Region	State	Place
West	Maharashtra	Bombay
West	Ahmedabad	GandhiNagar
South	TamilNadu	Madras
South	Karnataka	Bangalore
South	Andhra Pradesh	Hyderabad
North	Punjab	Chandigarh
West	Maharashtra	Pune

- **Large Hierarchy**

A large hierarchy refers to a hierarchy having large number of leaf levels. In order to provide an efficient and optimized hierarchy handling, a hierarchy is defined as Large in Oracle Infrastructure. A default value is set to accommodate the number of hierarchy nodes that a hierarchy can contain, for example, 100. If a hierarchy exceeds the default value specified, then the system treats it as a large hierarchy.

Example

Let us consider a hierarchy like Geography. The hierarchy could have three levels namely Region, State, and City.

Region	State	City
West	Maharashtra	Bombay
West	Ahmedabad	GandhiNagar
South	TamilNadu	Madras
	TamilNadu	Coimbatore

Region	State	City
	TamilNadu	Madurai
South	Karnataka	Bangalore
	Karnataka	Dharwad
	Karnataka	Belgaum
	Karnataka	Hubli
South	Andhra Pradesh	Hyderabad
North	Punjab	Chandigarh
West	Maharashtra	Pune

Now, suppose the nodes for cities, like Karnataka, exceed the specified limit of 100, it is considered a large hierarchy. Now while you view this hierarchy (Geography) in Insight, the system (back-end process) automatically enables a filter wherein the hierarchy viewing will be restricted to rows i.e. you will be able to view only the nodes based on the limit 100. Beyond this limit, the system automatically totals the nodes. The level will display the total of the nodes. To view a node which is not displayed you can perform a search (please refer to the Insight User Manual for the procedure and further details).

- The maximum hierarchy node limit can be configured to a higher number in the FIC_HOME / CONFIG file. However, the recommended, default value, is 100.
 - A large hierarchy is possible only when you are defining a Time or BI enabled hierarchy.
 - A large hierarchy cannot be user-defined it is handled automatically by the system.
- **List Hierarchy Type**
A list hierarchy is a flat hierarchy i.e. with only one level. In a list hierarchy, all the nodes are displayed, unlike the large hierarchy.

Example

Customer hierarchy having names of customers as a level.

In a list hierarchy, the user can create a hierarchy based on business terms like, Customer, Product, Geography, and so on. The information for this hierarchy is generated from the metadata framework, which encapsulates these business terms. This enables the user generate a report in Insight (please refer to the Insight User Manual for the procedure and further details) based on these business terms. The advantage of defining a list hierarchy is that the user need not know technical terminology or have technical knowledge. It also allows the user to specify a range of values. The user can also define a summary or group total and perform a sort on the list hierarchy based on the hierarchy member value or attribute value; these two features are available only for the fact-less view (please refer to the Insight User Manual for further details).

Note: Normally when a BI enabled hierarchy is saved, the hierarchy structure that you have defined is formed (this is a back-end process) and stored in an xml format (as Hierarchycode.xml) in the application server. However, when you save a BI-enabled List hierarchy, the hierarchy structure is not formed and hence there will be no BIHIER.XML formed. Instead, whenever that hierarchy is queried on, data is fetched from the atomic database.

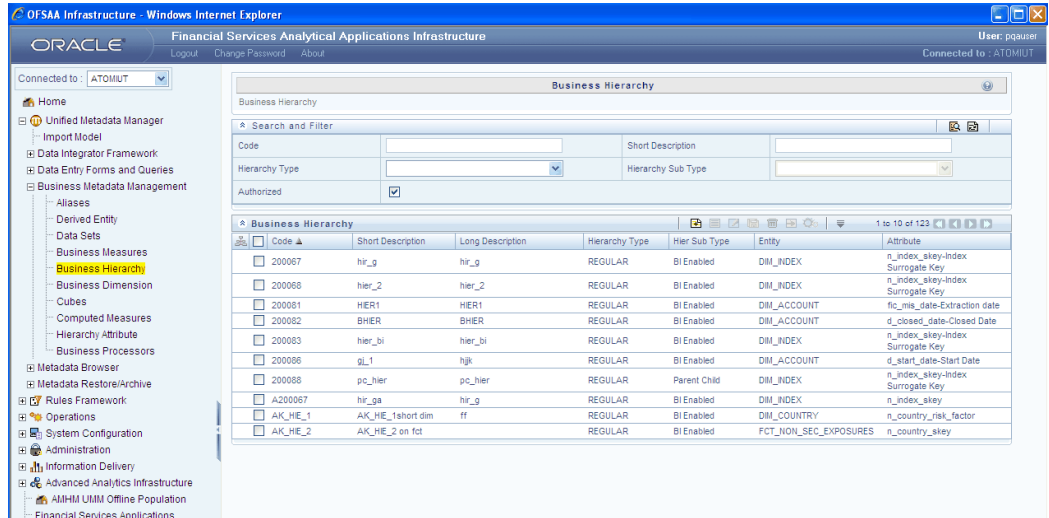
Why Define a Business Hierarchy?

A Hierarchy is essential in deriving qualitative in-depth information while querying across a dimension/s to arrive at the measure definition.

Creating a Business Hierarchy

The Hierarchy screen allows the user to create different types of hierarchies. The user is required to enter a Hierarchy code and a description when the user is defining it for the first time. The user can enter a short description and long description for the hierarchy. The user can authorize the hierarchy and specify the business intelligence enabled options (which will be dealt with in detail later in this chapter). The user has the option of specifying if the hierarchy defined is large and if the total at the node level is to be automated. It allows the user to create and choose the entity and attribute to which the user wants to specify exclusion.

To create a hierarchy, click the Business Hierarchy option (LHS) to open the screen.

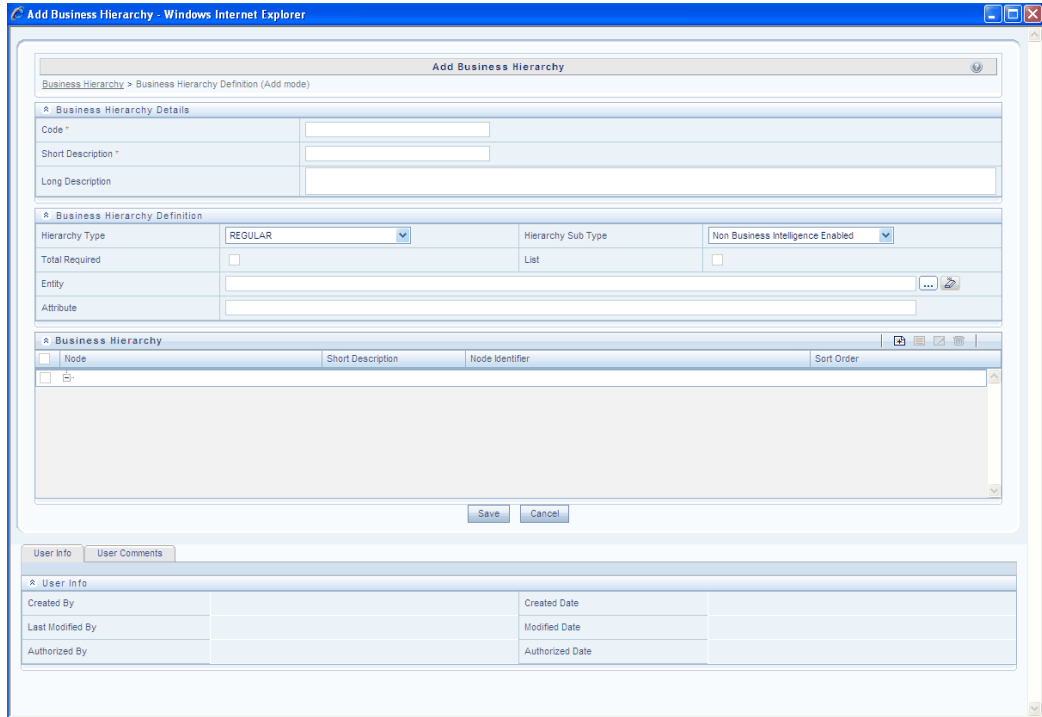


Search and Filter

You can search for an existing Hierarchy by entering its Code, Short Description or Hierarchy Type in its respective fields and click **Search**.

Creating a Business Hierarchy

Click **Add** button in the Business Hierarchy toolbar. The **Add Business Hierarchy** window opens.



Entering the Hierarchy Code

While creating a new Hierarchy, you need to define a distinct identifier/Code. It is recommended that you define a code that is descriptive or indicative of the type of hierarchy being created. This will help in identifying it while creating measures.

If you want to search any existing code, click **Search** tab beside code field. A pop up window will be displayed with the list of available codes. Select the code and double-click it, code and description value will be populated in respective fields.

- The Code should be a minimum of one character and a maximum of eight characters in length; it can be alphabetical, numerical (only 0-9) or alphanumeric characters.
- The Code cannot contain special characters with the exception of the underscore symbol.
- Once the Code and Short Description have been saved, it cannot be changed.
- You cannot use the following as either Code or Short Description for an Essbase installation: "\$\$\$UNIVERSE\$\$\$", "#MISSING", "#MI", "CALC", "DIM", "ALL", "FIX", "ENDFIX", "HISTORY", "YEAR", "SEASON", "PERIOD", "QUARTER", "MONTH", "WEEK", "DAY"

Entering the Short Description

Short descriptions of definitions are useful in understanding the hierarchy you are creating. It would help if you could enter a **Short Description** based on the code you have defined for the Hierarchy.

- It is mandatory to enter a Short Description.
- The Short Description should be a minimum of one character and a maximum of **eighty** characters in length.
- The Short Description cannot contain special characters with the exception of the underscore symbol.

Entering the Long Description

Long descriptions of definitions are useful in understanding the hierarchy you are creating with a more elaborate description. It would help if you could enter a Long Description based on the code you have defined for the Hierarchy.

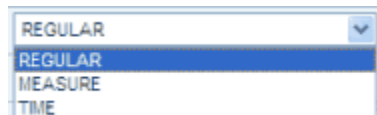
Note: The Long Description should be a minimum of one character and a maximum of hundred characters in length.

Business Hierarchy Details	
Code *	ABH
Short Description *	ABH-Short
Long Description	ABH-Long

Selecting the Hierarchy Type

Based on the type of hierarchy you want to create, click the Hierarchy Type drop-down list. The list contains three hierarchy types namely **Regular**, **Measure**, and **Time**. Select the hierarchy type that you want from the drop-down list.

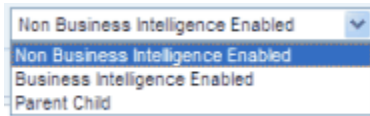
Note: The Measure hierarchy type is specific to Essbase MOLAP.



Selecting the Hierarchy Sub type Option

As explained earlier in the Different types of Hierarchy section, the **Hierarchy Sub Type Business Intelligence Enabled** option can be selected when you are unsure of the leaf values, as the system will automatically detect the values based on the actual data. If you are defining a Business Intelligence (BI) enabled hierarchy, select the Business Intelligence Enabled option. However, if you are entering the node details, select the

Non Business Intelligence Enabled option.



Also, in a hierarchy, a hierarchy can have multiple levels based on the user requirement. The user has to define the parentage structure for a hierarchy. Select the **Parent Child** option from the drop-down list if the hierarchy you are defining is of the Parent Child type.

Selecting the Total Required Option

If you want the total of all the nodes, select the **Total Required** option. This option is applicable only to BI enabled hierarchies that is only if you have selected the **Enable Business Intelligence** option.

Note: The Total Required option is enabled only if you select the Enable Business Intelligence option.

Specifying a List Hierarchy

Select the List option. This will retrieve information from the database when queried

Note: A **List** hierarchy can have only one level. You cannot select the List option if the Total Required option has been selected.

Hierarchy Type: Regular

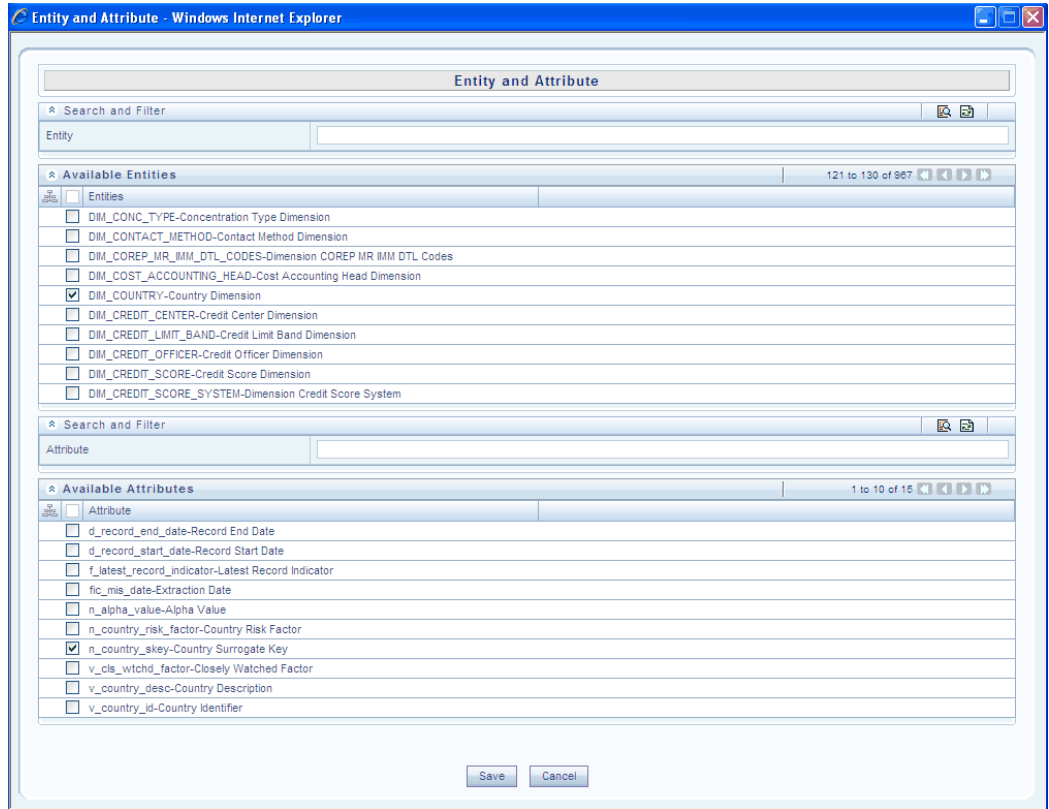
When the Hierarchy Type is selected as Regular, you can select the Hierarchy Sub Type from the drop down menu. It is mentioned in detail below, the changes that occurs on choosing different Hierarchy Sub Type.

i. Hierarchy Sub Type : Non Business Intelligence enabled

After the Hierarchy Type is selected as Regular, enter the Code, Short and Log description. Select the Hierarchy Type as Regular, the Hierarchy sub type, Total required and List.

Selecting an Entity

Specify the table (entity) that you want to map to the hierarchy. Click **Enter Expression** in the Entity field. The Entity and Attribute window opens.



A list of all the available entities will be listed under **Available Entities**. Select the required entity. The attributes for that entity will be listed under **Available Attributes**. Select the required Attribute and click Save. Click Cancel to quit the screen without saving.

After saving, the Entity and Attribute will be displayed in their respective fields.

Adding business Hierarchy

Click Add in the Business Hierarchy panel. The **Add Node Value** window opens.

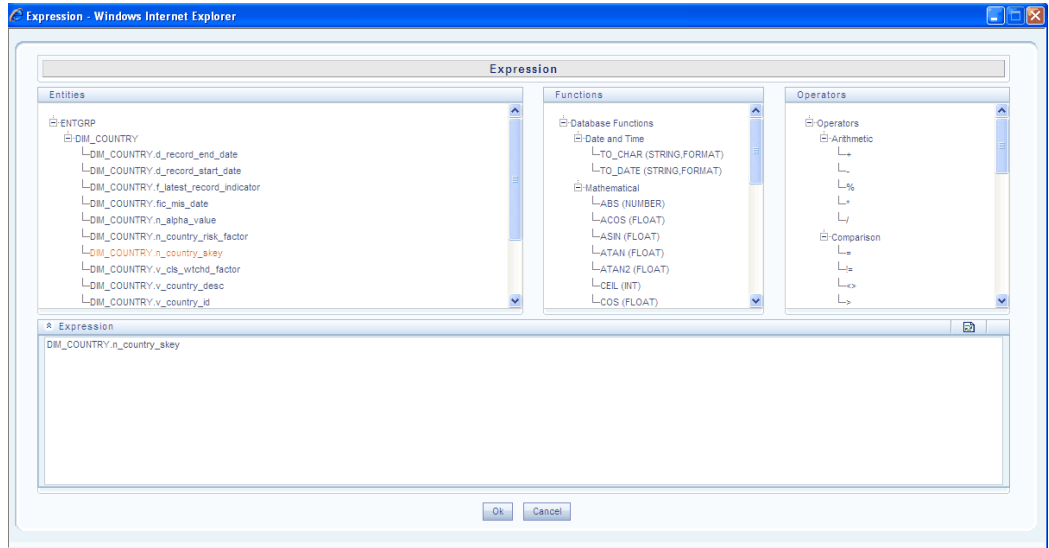
Add Node Values	
^ Hierarchy Values	
Node	ROOT
Short Description	
Node Identifier	
Sort Order	0
^ Node Attributes	
Storage Type	DataStore

Save Cancel

The Node option comes up automatically. Enter a short description in the field provided.

Click **Enter Expression** in the Node Identifier panel.

The Expressions window appears. For more information, please see Expression, page 13-33 section on how to select options in this screen.

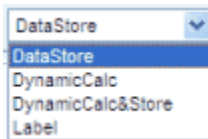


After selecting the Expression, click **OK**. The selected expression will be displayed in the Node Identifier field.

Enter the Sort order.

Selecting the Storage Type for the Node

You can select the storage type for the node. To select a storage type, select the node in the left pane and right click it to view the options. Select the Storage Type option and expand to view the sub-options within it.



There are four storage types:

- **Data Store**

This storage type allocates a data cell for the information to be stored in the database. The consolidated value of the data is stored in this cell. The consolidation for the node occurs during the normal process of rollup.

- **Dynamic Calc**

In this storage type, no cell is allocated and the consolidation is done when the data is viewed. The consolidation for the node is ignored during the normal process of rollup. The consolidation of node occurs when you use the OLAP tool for viewing data.

- **Dynamic Calc & Store**

In this storage type, a cell is allocated but the data is stored only when the data is consolidated when viewed, for the first time. The consolidation for the node is ignored during the normal process of rollup. It occurs only when you first retrieve the data from the database.

- **Label**

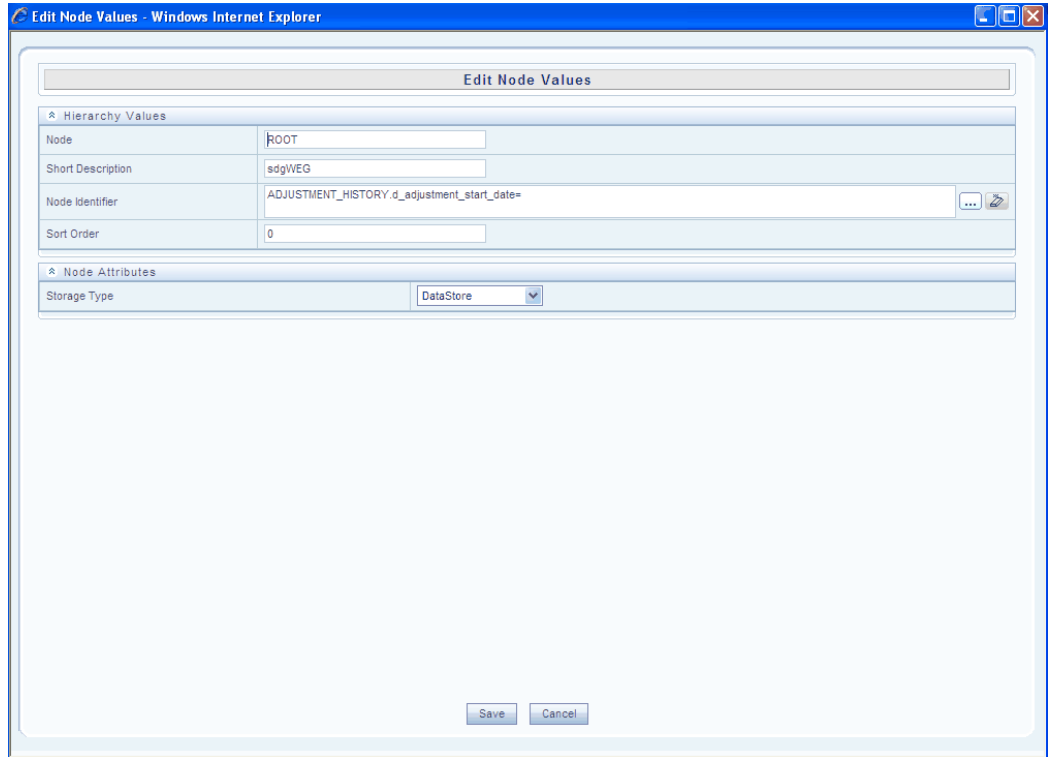
In this storage type, a cell is not allocated nor is the data consolidated. It is only viewed.

- The Label storage type is specific to Essbase MOLAP.
- Storage type is applicable only for the Regular hierarchy type and Measure. If the user wants to specify a dynamic calc option at level members in a multi-level time hierarchy, the same is provided through the execution of a utility called OLAP utility.

Click **Save** to save the Level Details selected or click **Cancel** to exit without saving.

Editing a Node

To Edit a node, select the level that you want to Edit and click **Edit**. You can edit the **Node**, **Short Description**, **Node identifier**, **Sort order** and **Storage Type**.



Adding Node

Click Add in the **Business Hierarchy** toolbar to Add a new Node. The **Add Node Values** window opens.

Click **Enter Expression** in the **Child of** panel. The Hierarchy window comes up. Select the hierarchy from the Hierarchy window. Select the **Node identifier** as mentioned above.

Consolidation Type:

Select the Consolidation Type from the drop down menu.

Note: The Consolidation Type option is specific to Essbase MOLAP.

There are six different consolidation types such as **Addition, Subtraction, Product, Division, Percent, and Ignore.**

Example

If the parent node is **Profit** and the child nodes are **Sales** and **Cost**. To arrive at the profit you would choose the consolidation type for the Sales node as ADD and Cost as SUB i.e. subtract.

Refer **Storage Types** above for more information on how to select the same.

Click **Save** to save the changes or click **Cancel** to exit without saving.

Deleting Nodes

Select the level you would like to Delete and click **Delete** to delete an existing Level.

ii. Hierarchy Sub Type : Business Intelligence enabled

After selecting the **Hierarchy Type** as **Regular** and **Hierarchy Sub Type** as **Business Intelligence enabled**, enter the **Code** and **Short Description**.

The screenshot shows a web application window titled "Add Business Hierarchy - Windows Internet Explorer". The main content area is titled "Add Business Hierarchy" and contains several sections:

- Business Hierarchy Details:** Fields for Code (NBE), Short Description (Regular short), and Long Description (Regular Long).
- Business Hierarchy Definition:** Fields for Hierarchy Type (REGULAR) and Hierarchy Sub Type (Business Intelligence Enabled). Checkboxes for Total Required (checked) and List (unchecked). Fields for Entity and Attribute.
- Business Hierarchy:** A table with columns: Level, Short Description, Level Identifier, Level Description. The table is currently empty.

Below the table are "Save" and "Cancel" buttons. At the bottom, there are tabs for "User Info" and "User Comments". The "User Info" tab is selected, showing fields for Created By, Last Modified By, Authorized By, Created Date, Modified Date, and Authorized Date.

Select the Entity and Attribute. After selecting the Entity and Attribute, click **Add** in the Business Hierarchy panel.

The **Add Hierarchy Level** window opens.

You can enter the details in the level Identifier field or click **Enter Expression** next to level Identifier.

You can enter the details in the Level description field or click **Enter Expression** button next to it.

The Expressions window appears. For more information, please see Expression, page 13-33 section on how to select options in this screen.

Note: The Expression created in the **Level Description** field should not contain columns with **Number** or **Date** data types. The inclusion of such a column in the **Level Description** field would prevent the Business Hierarchy from generating nodes.

Click Save to save all changes made. Click Cancel to exit without saving.

The saved options will be seen in the Business Hierarchy panel. Click **Add** to add a new Level. Follow the same procedure mentioned above.

Click **Save** in the Add Business Hierarchy page to save the new Hierarchy created. Click **Cancel** to exit without saving.

Note: BI Hierarchy value refresh on 'On Load' property is not functional for data loads performed through Excel Upload. It is applicable only for data loads which run through a batch process.

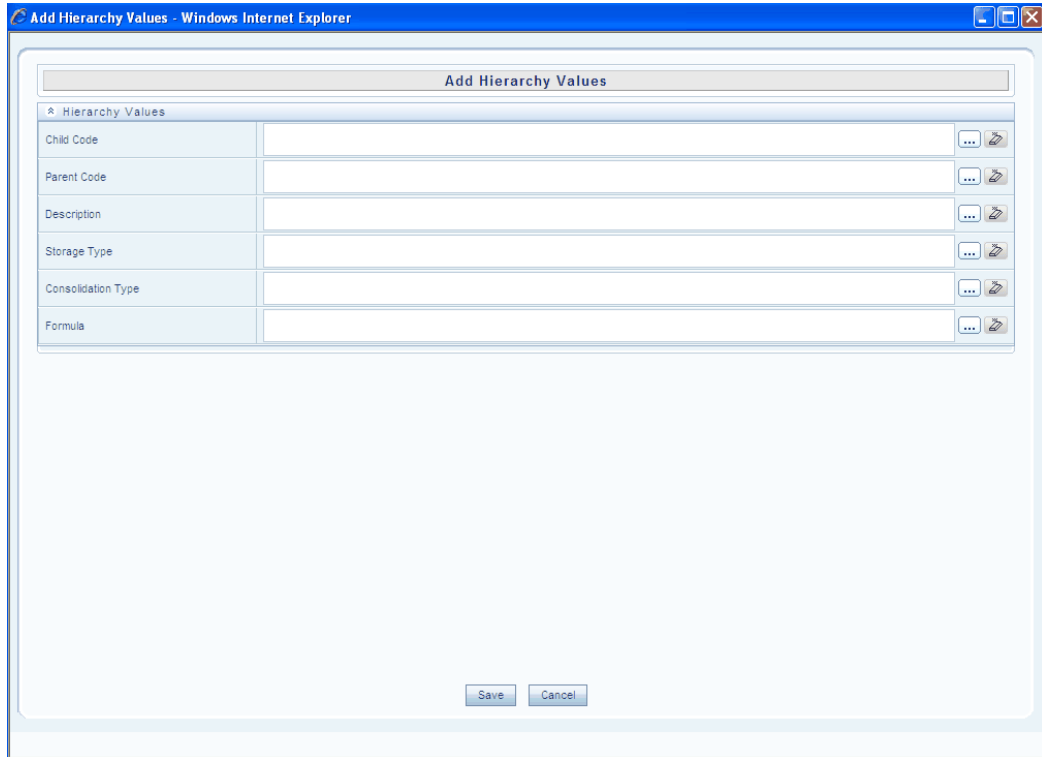
iii. Hierarchy Sub Type : Parent Child

After selecting the **Hierarchy Type** as **Regular** and **Hierarchy Sub Type** as **Parent Child**, enter the **Code** and **Short Description**.

Node	Short Description	Node Identifier
PC		
-CHILD_CODE	Child Code	
-PARENT_CODE	Parent Code	
-DESC	Description	
-STORAGE_TYPE	Storage Type	
-CONSO_TYPE	Consolidation Type	
-FORMULA	Formula	

The nodes are displayed in the Business Hierarchy panel. The nodes displayed are **Child code, Parent Code, Description, Storage Type, Consolidation Type** and **Formula**.

Select the Entity and Attribute. Click Add in the Business Hierarchy panel. The **Add Hierarchy Values** window opens.

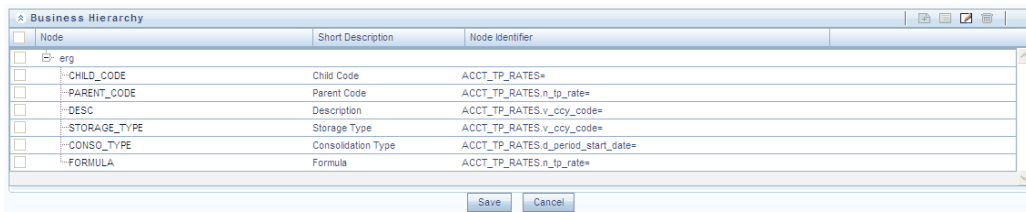


Enter the expression in the required field or select the expression by clicking **Enter Expression** against the respective field.

The Expressions window appears. For more information, please see Expression, page 13-33 section on how to select options in this screen.

Note: The Expression created in the **Description** field should not contain columns with **Number** or **Date** data types. The inclusion of such a column in the **Description** field would prevent the Business Hierarchy from generating nodes.

Click **Save** to save all changes made. The **Node Identifier** column displays the expression that you have defined in the Expression Generator screen for that node.



Repeat the same for all the other nodes such as Parent_Code, Description, Storage_Type, Consolidation_type and Formula.

Note: For optimal performance, Parent Child Hierarchy can be configured to be treated as a Business Intelligence enabled hierarchy when the size of the hierarchy is large. The Parent Child hierarchy will behave like a non-Business Intelligence hierarchy till a limit of the number of nodes is reached. This limit on the number of nodes which decides whether the parent child hierarchy needs to be treated as a BI or a non-BI hierarchy is configurable and can be given a value considering the system and JVM capabilities. The default value for this is 2048.

Creating a Parent Child Hierarchy with Roll-up Option

It is possible to roll up the values of the child nodes in a Parent child hierarchy to the parent level. If the parent node itself has some value and the child nodes of it also have associated values, it is possible for the value of the parent node to be displayed as the sum of its value and child values.

For using the Roll-up option, it is required to specify parameters in the **Consolidation Type** for the node field. Based on the column that is specified in the Consolidation Type field, the values of the child nodes will be rolled up i.e. added to the parent level. This can then be viewed using the Insight Viewer.

^ Hierarchy Values	
Child Code	CAMPAIGN_DL.v.promotion_id
Parent Code	CAMPAIGN_DL.v.promotion_name
Description	CAMPAIGN_DL.v.parent_promotion_id
Storage Type	
Consolidation Type	CAMPAIGN_DL.n.bdgtdirect_cost*
Formula	

Note: When Consolidation type is not selected for the Hierarchy then it is referred to as Parent Child Hierarchy with Rollup option.

Example

To arrive at the profit you would choose the consolidation type for the Sales node as addition (column value as 1).

Hierarchy Type – Measure

In the Add Business Hierarchy screen, select the Hierarchy Type as Measure. Select the Entity and attribute.

Refer to Selecting an Entity for more information on how to select the same. Click **Add** in the Business Hierarchy panel. The **Add Node Values** window opens.

To add a node, select Add Node in the Add Hierarchy Node panel. Click **Enter Expression** next to Child of option to select the Hierarchy Node. Enter the Node and

Short Description. Select the Consolidation Type, Storage Type, and TB Type from their respective drop down menus.

The screenshot shows a web browser window titled "Add Node Values - Windows Internet Explorer". The main content area is a form titled "Add Node Values". The form is organized into several sections:

- Add Hierarchy Node:** A section with a "Select" label and two radio buttons: "Add Node" (which is selected) and "Add Measures".
- Hierarchy Tree:** A section with a "Select Hierarchy Node" label and a text input field containing "Child Of ROOT" and a dropdown arrow.
- Node Details:** A section with two text input fields: "Node" containing "1" and "Short Description" containing "short".
- Node Attributes:** A section with three dropdown menus: "Consolidation Type" set to "Addition", "Storage Type" set to "DataStore", and "TB Type" set to "None".

At the bottom of the form, there are two buttons: "Save" and "Cancel".

If the Add Hierarchy node is selected as

Add Measure:

The screenshot shows a web browser window titled "Add Node Values - Windows Internet Explorer". The main content area is titled "Add Node Values" and contains the following sections:

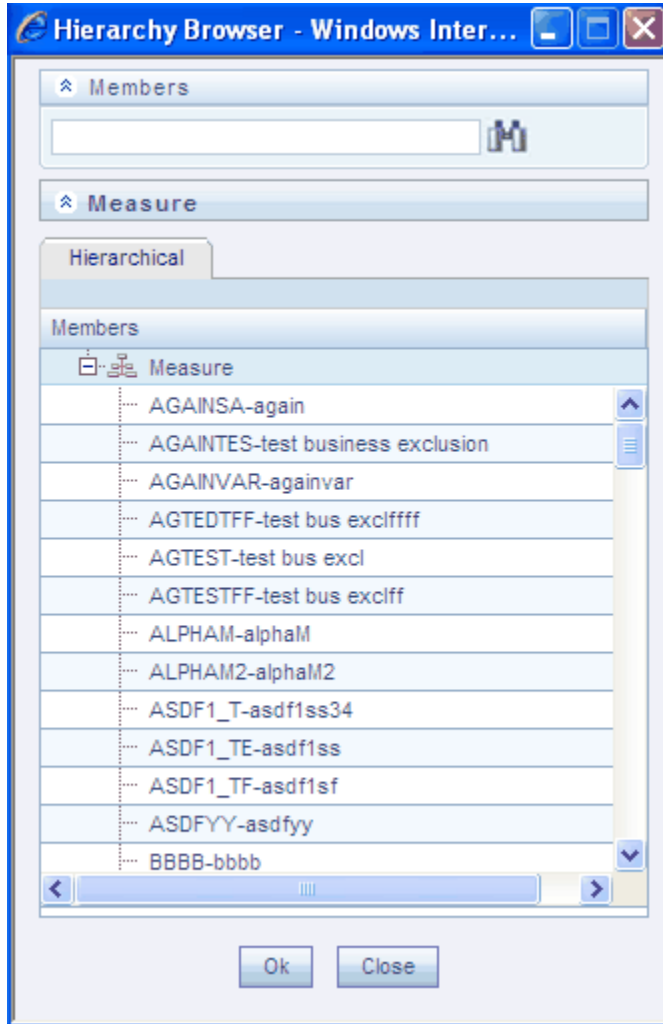
- Add Hierarchy Node:** Includes a "Select" label and two radio buttons: "Add Node" (unselected) and "Add Measures ..." (selected).
- Hierarchy Tree:** Includes a "Select Hierarchy Node" label and a "Child Of" dropdown menu currently set to "ROOT".
- Node Details:** Includes three input fields: "Node", "Short Description", and "Node Identifier".
- Node Attributes:** Includes three dropdown menus: "Consolidation Type" (set to "Addition"), "Storage Type" (set to "DataStore"), and "TB Type" (set to "None").

At the bottom of the form, there are "Save" and "Cancel" buttons.

A measure needs to be created under Root.



Click the above button next to Add Measure option in the Add Hierarchy Node panel. The **Hierarchy Browser** with the list of Measures will appear. Select the required Measure and click OK.



The Node details comes up automatically. The options in the Node Details panel are not editable.

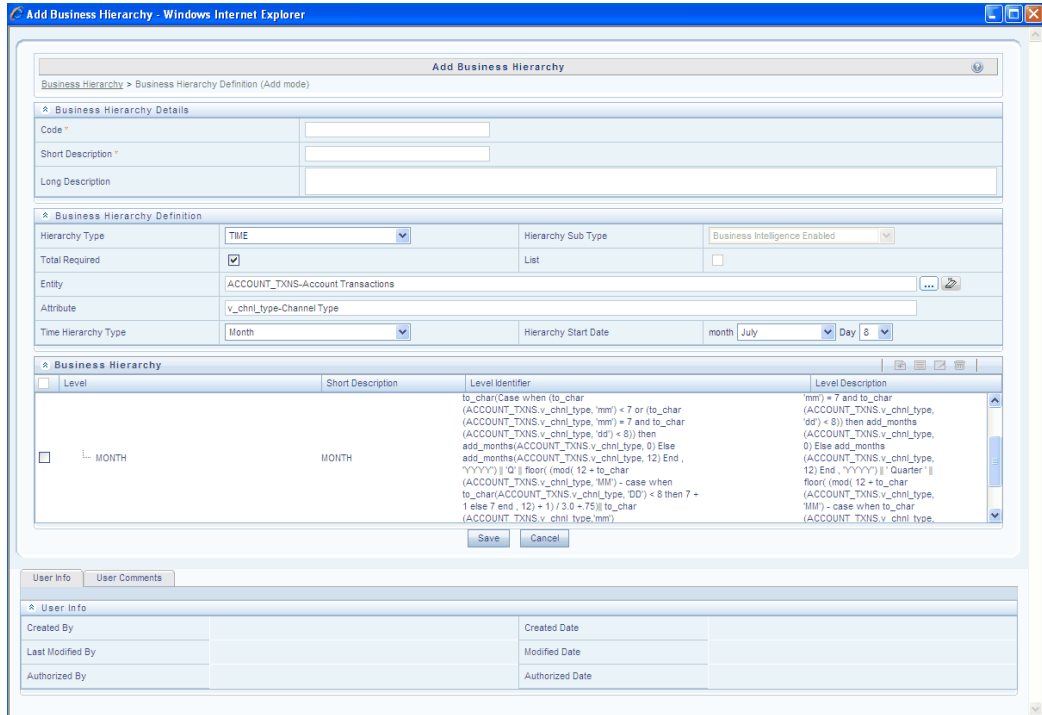
Click **Save** to save the changes. Click **Cancel** to exit without saving.

After saving the changes, the same will be highlighted in the **Business Hierarchy** panel.

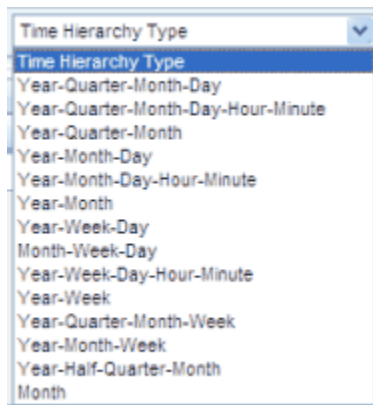
Node	Short Description	Node Identifier
abc		
ROOT	WRG	
ALPHAM	short	1 = 1

Hierarchy Type – Time

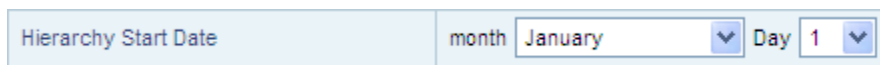
In the **Add Business Hierarchy** screen, select the **Hierarchy Type** as **Time**.



Select the Entity and attribute. Select the **Time Hierarchy** Type from the drop down menu.



Select the **Hierarchy Start Date** from the month and day drop down.



After selecting the Time Hierarchy Type and the Hierarchy Start Date, the corresponding Hierarchy will get populated in the Business Hierarchy field.

Modifying a Hierarchy

There is an option to search the hierarchy code. To perform the same, enter the

description filter in the Description Filter box and press **Enter**.

The hierarchy code that matches the search filter will be displayed.

Note: The User should be mapped with the Modify Hierarchy function to edit/modify the Business Hierarchy definitions.

The Search Dialog will display only the authorized definitions.

Note: The List Unauthorized check box will be displayed in a disabled state.

Copying a Hierarchy

A feature that is common to the metadata definitions is that you have the option of copying details of one definition to create another. There is an option to search the hierarchy code. To perform the same, enter the code in the Search panel and press Enter.

The details of the selected hierarchy will be displayed in the **Hierarchy** screen. Click **Copy**. You can change the **Hierarchy Code** and **Short Description** to create a new one. You can also change to add/remove more attributes to create another measure.

In this, the **Copy** functionality is similar to the **Save As** functionality.

Example

By Geography copied and renamed as GEOHIER1

Note: The User should be mapped with the Add Hierarchy function to copy the Business Hierarchy definitions.

Deleting a Hierarchy

To delete an existing hierarchy, search the hierarchy code to be deleted. To perform the same, enter the code in the Search panel and press Enter. The hierarchy code that matches the search filter will be displayed.

The details of the selected hierarchy will be displayed in the **Hierarchy** screen. Click **Delete** to delete the hierarchy. The delete function permanently deletes the hierarchy from the database so it is important that you check carefully if you really want to delete the hierarchy. On clicking Delete, you are prompted to confirm deletion.

Click **OK** to confirm deletion, but if you are unsure of deleting the hierarchy, click **Cancel**. You can delete a hierarchy only if you are authorized to do so or if you have created it.

When the user clicks delete, the hierarchy definition will be marked for deletion and won't be accessible to the users.

Then the deletion should be Authorized / Rejected by the authorizer. On **Authorization**, the hierarchy definition selected for deletion will be purged. On Rejection the hierarchy

definition selected will be reverted back to authorized state. On deletion the un-authorized hierarchy definition will be deleted and further modification to the definition will not be allowed before authorizing / rejecting the deletion.

Note: The User should be mapped with the **Delete Hierarchy** function to delete the Business Hierarchy definitions.

Defining Business Dimensions

Introduction

This section describes what a **Business Dimension** is and explains the process involved in its creation and modification.

The Business Dimension function allows you to create a logical connection with a measure/s. It gives you various options across which you can view a measure/s.

What is a Business Dimension?

A **Business Dimension** is a structure of one or more logical grouping (hierarchies) that classifies data. It is the categorization across which a measure(s) is viewed. A dimension can have one or more hierarchies.

Example

If the user wants to see Number of existing Customers (Measure), Number of Accounts (Measure), Number of Relationships (Measure) by Product (Dimension), Time (Dimension) and Organization (Dimension), Customer Income (Dimension).

In the **Dimension** screen, the user is required to enter the Dimension code and a description when the user is defining it for the first time. The user is required to select the dimension type, data type and map available hierarchies to a dimension.

Note: The User should be mapped with the **Business Analyst User Screen** function and **View Dimension** function, to have the Business Dimension sub menu option to be displayed in the LHS Menu.

Different types of Dimensions

Based on the user requirements, you can define different dimensions.

Dimensions are of three types:

- **Regular Dimension**

A regular dimension can have more than one hierarchy mapped to it.

Note: The option of mapping multiple hierarchies is available only for a non-SQLOLAP environment.

- **Measure Dimension**

A measure dimension can have hierarchies of only type measure mapped to them.

- **Time Dimension**

In a time dimension, the hierarchy defined has leaves/nodes of high time granularity.

Why Define a Business Dimension?

A Dimension combined with measures helps in business query. Since, dimension data is collected at the lowest level of detail and then aggregated into higher-level totals, it is useful for analysis.

Example

If in *Total_Product* dimension, there are four levels: *Total_Product*, *Regions*, *Territories*, and *Products*.

Data collected at the *Products* level is aggregated to the *Territories* level. For the *Regions* dimension, data collected for several regions such as South India, North India, East India, and West India might be aggregated as a fact in the fact table into totals for a larger area such as India.

Creating a Business Dimension

In the **Dimension** screen, the user is required to enter the Dimension code and a description /comments when user is defining it for the first time. The user is required to select the dimension type, data type and map available hierarchies to a dimension.

Although the Dimension screen allows users to map multiple hierarchies into a single dimension, the values for the intersection of those hierarchies mapped will not be generated to save space and enhance the loading and rollup time.

Example

Customer Profile Dimension can have *Customer Gender* and *Customer Age* as two different hierarchies.

Customer Gender Hierarchy

Total

Male

Female

Customer Age Hierarchy

Total

< 20 Years

>20 and < 40 Years

> 60 Years

Both the hierarchies form part of a single dimension. In the above scenario, the system will not generate cells for the combinations (below) thus saving space, loading and rollup time.

Male and < 20 Years

Male and >20 and < 40 Years

Male and > 60 Years

Female and < 20 Years

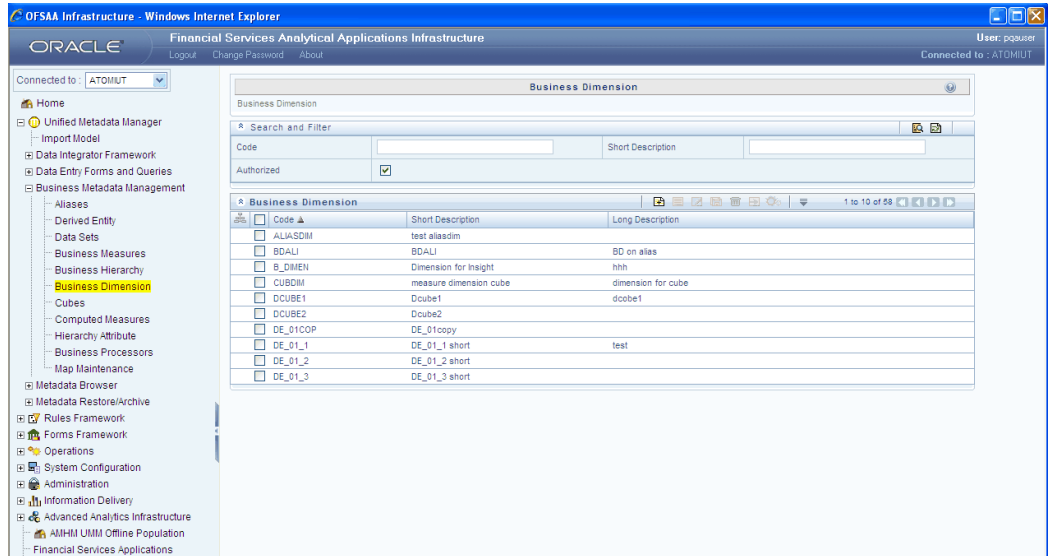
Female and >20 and < 40 Years

Female and > 60 Years

Users of the system can design the dimension appropriately.

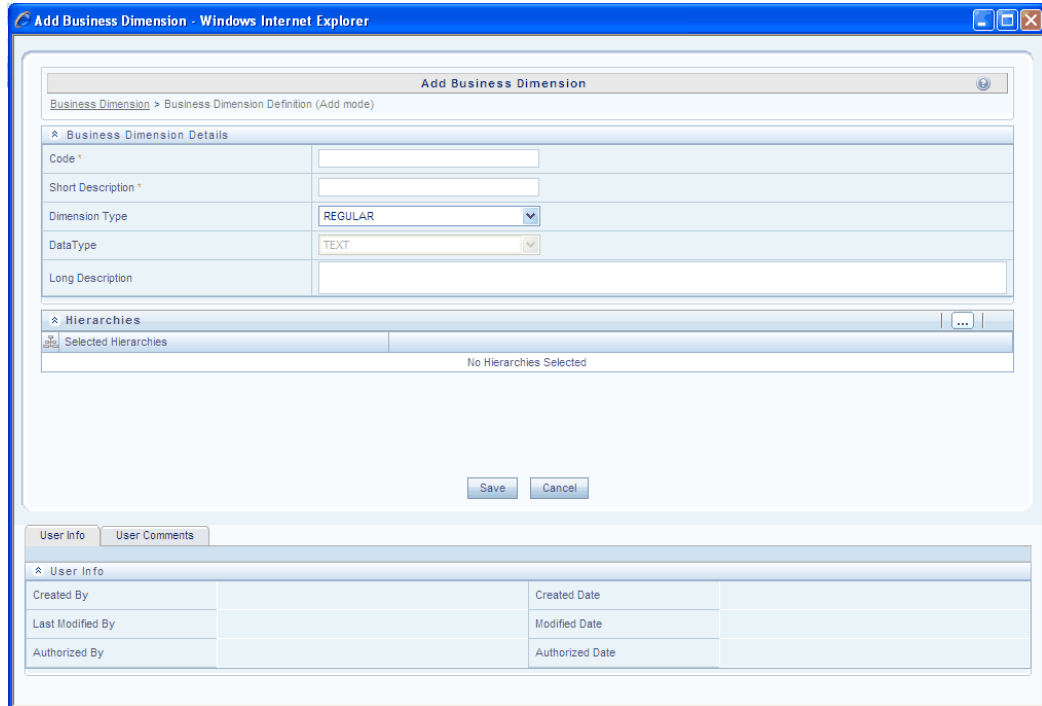
Note: The option of mapping multiple hierarchies is available only for a non-SQLOLAP environment.

To create a dimension, click **Business Dimension** option to open the screen.



You can search for an existing code by entering the code in the **Code** field and click **Search** in the Search and Filter panel.

To create a new business dimension, click **Add** in the Business Dimensions panel. The **Add Business Dimension** screen comes up.



Entering the Dimension Code

While creating a new Dimension, you need to define a distinct identifier/Code. It is recommended that you define a code that is descriptive or indicative of the type of dimension being created. This will help in identifying it while creating measures.

Example

D_BUS_UNIT1

If you wish to search any existing code, click **Search** beside **Code** field. A pop up window will be displayed with the list of available codes. Select the code and double click, code and description value will be populated in respective fields.

- The Code should be a minimum of **eight** characters in length; it can be alphabetical, numerical (only 0-9) or alphanumeric characters.
- The **Code cannot contain special characters** with the exception of the underscore symbol.
- Once the **Code** and **Short Description** has been saved, it cannot be changed.
- You cannot use the following as either Code or Short Description for an Essbase installation: "\$\$\$UNIVERSE\$\$\$", "#MISSING", "#MI", "CALC", "DIM", "ALL", "FIX", "ENDFIX", "HISTORY", "YEAR", "SEASON", "PERIOD", "QUARTER", "MONTH", "WEEK",

"DAY".

Entering the Short/Long Description

Short or Long descriptions of definitions are useful in understanding the content of the Dimension you are creating. It would help if you could enter a **Short Description** based on the code you have defined for the Dimension. You can enter a **Long Description** to enhance the short description that you have entered.

Example

Business Unit – **Short Description**

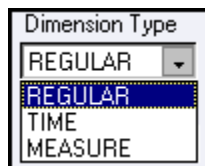
Business Unit Dimension – **Long Description**

Business Dimension Details	
Code *	<input type="text"/>
Short Description *	<input type="text"/>
Dimension Type	REGULAR
DataType	TEXT
Long Description	<input type="text"/>

- It is *mandatory* to enter a **Short Description** but not a **Long Description**.
- The Short Description should be a minimum of one character and a maximum of **eighty** characters in length.
- The Long Description should be a minimum of one character and a maximum of **hundred** characters in length.
- The Short Description cannot contain special characters with the exception of the underscore symbol.

Selecting the Dimension Type

Based on the type of dimension you want to create, click the **Dimension Type** field to open the drop-down list. The list contains three hierarchy types namely, **Regular**, **Measure** and **Time**. Select the dimension type that you want from the drop-down list.



Note: The **Measure** hierarchy type is specific to Essbase MOLAP.

Based on the type of dimension you select the list of available hierarchies is refreshed to display regular, time and measure hierarchies.

Automatic Data Type Selection

Based on the dimension type that you choose, the **Data Type** is automatically selected.

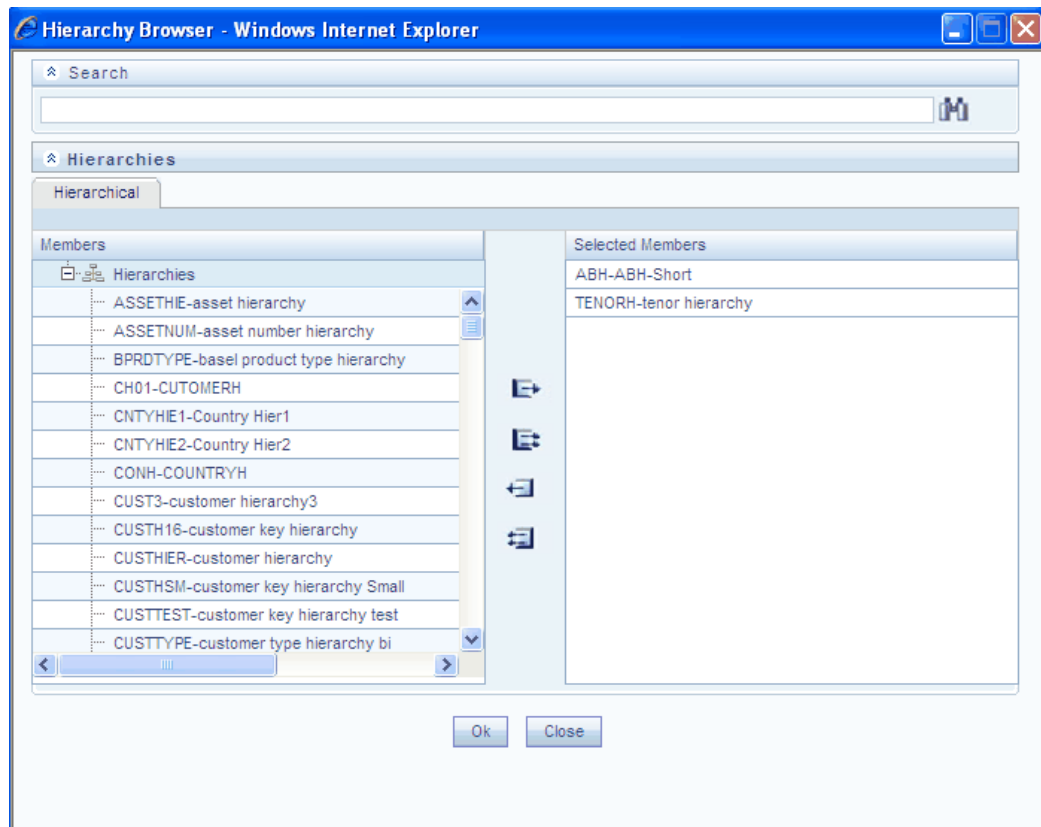
Note: The default data type for the dimensions definition is **Text**.

Mapping the Hierarchy

Now, you are required to select the hierarchies for the dimension you are creating.



Click the above button in the **Hierarchies** panel. The **Hierarchy Browser** opens. Based on your dimension type, the hierarchies are displayed in the **Available Hierarchies** pane.



To select the hierarchies that you want to map to the dimension, select the hierarchy from the **Available Hierarchies** pane and click -->. To select multiple hierarchies, hold the CTRL key and click the hierarchies you want to select and click -->.

This causes the selected hierarchies to move into the **Selected Hierarchies** pane. If you

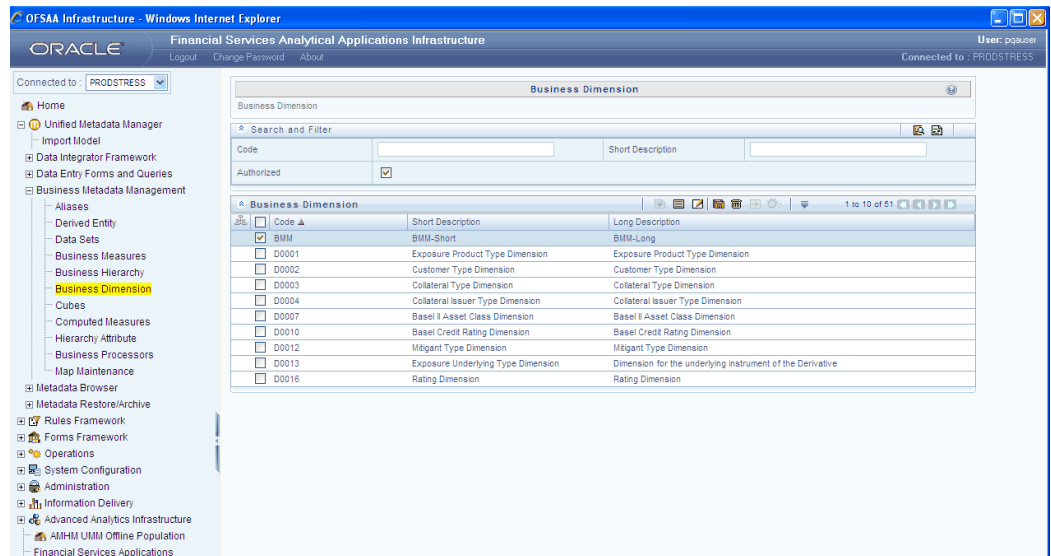
want to map *all* the available hierarchies, click >>

If you want to remove any selected hierarchy, select it from the **Selected Hierarchies** pane and click <-. To deselect all the selected hierarchies, click <<.

Click **Save** to save all the settings. Click **Close** to close the browser without saving. After saving the hierarchy successfully, the hierarchy will be listed in the **Business Dimension** list.

Saving a Dimension

On creating a new dimension or modifying an existing one, click **Save** to save the new dimension or the changes.



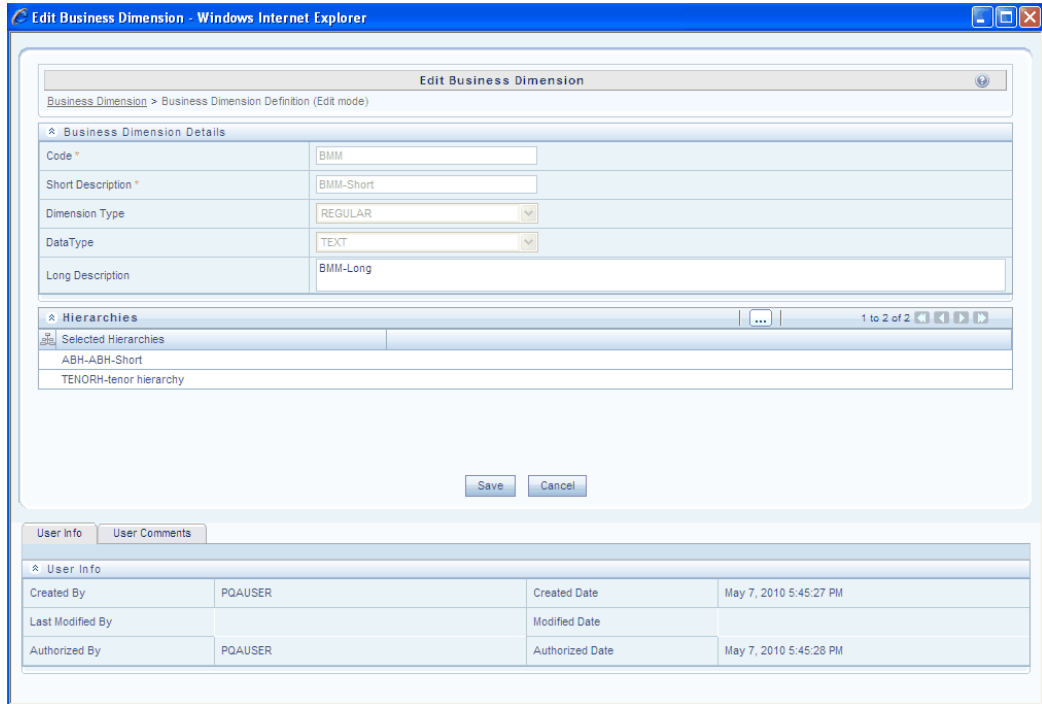
The saved dimension screen is displayed with non-editable **Code** and **Short Description** fields.

The saved dimension will be stored as the metadata definition in the repository, which will be instrumental in determining the measure data.

Note: If the **Is authorization required for Business Metadata?** checkbox is selected in the information domain maintenance screen during the information domain creation and if the user is assigned with the authorizing rights the metadata definition created will be saved in the authorized state.

Editing a Dimension

Click **Edit** to edit a Dimension. The **Edit Business Dimension** window appears.



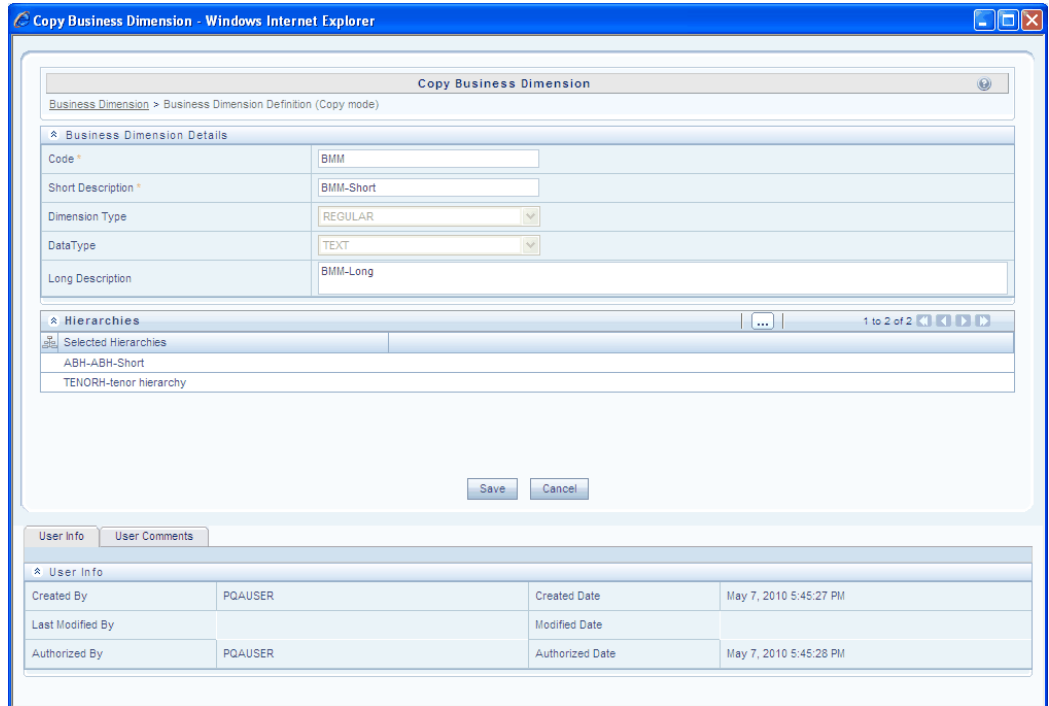
The Code, short Description, Dimension Type and Data Type cannot be edited.

Note: The User should be mapped with the **Edit Dimension** function to edit/modify the Business Dimension definitions. When the dimension definition selected for modification is in the un-authorized state (modified by another user), the definition cannot be modified.

Copying a Dimension

After saving the Dimension, the same will be listed under Business Dimension list.

Click **Copy** to copy the Dimension. The Copy Business Dimension page opens.



Other than the Dimension Type and Data Type, all the other options are editable.

Example

Geography Dimension copied and renamed as **GeoDim001**

Note: The User should be mapped with the **Add Dimension** function to copy the Business Dimension definitions.

Deleting a Dimension

To delete an existing dimension, search the dimension code to be deleted. To do so, enter the description or Code in the respective field and click **Search**.

The dimension code that matches the search filter will be displayed. Select the Dimension that you wish to delete and click **Delete**.

The delete function permanently deletes the dimension from the database so it is important that you check carefully if you really want to delete the dimension. On clicking Delete, you are prompted to confirm deletion. Click **OK** to confirm deletion, but if you are unsure of deleting the dimension, click **Cancel**. You can delete a dimension only if you are authorized to do so or if you have created it.

When the user clicks delete, the business dimension definition will be marked for deletion and won't be accessible to the users. Then the deletion should be Authorized / Rejected by the authorizer. On **Authorization**, the business dimension definition selected for deletion will be purged. On Rejection the business dimension selected will be reverted back to authorized state. On deletion un-authorized business dimension will be deleted, and further modification to the definition will not be allowed before

authorizing / rejecting the deletion.

Note: The User should be mapped with the **Delete Dimension** function to delete the Business Dimension definitions. When the dimension definition selected for deletion is in the un-authorized state (modified by another user) the definition cannot be deleted.

Opening Help for the Dimension Screen

To open help for the **Business Dimension** screen, click Help. The help option will open the help specific to the screen.

Defining Cubes

Introduction

This section defines **Cube** and elucidates the process involved in its creation and modification.

The **Cube** function allows you to define a multi-dimensional view of information. It gives you the flexibility of defining rules that fine-tune the information that you want to be reflected in the hierarchy.

What is a Cube?

A Cube represents data in a multidimensional context that is measures along multiple dimensions and at different logical levels within each dimension. A cube is a combination of measures and dimensions.

Example

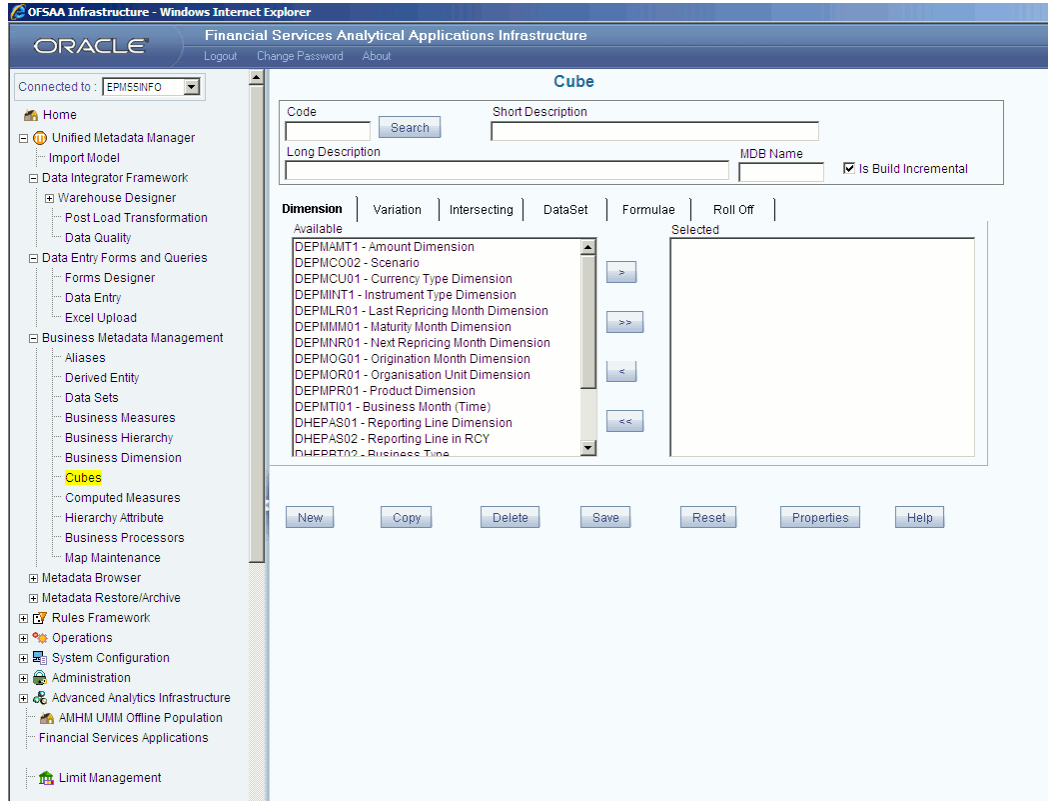
User wants to see Number of Customers, Number of Accounts, and Number of Relationships by Product, Time, and Organization.

Why Define a Cube?

The **Cube** presents a multi-dimensional view of data that is vital in business analytics. It enhances query time and provides decision support.

Creating a Cube

In the Cube screen, the user is required to enter the Cube code and a description /comments when the user is defining it for the first time. The user is required to specify the Multi-Dimensional Database (MDB) name, dimension, variation, intersecting details, data set, formulae and roll off details for the cube (these cube-building components are explained later in this section).



To create a cube, click **Cube** option to open the screen.

Entering the Cube Code

While creating a new Cube, you need to define a distinct identifier/Code. It is recommended that you define a code that is descriptive or indicative of the type of Cube being created.

Example

PCube001

If you want to search any existing code, click **Search** tab beside code field. A pop up window will be displayed with the list of available codes. Select the code and double-click, code and description value will be populated in respective fields.

- The Code should be a minimum of one character and a maximum of eight characters in length; it can be alphabetical, numerical (only 0-9) or alphanumeric characters.
- The Code cannot contain special characters with the exception of the underscore symbol.
- Once the Code and Short Description has been saved, it cannot be changed.

- You cannot use the following as either Code or Short Description for an Essbase installation: "\$\$\$UNIVERSE\$\$\$", "#MISSING", "#MI", "CALC", "DIM", "ALL", "FIX", "ENDFIX", "HISTORY", "YEAR", "SEASON", "PERIOD", "QUARTER", "MONTH", "WEEK", "DAY".

Entering the Short Description

Entering descriptions of definitions are useful in understanding the content of the Cube you are creating. It would help if you could enter a description based on the code you have defined for the Cube.

Example

Market Risk Analysis

The screenshot shows a form titled "Cube" with the following fields and values:

Code	VIBCUBE	Short Description	VIBCUBE
Long Description	VIBCUBE	MDB Name	VIBCUBE
		<input checked="" type="checkbox"/> Is Build Incremental	

- It is *mandatory* to enter a Description.
- The Short Description should be a minimum of one character and a maximum of eighty characters in length.
- The Short Description cannot contain special characters with the exception of the underscore symbol.

Entering the Long Description

Enter the **Long Description** for the cube you are defining. It could indicate the contents of the cube or any other useful information that would help an analyst.

Example

Market Risk Analysis

- The Long Description should be a minimum of one character and a maximum of hundred characters in length.
- The Long Description cannot contain special characters with the exception of the underscore symbol.

Specifying the MDB Name

To save a cube to the multi-dimensional database, you have to enter the name by which it would be identified. While saving the cube you are creating, the cube will be saved by

the cube name you have attributed to it. Enter the name of the cube in the MDB Name field. Saving a cube to a multi-dimensional database is different from saving the Cube definition wherein the definition (like all other metadata definitions) is stored in the repository.

Example

NoofProd

- The name should be a minimum of one character and maximum of eight characters in length; it can be alphabetical, numerical (only 0-9) or alphanumeric characters.
- The name cannot contain special characters.
- No spaces are allowed in the name definition.

Specifying whether the Build is Incremental

Select the **Is Build Incremental** check box if you wish to capture all incremental changes made to the database. The cube definitions with the Is Build Incremental check box selected can be executed with different MIS dates.

Cube Components

In creating the cube, you need to select dimensions, measures, variations, intersections, data sets, apply formulae, specify the roll off period, and cube storage. These cube components are displayed as different tabs in the **Cube** screen. Based on the type of installation, these tabs will be visible. If you try to navigate any of the tabs without selecting the dimensions, a message will be displayed which reads, *"Select at least two dimensions"*.

- The Dimension, Measure, and Dataset tabs are specific to a SQLOLAP installation whereas the Dimension, Variation, Intersecting, Dataset, Formulae, Roll Off and Storage tabs are specific to an Essbase installation.
- Cube Build with OLAP type as Essbase – If there is a Business Intelligence (BI) hierarchy in the cube definition, cube build is supported only if the data length for the BI Hierarchy processing is < 50

Selecting the Dimensions

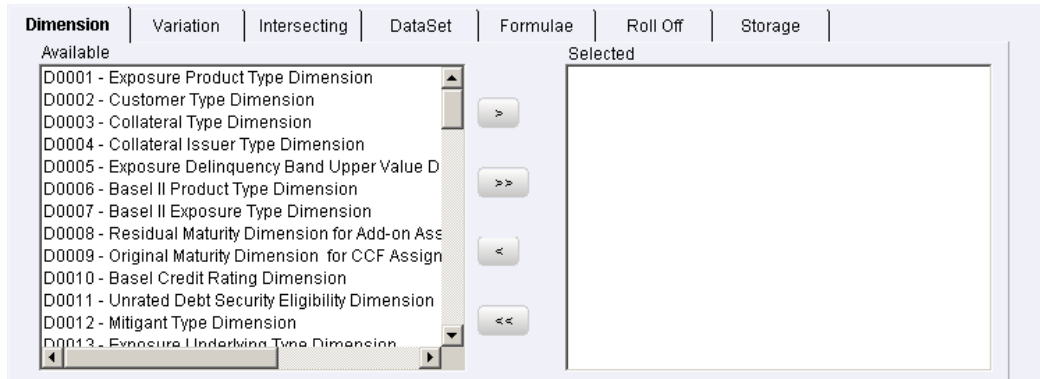
By default, the **Dimension** tab will be displayed. The Available pane contains a list of defined dimensions. You need to select a dimension/s for the cube.

Example

DGCMD6 – Products Dimension

DGCMD2 – Segment Dimension

MDGCMD – Measure Dimension



To select the dimensions select it from the **Available** pane and click >. To select multiple dimensions, hold the CTRL key and click the dimensions you want to select and click >. This causes the selected dimensions to move into the **Selected** pane.

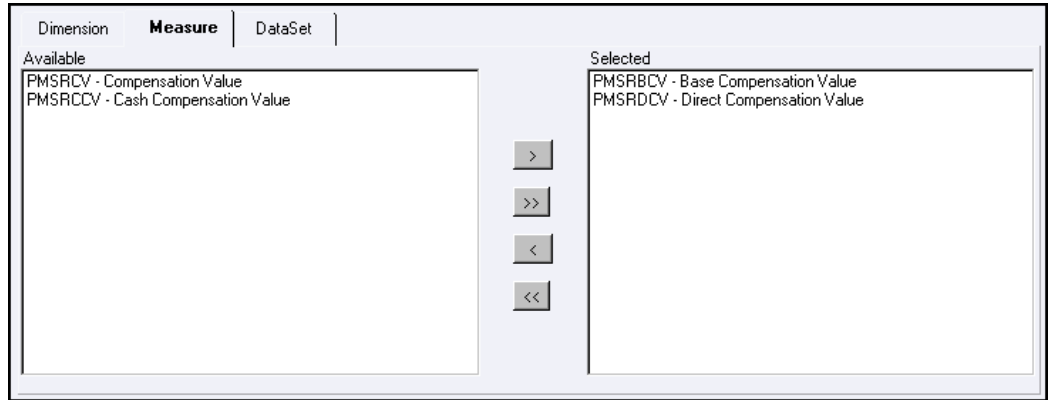
If you want to map all the available dimensions, click >>. If you want to remove any selected dimension, select it from the selected pane and click <. To deselect all the selected dimensions, click <<.

Note: It is mandatory to select at least *two* dimensions to create the cube. Only one dimension of the type *measure* can be selected.

Selecting the Measure

It is necessary to remember that the **Measure** tab is specific to a SQLOLAP installation. Hence, the first step in creating a cube for this environment is selecting the dimensions (as explained in the previous paragraph *Selecting the Dimensions*). Next, you will select the measures and conclude the cube creation by selecting the data set (explained under the heading *Selecting the Data Set*).

To select the measures, click **Measure** tab.



To select the measures, select it from the **Available** pane and click >. To select multiple measures, hold the CTRL key and click the measures you want to select and click >. This causes the selected measures to move into the **Selected** pane.

If you want to map all the available measures, click >>. If you want to remove any selected measures, select it from the selected pane and click <. To deselect all the selected measures, click <<.

Note: Dimensions/Measures mapped to a cube definition which is built cannot be un-mapped.

Specifying the Variation

The **Variation** option helps you specify which dimension you want to see against the selected measure. You need to map the dimension against which you want to see the measure.

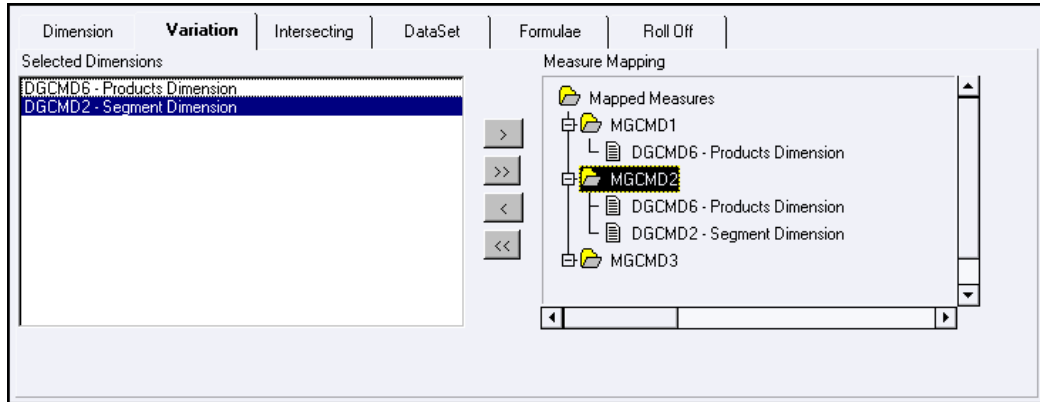
Example

Map DGCMD6 – Products Dimension to the measure MGCMD1

Map DGCMD2 – Segment Dimension and DGCMD6 – Products Dimension to the measure MGCMD2

Thereby you will be viewing the measure MGCMD1 against the product dimension and the measure MGCMD2 against the product and segment dimension.

Select the **Variation** tab to define the dimension-measure mapping.



The **Selected Dimensions** pane contains the list of dimensions that you chose. The Measure Mapping pane contains the **Mapped Measure** folder. Double-click the folder to expand the folders within it, namely, MGCMD1 and so on.

To map the dimension(s) (for example, DGCMD6 – Products Dimension), select it from the Selected Dimensions pane, select the Measure folder (example, MGCMD1), and click. Similarly, to map multiple dimensions, hold the CTRL key and selecting the dimensions and also select the measure folder in the **Measure Mapping** pane and click >.

This causes the selected dimensions to move into the measure folder. If you want to map all the available dimensions to the measure folder, select the measure folder and click >>.

If you want to remove any mapped dimension from the measure folder, select it from the measure folder displayed under the Mapped Measure folder and click <. To remove the mapping of all the dimensions, click <<.

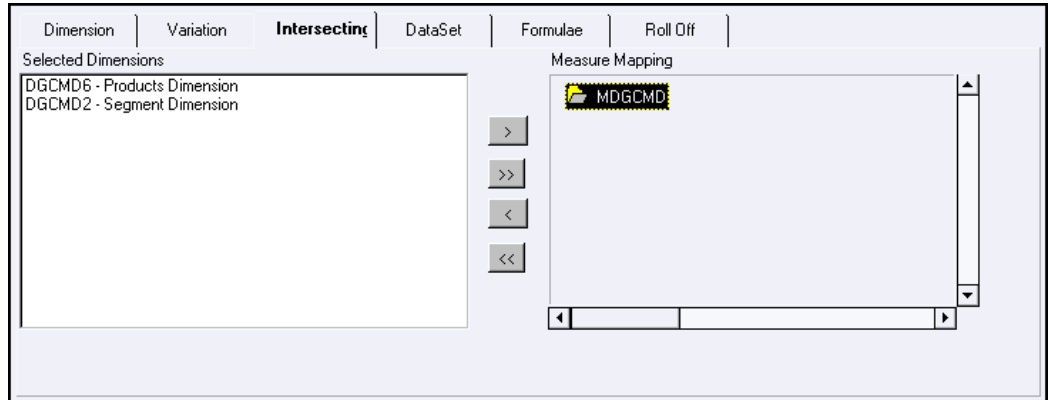
Specifying the Intersection

The Intersection option is specific to count distinct (please refer to the *Selecting the Aggregation Function* explained under the *Defining Business Measures*). The count distinct measures should be intersected only across those dimensions on which a duplicate is expected for that measure.

Example

There can be no customer who can have a gender as Male and Female. The customers can be either Male or Female. Thus intersecting the Count distinct measures across a Gender dimension will not make sense. Similarly, the Count Distinct measures will have duplicates across Products or Regions. Thus, the intersecting can be across those dimensions (Product/Region).

Select the **Intersecting** tab to specify the dimensions across the count distinct measure.



The **Selected Dimensions** pane contains the list of dimensions that you chose. The **Measure Mapping** pane contains the count distinct measure.

To map the dimension(s) (for example, DGCMD6 – Products Dimension), select it from the **Selected Dimensions** pane, select the Measure folder (example, MGCMD1), and click >.

Similarly, to map multiple dimensions, hold the CTRL key and selecting the dimensions and also select the measure folder in the Measure Mapping pane and click >.

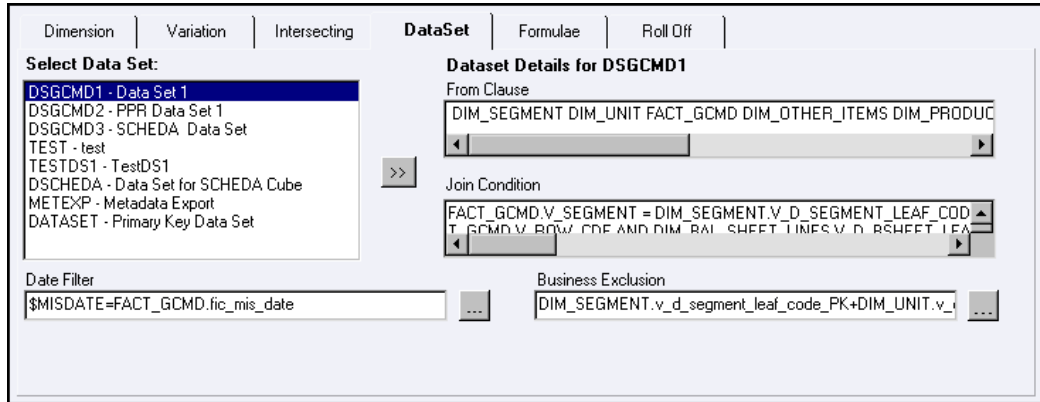
This causes the selected dimensions to move into the measure folder. If you want to map all the available dimensions to the measure folder, select the measure folder and click >>.

If you want to remove any mapped dimension from the measure folder, select it from the measure folder displayed under the Mapped Measure folder and click <. To remove the mapping of all the dimensions, click <<.

Selecting the Data Set

The *Data Set* option allows you select the data set for the cube you are creating. It allows you to specify additional filters like the **Date Filter and Business Exclusions**.

Select the **Dataset** tab to select the data set for the cube.



Select the data set from the Select Data Set pane and click >>, which displays the **From Clause** and **Join Condition** defined for the selected data set.

Example

DSGCMD1 – Data Set 1

To define the date filter for the selected data set, click

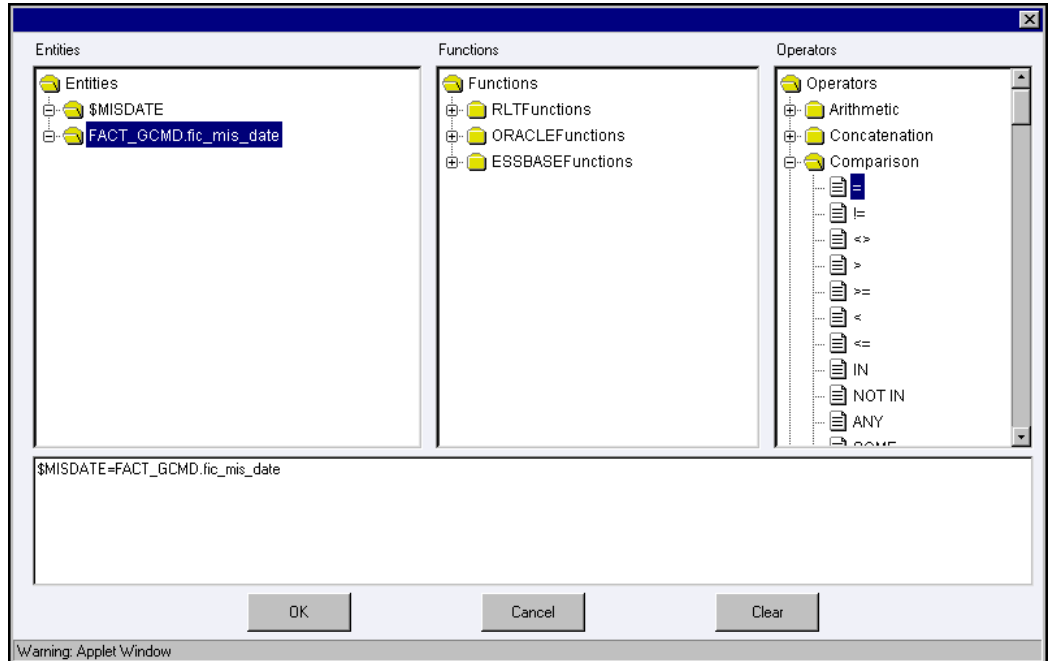


against the **Date Filter** field to open the **Specify Expression** screen. Double-click the **Entities** folder to expand the dimension and fact table date folders. Now double-click the dimension date folder. The dimension date will be displayed in the expression field. Next, select the filter condition from the **Operators** folder. You will have to double-click the **Operators** folder to view the available operators (please refer to The *Operators* pane detailed under *Defining the Join/Filter condition* under the *Defining Data Sets* section).

Select the operator you want to use for the date filter and select the fact table date.

Example

\$MISDATE=FACT_GCMD.fic_mis_date



After you have specified the date filter, click **OK** and return to the **Cube** screen.

Click **Cancel** to exit the **Specify Expression** screen without saving the changes.

Click **Clear** to reset the filter condition that you defined. This is applicable only when you are defining a new expression. While modifying an existing expression, click **Clear** to return to the existing expression.

Similarly, you can define the **Business Exclusion** filter by clicking the below button



against the **Business Exclusions** field to open the **Specify Expression** screen.

Double-click the **Entities** folder to expand the dimension and fact table folders. Now, double-click the dimension/fact folder to view the attributes.

Select the attribute and double-click it. The selected attribute will be displayed in the expression field.

Example

DIM_SEGMENT.v_d_segment_leaf_code_PK

Next, select the operator from the **Operators** folder. You will have to double-click the **Operators** folder to view the available operators (please refer to *The Operators* pane detailed under *Defining the Join/Filter condition* under the *Defining Data Sets* section). Select the operator you want and double-click it. The selected operator will be displayed in the expression field.

Example

+

You may select more than one dimension/fact attribute to apply the filter.

Example

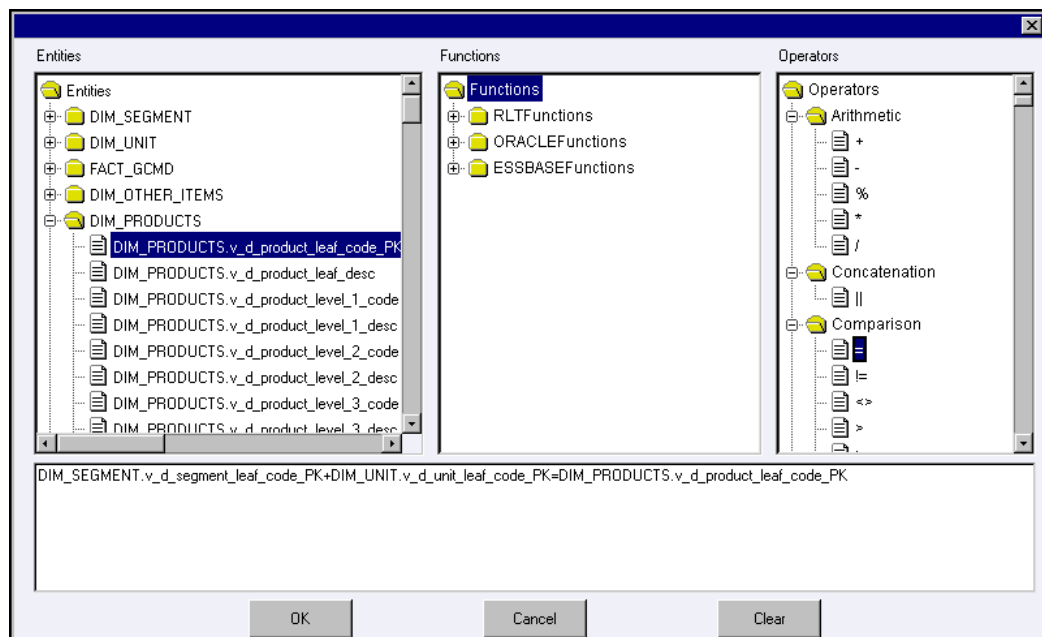
DIM_SEGMENT.v_d_segment_leaf_code_PK+DIM_UNIT.v_d_unit_leaf_code_PK=DIM_PRODUCTS.v_d_product_leaf_code_PK

Similarly, you can define the **Business Exclusion** filter by clicking the below button



against the **Business Exclusions** field to open the **Specify Expression** screen.

Double-click the Entities folder to expand the dimension and fact table folders. Now double-click the dimension/fact folder to view the attributes. Select the attribute and double-click it. The selected attribute will be displayed in the expression field.



After you have specified the business exclusion filter, click **OK** and return to the **Cube** screen.

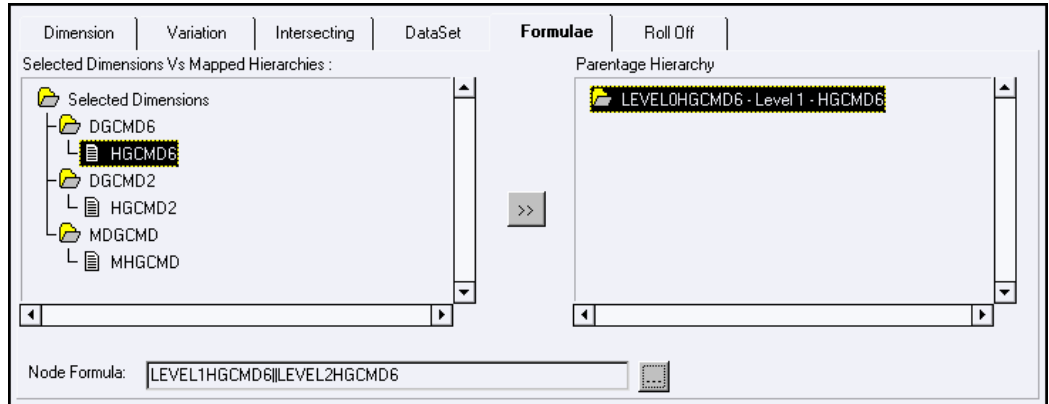
Click **Cancel** to exit the Specify Expression screen without saving the changes. Click **Clear** to reset the filter condition that you defined. This is applicable only when you are defining a new expression. While modifying an existing expression, click Clear to return to the existing expression.

Defining the Formulae

The *Formulae* option allows you apply filters to a hierarchy node.

Note: Formula can be defined only on Non-BI hierarchy nodes.

Select the **Formulae** tab.



The **Selected Dimensions vs. Mapped Hierarchies** pane contains the Selected Dimensions folder. Double-click the folder to view the dimension-hierarchy mapping. Select the hierarchy you want to apply the node formula and click >.

The Parentage Hierarchy pane will display the hierarchy. Click the button below



against the Node Formula field to open the Specify Expression screen. Double-click the Entities folder to expand the measure/hierarchy folders. Double-click the hierarchy folder, which you have chosen to apply the formula.

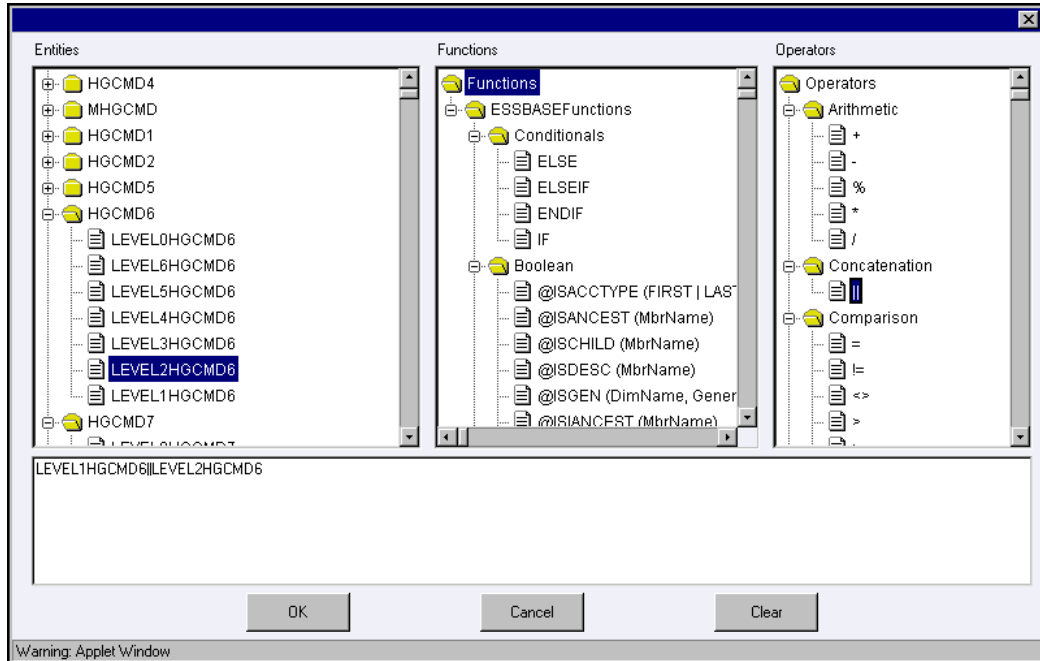
Example

HGCMD6

Next, select the node to which you want to apply the formula. Now choose the operator, which you want to apply as the formula and select the next attribute to complete the formula.

Example

LEVEL1HGCMD6||LEVEL2HGCMD6



After you have specified the node formula, click **OK** and return to the **Cube** screen.

Click **Cancel** to exit the Specify Expression screen without saving the changes. Click **Clear** to reset the formula that you defined. This is applicable only when you are defining a new expression. While modifying an existing expression, click Clear to return to the existing expression.

Note: The Formulae tab is specific to Essbase MOLAP.

Specifying the Roll Off

The *Roll Off* option allows you to delineate the start date of the cube to specify the history of the data, which is to be picked up during aggregation. The maximum period of data history that you can specify is 24 months.

Select the Roll Off tab. To define the Roll Off period for the purging of the cube data, select the **Roll Off Required** option.

Note: Currently the Roll Off option is implemented only to BI enabled hierarchies.

Enter the **Roll Off Period** to specify the period for which the data should be maintained in the system. The data will be automatically rolled off with the addition of new nodes to the cube.

Example

3 – Roll Off Period

Based on Time Dimension

Level (Leaf)

Dimension structure

Total

Quarter1

Jan

Feb

Mar

This enables that three nodes are maintained. When the build for the next month is executed, it will add the node Apr into the cube. The system cube building process will remove the node Jan and then add *Quarter 2* and *Apr* node to the cube.

Click the **Dimensions** field to open the drop-down list. The list displays the selected dimensions – namely *Product and Segment* dimension. Select the dimension for which you want to specify the roll off period.

Example

DGCMD6

Next, click the Level field to open the drop-down list to choose a level for the roll off. The list contains the hierarchy levels of the chosen dimension. Select a level.

Example

LEVEL0HGCMD6

Note: The Roll Off tab is specific to Essbase MOLAP. Currently, the data will be purged from the system, which cannot be retrieved. This facility can be implemented for other Business Enabled Hierarchies except a Time Dimension. In those cases, the data will be maintained for a specific number of periods where the oldest node will be removed from the Cube with the addition of new nodes to the dimension in that cube.

Specifying the Cube Storage

The Storage option allows you to specify how you want the cube to be stored. To define

the storage options, select the Storage tab.

You can specify the following storage information:

Access Mode

The Access Mode refers to the type of input/output. Click the Access Mode drop-down list to select the access type. By default, the access mode is set to Buffered I/O. You may change this to Direct I/O.

Data Compression

Data Compression refers the format in which the cube data is stored. Click the Data Compression drop-down list to select one of the following types:

- Bit-Map Encoding
- Run Length Encoding
- Zlib Compression.
- No Compression

The default data compression is set to **Bit-Map Encoding**.

Cache Memory Locking

The Cache Memory Locking option is specific to Essbase. Selecting this option would enable Essbase to lock the index, data file and the data cache to be locked in the physical memory. This would allow the Essbase Kernel to prioritize the use of the system RAM.

Index Cache

The Index Cache refers to the memory buffer that holds index pages. You may specify the memory size to be allocated to the cache, which will determine the number of index pages that will be buffered at a time. Enter the Index Cache.

Example

1024

Index Bytes

Index Bytes refers to the sub-division of an Index file that contains Index entries, which refer to the Data block.

Note: The Index Bytes is fixed at 8 bytes and cannot be changed.

Data File Cache

The Data File Cache refers to the buffer in memory that holds compressed data files (.PAG files). Essbase allocates memory to the data file cache during data load, calculation, and retrieval operations when required. The data file cache is used only when you have chosen the Direct I/O access mode.

Data Cache

The Data Cache refers to the buffer in memory that holds uncompressed data blocks. Essbase allocates memory to the data cache during data load, calculation, and retrieval operations when required.

Location

You can enter the following Location details:

Disk Volume - The Disk Volume can be entered as c:\, d:\ or /usr, /tmp and so on.

Partition Size – The Partition Size information can be provided as Unlimited or some valid size specified in Kilobytes (K) or Megabytes (M) or Gigabytes (G). The valid ranges are:

- In K – 8192 to 8796093022207
- In M – 8 to 8589934592
- In G – 0 to 8388608

File Type – Click the File Type drop-down list to select Page, Index, or Page and Index file types.

File Size - Click the File Size drop-down list to specify the maximum file size for the file type. This could be set to Default or can be specified in Kilobytes (K) or Megabytes (M) or Gigabytes (G). The valid ranges are:

- In K – 8192 to 2097152
- In M – 8 to 2048
- In G – 0 to 2

Note: It is not mandatory for the user to specify the storage. Oracle Infrastructure would consider the default storage settings.

On providing the following storage information, click Set to save the details. You can

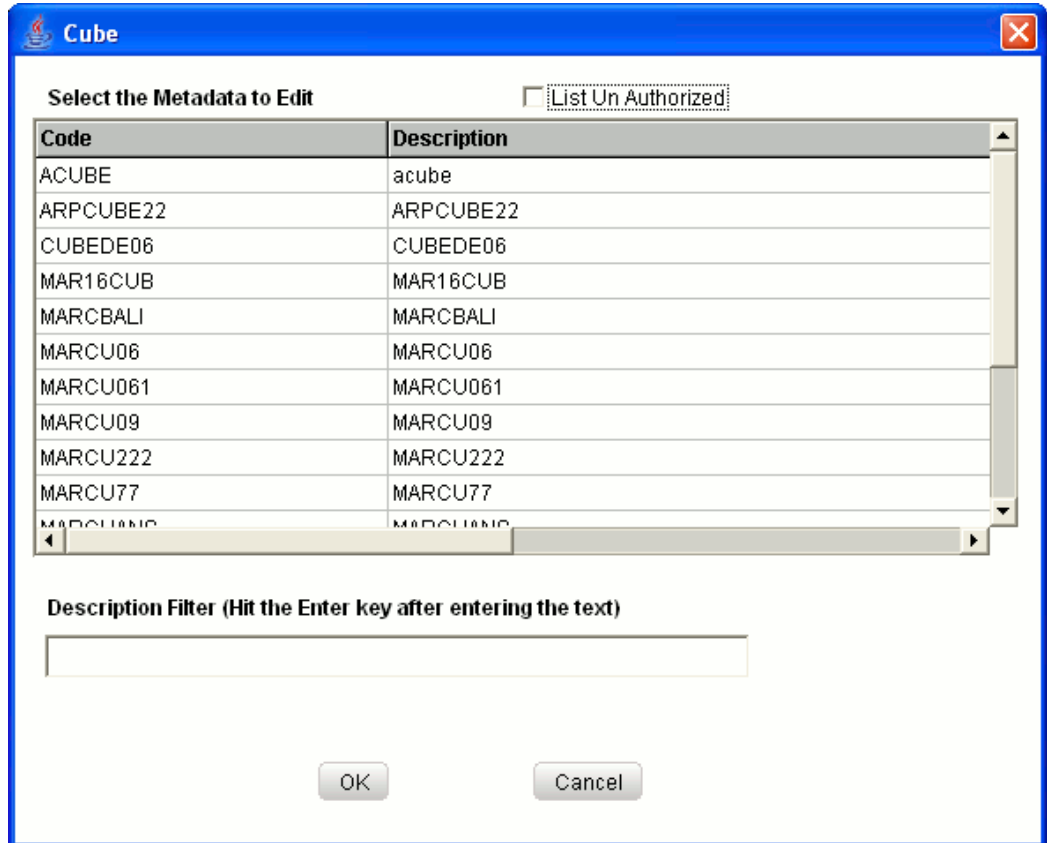
edit specific storage information and click Set to save the change. To delete the storage details that you have defined, click **Delete**.

Note: If the user has specified the Path on which the .PAG and .IND files needs to be created at an Information domain level, that information will be automatically set for every cube in that Information domain. However, the user can override this by setting Cube specific Path (Storage) information.

Modifying a Cube

There is an option to search the metadata. To do so, enter the description filter in the Description Filter box and press the Enter key. The metadata code that matches the search filter will be displayed.

Note: The User should be mapped with the Modify Cube function to edit/modify the cube definitions. When the cube definition selected for modification is in the un-authorized state (modified by another user), the definition cannot be modified.



Select (or) Check the **List Un Authorized** checkbox to view all the un authorized cube definitions. By default the search dialog will display all the authorized cube definition codes.

In UnAuthorized State, the modified cube definition and the cube definitions to be authorized by the user will be displayed.

Note: In UnAuthorized State, the users having Authorize Rights will be able to view all the unauthorized cube definitions.

Select a cube code, which you want to modify and click OK. This will cause the pop-up to close and the selected cube will be displayed in the Code field in the Cube screen. You can also double click selected code and description to populate it in respective fields.

To exit the pop-up without saving the selection, click **Cancel**.

Example
SCHEDA

Now you can modify the cube by defining new cube components or modify existing ones. The procedure of modifying a cube is similar to that of creating it (please refer to Creating a Cube for the procedure). To create a new cube after you have modified an

existing one, click New. This will display a new screen for you to create one.

When the user tries to modify a hierarchy definition which is used in the other metadata definitions and save the definition the **Affected Metadata** Dialog will be displayed.

The Affected Metadata Dialog displays all the dependent base metadata / business definitions for the selected dataset.

Click OK to save the modifications made to the dataset definition. Click Cancel to discard the operation.

Note: You cannot modify the Cube Code or its Short Description. The Dimensions/Measures mapped to a cube which is built cannot be unmapped.

Copying a Cube

A feature that is common to the metadata definitions is that you have the option of copying details of one definition to create another. There is an option to search the cube code. To do so, enter the description filter in the Description Filter box and press the Enter key. The details of the selected cube will be displayed in the Cube screen. Click **Copy**.

You will receive a copy confirmation message, which reads 'Copy Successful'. Now you can change the Cube Code and Short Description to create a new one. You can also change to add/remove cube component details to create another cube. In this, the Copy functionality is similar to the **Save As** functionality.

Example

SCHEDA Months copied and renamed as **SCHEDA001**

Note: The User should be mapped with the Add Cube function to copy the cube definitions.

Deleting a Cube

To delete an existing cube definition, search the cube code to be deleted. To do so, enter the description filter in the Description Filter box and press the Enter key. The cube code that matches the search filter will be displayed. The details of the selected cube will be displayed in the Cube screen. Click **Delete** to delete the cube. The delete function permanently deletes the cube from the database so it is important that you check carefully if you really want to delete the cube. On clicking Delete, you are prompted to confirm deletion. Click **OK** to confirm deletion, but if you are unsure of deleting the cube, click **Cancel**. You can delete a cube only if you are authorized to do so or if you have created it.

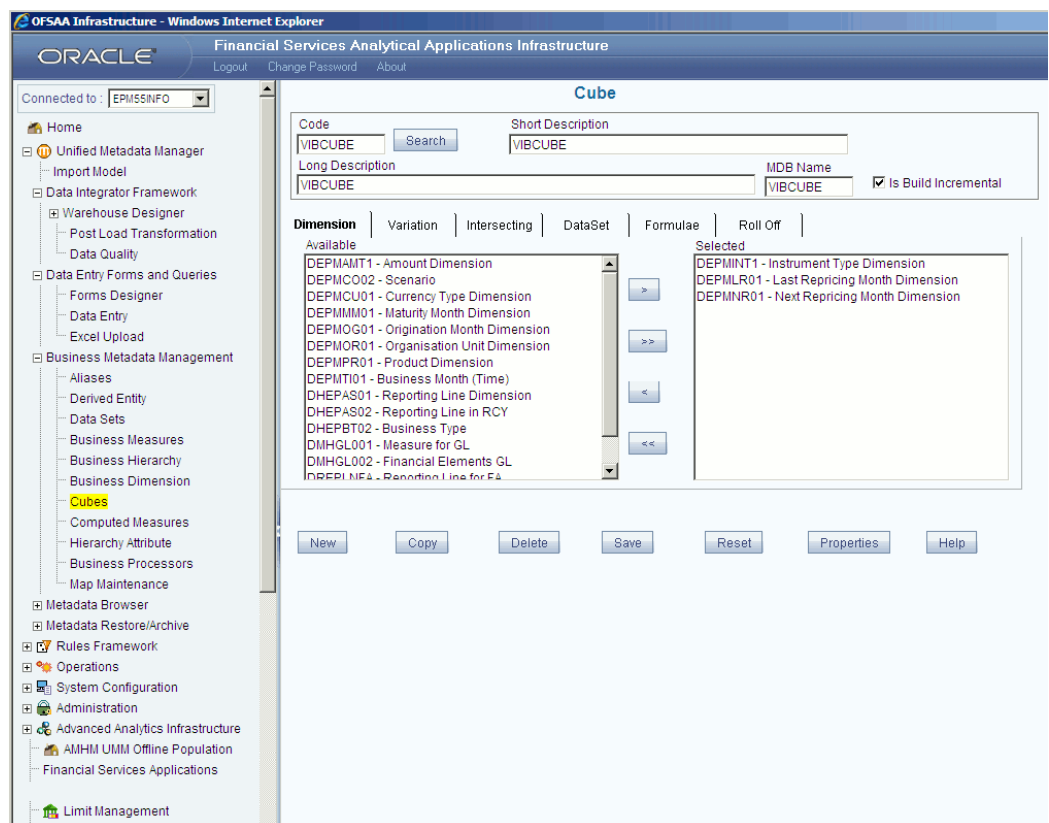
When the user clicks delete the cube definition will be marked for deletion, and won't be accessible to the users. Then the deletion should be Authorized / Rejected by the authorizer. On **Authorization** the cube definition selected for deletion will be purged.

On **Rejection**, the cube selected will be reverted back to authorized state. On deletion the un-authorized cube definition will be deleted, and further modification to the definition will not be allowed before authorizing / rejecting the deletion.

Note: The User should be mapped with the Delete Cube function to delete the cube definitions. When the cube definition selected for deletion is in the un-authorized state (modified by another user), the cube definition cannot be deleted.

Saving a Cube

On creating a new cube or modifying an existing one, click **Save** to save the new cube or the changes. You will receive a confirmation reading 'Operation successful'.



The saved cube screen is displayed with non-editable **Code** and **Short Description** fields. The saved cube definition will be stored in the repository where it will be accessed for query.

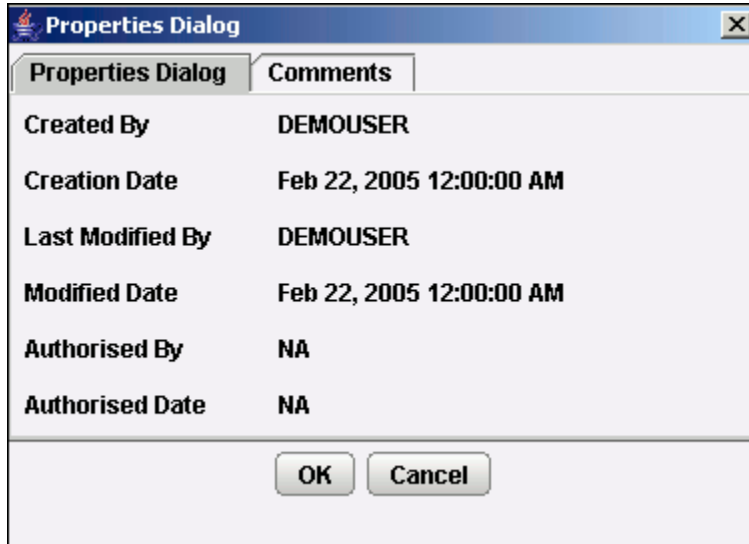
Note: If the **is authorization required for Business Metadata?** check box is selected in the information domain maintenance screen during the information domain creation, and if the user is assigned with the authorizing rights the metadata definition created will be saved in the

authorized state.

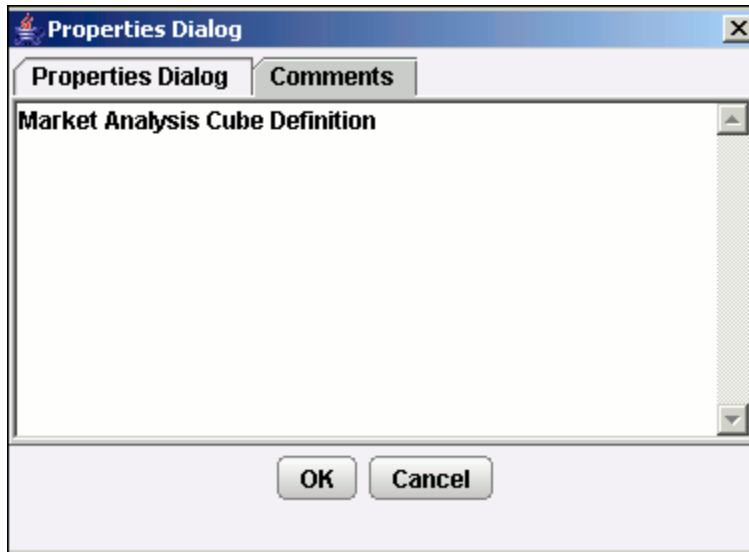
Properties

Click the Properties button. The **Properties Dialog** window will be displayed.

The window displays the name of the user who has created the definition along with the date and time of creation. It also displays the name of the user who has last modified the definition along with the date and time of the last modification, along with the authorizer name who authorized it and the data and time of authorization.



Click the **Comments** tab provided in the Properties Dialog window to enter the narration/comments about the created cube definition.



Click **OK** to save the definition with the comments given. Click **Cancel** to discard the operation.

Opening Help for the Cube Screen

To open help for the **Cube** screen, click Help. The help option will open the help specific to the Cube screen, but will also give you the option of selecting help on related topics.

Defining Computed Measures

Introduction to Defining Computed Measures

This section describes what a Computed Measure is and explains the process involved in its creation and modification. The measure discussed in this section is the computed/derived measure.

The **Computed Measures** function allows you to create aggregated measures. It gives you the flexibility of defining rules that fine-tune the information that you want to be reflected in the hierarchy.

Note:

- The User should be mapped with the Business Analyst User Screen function and View Computed Measures function, to have the **Computed Measure** sub menu option to be displayed in the left Menu.
- The User should be mapped with the Computed Measure Advanced function to define computed measure.

What is a Computed Measure?

A Computed (derived) measure is based on the functions of base measures and computed by mathematical operations like aggregation, difference, time lag, and so on.

Example

Increase in number of existing customers over previous month is computed by taking the difference between customers existing in current month and existing customers in previous month.

Why Define a Computed Measure?

A Computed Measure is essential in complex queries where the answer is not got by a simple summation of data but an intelligible one. It allows you to perform queries on a set of base measures.

Creating a Computed Measure

The Computed Measure screen wizard takes you through the process of selecting the components. First, you are required to select the Cube, solve order, and define a measure code for the computed measure. You should enter a short/ long description when you are defining it for the first time. You are required to specify the format, type of consolidation, and data storage type of the computed measure. You can choose the type of computed measure, you want to create. Secondly, you are then given the option of choosing the type of relationship of the cube and measure based on the type of computed measure, you want to create. Then the computed measure is generated.

If there are no computed measure codes for the chosen analytical domain, a system message "No Computed Measures found for the specified criteria" will be displayed.

The intermediate measure feature allows calculation of values, which cannot be arrived at by a single formula.

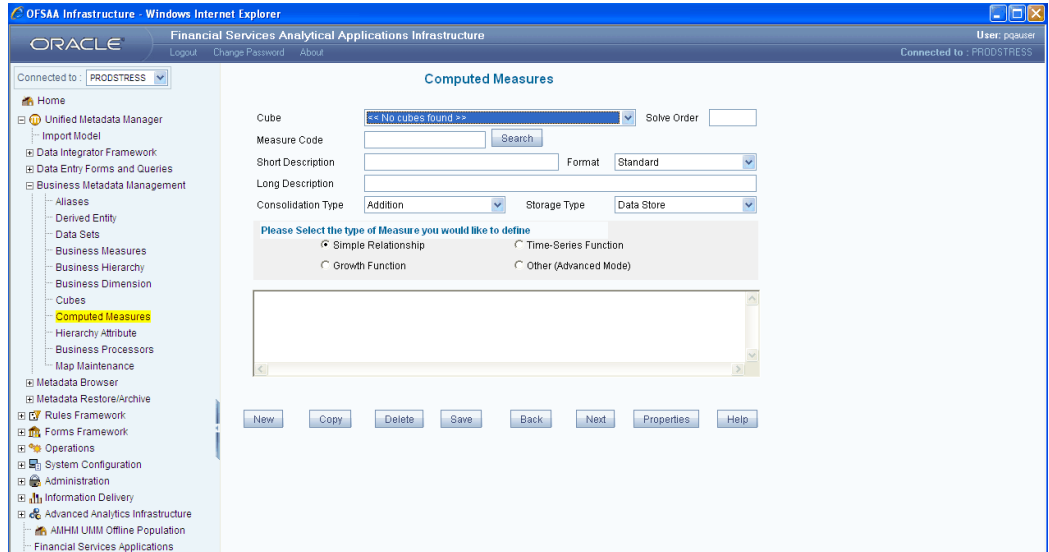
Example

$(\text{Base Measure1} + \text{Base Measure2}) \div 2$

In this case, the Base Measure1+ Base Measure2 is one part of the formula and $\div 2$ is the latter part. In a computed measure, you cannot perform two computation functions at a time. Instead, if you select the option of an Intermediate Measure, you can specify the formula in single step.

Note: You should be mapped with the Add Computed Measure function to define new computed measure definitions.

To create a computed measure, click the **Computed Measure** submenu to open the window.



Selecting the Cube

To create a computed measure, you first need to select a Cube. Click the **Cube** field to open the list. Based on the information domain you have chosen, the cubes generated for that domain are displayed in the list. Select the Cube.

Example

Cash Flow Analytics

Defining the Solver Order

The Solve Order refers to the sequence in which the values of computed measures are to be calculated. By setting the solve order property of a computed measure, you can indicate the order in which the values of computed measures are to be calculated. Computed Measures with Solve Order 0 (Zero) are calculated first. *Computed Measures* with higher solve order values are calculated later.

Enter the **Solve Order**.

Example

2

Note

- The Solve Order should be a numerical value.
- Enter the Measure Code.

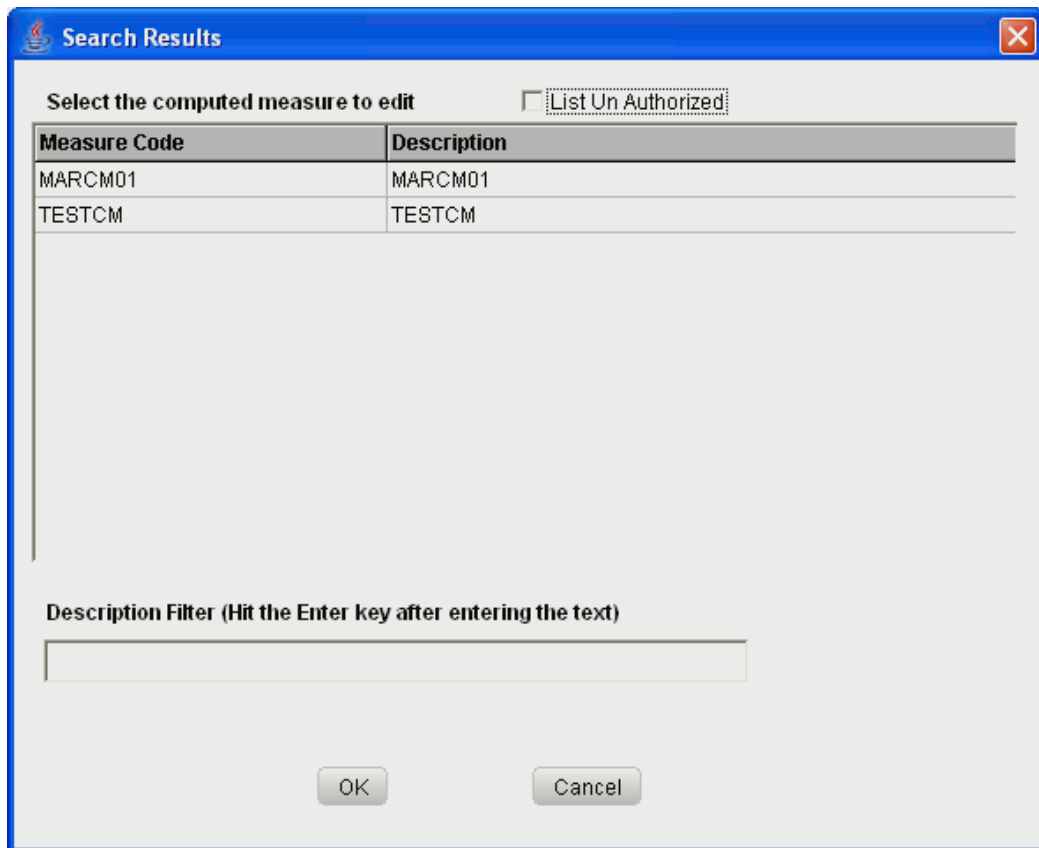
Defining the Measure Code

Enter the **Measure Code** for the computed measure you are creating or click **Search** to

select the computed measure code.

Example

MARCM01



Select the **List Un Authorized** checkbox to view all the un authorized computed measure definitions. By default the search dialog will display all the authorized computed measure definition codes.

In Un Authorized State, the modified computed measure definition and the computed measure definition to be authorized by you will be displayed.

In Un Authorized State, you should have Authorize Rights to view all the unauthorized computed measure definitions.

Click **OK** to add the selected measure code. Click **Cancel** to discard the operation.

There is an option to search the measure code. To do so, enter the description filter in the **Description Filter** box and press the **Enter** key. The measure code that matches the search filter will be displayed.

Note

- The Code should be a minimum of *one* character and a maximum of

fifteen characters in length. It can be alphabetical, numerical (only 0-9), or alphanumeric characters.

- The Code cannot contain special characters with the exception of the underscore symbol.
- Once the Code and Short Description has been saved, it cannot be changed.

Entering the Short/Long Description

Short or Long descriptions of definitions are useful in understanding the content of the Computed Measure you are creating. It would help if you could enter a **Short Description** based on the code. You can enter a **Long Description** to enhance the short description that you have entered.

Example

Computed Measure – Short Description

Computed Measure for Demo– Long Description

Cube	MARCU06	Solve Order	4
Measure Code	MARCM01	Search	
Short Description	MARCM01	Format	Currency
Long Description	MARCM01		

Note:

- It is *mandatory* to enter a Short Description but not a Long Description.
- The Short Description should be a minimum of *one* character and a maximum of *eighty* characters in length.
- The Short Description cannot contain special characters with the exception of the underscore symbol.
- The Long Description should be a minimum of one character and a maximum of hundred characters in length.

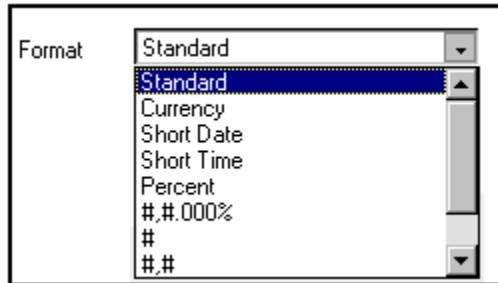
Selecting the Format

The **Format** option lists out the different types of measure computations. The computed measure that you create will be saved in the format that you select.

Click the **Format** field to open the list box. The available formats are Standard, Currency, Short Date, Short Time, Percent, #, #.00%, #, #, #.0, #,#.00. Select the format you want from the list.

Example

Standard



Selecting the Consolidation Type

The **Consolidation** option allows you specify how you want the computed measure to be combined.

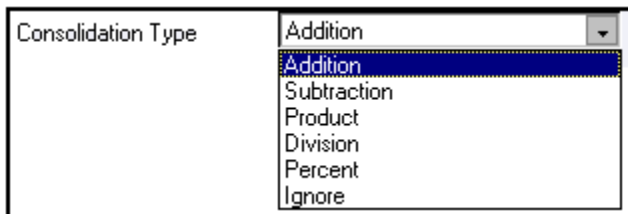
Example

If the parent node is **Profit** and the child nodes are **Sales** and Cost to arrive at the profit you would choose the consolidation type for the Sales node as **addition** and Cost as **subtraction**.

Click the **Consolidation Type** field to open the list. The options available are Addition, Subtraction, Product, Division, Percentage, and Ignore. Select the **consolidation type** you want from the list.

Example

Addition



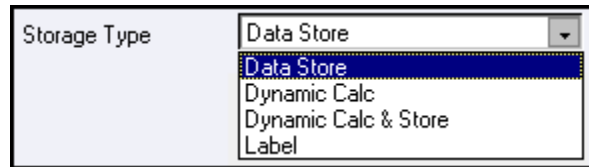
Note: The Consolidation Type option is specific to Essbase MOLAP.

Specifying the Storage Type

The Storage Type allows you to specify where information is to be stored in the database. The options available are Data Store, Dynamic Calc, Dynamic Calc & Store, and Label storage types. Select the storage type you want from the list.

Example

Data Store



Data Store

This storage type allocates a data cell for the information to be stored in the database. The consolidated value of the data is stored in this cell. The consolidation for the node occurs during the normal process of rollup.

Dynamic Calc

In this storage type, no cell is allocated and the consolidation is done when the data is viewed. The consolidation for the node is ignored during the normal process of rollup. The consolidation of node occurs when you use the OLAP tool for viewing data.

Dynamic Calc & Store

In this storage type, a cell is allocated but the data is stored only when the data is consolidated when viewed, for the first time. The consolidation for the node is ignored during the normal process of rollup. The consolidation occurs only you first retrieve the data from the database.

Label

In this storage type a cell is not allocated nor is the data consolidated, it is only viewed.

Click the **Storage Type** field to open the list. Select the storage type.

Example

Data Store

Note: The Storage Type option is specific to Essbase MOLAP.

Selecting the Measure Type

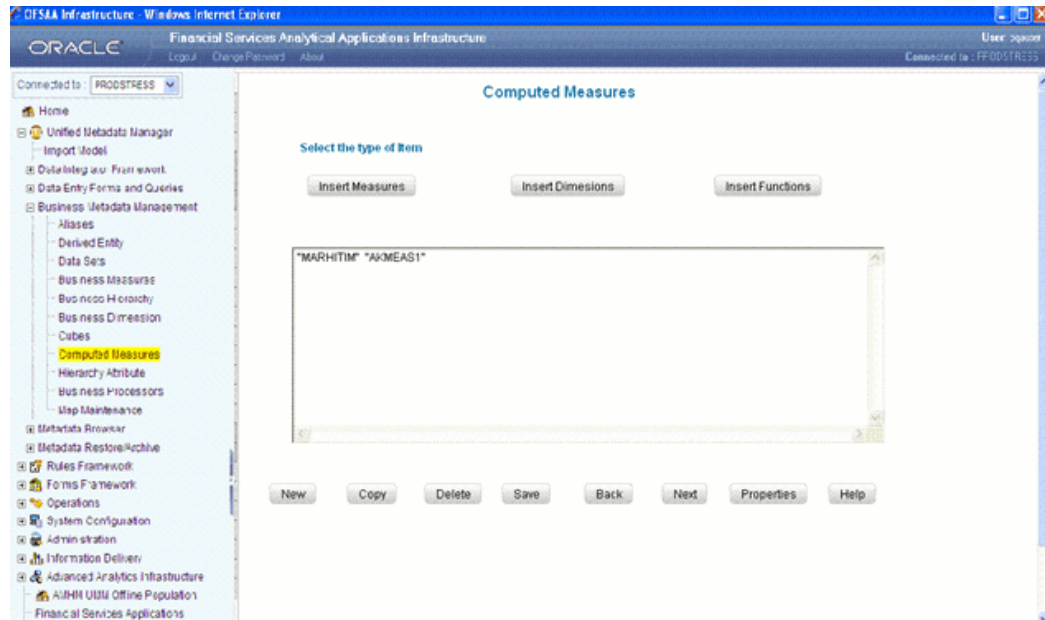
You can choose the type of computed measure you want. The type options available are as follows:

- Simple Relationship
- Growth Function
- Time-series Function
- Other – referring to the advanced mode where you can define measures to suit your requirements.

Each of the computed measure types has sub-types. Each of these sub-options is explained below to help you choose the right computed measure type. You require to click **Next** to go to the second window of the wizard. Click **Back** to go back to the first window of the wizard.

Note: The **Growth** and **Time-series** types are disabled if the cube you have chosen does not have any time dimension mapped to it.

The specified measure type is displayed in the pane.

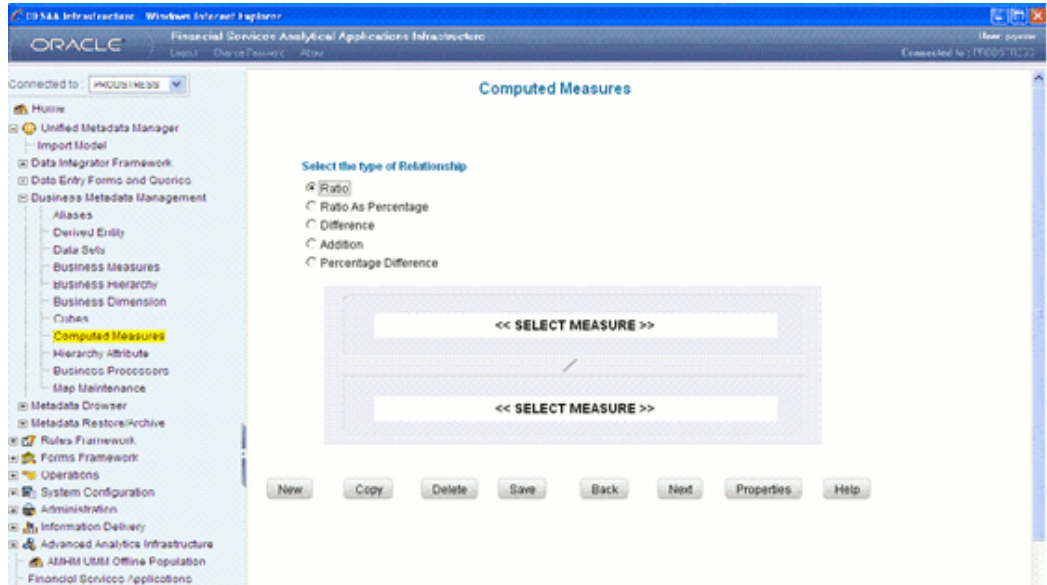


Simple Relationship type

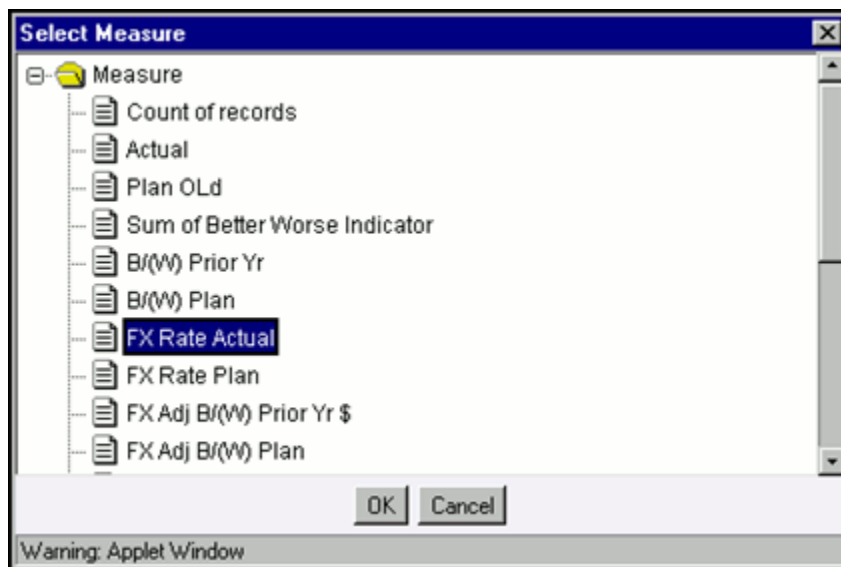
The Simple Relationship type computed measure is of five types. They are:

- Ratio
- Ratio as Percentage
- Difference
- Addition
- Percentage Difference

When you select the **Ratio** option, the window displays a simple ratio of two measures.



To define the relationship as a ratio, double click the first <<Select Measure>> option to open the Select Measure pop-up. The pop-up displays will display the **Measure** folder. Double-click the folder to expand the list of measures under it. Depending on the information domain you are logged in to, the measures for that domain are displayed.



Select the measure for which you want to compute the ratio and click **OK**. To close the pop-up without saving the selected measure option, click **Cancel**. Repeat the same procedure to choose the second measure.

Example

60 Day Average VaR / Value at Risk

Note: The method of selecting the Measures is common to all the sub-options of the Simple Relationship type.

When you select the **Ratio as Percentage** option, the window displays the ratio percentage of the selected measures (For the procedure of selecting the measures, see the Ratio option, page 13-120)

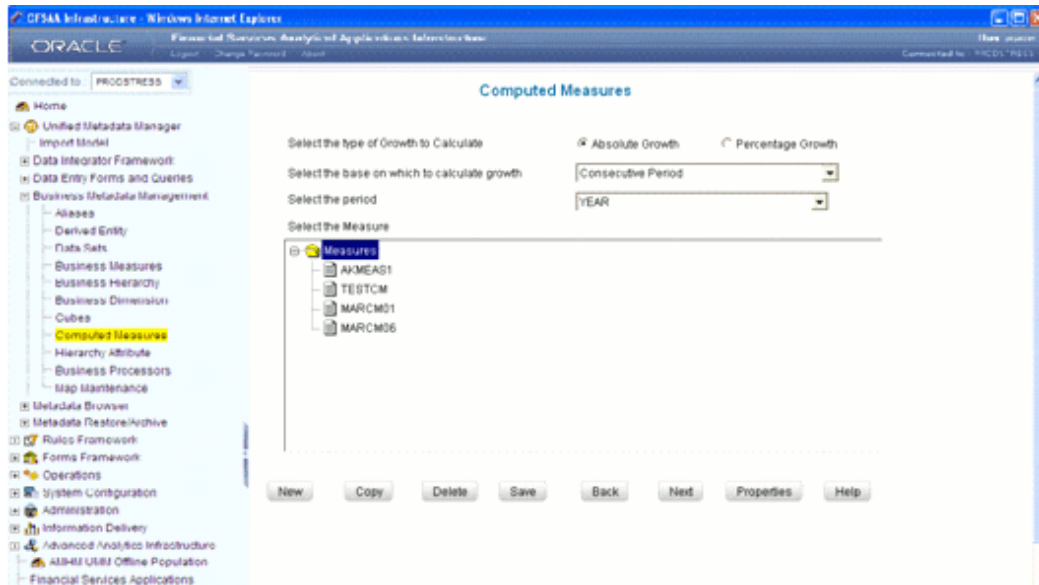
When you select the **Difference** option, the value displayed will be the difference between two selected measures (For the procedure of selecting the measures, see Ratio option, page 13-120)

When you select the **Addition** option, the summated value of the selected measures will be displayed (For the procedure of selecting the measures, see Ratio option, page 13-120)

When you select the **Percentage Difference** option, the percentage value of the selected measures is computed (For the procedure of selecting the measures, see Ratio option, page 13-120)

Growth type

Growth type computed measures are used to calculate the growth of a measure over a certain time period.



The **Growth type** measures are of two types:

Absolute – where the growth of a measure can be calculated either in absolute terms that is a simple difference.

Percentage – where the growth of a measure is calculated on a percentage basis.

Selecting the Absolute Growth Option

Select the **Absolute Growth** option.

Next, click **Select the base on which to calculate the growth** field to open the list. The available option is **Consecutive Period**.

Example

If you want to find the growth of a measure in Feb 2001 as compared to Jan 2001, select the Consecutive option.

Now, click **Select the Period** field to open the list and select the period for which you want the growth to be monitored. The available options are Year, Quarter or month. Select the **period** from the list.

Example

Year

If the time Dimension period specified in the cube is Year, Quarter and Month, it takes the previous period of the Time Level.

Finally, select the measure from the Select the Measure pane. Depending on the information domain you are logged in to, the measures for that domain are displayed in the pane. Select the measure from the pane.

Example

Currency Holdings

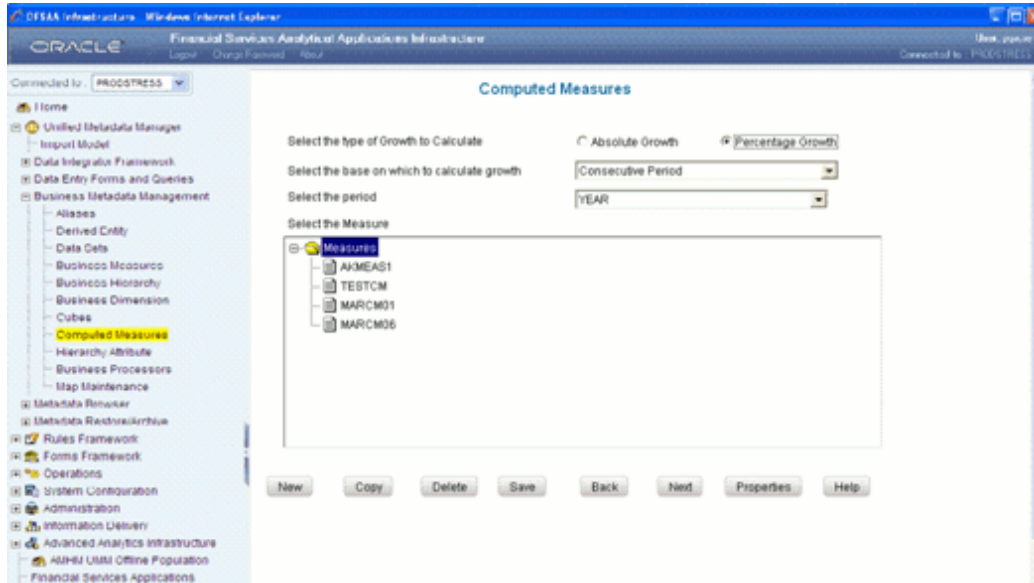


On selecting the measure, the growth of the measure will be calculated for the consecutive period for a year.

Selecting the Percentage Growth Option

Select the **Percentage Growth** option.

When you select the Percentage Growth, the screen displays the base on which to calculate the growth and the period for the same (For the procedure of creating a Percentage Growth measure type, see Selecting the Absolute Growth, page 13-122 option).



Time-Series Type

The Time Series type measures are time dependent. The **Time Series** types are:

Aggregation type – This option computes the estimate of the periodical performance on a period-to-date basis.

Rolling Average – This option computes the average for the previous N values based on the given dynamic value (N). This dynamic range could vary from a period of three months to any number of months.

Example

For a given N value =3, the average of previous 3 months will be calculated.

Selecting the Aggregation Type Option

Select the **Aggregate** option. Select the measure from the **Select the Measure** pane. Depending on the information domain you are logged in to, the measures for that domain are displayed in the pane.

Select the measure from the pane.

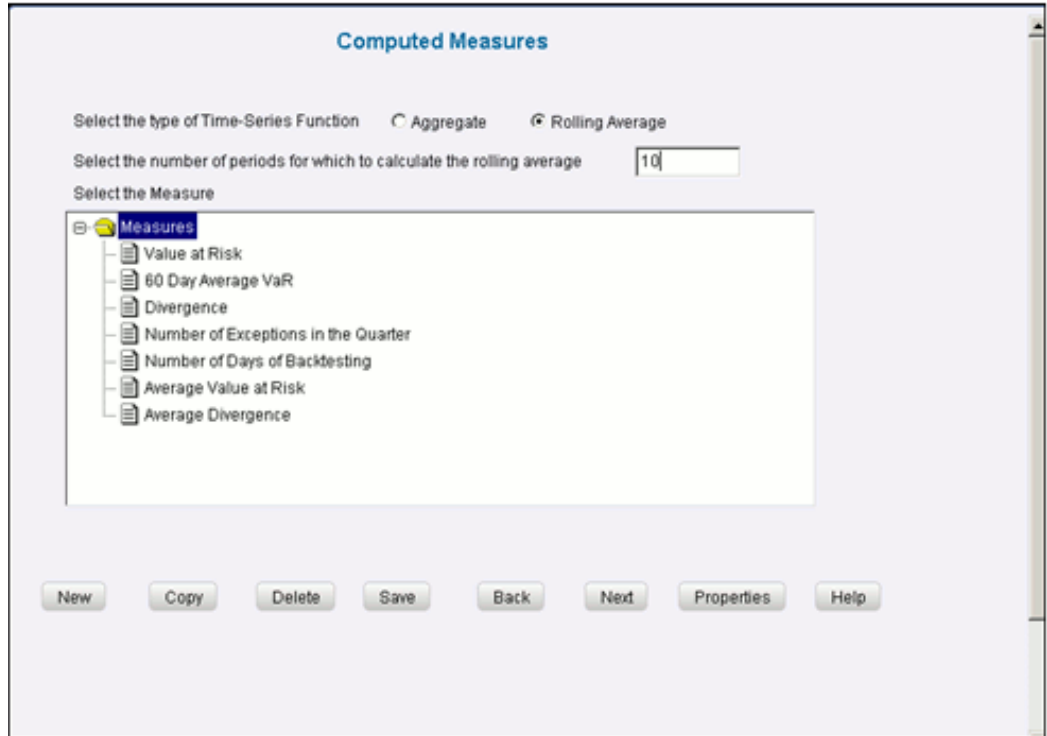
Example

Currency Holdings



Selecting the Rolling Average Option

Select the **Rolling Average** option.



Enter the rolling average in the Select the number of periods for which to calculate the rolling average field.

Example

10

Note: The duration/period refers to the number of periods with respect to the current level in the time dimension of the chosen cube i.e. if the Current Value of the time dimension + the previous X values (where 'x' is 10 as you have specified) / 10 +1.

Next, select the measure from the Select the Measure pane. Depending on the information domain you are logged in to, the measures for that domain are displayed in the pane. Select the measure from the pane.

Example

Currency Holdings

Other (Advanced Mode) Type

The **Advanced** computed measures option allows you to specify a formula for computation of the measure. In order to enter the formula, it is assumed that the user is familiar with MDB specific OLAP functions.

There are two ways that you can enter a formula.

First, you can you can define the function/condition for a measure and/or dimension by entering the expression in the pane.

Example

```
@AVG(SKIPNONE | SKIPMISSING | SKIPZERO | SKIPBOTH, expList) "PMSRBCV"  
"PMSRCCV"
```

It is not essential that you select the measure/dimension and the function in the order displayed. You can select the function and then proceed to specify the parameters, which can be either a measure or dimension or both.

Additionally, you can define it by following the procedure:

Selecting the Measure

Click **Insert Measure** to open the **Select Measure** pop-up. The pop-up displays will display the Measure folder. Double-click the folder to expand the list of measures under it. Depending on the information domain you are logged in to, the measures for that domain are displayed.



Select the measure from the pane.

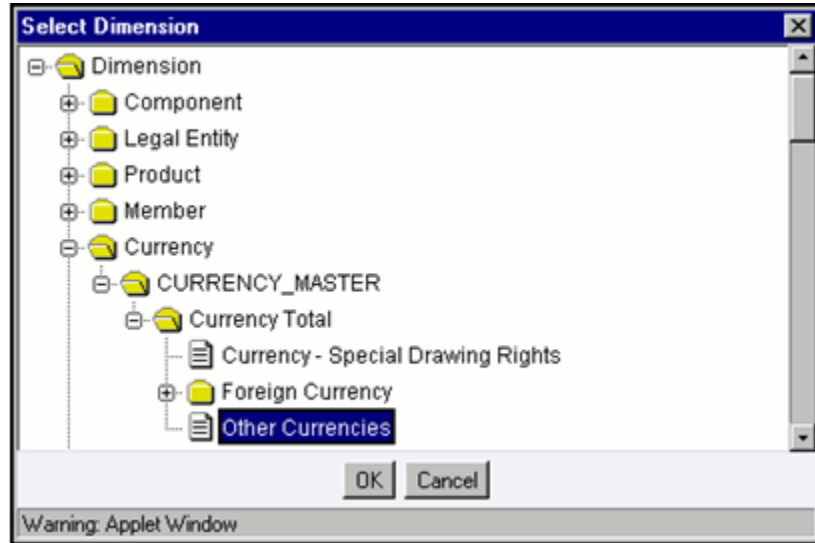
Example

Inflows-SDR

Click **OK** to select the measure selection. To close the pop-up without saving the selected measure option, click **Cancel**.

Selecting the Dimension

Click **Insert Dimension** to open the **Select Dimension** pop-up. The pop-up displays will display the **Dimension** folder. Double-click the folder to expand the list of dimensions under it. Depending on the information domain you are logged in to, the dimensions for that domain are displayed.



Select the dimension from the pane.

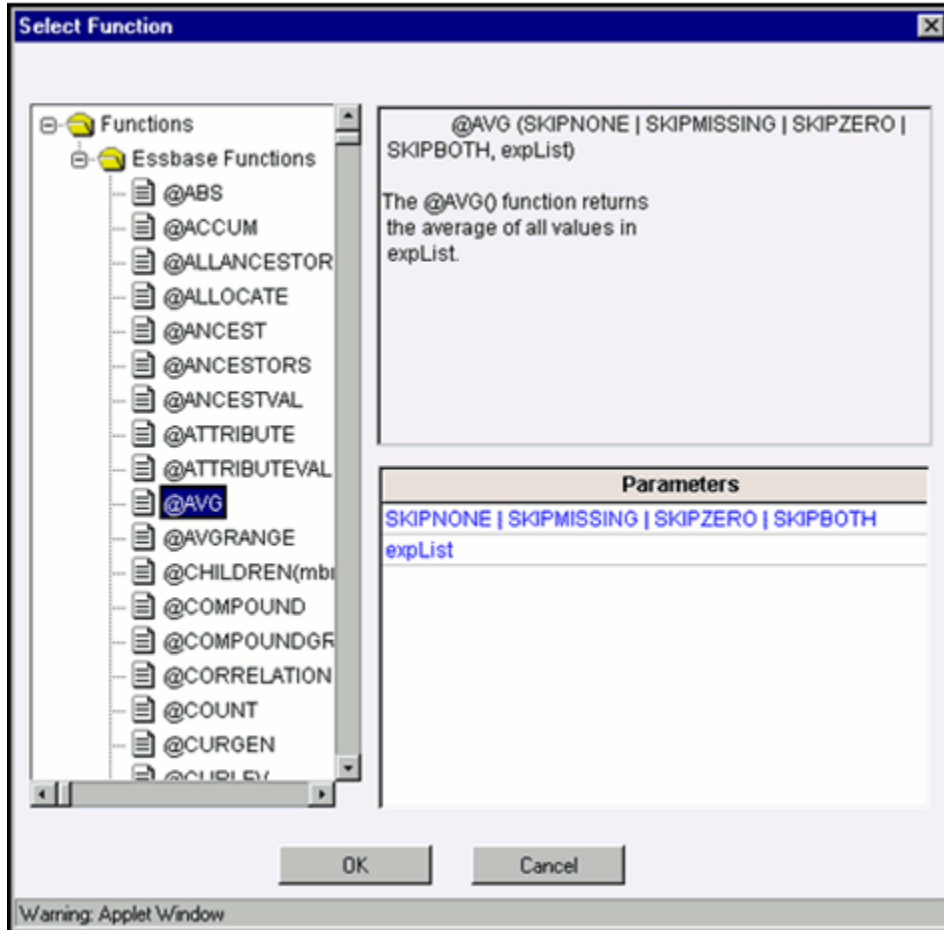
Example

Double-click **Currency** to open the folder **CURRENCY_MASTER**, double-click it to open the **Current Total** folder with **Other Currencies** as a dimension. Select it.

Click **OK** to select the dimension selection. To close the pop-up without saving the selected dimension option, click **Cancel**.

Selecting the Function

Click **Insert Function** to open the **Select Function** pop-up. Double-click the **Functions** folder to expand the list of functions within in it. The functions available are those specific to Essbase.



Select the function. The parameters for the function are displayed in the Parameters pane.

Example

@Avg

Note: The functions displayed are based on the OLAP type and therefore, vary for SQL OLAP and Essbase.

Click **OK** to select the function. To close the pop-up without saving the selected function option, click **Cancel**.

Modifying a Computed Measure

Unlike the process involved in modifying metadata definitions like the data set, measure and so on, the procedure involved in modifying a computed measure is slightly different.

Note:

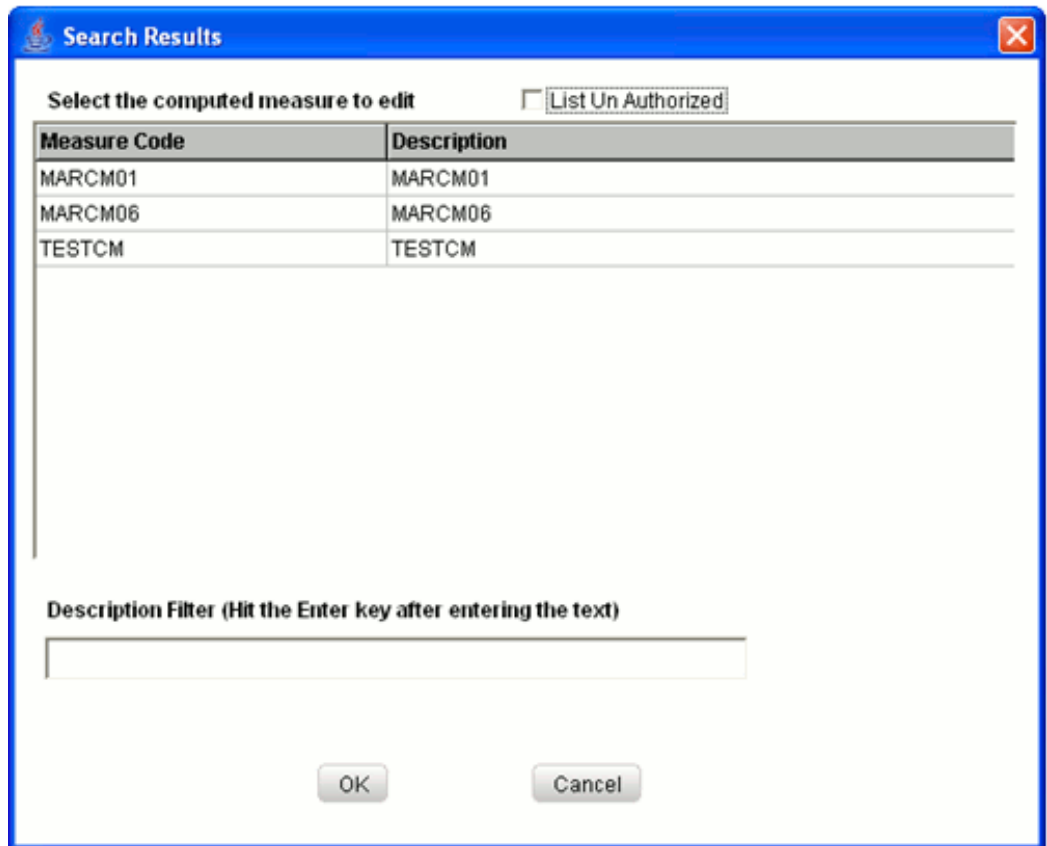
- The User should be mapped with the **Modify Computed Measure** function to edit/modify the computed Measure definitions.
- When the computed measure definition selected for modification is in the un-authorized state (modified by another user), the definition cannot be modified.

First, click the **Cube** field to open the list and select the cube to which the computed measure that you want to modify belongs.

Example

Cash Flow Analytics

There is an option to search the measure code. To do so, enter the description filter in the Description Filter box and press the Enter key. The measure code that matches the search filter will be displayed.



Select the **List Un Authorized** checkbox to view all the un authorized computed measure definitions. By default, the search dialog will display all the authorized metadata computed measure definition codes.

In Un Authorized State, the modified computed measure definition and the computed

measure definitions to be authorized by the user will be displayed.

Note: In Un Authorized State, the users having Authorize Rights will be able to view all the unauthorized computed measure definitions.

Select the measure code, which you want to modify and click **OK**. This will cause the pop-up to close and the selected cube will be displayed in the **Measure Code** field in the Computed Measures window. To exit the pop-up without saving the selection, click **Cancel**.

Example

Gap to Outflow

When the user tries to modify a computed measure definition which is used in the other metadata definitions and save the definition the Affected Metadata Dialog will be displayed.

The Affected Metadata Dialog displays all the dependent base metadata / business definitions for the selected computed measure definition.

Click **OK** to save the modifications made to the computed measure definition.

Click **Cancel** to discard the operation.

On selecting the measure code, the pop-up closes and the second window of the wizard opens displaying the existing computed measure relationship. You can change or modify this. The procedure of modifying a cube is similar to that of creating it (For the procedure, see *Creating a Computed Measure* , page 13-114).

Note: You cannot change the Cube selection, Measure Code or its Short Description.

To create a new cube after you have modified an existing one, click **New**. This will display a new window for you to create one.

Note: The window that is displayed while creating a Computed Measure for the first time is similar to the window that you will see when you click **New** to create a new computed measure. The **New** option is disabled when you see the Computed Measures window for the first time and is enabled only when you select the **Cube** to create the computed measure.

Sharing/Copying a Computed Measure

The computed measure can not only be copied but also shared. Unlike other metadata definitions, which you can copy, the computed measure function allows you to share/copy the selected computed measure to other cubes.

Click **Copy** to open the **Select Cube** pop-up.

Note: You should be mapped with the Add Computed Measure function to copy the Computed Measure definitions.



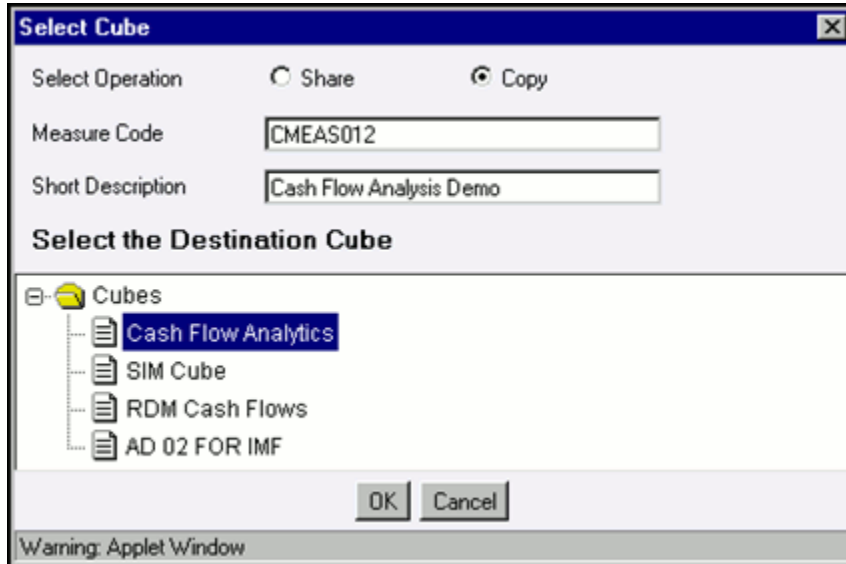
To share the computed measure, select the **Share** option. Next, select the Destination Cube from the pane. Double-click the Cubes folder to view the cubes under it. Depending on the information domain you are logged in to, the cubes for that domain are displayed. Select the cube to which you want to share the computed measure.

Example

SIM Cube

To copy a computed measure, select it by using the **Search** option to open the Select Cube. Click **OK** and you will receive a copy confirmation message, which reads "Computed Measure copied successfully". To exit the pop-up without saving the selection, click **Cancel**.

To copy the computed measure, select the **Copy** option.



Next, enter the code with which you want to save the computed measure in the **Measure Code** field. Enter a description for it in the **Short Description** field.

Example

CMEAS012 – Measure Code

Cash Flow Analysis Demo – Short Description

Click **OK** and you will receive a copy confirmation message, which reads "Computed Measure saved successfully". To exit the pop-up without saving the selection, click **Cancel**.

Deleting a Computed Measure

To delete an existing computed measure, click the **Cube** filed to open the list. Select the cube to which the computed measure belongs. Next, select the **Measure Code**, to do so, enter the description filter in the Description Filter box and press the Enter key. The details of the selected computed measure is displayed in the Computed Measure window. Click **Delete** to delete the computed measure definition. The delete function permanently deletes the computed measure definition from the repository so it is important that you check carefully if you really want to delete the computed measure. On clicking **Delete**, you are prompted to confirm deletion. Click **OK** to confirm deletion, but if you are unsure of deleting the computed measure, click **Cancel**. You can delete a computed measure only if you are authorized to do so or if you have created it.

When you click **delete**, the compute measure definition will be marked for deletion, and won't be accessible.

Then the deletion has to be Authorized / Rejected by the authorizer. On Authorization the computed measure definition selected for deletion will be purged. On Rejection the computed measure definition selected will be reverted to authorized state. On deletion the un-authorized computed measure definition will be deleted, and further

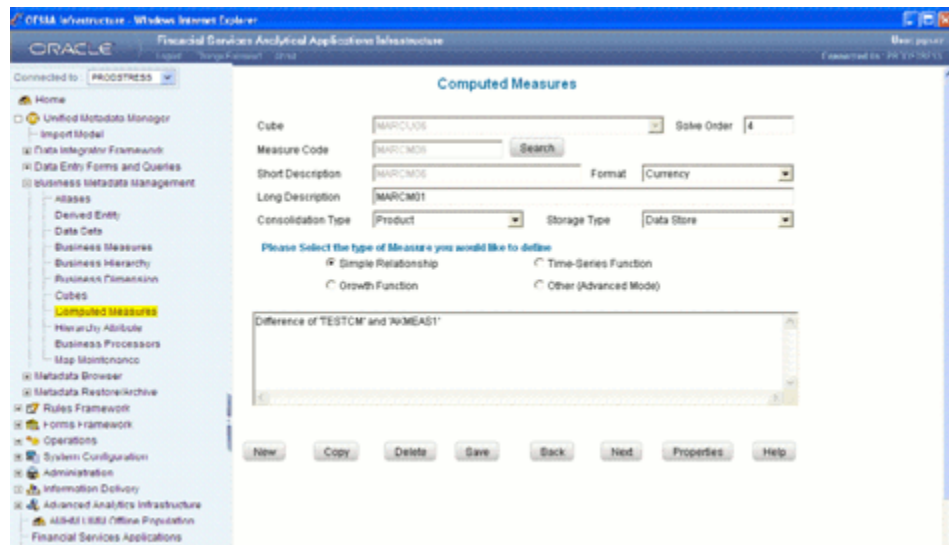
modification to the definition will not be allowed before authorizing / rejecting the deletion.

Note:

- The User should be mapped with the Delete Computed Measure function to delete the computed measure definitions.
- When the computed measure definition selected for deletion is in the un-authorized state (modified by another user), the definition cannot be deleted.

Saving a Computed Measure

On creating a new computed measure or modifying an existing one, click **Save** to save the new computed measure or the changes. You will receive a confirmation reading "Operation successful".



The saved computed measure is displayed with non-editable Cube, Measure Code, and Short Description fields.

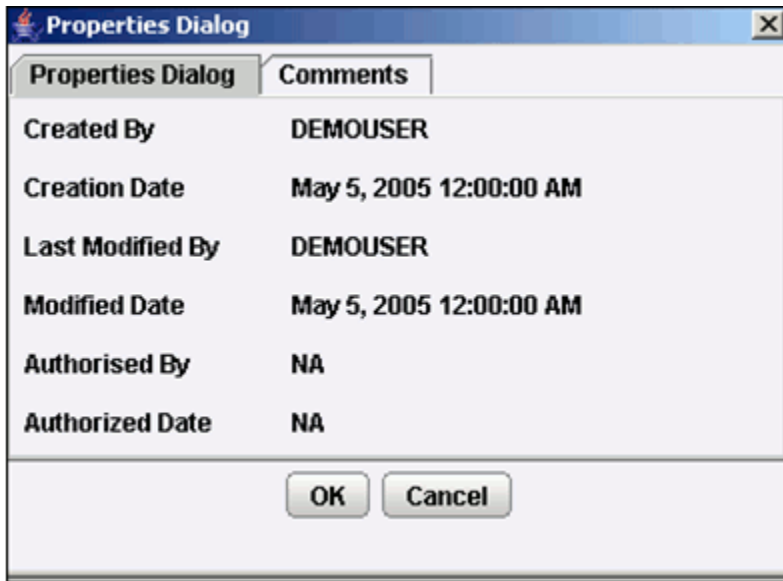
The saved computed measure definition will be stored in the repository.

Note: If the **Is authorization required for Business Metadata?** check box is selected in the information domain maintenance window during the information domain creation, and if the user is assigned with the authorizing rights the metadata definition created will be saved in the authorized state.

Properties

Click the **Properties** option. The Properties Dialog window will be displayed.

The window displays the name of the user who has created the definition along with the date and time of creation. It also displays the name of the user who has last modified the definition along with the date and time of the last modification, along with the authorizer name who has authorized it and the data and time of authorization.



Click the **Comments** tab provided in the Properties Dialog window to enter the narration/comments about the created computed measure definition.



Click **OK** to save the definition with the comments given. Click **Cancel** to discard the

operation.

Opening Help for the Computed Measure Window

To open help for the Computed Measure window, click **Help**. The help option will open the help specific to the Computed Measure window, but will also give you the option of selecting help on related topics.

Defining Hierarchy Attributes

Introduction to Defining Hierarchy Attributes

This section takes you through the process involved in assigning Hierarchy Attributes to the nodes of a hierarchy.

The **Hierarchy Attributes** function enables you to define information associated with hierarchy nodes. The attribute is the generic information about the node.

What is a Hierarchy Attribute?

A Hierarchy Attribute is some generic descriptive notion about different hierarchy nodes. It provides an ability to provide further information about every hierarchy node than is available in the hierarchy structure itself.

Example

The notion of cities rolling up into states that roll up into countries is captured normally as part of the hierarchy structure and is information about these hierarchy nodes. Additionally each location could have a manager responsible for its management- which is not automatically captured in the hierarchy definition, but is nevertheless useful in defining the geographical classification from a financial services institutions perspective. This descriptive notion of a branch manager is an example of a Hierarchy Attribute. Attributes are also different from the notion of Hierarchy in that commonality is not the basis for classification- so two hierarchy nodes can have the same manager and this similarity will not be the basis of aggregating of data.

Note: You should be mapped with the Business Analyst User Screen function and View Attributes function, to have the Hierarchy Attribute sub menu option to be displayed in the left Menu.

Why Define Hierarchy Attributes?

Hierarchy attributes provides additional information defined to the existing hierarchy and are useful while viewing information and performing analytics using Insight.

Assigning Hierarchy Attributes

Hierarchy attributes can be assigned to both types of hierarchy that is Non BI Enabled Hierarchy and a BI Enabled Hierarchy: While assigning a Hierarchy attribute, all the leaves are treated as one level.

Assigning hierarchy attributes for a non-BI enabled hierarchy and BI enabled hierarchy vary. These are discussed as follows:

Non BI-Enabled Hierarchy

In a non-BI enabled hierarchy, you need to select the expression for values of all the leaf and enter the hierarchy attribute at every intermediate node.

While defining the hierarchy attribute for a non-BI enabled Hierarchy, the Hierarchy Attributes wizard takes you through two windows. In the first window, you have to specify the entity – attribute for the leaf level nodes (that is, column name, to get the values of that attribute) and the join condition between the actual table column of that hierarchy node and table column of that node (if the entity is different from the entity on which the hierarchy is defined).

Unlike a BI enabled hierarchy, in the second window, you have enter the values for the intermediate nodes manually for parent node level identification.

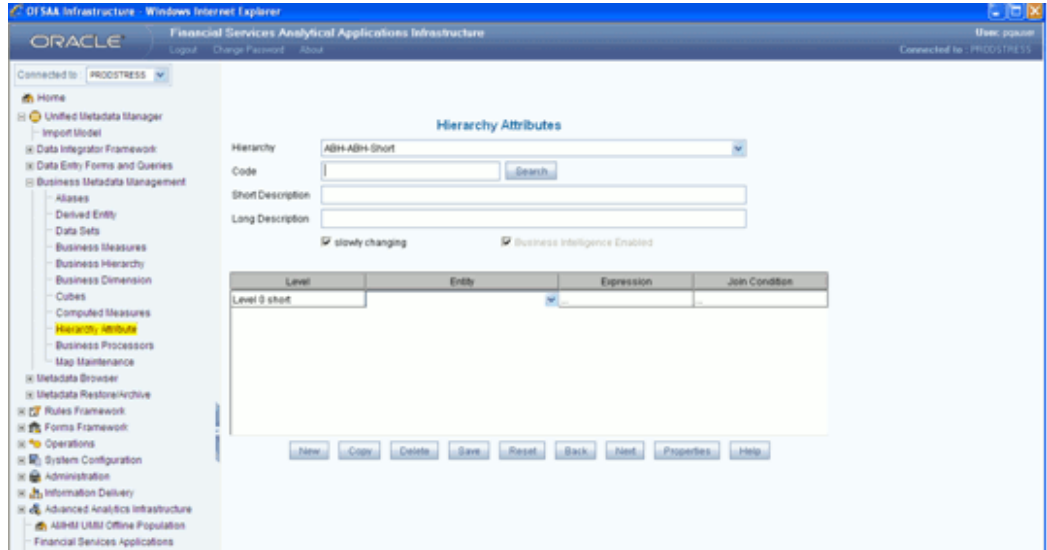
BI-Enabled Hierarchy

In a BI enabled hierarchy, you need to enter the expression for values at different levels and enter an attribute value for the total node (identification of the total node value).

While defining the hierarchy attribute for a BI enabled Hierarchy, you have to enter the expression for different levels. If the total required property is true for the BI Hierarchy, a text field appears at the bottom where the attribute value for the total node has to be entered.

It is not necessary for expressions to be specified for all the levels but expression for attribute values for nodes belonging to at least one level should be entered in order to save the attribute.

To assign a hierarchy attribute, click the Hierarchy Attributes option to open the window.



Assigning hierarchy attributes for a non-BI enabled hierarchy and BI enabled hierarchy are explained separately as follows:

Assigning Hierarchy Attributes for Non BI-Enabled Hierarchy

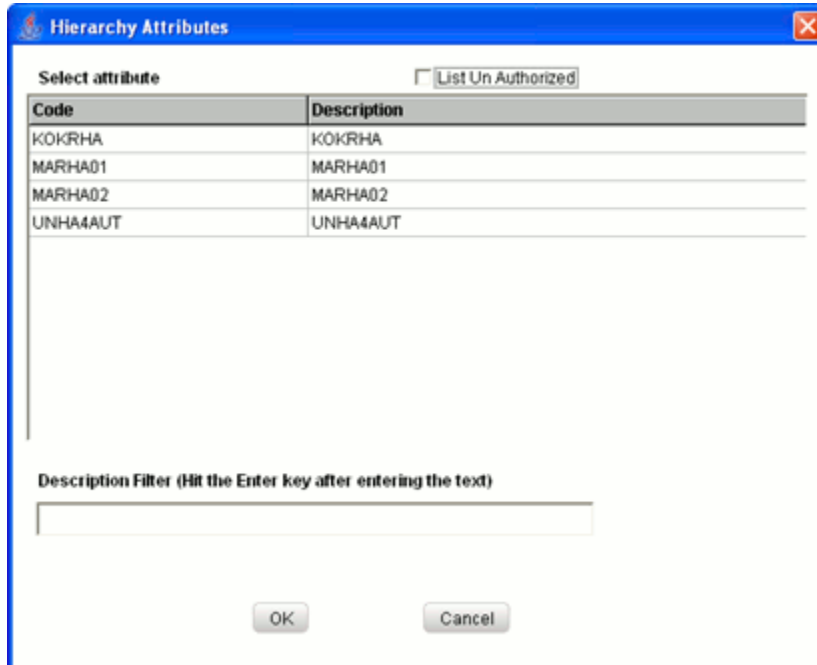
Selecting the Hierarchy

Click the **Hierarchy** field to open the list. Based on the information domain you have chosen, the hierarchies generated for that domain are displayed in the list. Select a non-BI enabled hierarchy. You will recognize a BI enabled hierarchy when you select it because the Business Intelligence Enabled option will be enabled.

Select a **Hierarchy** from the list.

Entering the Hierarchy Attribute Code

Enter a distinct identifier/Code for the hierarchy attribute that you are creating or click **Search** to select the Hierarchy Attribute code. It is recommended that you define a code that is descriptive or indicative of the hierarchy attribute you are going to assign.



Select the List Un Authorized checkbox to view all the un authorized hierarchy attribute definitions. By default, the search dialog will display all the authorized hierarchy attribute definition codes.

In Un Authorized State, the modified hierarchy attributes definitions and the hierarchy attribute definitions to be authorized by the user will be displayed.

Note: In Un Authorized State, if you are having Authorize Rights, you will be able to view all the unauthorized hierarchy attribute definitions.

There is an option to search the hierarchy attribute code. To do so, enter the description filter in the **Description Filter** box and press the **Enter** key. The hierarchy attribute code that matches the search filter will be displayed.

Note:

- The Code should be a minimum of one character and a maximum of *eight* characters in length; it can be alphabetical, numerical (only 0-9) or alphanumeric characters.
- The Code cannot contain special characters with the exception of the underscore symbol.
- Once the Code and Description has been saved, it cannot be changed.

Click **OK** to add the selected hierarchy attributes code. Click **Cancel** to discard the operation.

Entering the Short Description

Entering descriptions of definitions are useful in understanding the content of the hierarchy attribute definition you are creating. It would help if you could enter a Short Description based on the code you have defined for the hierarchy attribute definition.

Example

Product Hierarchy Attribute

Note:

- It is *mandatory* to enter a Description.
- The Description should be a minimum of *one* character and a maximum of *eighty* characters in length.
- The Description cannot contain special characters with the exception of the underscore symbol.

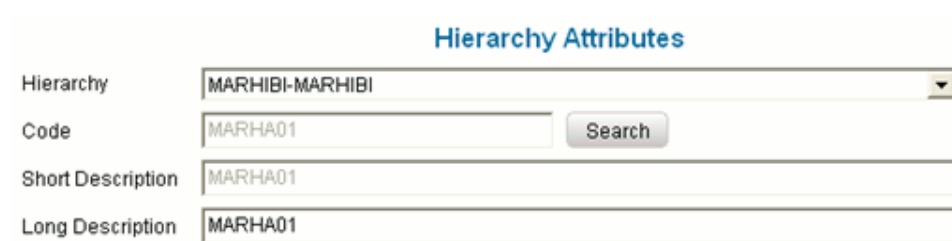
Entering the Long Description

Entering long descriptions of definitions are useful in understanding the content of the hierarchy attribute definition you are creating. It would help if you could enter a Long Description based on the code you have defined for the hierarchy attribute definition.

Example

MARHA01

Note: The Description should be a minimum of *one* character and a maximum of *hundred* characters in length.

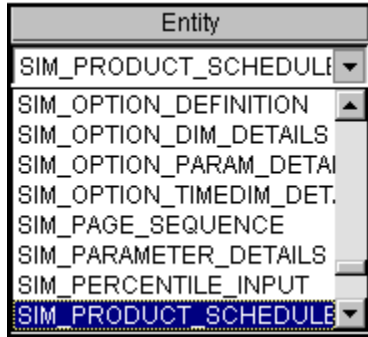


The screenshot shows a form titled "Hierarchy Attributes". It contains four input fields, each with the value "MARHA01":

- Hierarchy:** A dropdown menu.
- Code:** A text input field with a "Search" button to its right.
- Short Description:** A text input field.
- Long Description:** A text input field.

Selecting the Entity

The Level field denotes that the expression for values that you choose will be applicable to all leaf nodes. Now you need to select the entity for the expression. Click the **Entity** field to open the list.



Select the entity for which you want to define the hierarchy attribute.

Example

SIM_PRODUCT_SCHEDULE

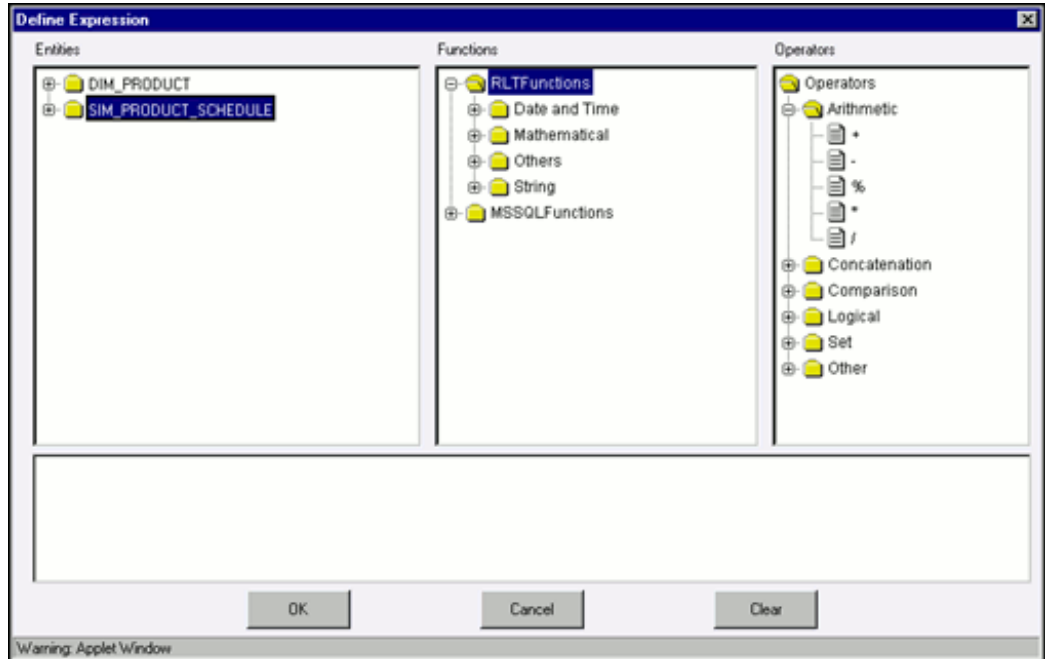
Note: The entity chosen is not part of the selected hierarchy, which means, a join condition has to be defined. However, if an entity like DIM_PRODUCT were selected, a join condition would not be required as it belongs to the same dimension table.

Selecting the Expression

Double-click the **Expression** field to open the Define Expression screen where you can select an expression for the selected entity.

The Define Expression screen has three panes – the Entities, Function and Operators and one field – Expression (a detailed explanation of these is given under Defining the Join condition). You need to choose an expression from the Entities pane.

The Entities pane contains the Entities folder with the list of tables that you selected from the Entity field. Double-click the Entities folder to view the table, namely, the DIM_PRODUCT and SIM_PRODUCT_SCHEDULE. Now you need to choose the expression from the SIM_PRODUCT_SCHEDULE table.



Select the expression from the SIM_PRODUCT_SCHEDULE folder.

Example

SIM_PRODUCT.SCHEDULE_V_PRODUCT_CODE

The expression that you chose will be shown in the Expression field.



After you have specified the expression, click **OK** to save it and return to the Hierarchy Attributes screen. Click **Cancel** to exit the Define Expression screen without saving the changes. Click **Clear** to reset the expression that you defined. This is applicable only when you are defining a new expression. While modifying an existing expression, click **Clear** to return to the existing condition.

Defining the Join Condition

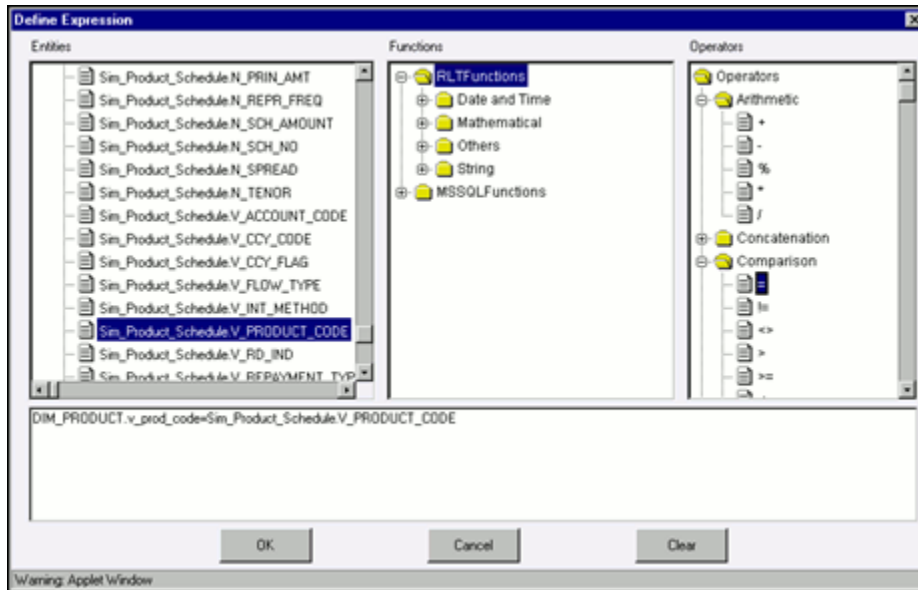
Double-click the Join Condition field to open the Define Expression screen where you can define the join condition between the selected entity node and the table column of the selected hierarchy node.

The Define Expression screen has three panes and one field, which are explained as follows:

The Entities Pane

This contains the **Entities** folder with the list of tables that you selected from the Entity Groups folder. Double-click the Entities folder to view the selected dimension tables,

namely, the DIM_PRODUCT and SIM_PRODUCT_SCHEDULE tables. Double-click the table folders to view the table entities.



Select the entity of the table to which you want join the entity attribute.

Example

DIM_PRODUCT.v_prod_code

The Functions Pane

This contains functions that are specific to databases like Oracle and MS SQL Server. You can use these functions along with Operators to specify the join condition.

Four Functions categories are displayed based on the database types.

Transact SQL is specific to Sybase/MS SQL server, which consists of Date & Time, Math and System functions.

SQL OLAP is specific to Microsoft OLAP, which consists of Array, Dimension, Hierarchy, Logical, Member, Number, Set, and String functions.

SQL is specific to Oracle, which consists of Character, Conversion, Date, Misc, and Numeric functions.

Note: It is not *mandatory* to specify a Function for a join condition.

The Operators Pane

This contains the Operators folder. Double-click the folder to view the list of available operators.

There are *six* categories of Operators.

Arithmetic – Arithmetic operators are +, -, %, * and /

Example

Plus sign -- (balance + interest_computed)

Minus sign -- (actual_balance – minimum_balance)

Concatenation - The Concatenation operator is ||

Example

(customer.customer_first_name || customer_last_name)

Comparison – Comparison operators are '=', '!=', '<>', '>', '<', 'IN', 'NOT IN', 'ANY', 'SOME', 'LIKE' and 'ALL'.

Example

= -- (account_status = O)

IN -- account_status IN {O, A, C}

Logical – Logical operators are 'NOT', 'AND' and 'OR'

Example

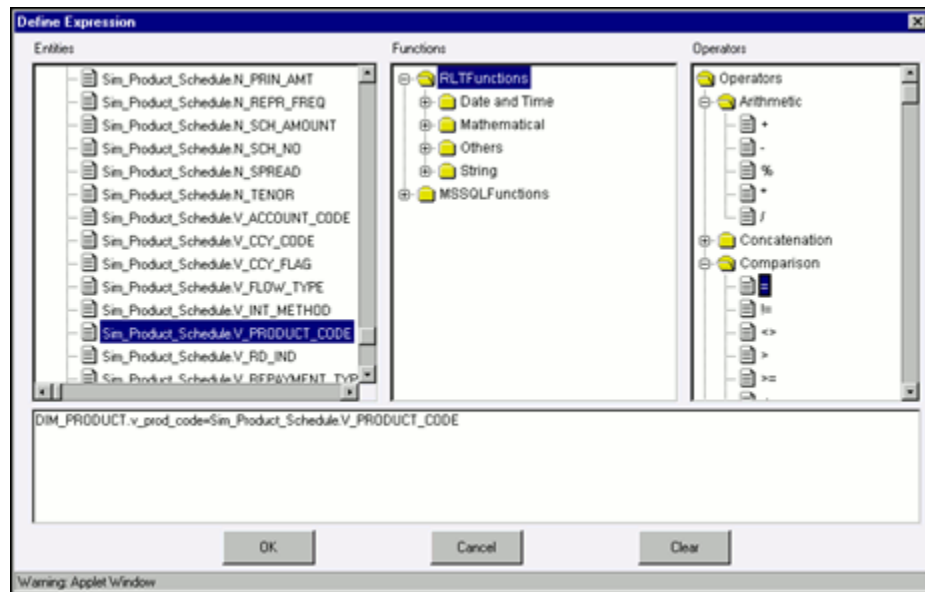
'NOT' -- 'NOT' (account_status = O)

'AND' -- (actual_balance – minimum_balance) >1000 'AND' (actual_balance – minimum_balance) <2000

'OR' -- (actual_balance > 1000 'OR' <2000)

Set - Set operators are UNION, UNION ALL, INTERSECT and MINUS

Others – The Other operators are 'PRIOR', '(+)', '(' and ')'.



Now select the operator, which you want to use for the join condition.

Example

Comparison - =

Now select the second entity from the Entities pane that you want to join with the first entity that was selected.

Example

DIM_PRODUCT.v_prod_code from DIM_Products =
SIM_PRODUCTS_SCHEDULE_V_PRODUCT_CODE entity from
SIM_PRODUCT_SCHEDULE

The Expression Field

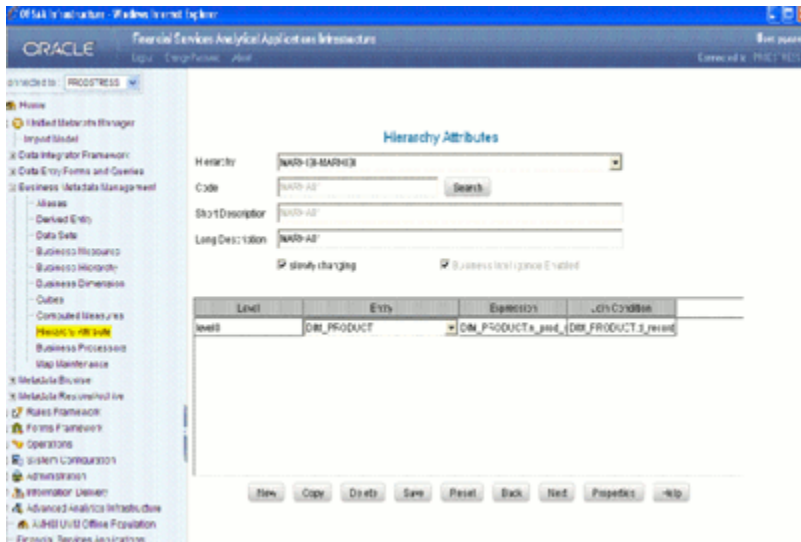
The join condition that you specify will be shown in the Expression field.



After you have specified the join condition, click **OK** to save it and return to the Data Set screen. Click **Cancel** to exit the Define Expression screen without saving the changes. Click **Clear** to reset the join condition that you defined. This is applicable only when you are defining a new expression. While modifying an existing expression, click **Clear** to return to the existing condition.

Click **Next** to go to the second screen of the Hierarchy Attributes wizard.

The table displays the Hierarchy and the Attribute Value columns.



In the **Hierarchy** column, the selected hierarchy folder will be displayed that is **Product Total**. Double-click the folder to view the nodes within it. The intermediate nodes where you can enter the value are represented by a dotted line under Attribute Value column. Enter the attribute value.

The table displays the Level against which you can specify the entity-attribute, to get the values of that attribute.

Assigning Hierarchy Attributes for a BI-Enabled Hierarchy

Selecting the Hierarchy

Click the **Hierarchy** field to open the list. Based on the information domain you have chosen, the hierarchies generated for that domain are displayed in the list. Select a BI enabled hierarchy. You will recognize a BI enabled hierarchy when you select it because the **Business Intelligence Enabled** option will be enabled.

Select a **Hierarchy** from the list.

Example

Geography-By Geography

Entering the Hierarchy Attribute Code

Enter a distinct identifier/Code for the hierarchy attribute that you are creating. It is recommended that you define a code that is descriptive or indicative of the hierarchy attribute you are going to assign.

Example

Geography Attribute

Note:

- The Code should be a minimum of eight characters in length; it can be alphabetical, numerical (only 0-9) or alphanumeric characters.
- The Code cannot contain special characters with the exception of the underscore symbol.
- Once the Code and Description has been saved, it cannot be changed.
- You cannot use the following as either Code or Short Description for an Essbase installation: "\$\$\$UNIVERSE\$\$\$", "#MISSING", "#MI", "CALC", "DIM", "ALL", "FIX", "ENDFIX", "HISTORY", "YEAR", "SEASON", "PERIOD", "QUARTER", "MONTH", "WEEK", "DAY".

Entering the Short Description

Entering descriptions of definitions are useful in understanding the content of the Cube you are creating. It would help if you could enter a Short Description based on the code you have defined for the Cube.

Example

Geography Attribute

Note:

- It is *mandatory* to enter a Description.

- The Description should be a minimum of one character and a maximum of fifty characters in length.
- The Description cannot contain special characters with the exception of the underscore symbol.

Entering the Long Description

Entering long descriptions of definitions are useful in understanding the content of the hierarchy attribute definition you are creating. It would help if you could enter a Long Description based on the code you have defined for the hierarchy attribute definition.

Note: The Description should be a minimum of one character and a maximum of hundred characters in length.

Authorizing the Hierarchy Attribute

The Authorization feature is unique to the metadata definitions of the Mart Builder. It allows the authorizer to approve hierarchy attributes created by other users. The right of authorization gives the authorizer permission to delete or modify the hierarchy attributes but not the user who created it. Only an authorized hierarchy attribute will be stored in the repository. To authorize the hierarchy attribute that has been created by another user, select the **Is Authorized** option.

Note: You can authorize a hierarchy attribute only if you have authorization rights.

Selecting the Entity

The **Level** field displays the levels available in the hierarchy and the related entity in the **Entity** field.

Level	Entity	Expression	Join Condition
GEOG0	PS_WFI_GEO_DIM	PS_WFI_GEO_DIM.WFI_GEO_D...	
GEOG1	PS_WFI_GEO_DIM	PS_WFI_GEO_DIM.WFI_GEOLV...	
GEOG2	PS_WFI_GEO_DIM	PS_WFI_GEO_DIM.WFI_GEOLV...	
GEOG3	PS_WFI_PERSON_DIM	PS_WFI_PERSON_DIM.DMT_BI...	
GEOG4	PS_WFA_CMPVAL_FACT	PS_WFI_GEO_DIM.WFI_GEO_D...	
GEOG5	PS_WFA_HEALTH_FACT	PS_WFI_GEO_DIM.WFI_GEO_D...	
GEOG6	PS_WFA_WKFRCE_FACT	PS_WFI_GEO_DIM.WFI_GEO_D...	
	PS_WFI_BU_DIM		
	PS_WFI_DAY_DIM		
	PS_WFI_GEO_DIM		
	PS_WFI_MONTH_DIM		
	PS_WFI_PERSON_DIM		

You can change the entity for a level by clicking the Entity field to open the list. Select an entity for any given level.

Example

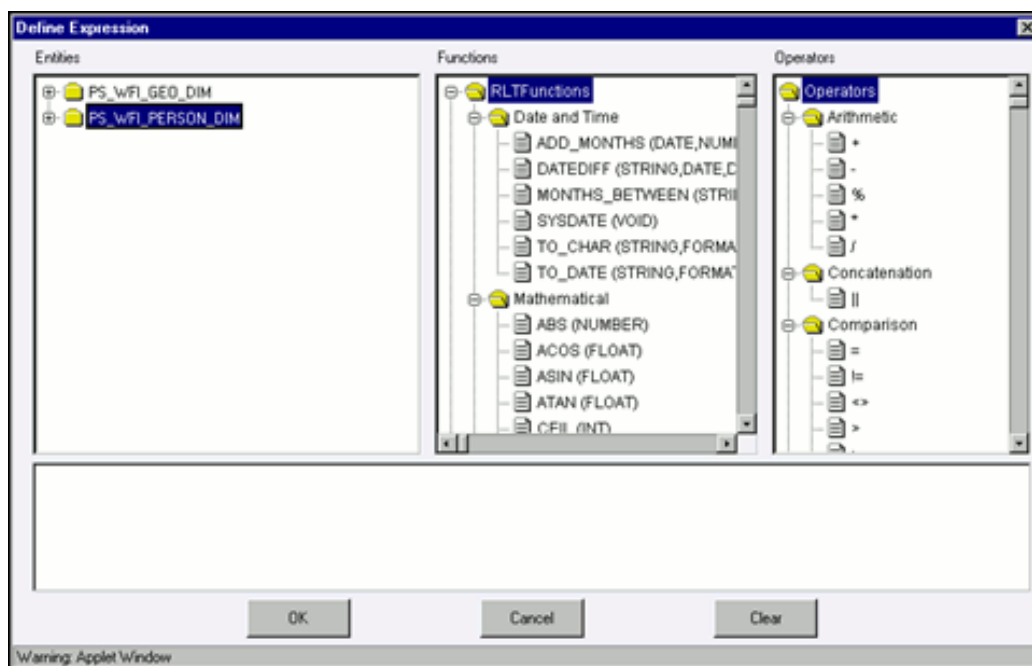
For Level GEOG3, PS_WFI_PERSONAL_DIM is chosen as an entity, which belongs to another table (not the Geography table); so join condition will be required to join these two tables.

Selecting the Expression

Double-click the **Expression field** to open the Define Expression screen where you can select an expression for the selected entity.

The Define Expression screen has three panes – the Entities, Function and Operators and one field – Expression (a detailed explanation of these are given under Defining the Join condition). You need to choose an expression from the Entities pane.

The Entities pane contains the **Entities** folder with the list of tables that you selected from the Entity field. Double-click the Entities folder to view the table, namely, the PS_WFI_GEO_DIM and PS_WFI_PERSON_DIM. Now you need to choose the expression from the PS_WFI_PERSON_DIM table.



Select the expression from the PS_WFI_PERSON_DIM folder.

Example

PS_WFI_PERSON_DIM.DMT_BU_ID

The expression that you chose will be shown in the Expression field.



After you have specified the expression, click **OK** to save it and return to the Hierarchy Attributes screen. Click **Cancel** to exit the Define Expression screen without saving the changes. Click **Clear** to reset the expression that you defined. This is applicable only when you are defining a new expression. While modifying an existing expression, click **Clear** to return to the existing condition.

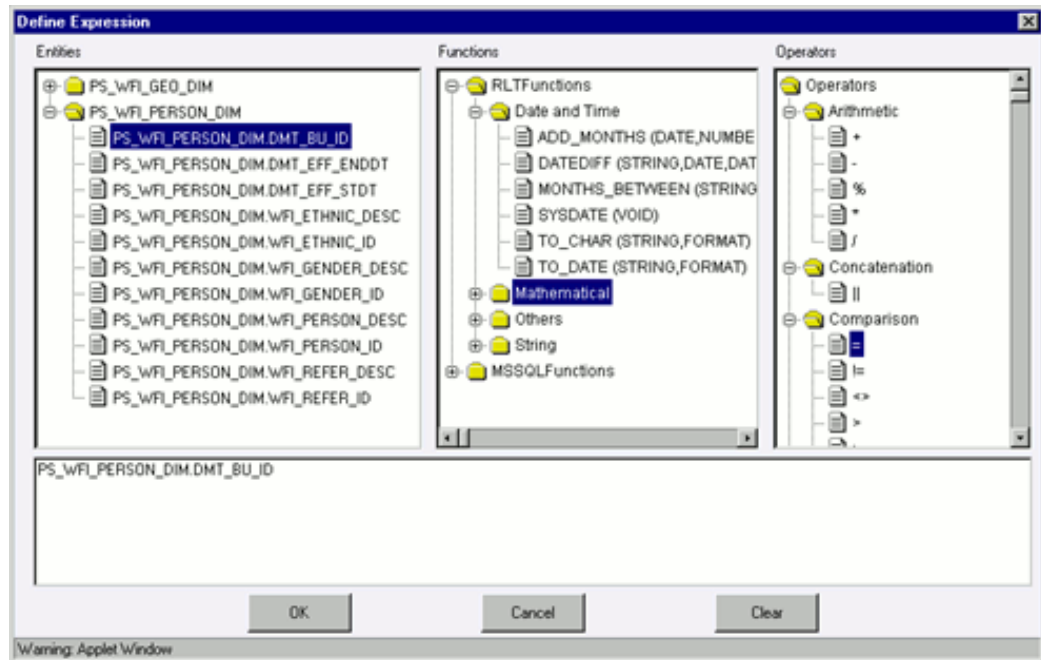
Defining the Join Condition

Double-click the Join Condition field to open the Define Expression screen where you can the join condition between the selected entity node and the table column of the selected hierarchy node.

The Define Expression screen has three panes and one field, which are explained as follows:

The Entities Pane

This contains the **Entities** folder with the list of tables that you selected from the Entity Groups folder. Double-click the Entities folder to view the selected dimension tables, namely, the PS_WFI_GEO_DIM and PS_WFI_PERSON_DIM tables. Double-click the table folders to view the table entities.



Select the entity of the table to which you want join the entity attribute.

Example

PS_WFI_PERSON_DIM.DMT_BU_ID

The Functions Pane

This contains functions that are specific to databases like Oracle and MS SQL Server. You can use these functions along with Operators to specify the join condition.

The Functions categories are displayed based on the database types.

Transact SQL is specific to Sybase/MS SQL server, which consists of Date & Time, Math and System functions.

SQL OLAP is specific to Microsoft OLAP, which consists of Array, Dimension, Hierarchy, Logical, Member, Number, Set and String functions.

SQL is specific to Oracle, which consists of Character, Conversion, Date, Misc, and Numeric functions.

Note: It is not *mandatory* to specify a Function for a join condition.

The Operators Pane

This contains the Operators folder. Double-click the folder to view the list of available operators.

There are six categories of Operators.

Arithmetic – Arithmetic operators are +, -, %, * and /

Example

Plus sign -- (balance + interest_computed)

Minus sign -- (actual_balance – minimum_balance)

Concatenation - The Concatenation operator is ||

Example

(customer.customer_first_name || customer_last_name)

Comparison – Comparison operators are '=', '!=', '<>', '>', '<', 'IN', 'NOT IN', 'ANY', 'SOME', 'LIKE' and 'ALL'.

Example

= -- (account_status = O)

IN -- account_status IN {O, A, C}

Logical – Logical operators are 'NOT', 'AND' and 'OR'

Example

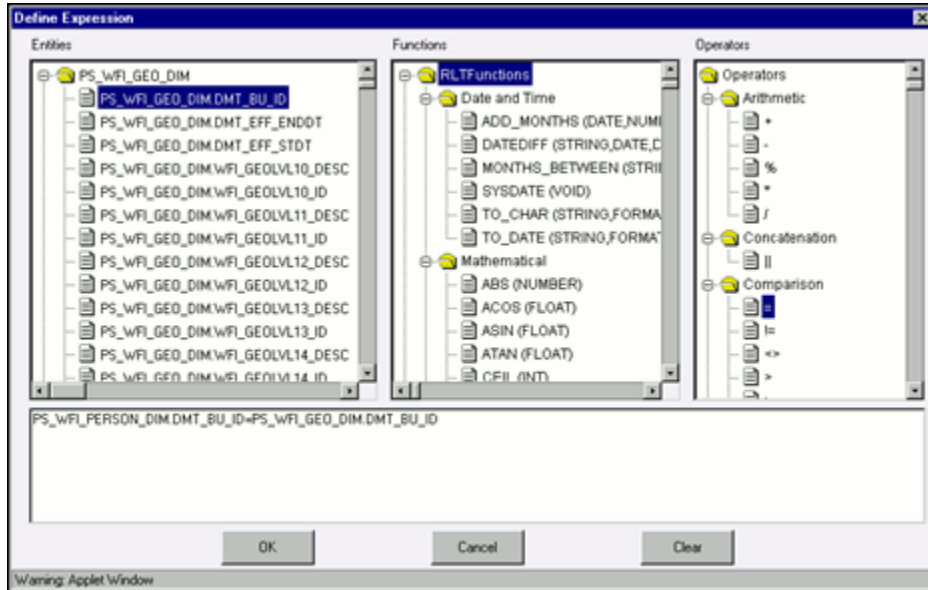
'NOT' -- 'NOT' (account_status = O)

'AND' -- (actual_balance – minimum_balance) >1000 'AND' (actual_balance – minimum_balance) <2000

'OR' -- (actual_balance > 1000 'OR' <2000)

Set - Set operators are UNION, UNION ALL, INTERSECT and MINUS

Others – The Other operators are 'PRIOR', '(+)', '(' and ')'.
'PRIOR' -- (actual_balance PRIOR 1000)



Now select the operator, which you want to use for the join condition.

Example

Comparison - =

Now select the second entity from the Entities pane that you want to join with the first entity that was selected.

Example

PS_WFI_PERSON_DIM.DMT_BU_ID entity from PS_WFI_PERSON_DIM =

PS_WFI_GEO_DIM.DMT_BU_ID entity from PS_WFI_GEO_DIM

The Expression Field

The join condition that you specify will be shown in the Expression field.



After you have specified the join condition, click **OK** to save it and return to the Data Set screen. Click **Cancel** to exit the Define Expression screen without saving the changes. Click **Clear** to reset the join condition that you defined. This is applicable only when you are defining a new expression. While modifying an existing expression, click **Clear** to return to the existing condition.

Defining the Attribute Value for the Total Node

Enter the Attribute Value for Total Node in the field.

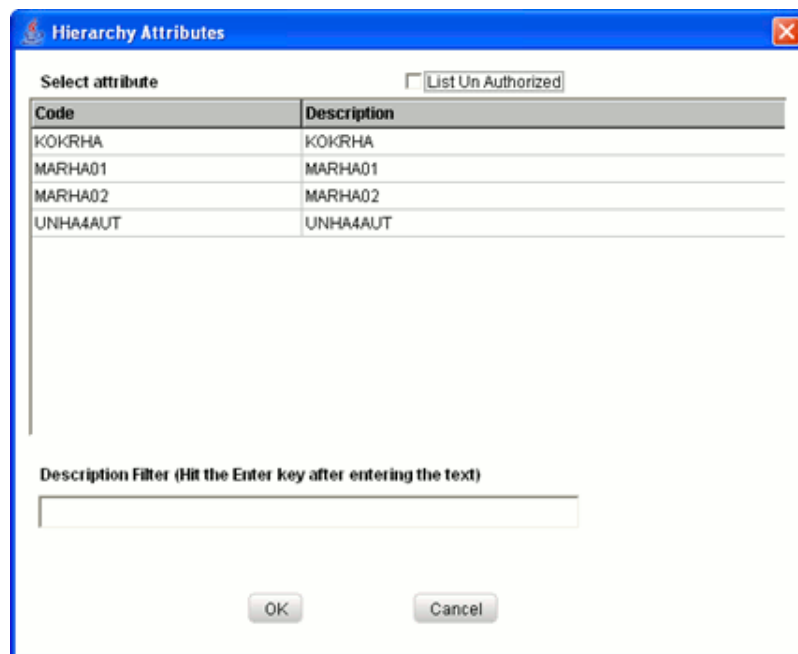
Example
Geography

Modifying a Hierarchy Attribute

There is an option to search the hierarchy attribute code. To do so, enter the description filter in the Description Filter box and press the Enter key. The hierarchy attribute code that matches the search filter will be displayed.

Note:

- The User should be mapped with the Modify Attributes function to edit/modify the Hierarchy Attribute definitions.
- When the hierarchy attribute definition selected for modification is in the un authorized state (modified by another user), the definition cannot be modified.



Select the **List Un Authorized** checkbox to view all the un authorized hierarchy attribute definitions. By default the search dialog will display all the authorized metadata hierarchy attribute definitions codes.

In Un Authorized State, the modified hierarchy attribute definitions and the hierarchy attribute definitions to be authorized by the user will be displayed.

Note: In Un Authorized State, the users having Authorize Rights will

be able to view all the unauthorized hierarchy attribute definitions.

Select the code, which you want to modify and click **OK**. This will cause the pop-up to close and the selected hierarchy attribute details will be displayed in the Hierarchy Attributes Set screen. To exit the pop-up without saving the selection, click **Cancel**.

Example

NAMES OF DIFFERENT REGIONS

Now you can modify the hierarchy attributes by selecting new entities and expression. The procedure of modifying a data set is similar to that of assigning it (For the procedure, see Assigning Hierarchy Attributes, page 13-136). To create a new hierarchy attribute after you have modified an existing one, click **New**. This will display a new screen for you to create one.

Note: You cannot modify the Hierarchy Attribute Code or its Short Description.

Copying a Hierarchy Attribute

A feature that is common to the metadata definitions is that you have the option of copying details of one definition to create another. There is an option to search the hierarchy attribute code. To do so, enter the description filter in the Description Filter box and press the Enter key. The details of the selected hierarchy attribute will be displayed in the Hierarchy Attributes screen. Click **Copy**. You will receive a copy confirmation message, which reads "Copy Successful". Now you can change the hierarchy attribute Code and Short Description to create a new one. You can also change the entities, expression and join table conditions. In this, the **Copy** functionality is similar to the **Save As** functionality.

Example

NAMES copied and renamed as *HABIENAB001*.

Note: The User should be mapped with the Add Hierarchy function to copy the Business Hierarchy definitions.

Deleting a Hierarchy Attribute

To delete an existing data set, search the hierarchy attribute code to be deleted. To do so, enter the description filter in the Description Filter box and press the Enter key. The hierarchy attribute code that matches the search filter will be displayed. The details of the selected hierarchy attribute will be displayed in the Hierarchy Attribute screen. Click **Delete** to delete the hierarchy attribute. The delete function permanently deletes the hierarchy attribute from the database so it is important that you check carefully if you really want to delete the hierarchy attribute. On clicking **Delete**, you are prompted

to confirm deletion. Click **OK** to confirm deletion, but if you are unsure of deleting the hierarchy attribute, click **Cancel**. You can delete a hierarchy attribute only if you are authorized to do so or if you have created it.

When the you click **Delete**, the hierarchy attribute definition will be marked for deletion and won't be accessible to you.

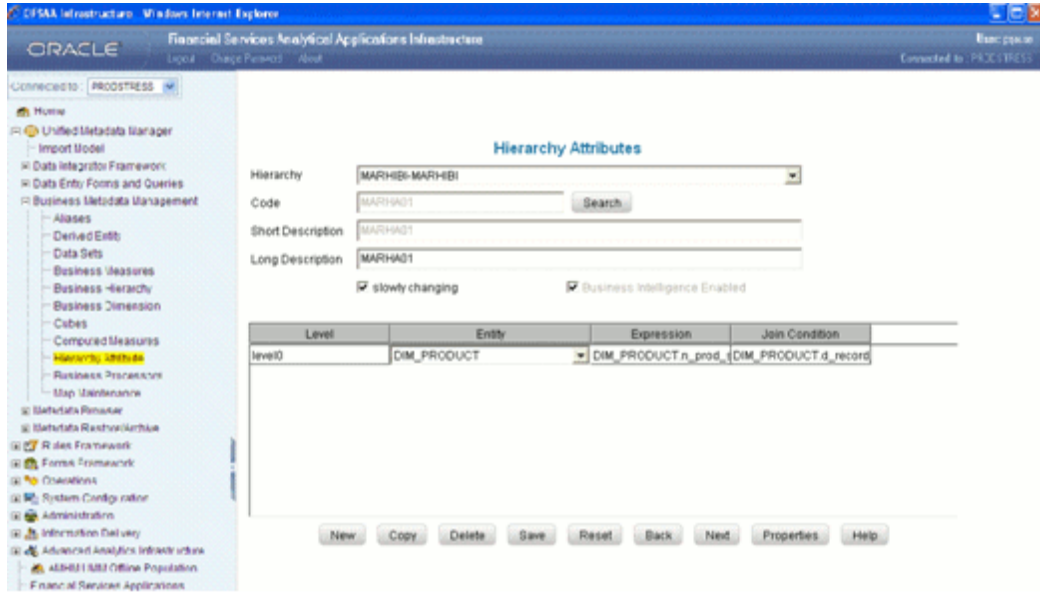
Then the deletion has to be Authorized / Rejected by the authorizer. On Authorization the hierarchy attribute definition selected for deletion will be purged. On Rejection the hierarchy attribute definition selected will be reverted back to authorized state. On deletion the un-authorized hierarchy attribute definition will be deleted, and further modification to the definition will not be allowed before authorizing / rejecting the deletion.

Note:

- The User should be mapped with the Delete Attributes function to delete the Hierarchy Attribute definitions.
- When the hierarchy attribute definition selected for deletion is in the un authorized state (modified by another user), the definition cannot be deleted.

Saving a Hierarchy Attribute

On assigning a new hierarchy attribute or modifying an existing one, click **Save** to save the new hierarchy attribute or the changes. You will receive a confirmation reading "Operation successful".

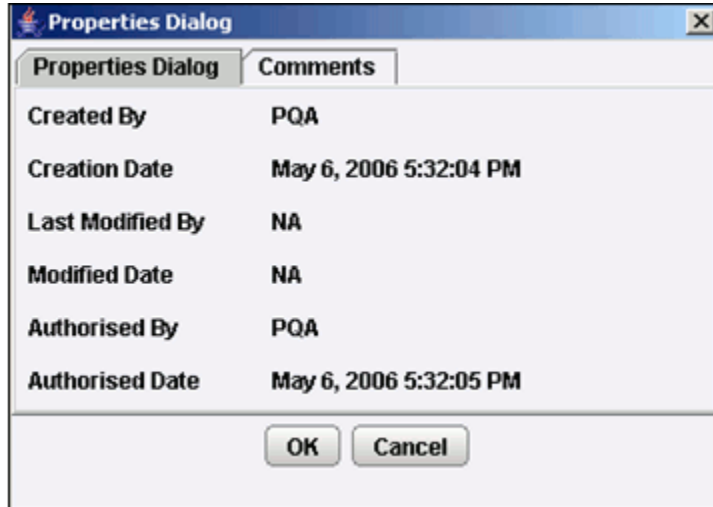


The saved Hierarchy Attributes screen is displayed with non-editable Code and Description fields.

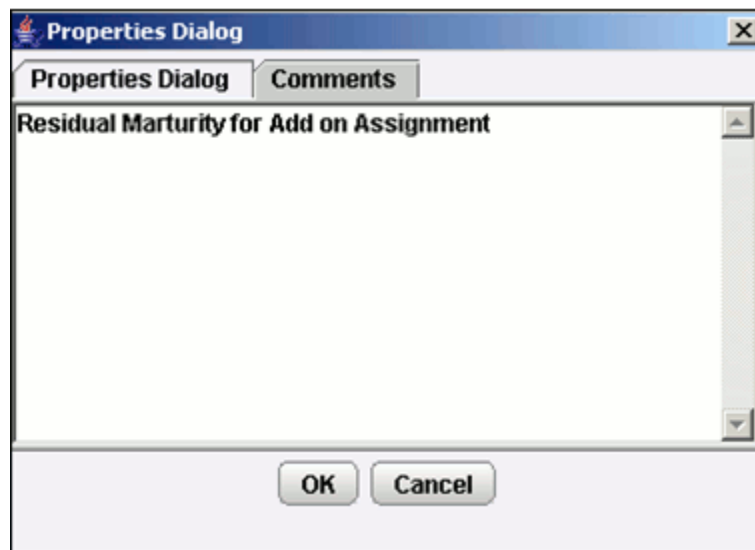
Note: If the **Is authorization required for Business Metadata?** check box is selected in the information domain maintenance screen during the information domain creation, and if the user is assigned with the authorizing rights the metadata definition created will be saved in the authorized state.

Properties

Click the **Properties** button. The Properties Dialog window will be displayed. The window displays the name of the user who has created the definition along with the date and time of creation. It also displays the name of the user who has last modified the definition along with the date and time of the last modification, along with the authorizer name who has authorized it and the data and time of authorization.



Click the **Comments** tab provided in the Properties Dialog window to enter the narration/comments about the created hierarchy attribute definition.



Click **OK** to save the definition with the comments given. Click **Cancel** to discard the operation.

Opening Help for the Hierarchy Attribute Screen

To open help for the Hierarchy Attribute screen, click **Help**. The help option will open the help specific to the hierarchy attribute screen but will also give you the option of selecting help on related topics.

Defining Business Processor

Introduction to Defining Business Processor

This section describes what a Business Processor is and explains the process involved in its creation and modification.

The Business Processor function allows you to generate values that are functions of base measure values. Using the metadata abstraction of a business processor, power users have the ability to design rule-based transformation to the underlying data within the data warehouse/store.

What is a Business Processor

A Business Processor encapsulates business logic for assigning a value to a measure as a function of observed values for other measures.

Let us take an example of risk management in the financial sector that requires calculating the risk weight of an exposure while using the Internal Ratings Based Foundation approach. Risk weight is a function of measures such as Probability of Default, Loss Given Default and Effective Maturity of the exposure in question. The function (risk weight) can vary depending on the various dimensions of the exposure like its customer type, product type and so on. Risk weight, in this example is the business processor.

Note: The User should be mapped with the Business Analyst User Screen function and View Business Processor function, to have the Business Processor sub menu option to be displayed in the LHS Menu.

Why Define a Business Processor?

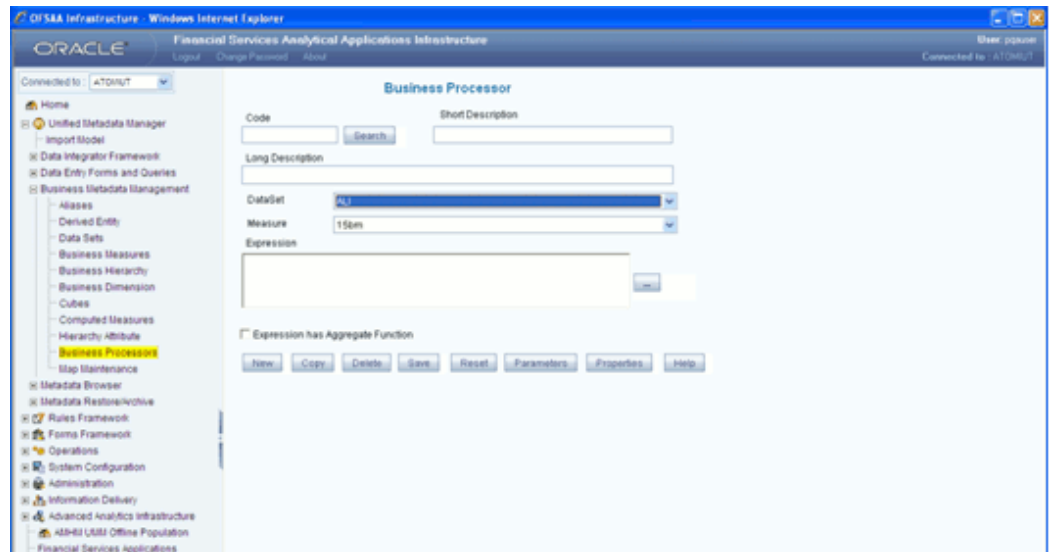
Measurements that require complex transformations that entail transforming data based on a function of available base measures require business processors. A supervisory requirement necessitates the definition of such complex transformations with available metadata constructs. Business Processors are metadata constructs that are used in the definition of such complex rules.

Business Processors are designed to update a measure with another computed value. When a rule that is defined with a business processor is processed, the newly computed value is updated on the defined target. Let us take the example cited in the earlier section where, risk weight is the business processor. A business processor is used in a rule definition. In this example, a rule is used to assign a risk weight to an exposure with a certain combination of dimensions.

Creating a Business Processor

Click **Unified Metadata Management** option in the left pane of the Oracle Infrastructure home page. Click **Business Metadata Management** option. Select Business Processor. This will launch the corresponding screen in the right pane.

Note: The User should be mapped with the Add Business Processor function to define new Business Processor definitions.



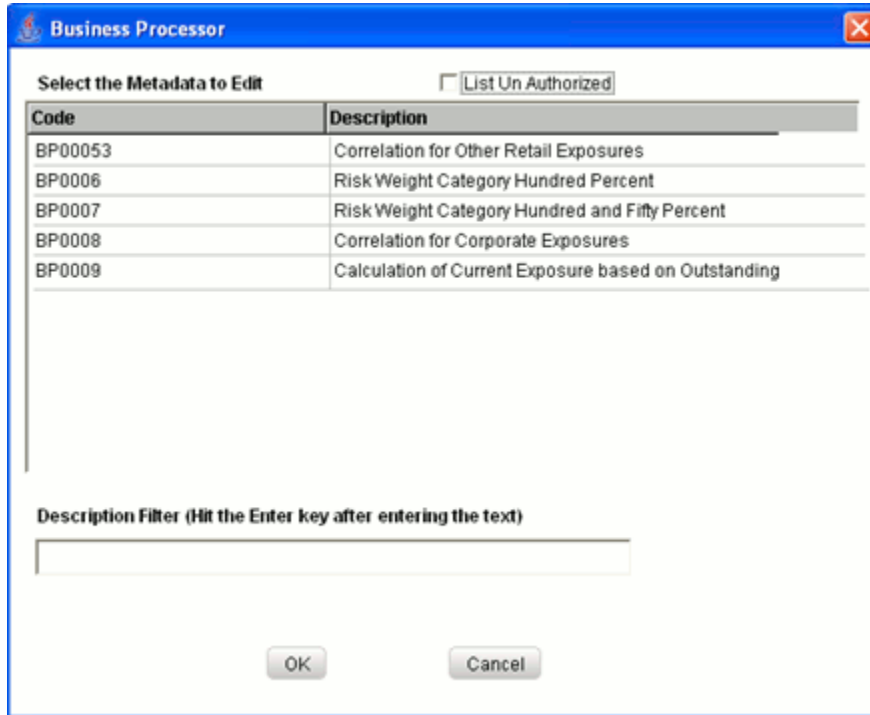
Entering the Business Processor Code

While creating a new business processor, you need to define a distinct identifier/Code. It is recommended that you define a code that is descriptive or indicative of the type of measure being created. This will help in identifying it while creating rules.

Example

BASEL04

If you want to search for any existing code, click **Search** tab beside **code** field. A pop up window will be displayed with the list of available codes. Select the code and double click it, code and description value will be populated in respective fields.



Enter the **Code Name** in the field.

Example

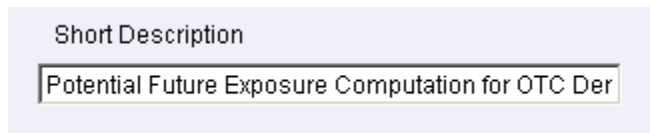
BP0055

Note:

- It is *mandatory* to enter a Code.
- The Code should be a minimum of *one* character and a maximum of *eight* characters in length; it can be alphabetical, numerical (only 0-9) or alphanumeric characters.
- The Code should start with an Alphabet.
- The Code cannot contain special characters with the exception of the underscore symbol.
- Once the Code and Description has been saved, it cannot be changed.

Entering the Short Description

Short descriptions of Business processors are useful in understanding the content of the computation you are creating. It would help to enter a Short Description based on the code.

A screenshot of a software interface showing a label 'Short Description' above a text input field. The input field contains the text 'Potential Future Exposure Computation for OTC Der'.

Example

Potential Future Exposure Computation for OTC Derivative

Note:

- It is *mandatory* to enter a Code.
- The Short Description should be a minimum of one character and a maximum of 80 characters in length.
- Only Alpha Numeric and Special characters such as ", '.', '\$', '&', '%', '<', '>', ')', '(' are permitted to be entered in the Short Description field.

Entering the Long Description

The long description of Business processor gives the in-depth understanding of the content of the computation you are creating. It would help to enter a Long Description based on the code.

A screenshot of a software interface showing a label 'Long Description' above a text input field. The input field contains the text 'Securitization Exposure RWA Unexpected Loss'.

Example

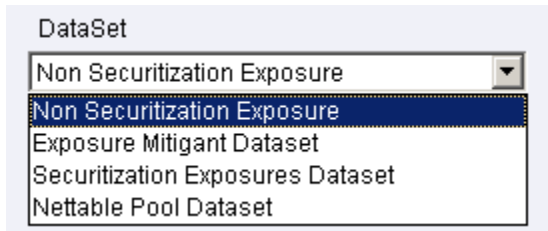
Securitization Exposure RWA Unexpected Loss

Note:

- The length of the Long Description cannot exceed a Maximum Value of 100 characters.
- Only Alpha Numeric and Special characters such as ", '.', '\$', '&', '%', '<', '>', ')', '(' are permitted to be entered in the Long Description field.

Selecting the Dataset

You must select the Dataset (For more details on datasets, see What is a Dataset, page 13-27). Click the Dataset field to open the list. The list of available datasets for the selected Information Domain will appear in the list.



Select a Dataset

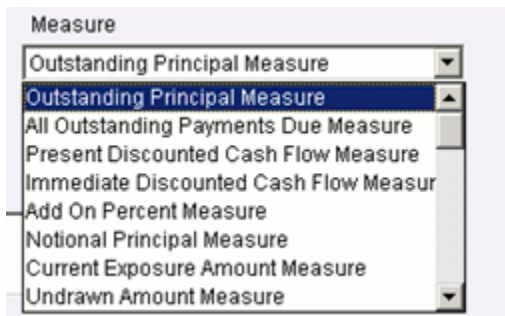
Example

Non Securitization exposure

Note: The Short Description of the Datasets as entered in the Datasets screen under Business Metadata Management will be reflected in the list.

Selecting the Measure

Select the measure on which you will base the business processor. Click the **Measure** field to open the list. All base measures that are defined on any of the tables present in the selected dataset will appear in the list



Select a Measure from the list.

Example

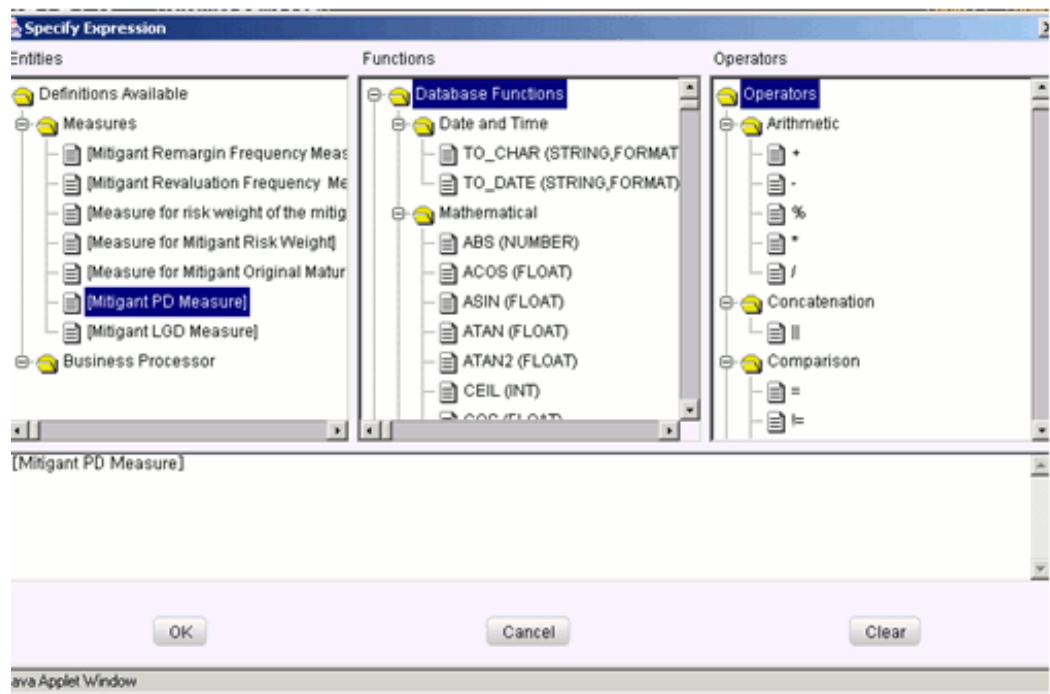
Outstanding principal Measure

Note: If the underlying measure is deleted after the Business Processor definition, then the corresponding Business Processor definition will automatically be invalidated.

Selecting the Expression

Double-click the **Expression** field button to open the Specify Expression screen where you can select an expression for the selected entity.

The Specify Expression screen has three panes – the Entities, Function and Operators and one field – Expression. You can you the objects from the Entities, Function & Operators panes to create the expression in the Expression filed.



The Entities Pane

The Entities pane contains the list of available definitions. Click the **Definitions Available** folder to view the Measures and Business Processor tags.

Click Measures tag to expand it. The expansion displays the list of all measures that are defined on tables in the selected dataset. Click Business Processor tag to expand it. The expansion displays the list of all business processors that are defined on the selected dataset.

Select the measure or business processor that you wish to use in the current definition. For the selected measure / business processor to appear in the Expression field, double-click the selected item.

Example

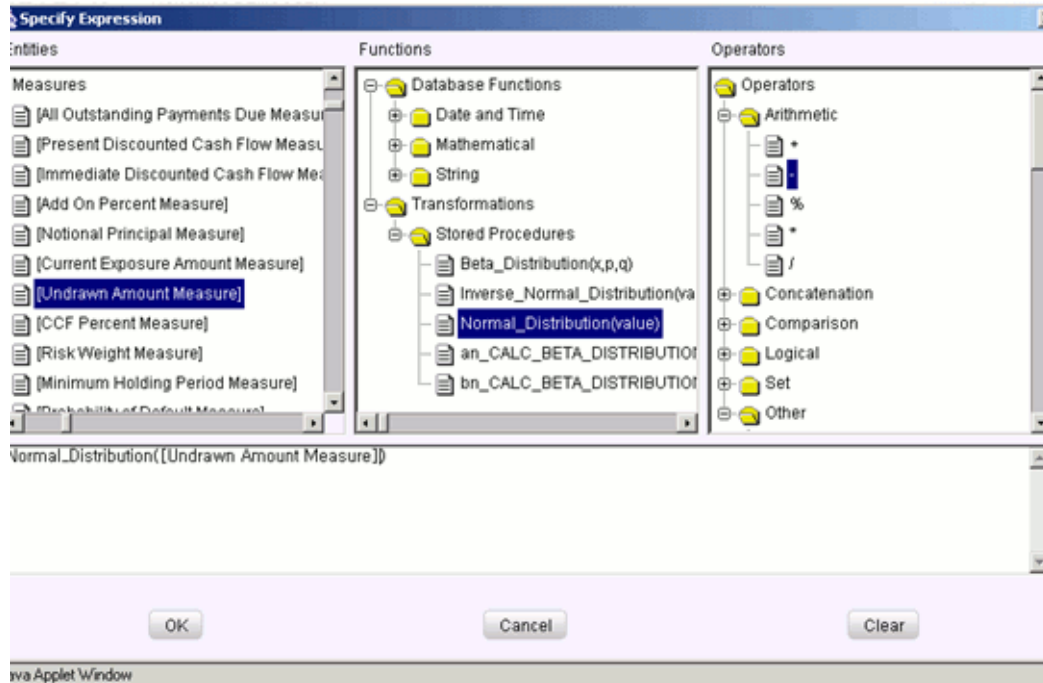
[Mitigant PD Measure] from Measures

The Functions pane

The Functions pane contains the list of available Database Functions and Transformations. Expand Database Functions to access the functions that are specific to the underlying database. You can use these functions along with Operators to create the

expression. The categories of database functions available are Date and Time, Mathematical and String. Select the function desired by double-clicking on the item. This operation moves the function into the expression field.

Similarly, you must expand the tag Transformations to access the list of Stored Procedures in the database. Select the stored procedure and double-click to move it into the expression field.



Example

[Normal_Distribution ([Undrawn Amount Measure]) where the stored procedure Normal_Distribution is selected and the measure [Undrawn Amount Measure] is the value to be passed as a parameter to the stored procedure.

The Operators pane

This contains the Operators folder. Double-click the folder to view the list of available operators.

There are *six* categories of Operators.

Arithmetic – Arithmetic operators are +, -, %, * and /

Example

Plus sign – [Add on Percent Measure] + [Notional Principal Measure]

Minus sign -- [Present Discounted Cash Flow Measure]-[Undrawn Amount Measure]

Concatenation - The Concatenation operator is ||

Example

(customer.customer_first_name || customer_last_name)

Comparison – Comparison operators are '=', '!=', '<>', '>', '<', 'IN', 'NOT IN', 'ANY',

'SOME', 'LIKE' and 'ALL'.

Example

= -- (account_status = O)

IN -- account_status IN {O, A, C}

Logical – Logical operators are 'NOT', 'AND' and 'OR'

Example

'NOT' -- 'NOT' (account_status = O)

'AND' -- (actual_balance – minimum_balance) >1000 'AND' (actual_balance – minimum_balance) <2000

'OR' -- (actual_balance > 1000 'OR' <2000)

Set - Set operators are UNION, UNION ALL, INTERSECT and MINUS

Others – The Other operators are 'PRIOR', '(+)', '(' and ')'.
Now select the Operator to apply the filter.

Example

[Notional Principal Measure] > 10000

The Expression field

The filter condition that you specify will be shown in the Expression field. The expression must be syntactically correct in order to be able to save the business processor definition.

Example

If M1 is the code for Measure-1 and M2 is the code for Measure-2, the following syntaxes are incorrect

M1 + M2: Measure codes used instead of measure descriptions

Measure-1 + Measure-2: Measure descriptions used without square braces

[Measure-1] + [measure-2]: Measure descriptions used are in incorrect case.

The following syntax represents a correct definition:

[Measure-1] + [Measure-2]: Case-sensitive measure descriptions within square braces

The expression that you chose will appear in the Expression field.



Note:

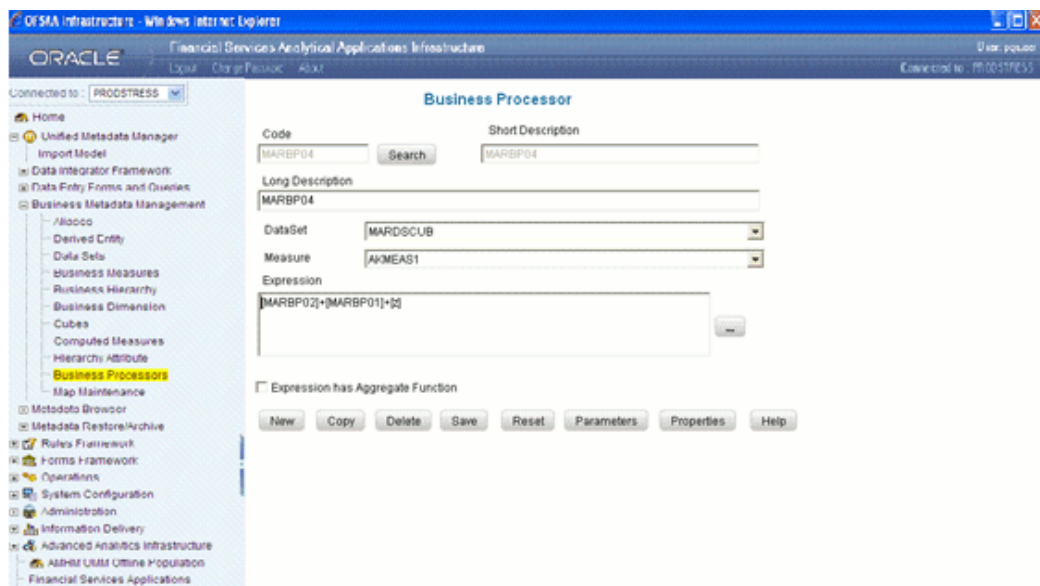
- The Business Processors with expressions 1=1 will not be displayed in the respective Data set in Rules screen.

- The Expression cannot be null.
- The Business Processor definition cannot use its own definition in the expression.

After you have specified the expression, click **OK** to save it and return to the Business Processor screen. Click **Cancel** to exit the Define Expression screen without saving the changes. Click **Clear** to reset the expression that you defined. This is applicable only when you are defining a new expression. While modifying an existing expression, click **Clear** to return to the existing condition.

Defining Placeholders

The placeholder option enables the user to provide values for the constants in the expression. The user can specify values to the business processor expression during the run time rather than at definition time through the place holders defined while specifying the expression.

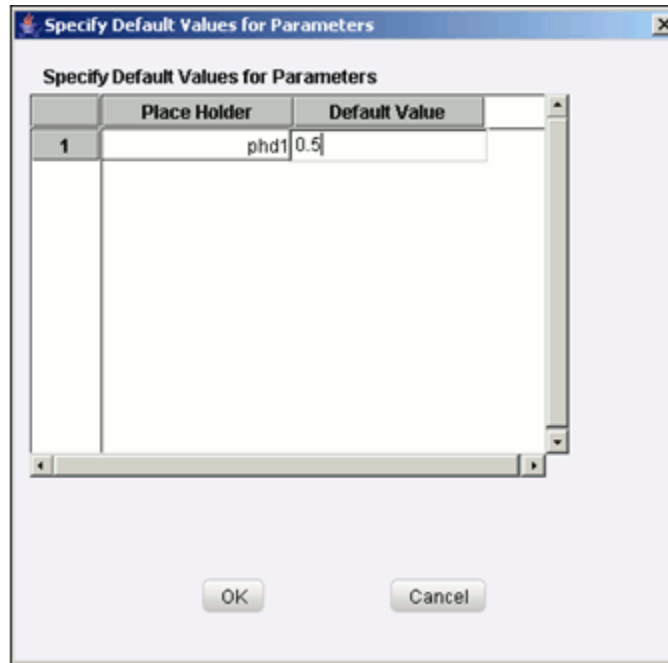


Example

(MAX([Securitization Exposure Amount Measure])-SUM([Sub Exposure EAD Amount Measure]))*MAX([Risk Weight Unexpected Loss Measure for Securitization Exposures])+SUM([Sub Exposure EAD Amount Measure]*[Sub Exposure UL Risk Weight Measure]) + [phd1]

In the given example [phd1] is the place holder defined along with the expression for the Business Processor BP0224.

You can specify the expression in the **Expression** field. Click the **Parameters** button to specify default values for any of the placeholders defined.



Enter a default value for the place holders defined along with the expression in the **Default Value** box.

Click **OK** to save the specified default value for the place holder. Click **Cancel** to discard the operation.

Note:

- The values for the placeholders can be alphanumeric.
- The process of specifying place holders enables the user to execute the same business processor definition with different values during the run time.

Specifying Aggregation

The expression may require an aggregation function depending on the business logic. The aggregation functions have to be entered in the expression field per acceptable syntax. IF an aggregation function is used in the expressions, the check box Expression has Aggregate Function must be enabled. Leave the check box "Expression has Aggregate Function" blank if your expression does not contain an aggregation function.

Click **Save** Button to save the business processor definition.

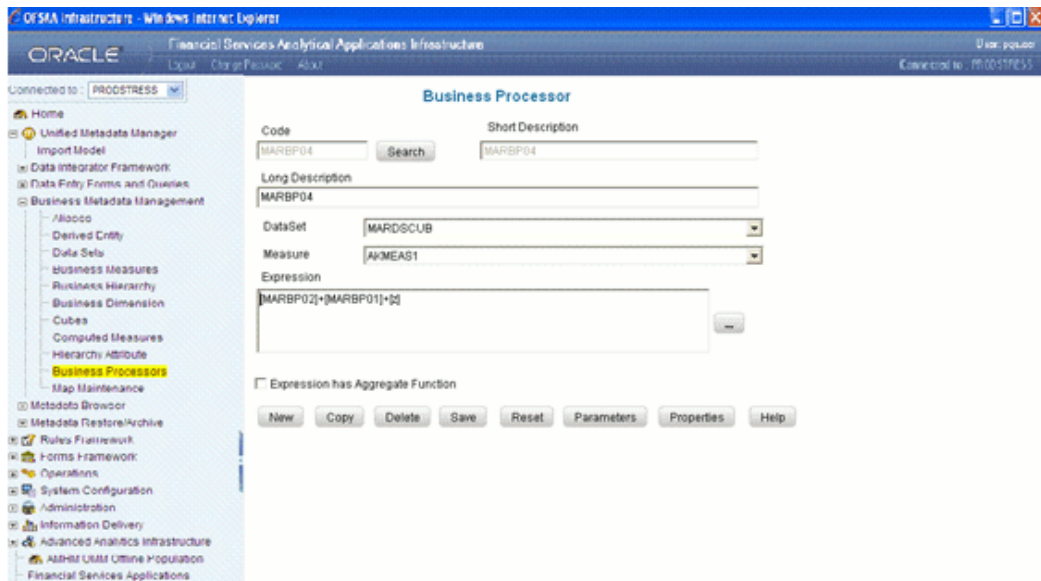
While saving the business processor, the expression is parsed for a syntax check. If the expression has been entered incorrectly, an error message is displayed as shown as " Metadata could not be parsed. Please check SQL syntax"

The reason for these parsing errors can be due to any of the following reasons

- No expression has been entered
- An aggregation function has been used in the expression, but the Aggregation Check box has not been enabled
- The Aggregation Check box has been enabled when there is no such aggregation function used in the expression
- The expression entered does not reflect a business condition

If the expression is syntactically correct, a confirmation of the save operation will be displayed.

Click **OK**. The Business Processor screen will be refreshed to display the latest attributes of maintenance.



Modifying a Business Processor

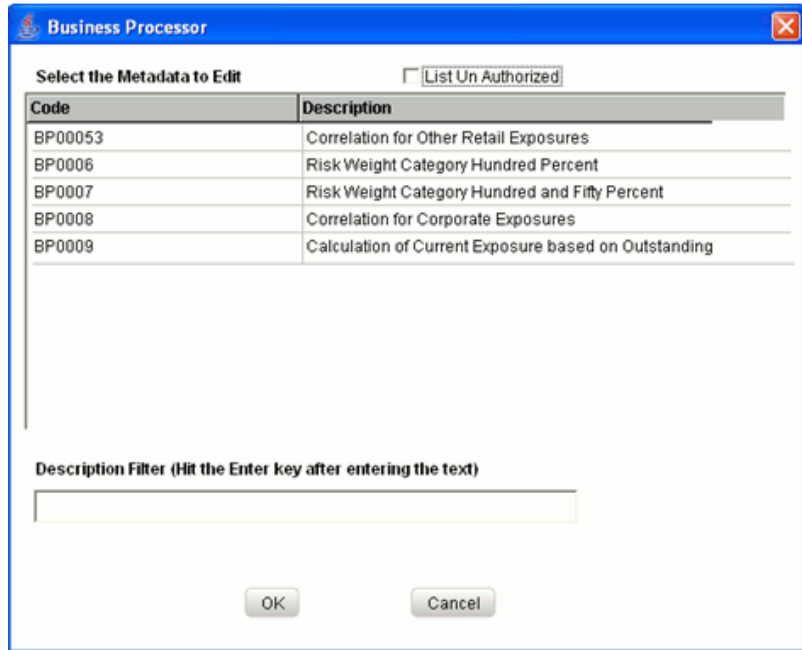
Use the **Search** button to locate an existing business processor definition.

Click **Search** to open the **Search** pop-up. The pop-up lists the codes and short descriptions of available business processors under the column **Code** and **Description** respectively.

Note :

- You should be mapped with the **Modify Business Processor** function to edit/modify the Business Processor definitions.

- When the business processor definition selected for modification is in the un-authorized state (modified by another user), the definition cannot be modified.



Select the **List Un Authorized** checkbox to view all the un authorized business processor definitions. By default the search dialog will display all the authorized business processor definition codes.

In Un Authorized State, the modified business processor definition and the business processor definitions to be authorized by the user will be displayed.

Note: In UnAuthorized State, the users having Authorize Rights will be able to view all the unauthorized business processor definitions.

Select the code, which you want to modify and click **OK**. This will display the details of the selected business processor in the Business Processor screen. To exit the pop-up without a selection, click **Cancel**.

Example

BP0006 Risk Weight Category Hundred Percent

When the user tries to modify a business processor definition which is used in the other metadata definitions and save the definition the Affected Metadata Dialog will be displayed.

The Affected Metadata Dialog displays all the dependent base metadata / business definitions for the selected business processor.

Click **OK** to save the modifications made to the business processor definition.

Click **Cancel** to discard the operation.

Except for the Code and Short Description, you can modify the definition of the business processor. The procedure for modifying a definition is similar to the procedure followed for creation.

For more information, see *Creating a Business Processor*, page 13-157.

Note: You cannot modify the business processor Code or its Short Description.

Copying a Business Processor

A feature that is common to the metadata definitions is that you have the option of copying details of one definition to create another. To make a copy a business processor, locate the definition using the Search option. The details of the selected processor will be displayed in the Business Processor screen. Click **Copy**. You will receive a copy confirmation message, which reads "Copy Successful". Now you can alter the Business Processor Code and Short Description to create a new definition. You can also alter the expression appropriately. The Copy functionality is similar to the Save As functionality.

Note: You should be mapped with the **Add Business Processor** function to copy the Business Processor definitions.

Example

AK0001 copied and renamed as AK0002

Deleting a Business Processor

To delete an existing business processor, locate the definition by using the **Search** option. The details of the selected business processor will be displayed in the Business Processor screen. Click **Delete** to delete the definition. The delete function permanently deletes the business processor from the database so it is important that you exercise caution before deleting. On clicking **Delete**, you are prompted to confirm deletion. Click **OK** to confirm deletion. Click **Cancel** to exit from the delete operation.

When you click **delete**, the business processor definition will be marked for deletion and won't be accessible.

Then the deletion has to be Authorized / Rejected by the authorizer. On Authorization the business processor definition selected for deletion will be purged. On Rejection the business processor definition selected will be reverted to authorized state. On deletion the un-authorized business processor definition will be deleted, and further modification to the definition will not be allowed before authorizing / rejecting the deletion.

Note:

- The User should be mapped with the Delete Business Processor function to delete the Business Processor definitions.
- You can delete a Business Processor only if the role you are assigned to is mapped to delete function.
- You cannot delete a Business Processor if it is mapped to another definition.
- When the business processor definition selected for deletion is in the un authorized state (modified by another user), the definition cannot be deleted.

Saving a Business Processor

While creating a new business processor or modifying an existing one, click **Save** to save the new or modified definition. You will receive a confirmation message "Operation successful".

The saved business processor screen is displayed with non editable **Code** and **Short Description** fields.

The saved definition will be stored as the metadata definition based on which rules can be defined.

Note: If the **Is authorization required for Business Metadata?** check box is selected in the information domain maintenance screen during the information domain creation, and if the user is assigned with the authorizing rights the metadata definition created will be saved in the authorized state.

Defining Parameters

Click the **Parameters** button to specify default values for any of the placeholders defined while specifying the expression.

For more details, see *Specifying Placeholders*, page 13-164 section .

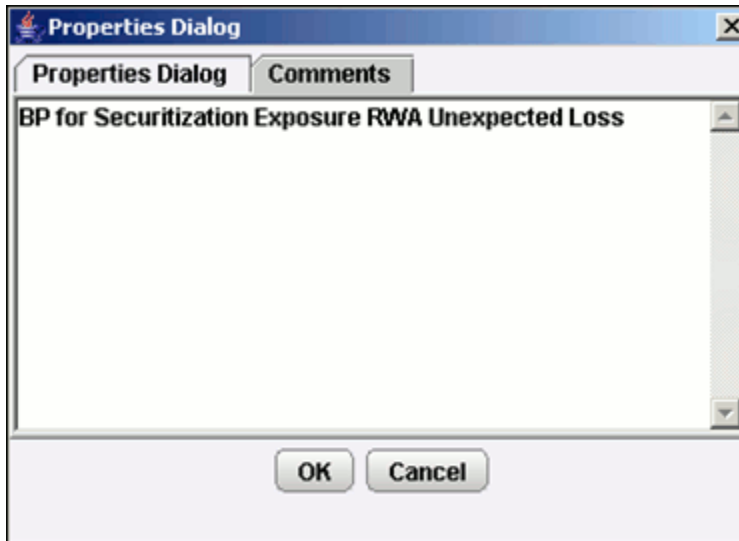
Properties

Click the **Properties** button. The Properties Dialog window will be displayed. The window displays the name of the user who has created the definition along with the date and time of creation. It also displays the name of the user who has last modified the definition along with the date and time of the last modification, along with the

authorizer name who authorized it and the data and time of authorization.



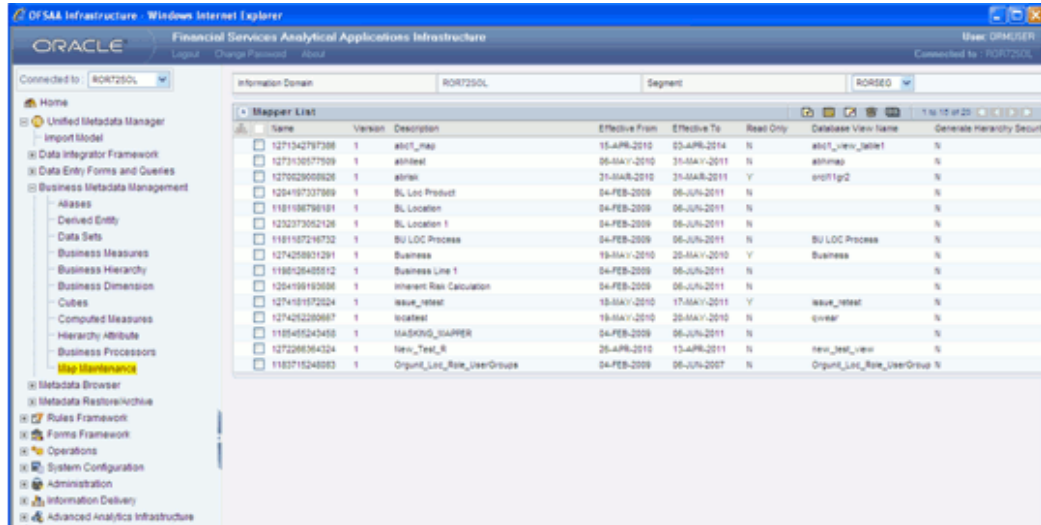
Click the **Comments** tab provided in the Properties Dialog window to enter the narration/comments about the created business processor definition.



Click **OK** to save the definition with the comments given. Click **Cancel** to discard the operation.

Opening Help for the Business Processor Screen

To open help for the Business Processor screen, click **Help**. This option provides online help on how to define a business processor. It will also provide online help links to related topics.



The Mapper List window displays the Name, Description, Version number, Effective From date, Effective To date, Read Only, Database View Name and Generate Hierarchy Security details for the available map definitions.

Note: Only those users mapped with the Ops Risk Admin role will have access to the Mapper definition window.

Hiding/Unhiding the Mapper Menu

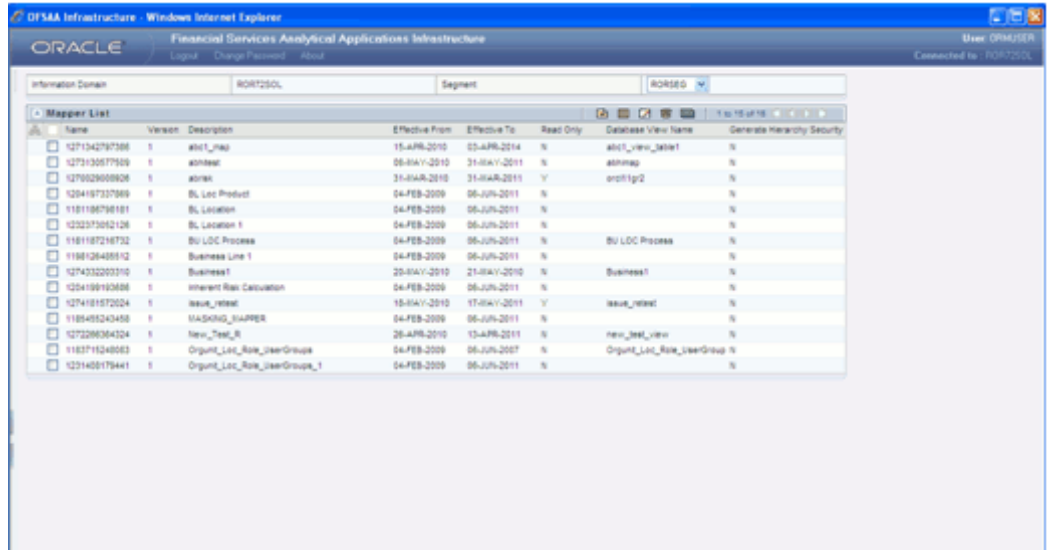
You can Hide/Unhide the Mapper left Menu using the buttons provided. The Hide button is provided within the Mapper menu in the left hand side frame. When you hide the Mapper menu, the right frame expands across the screen. To Unhide the Mapper menu, use the unhide button provided on the extreme left of the screen. You are provided illustrations of the hide and unhide buttons in the sections to follow:

Hiding the Menu

To hide the mapper menu, click

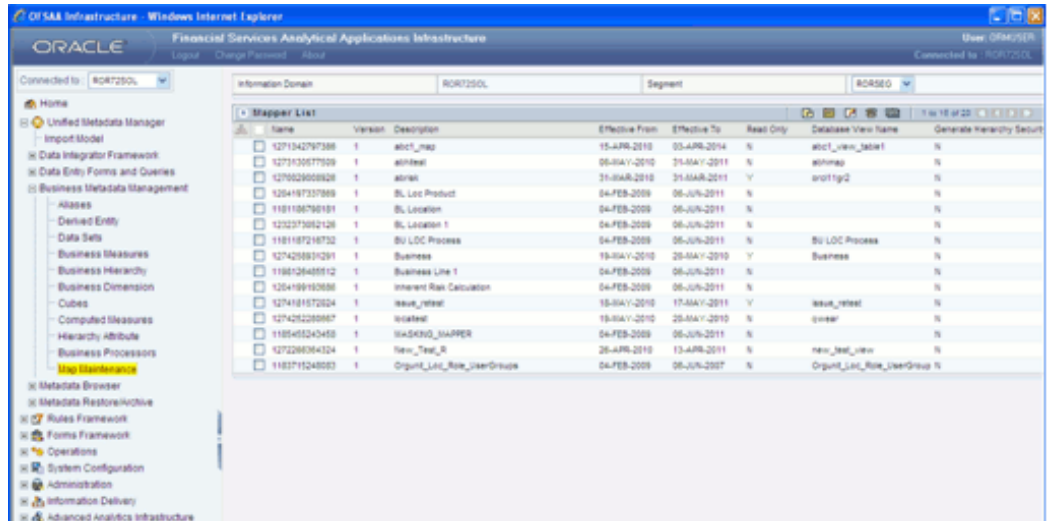


This will increase the work area for data.



Unhiding the Menu

To unhide the mapper menu, click



Mapper List Toolbar

The Mapper List toolbar allows you to

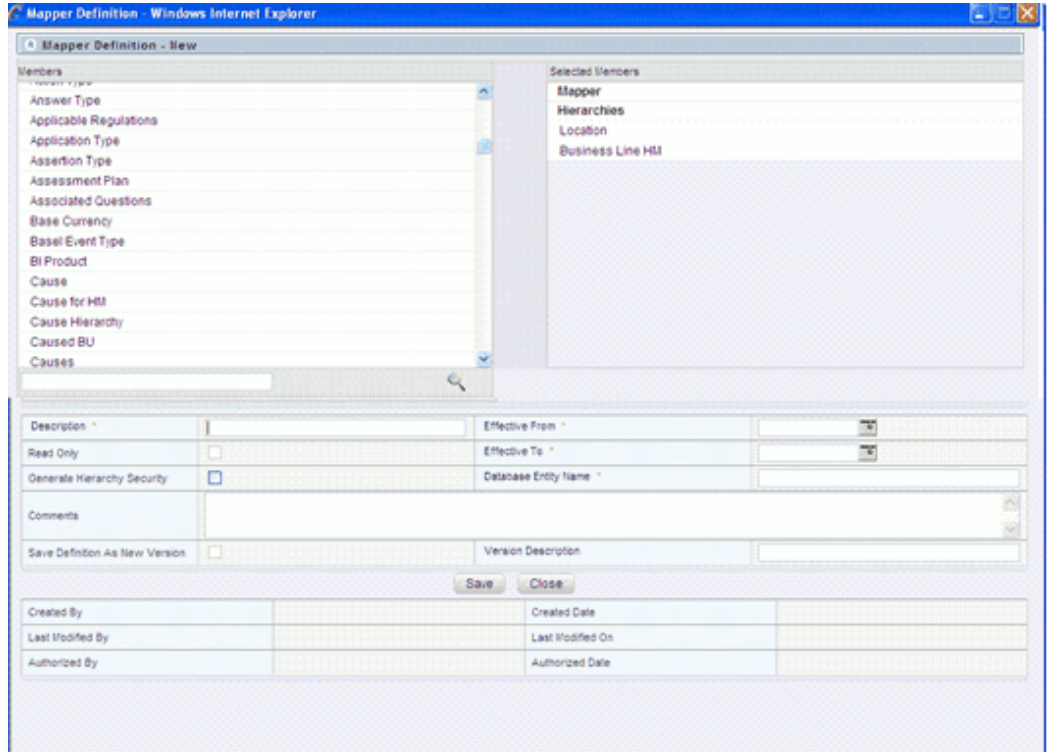
- Create a New Map

- View Map
- Edit Map
- Delete Map
- Mapper Maintenance

Creating a New Map

Click the **Segment** list to select the segment. Segments are defined through the System Administration menu options. Segments facilitate classification of related metadata in a single segment. Users will be permitted access to only those metadata objects that are mapped to the same segment that the user has been mapped to.

To create a new map, click **Create New Map** icon from the Mapper Tool bar. The Mapper Definition (New) window opens. Under the Members panel in the left, you will have a list of all available Mapper and Hierarchies. Click once to select the required Mapper and Hierarchy. The selected Mapper and Hierarchy will be displayed under the Selected Members panel.



You can also search for a Mapper or Hierarchy by entering the name in the **search** field and clicking on



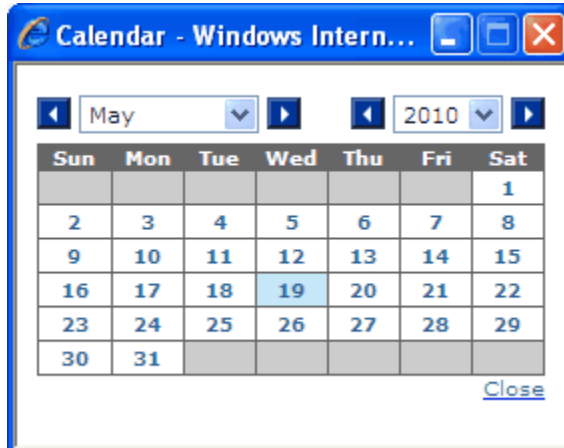
Note: Only One Measure can be selected for Mapping.

Enter a description in the **Description** field. It is mandatory to fill this field.

To enter the **Effective From** date, click

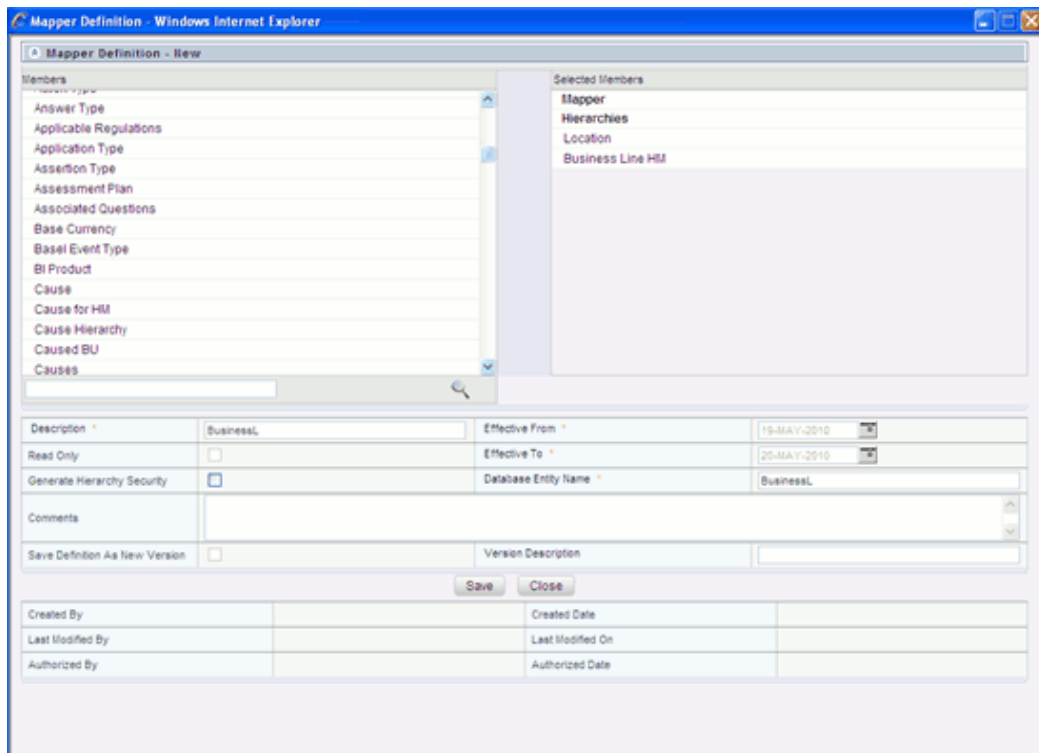


The Calendar opens.



Select the Month and Year from the list. The selected map definition will be effective from the selected date. Similarly select the **Effective To date**. The selected map definition will be effective/valid till the selected date.

Provide a **Database Entity** Name in the provided field. You can put in extra comments if required in the Comments field.



Generate Hierarchy Security is an option that will allow you to keep Nodes confidential. If the option is selected, the other users will not be able to view the nodes for which the security has been applied.

Note:

- Both the Roles and User Group Hierarchy should be selected for the creation of Security Mapper.
- The View will be created in the atomic schema.
- There will be an entry in the CSSMS_USR_SECURITY table in config schema in case Generate Hierarchy Security checkbox is checked.

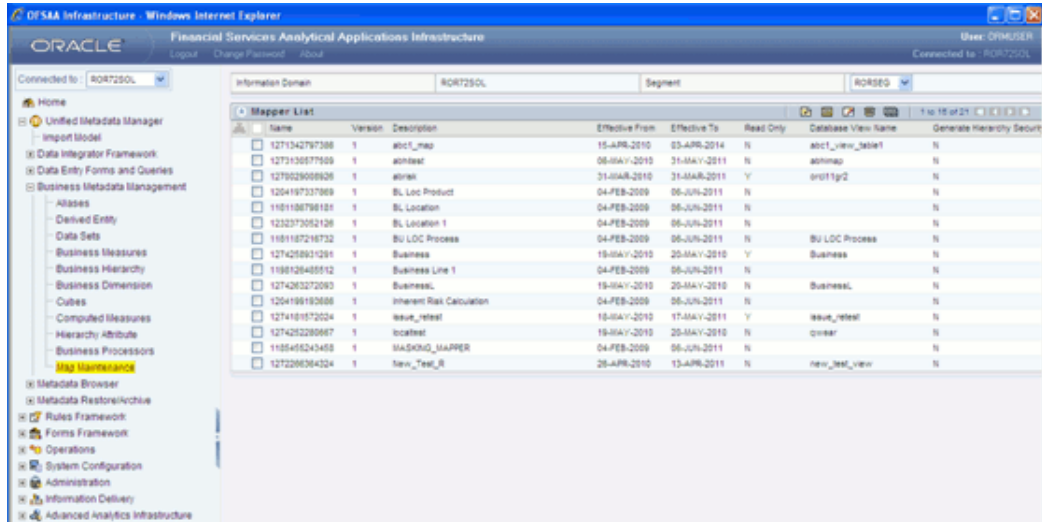
The Read Only, Save Definition as New Version and Version Description will be disabled while creating a New Map. These options will be enabled only while editing the Map.

Click **Save** to save all the changes made. Click **Close** to quit without saving.

Note:

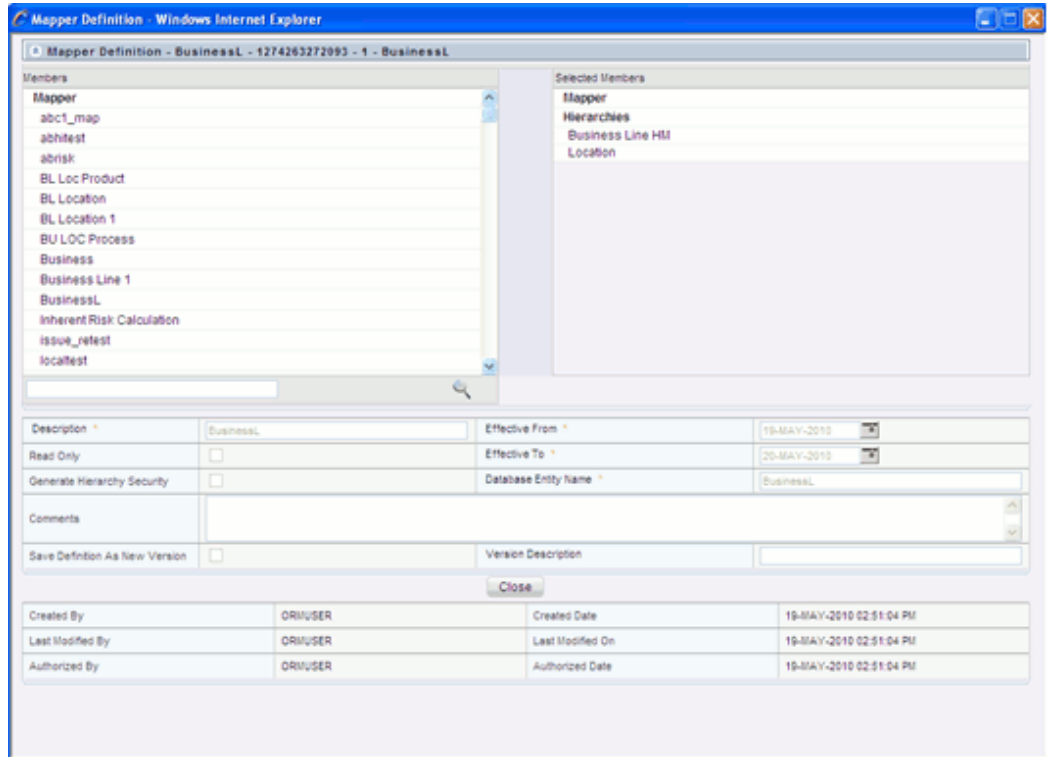
- The **Description, Effective From, Effective To** and **Database Entity Name** fields are mandatory. You cannot save a new Map without entering these fields.
- The **Map** definition will be saved with the version number as one.
- The Map definition will be saved in the authorized state.

After clicking on Save, the defined Map will be listed in the Mapper List. The Mapper Definition window will refresh automatically. You can continue to add another new Map.



Viewing a Map

To view a defined Map, select the map that you wish to view and click **View Map** icon. The Mapper Definition (View) window opens.

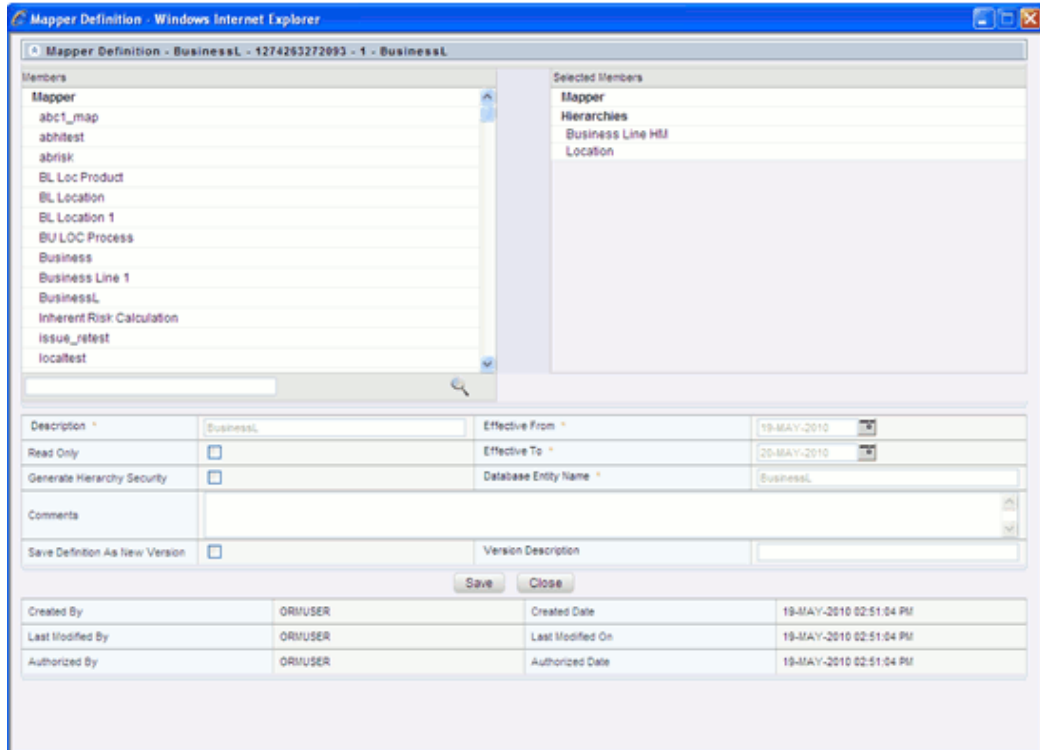


As the name suggests, you can only view the details of the Map. For Example, you can view the selected Mapper/Hierarchy, Description, Effective From/To date, and so on.

No changes can be made in this screen. Click **Close** to Exit.

Editing a Map

To edit a defined map, select the map that needs to be edited and click **Edit Map** icon from the Mapper List. The Mapper Definition (Edit) window opens.



In this window, you will not be able to edit the Selected Members, the Description and the Database Entity name.

The Read Only option will be enabled. Selecting this option will make the selected mapper a Read only mapper. Selecting or deselecting this option brings changes in the Map Maintenance screen as well. This will be explained in detail in the Read Only section, page 13-184.

Save Definition as a new version and Version Description will also be enabled in the Edit window.

After making the required changes (if any) click **Save** or click **Close** to exit from the screen.

Deleting a Map

To delete a defined Map, select the required Map and click **Delete Map** icon. A message comes up confirming if you want to delete the record. Click **Ok** to delete, click **Cancel** to quit without deleting.

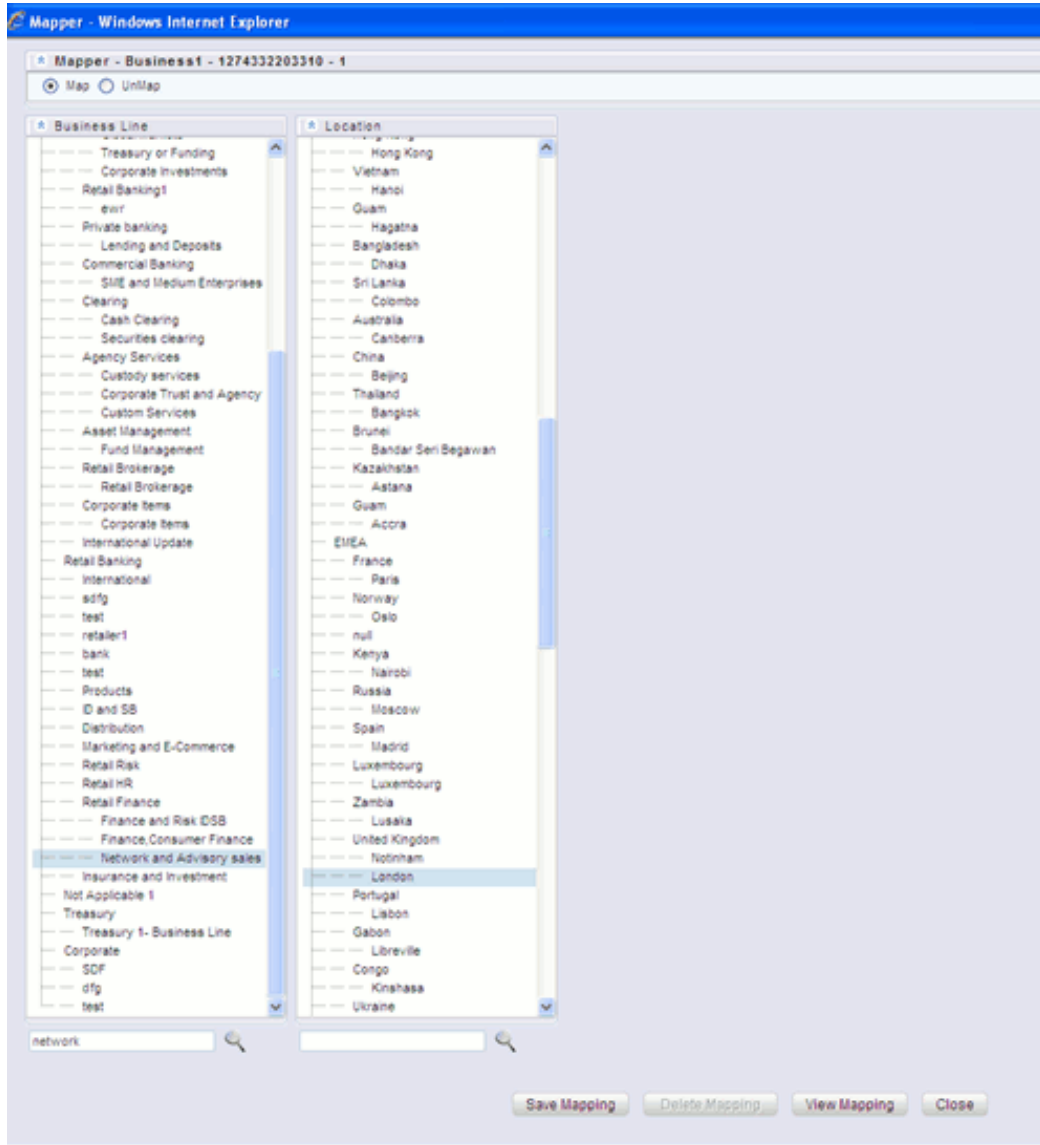
Mapper Maintenance

Select the Map and click **Mapper Maintenance** icon. The Mapper window opens. In the mapper window, you will have two radio buttons

- Map
- Unmap

Map

Select the **Map** option.



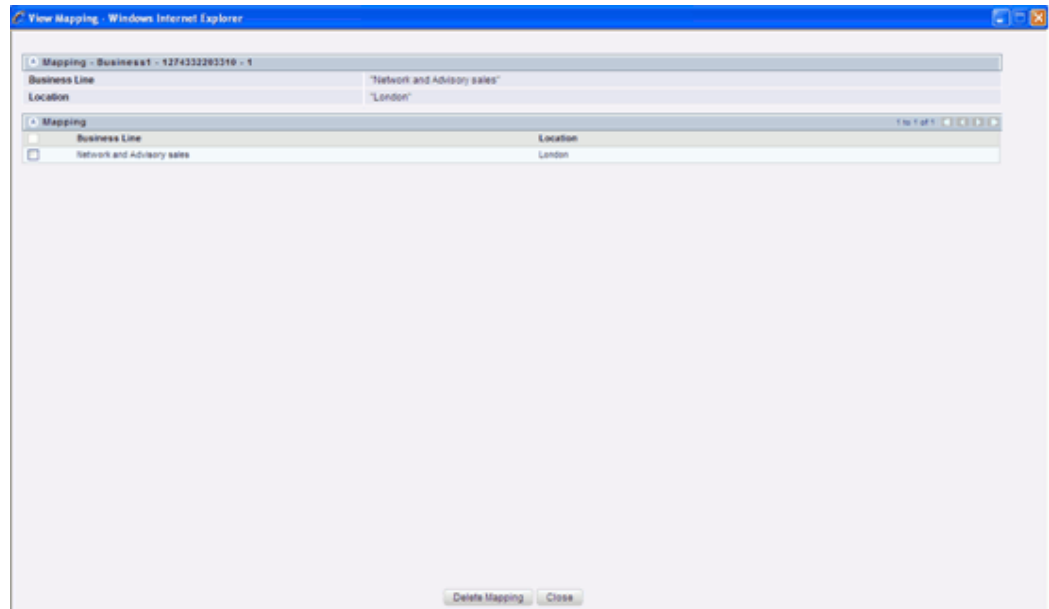
Note: Save mapping option will be enabled only if the Read Only option is not selected.

The Mapper/Hierarchy that was selected in the Create New Map window, appears in the Mapper screen. Select the options that you wish to Map and click **Save Mapping**. You can also search for the required record by entering the keyword/name in the search field and clicking on



To view the Map, select the Node and click on **View Mapping**. The View Mapping

screen opens.



You can select the mapping and delete it by clicking on **Delete mapping**. Else click **Close** to exit.

Example

Business Line : Network and Advisory Sales

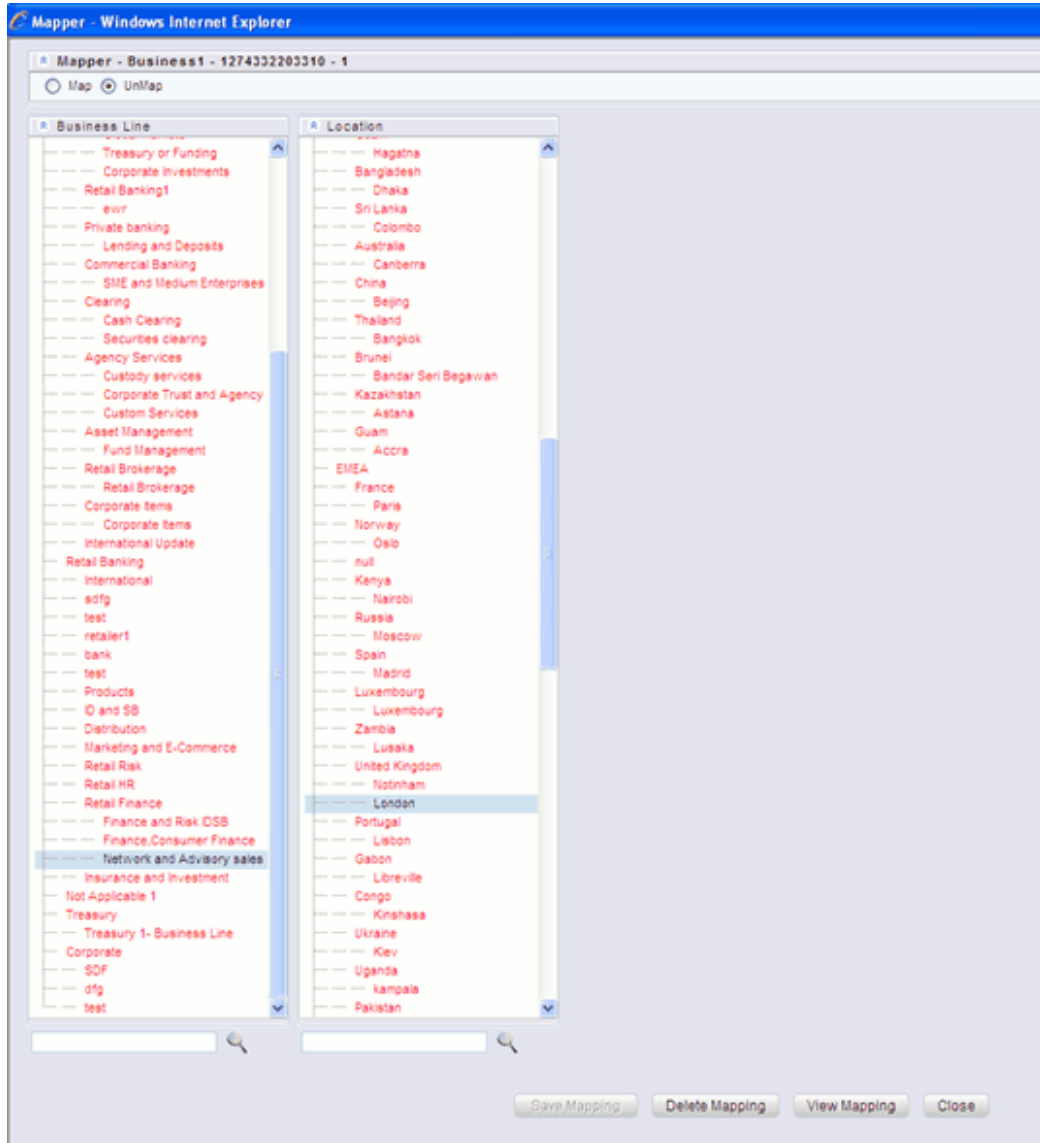
Location : London

After mapping, click on **Save Mapping**. A confirmation message comes up stating that the Mapping was successful. Click **OK**.

You can continue mapping if required, else click **Close**.

Unmap

Select the **Unmap** option. This will provide a list of unmapped records. The Save Mapping option will be disabled.



To delete a mapped Node, select the Node and click on **Delete Mapping**. A confirmation comes up. Click **OK** to delete. You can select the Map and click on **View Mapping** to view the Map. Click **Close** to Exit.

Read Only selected in Mapper screen

After selecting the Read Only option in the Mapper screen (New), click **Save**.

Description *	Business1	Effective From *	20-MAY-2010
Read Only	<input checked="" type="checkbox"/>	Effective To *	21-MAY-2010
Generate Hierarchy Security	<input type="checkbox"/>	Database Entity Name *	Business1
Comments			
Save Definition As New Version	<input type="checkbox"/>	Version Description	

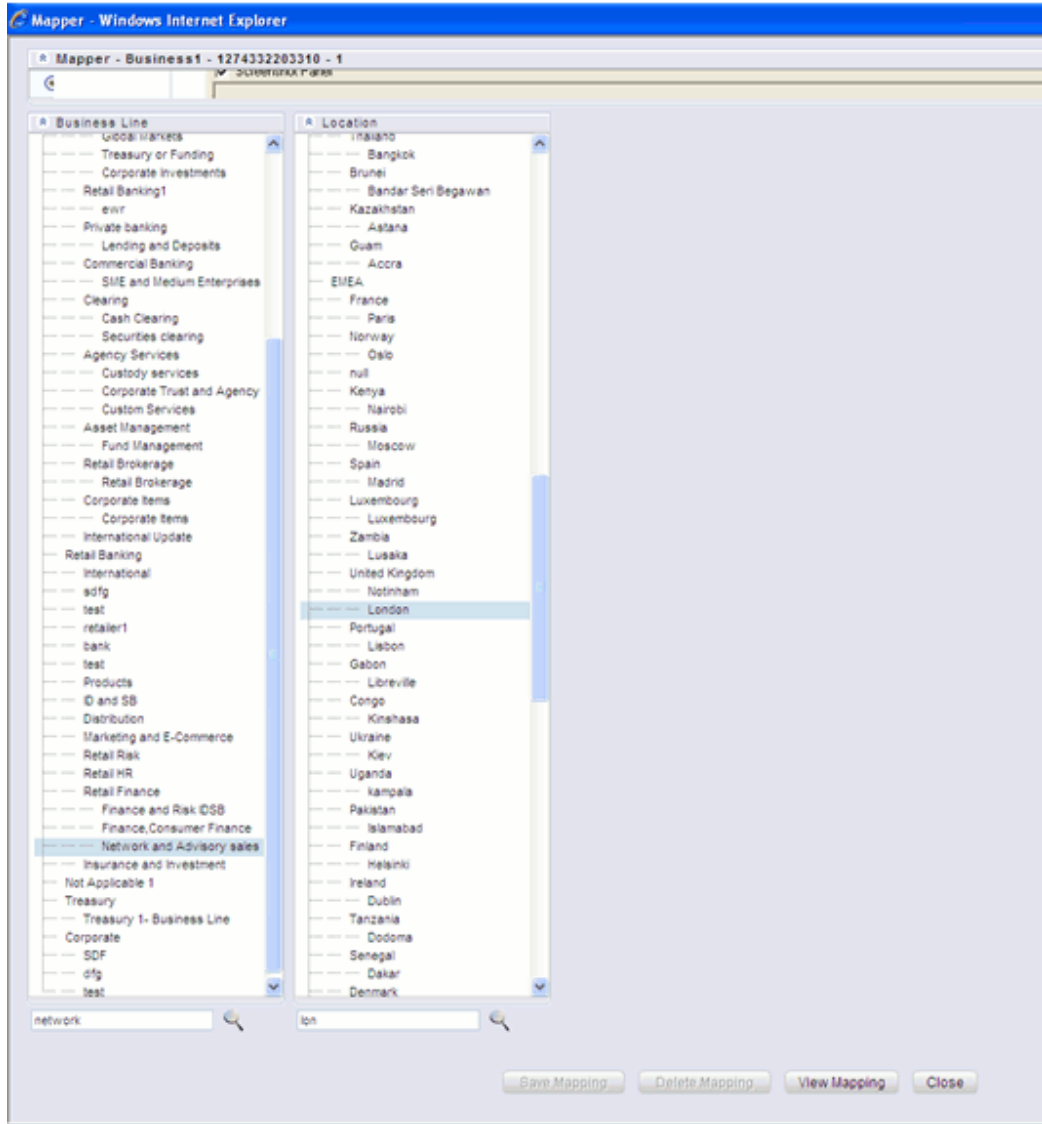
Save Close

In the Mapper List screen, the Read Only option against the created Map would appear as Y.

Name	Version	Description	Effective From	Effective To	Read Only	Database View Name	Generate Hierarchy Security
<input type="checkbox"/> 1271342797386	1	abc1_map	15-APR-2010	03-APR-2014	N	abc1_view_table1	N
<input type="checkbox"/> 1273130577509	1	aphtest	06-MAY-2010	31-MAY-2011	N	ashmap	N
<input type="checkbox"/> 1270026008926	1	abrisk	31-MAR-2010	31-MAR-2011	Y	oroff1gr2	N
<input type="checkbox"/> 1204197337869	1	BL Loc Product	04-FEB-2009	06-JUN-2011	N		N
<input type="checkbox"/> 1181186798181	1	BL Location	04-FEB-2009	06-JUN-2011	N		N
<input type="checkbox"/> 1232373052126	1	BL Location 1	04-FEB-2009	06-JUN-2011	N		N
<input type="checkbox"/> 1181187216732	1	BU LOC Process	04-FEB-2009	06-JUN-2011	N	BU LOC Process	N
<input type="checkbox"/> 1198126485512	1	Business Line 1	04-FEB-2009	06-JUN-2011	N		N
<input checked="" type="checkbox"/> 1274332203310	1	Business1	20-MAY-2010	21-MAY-2010	Y	Business1	N
<input type="checkbox"/> 1204199193686	1	Inherent Risk Calculation	04-FEB-2009	06-JUN-2011	N		N
<input type="checkbox"/> 1274181572024	1	issue_retest	16-MAY-2010	17-MAY-2011	Y	issue_retest	N
<input type="checkbox"/> 1185455243458	1	MASKING_MAPPER	04-FEB-2009	06-JUN-2011	N		N
<input type="checkbox"/> 1272266364324	1	New_Test_R	26-APR-2010	13-APR-2011	N	new_test_view	N
<input type="checkbox"/> 1183715248083	1	Orgunit_Loc_Role_UserGroups	04-FEB-2009	06-JUN-2007	N	Orgunit_Loc_Role_UserGroup	N
<input type="checkbox"/> 1231408179441	1	Orgunit_Loc_Role_UserGroups_1	04-FEB-2009	06-JUN-2011	N		N

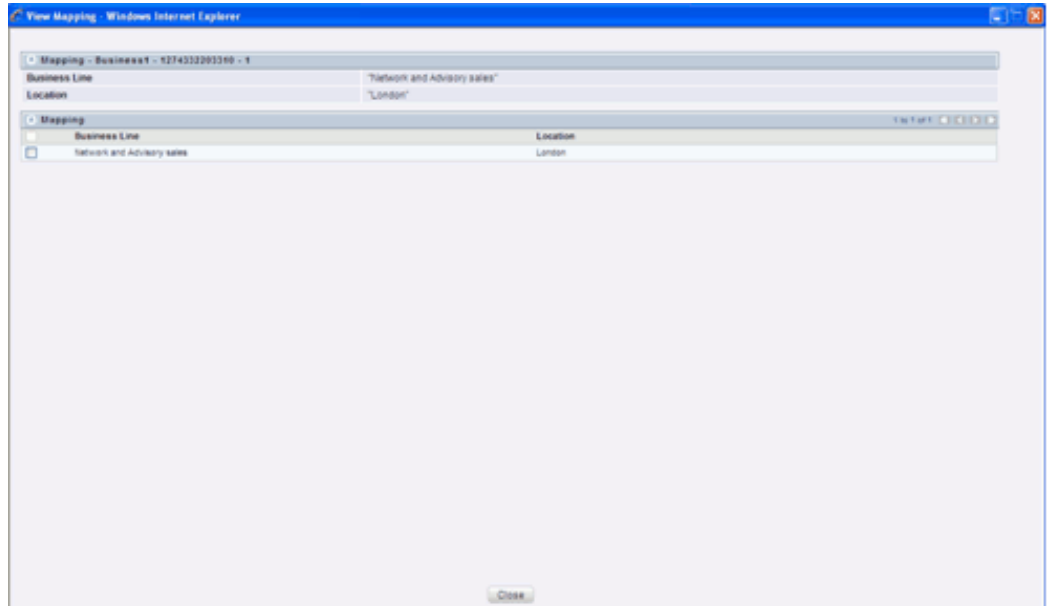
Now select the defined Map and click **Mapper maintenance** icon.

The Mapper window appears.



You will notice that the **Save Mapping** and **Delete Mapping** options would be disabled.

Select the Node and click on **View Mapping**. The View mapping screen appears.



You will note that the **Delete** button will not be available. Click **Close** to exit the screen.

Exploring Metadata

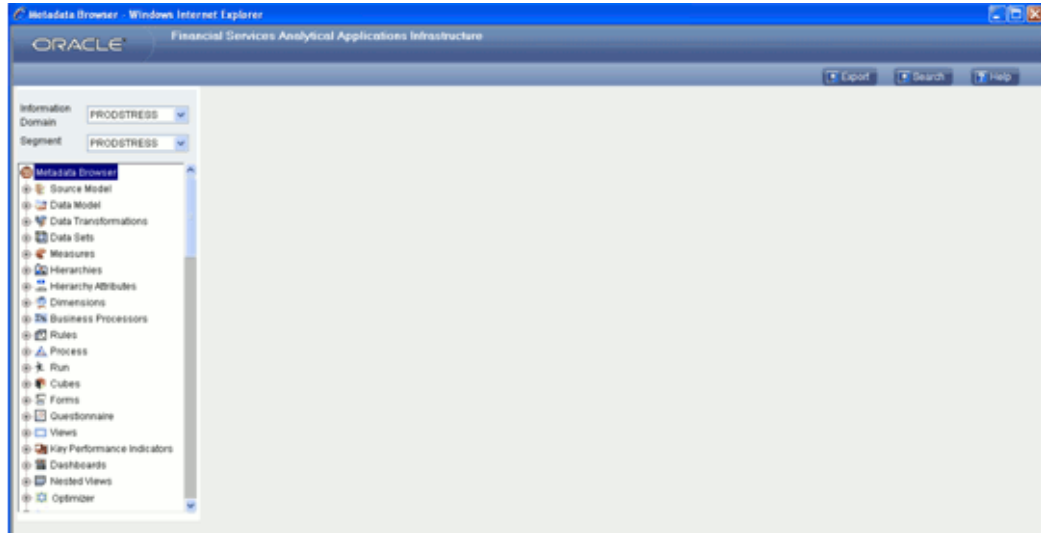
Introduction to exploring metadata

This section helps you navigate metadata and guides you in tracing the source of the metadata.

The **Metadata Browser** function allows you to view and analyze all aspects of the metadata used in the Oracle Infrastructure. It provides extensive browsing capabilities of metadata, helps track the impact of changes to metadata, and trace through to the source of originating data.

With the Metadata Browser, you can view the Source Model, Data Model, Data Transformations, Datasets, Measures, Hierarchies, Hierarchy Attributes, Maps, Dimensions, Business Processor, Rules, Process, Run, Cubes, Forms, Questionnaire, Views, Key Performance Indicators, Dashboards, Nested Views, Optimizer, Pooling, Modeling Framework, and Stress Testing Framework. The **Search** option enables you to search tables, measures, dimensions, hierarchies, cubes, marts, views, dashboards, Business Processors, Rules, Process, Run, Map, Optimizer, Pooling, Key Performance Indicators, Nested views, Models, Model Objectives, Variables, Variable Sets, Variable Shocks, Rule Shocks, Scenarios, and Stress Definitions.

Click the **Metadata Browser** option under Business Metadata management. Click on metadata to open the **Metadata Browser** window.



When you open the Metadata Browser, it will display the Information Domain, Segment and Metadata Browser options in the left-hand pane. By default, the right pane does not display any content. The Metadata Browser option contains Source Model, Data Model, Data Transformations, Data Sets, Measures, Hierarchies, Hierarchy Attributes, Maps, Dimensions, Business Processors, Rules, Process, Run, Cubes, Forms, Questionnaire, Views, Key Performance Indicators, Dashboards, Nested View, Optimizer, Pooling, Modeling Framework, Stress Testing Framework and folders.

With the Metadata Browser, you are only provided the option of forward tracing. You will not be able to trace back from the view definition to metadata.

Metadata Browser Buttons

Button	Action
Trace Sources	This button displays the trace details Source of the definition.
Trace Dataset	This button displays the trace details of Datasets defined for a definition.
Trace Transformations	This button displays the trace details of Transformations defined for a definition.
Trace Dimensions	This button displays the trace details of Dimensions mapped to the definition.
Trace Measures	This button displays the trace details of Measures mapped to the definition.

Button	Action
Trace Hierarchy Attributes	This button displays the trace details of Hierarchy Attributes of a definition.
Trace Cubes	This button displays the trace details of Cubes mapped to the definition.
Trace Marts	This button displays the trace details of Trace Marts mapped to the definition.
Trace Definitions	This button displays the trace details of Definitions mapped to a dimension/hierarchy/measure/cube/mart.
Trace Nested Views	This button displays the trace details of Nested Views for a view definition.
Trace Scenarios	This button displays the trace details of mapped Scenarios for a definition.
Trace Stress	This button displays the details of the mapped Stress Definitions.
Trace Models	This button displays the details of the mapped Models for a definition.
Trace Variable Sets	This Button displays the trace details of Variable Sets.
Trace Variable Shocks	This button displays the details of mapped Variable Shocks to a particular variable.

To browse metadata, you need to perform the following procedures:

Browsing Source Models

The Source Model contains applications. These applications are logical groupings of the source. The source details display source and destination mapping details.

To browse details of Source Models you have to select the information domain and segment first.

Selecting the Information Domain

To view source models, click the **Information Domain** field to open the drop-down list. Select the information domain that contains the source model/s.

Example
DOCINFO

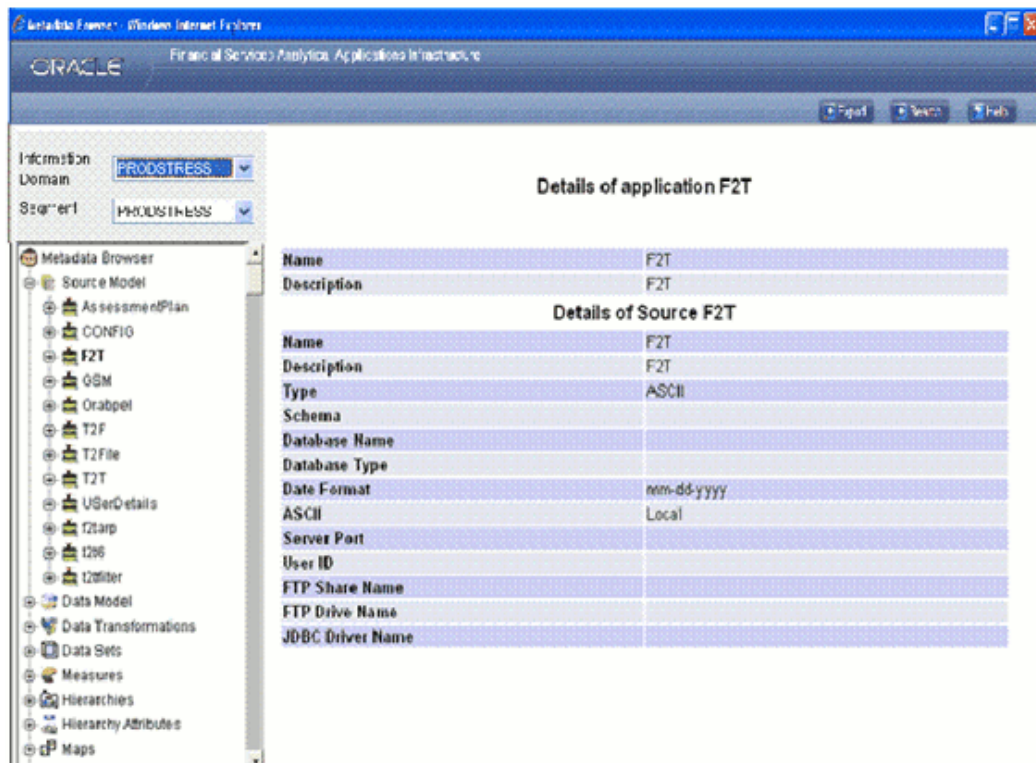
Selecting the Segment

Click the **Segment** field to open the drop-down list. Select the segment of the selected information domain to which the source model/s belongs.

Example
ALL

Now double-click the + (plus sign) against the **Source Model** folder displayed under the Metadata Browser in the left pane. This action will cause the folder to expand displaying the applications of the selected source model. Click an application.

Example
F2TBASEL2

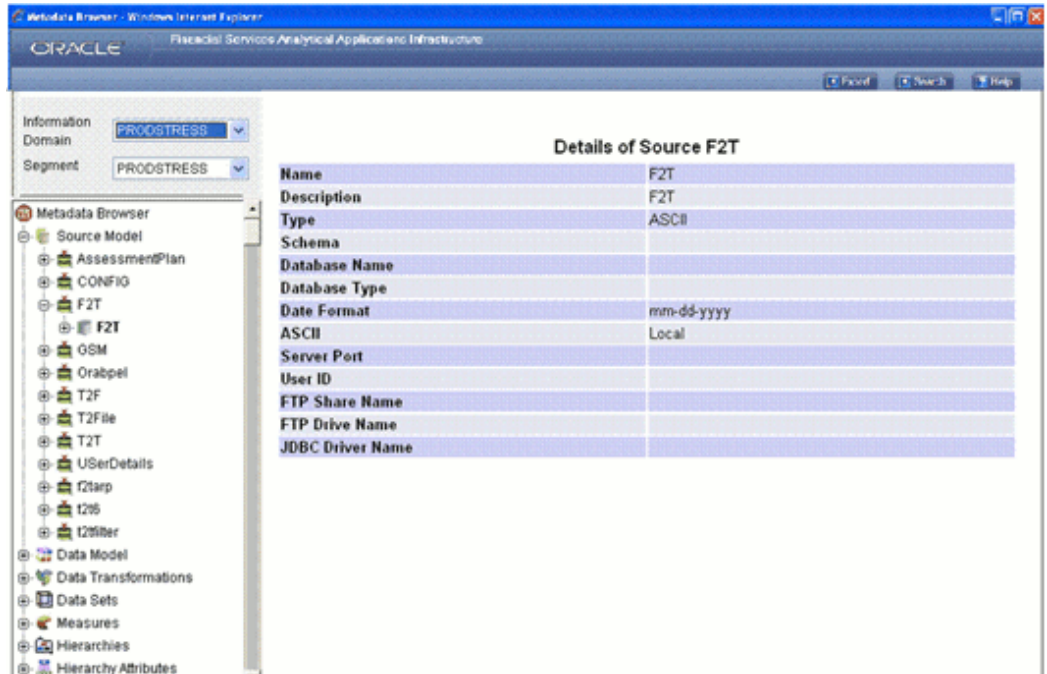


Next double-click the + (plus sign) against the application folder to view the source definitions within it. Now, click the source definition to view its details.

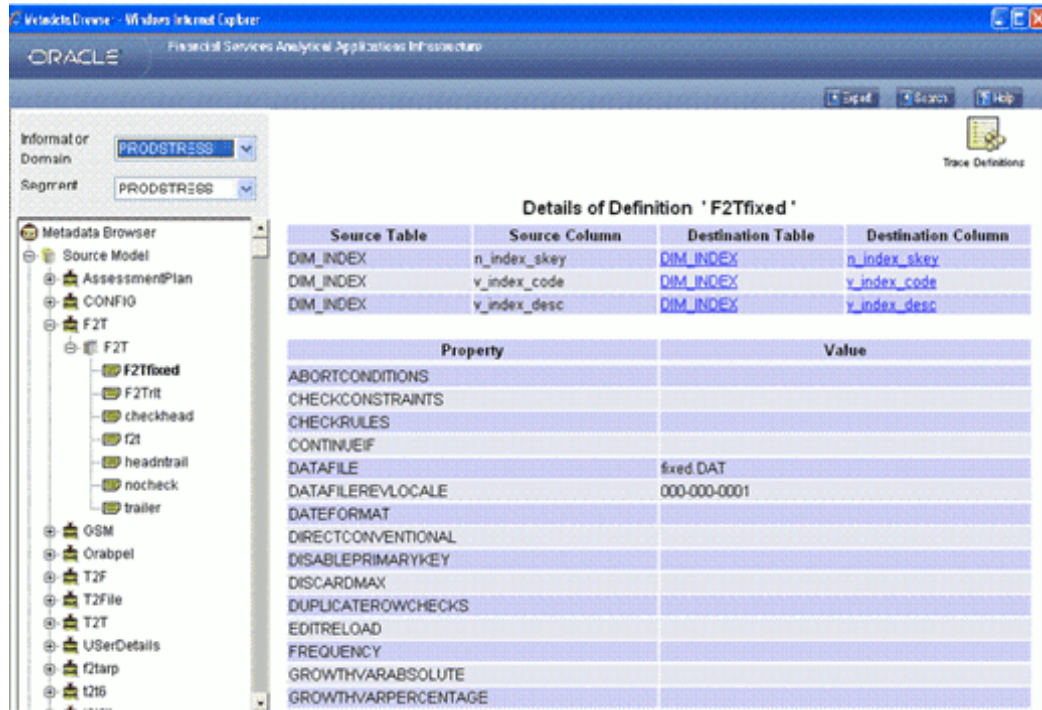
Example

F2TBASEL2 (in this case the application and the source name is the same)

The Name, Description, Type, Schema, Database Name, Database Type, Date Format, ASCII, Server Port, User Id, FTP Share name, FTP Drive name, and JDBC Driver name details of the source is displayed.



To view the mapping details of the source, double-click the + (plus sign) against the source definition to view the source definition mapping details that are maintained within it. Select the definition to view the mapping details of the source.



The mapping details of the Source Table and Source Column to Destination Table and Destination Column are displayed in the right pane.

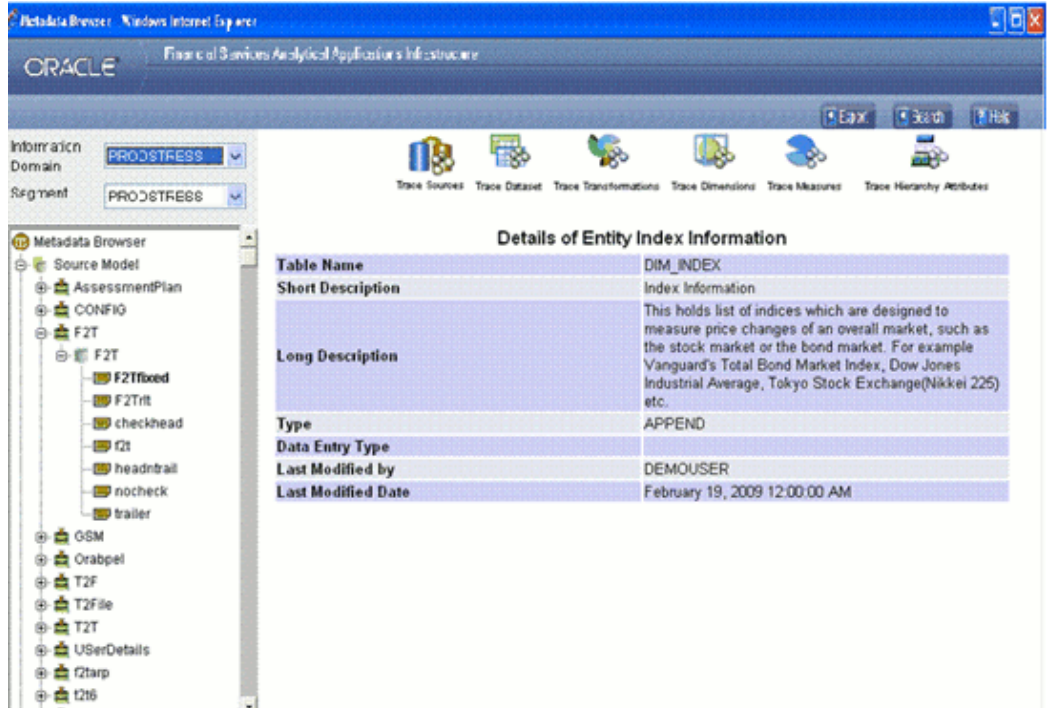
Viewing Destination Table Details

Click the **Destination Table** name hyperlink to view the details of the table.

Example

DIM_INDEX

The Table Name, Short Description, Long Description, Type, Data Entry Type, Last Modified by and Last Modified Date of the destination table are displayed.



You can trace the source, dataset, transformation, dimensions, measures and hierarchy attributes that are mapped to the selected destination table. These are explained as follows:

Tracing Source details

Click **Trace Sources** to view the source to which the selected table is mapped.

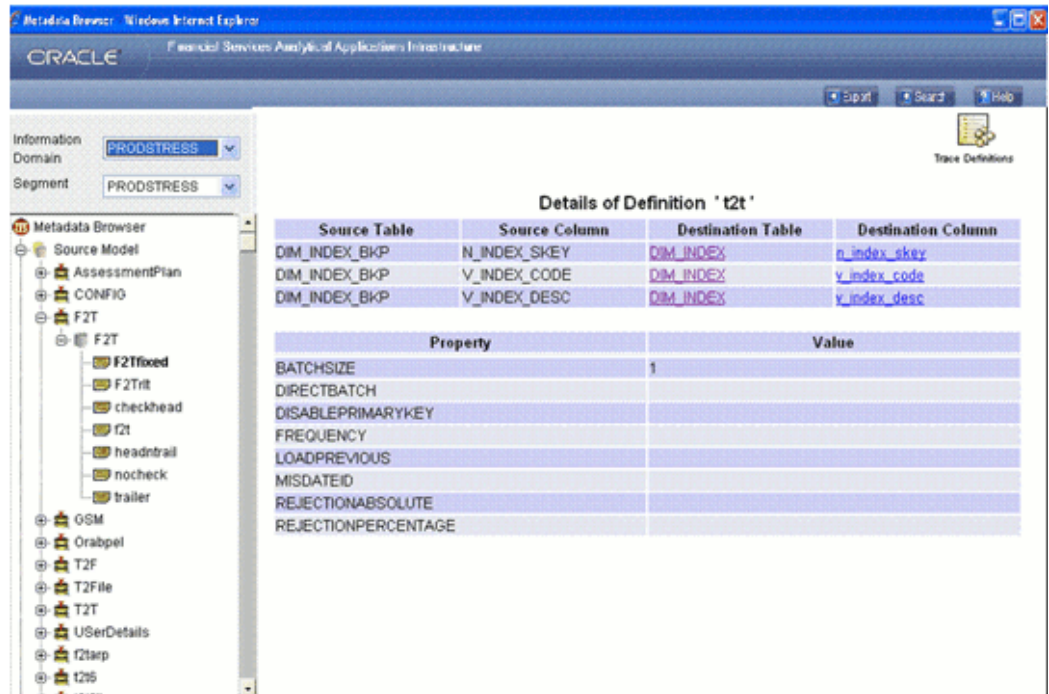
Details of Entity Index Information

Table Name	DIM_INDEX
Short Description	Index Information
Long Description	This holds list of indices which are designed to measure price changes of an overall market, such as the stock market or the bond market. For example Vanguard's Total Bond Market Index, Dow Jones Industrial Average, Tokyo Stock Exchange(Nikkei 225) etc.
Type	APPEND
Data Entry Type	
Last Modified by	DEMOUSER
Last Modified Date	February 19, 2009 12:00:00 AM

Mapped Sources

Application	Source	Definition
T2T	T2T	t2t
T2T	T2T	T2Tdirect
T2T	T2T	T2Tpara
T2F	T2F	check1
T2F	T2F	checkrule
T2F	T2F	t2f
T2F	T2F	t2f
T2F	T2F	t2f0
F2T	F2T	f2t
F2T	F2T	F2Tfixed
F2T	F2T	checkhead
F2T	F2T	headtrail

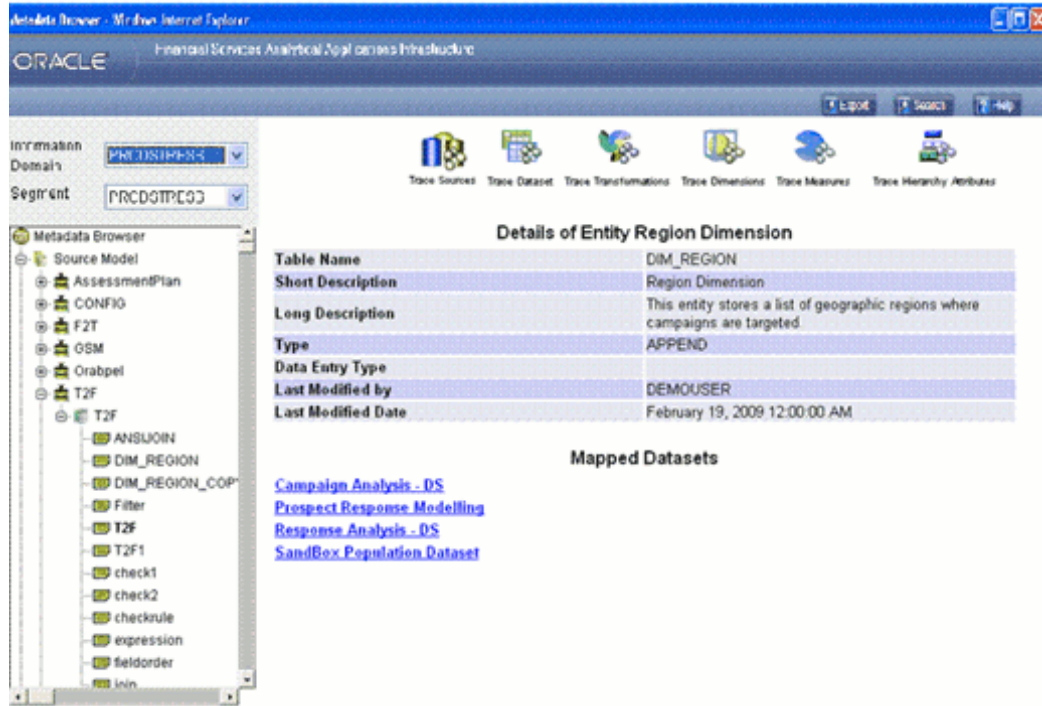
To further view the details of the table, which is mapped to another source, click the **Definition** name hyperlink against the Application name.



Click **Trace Definitions** to trace the definitions of this Definition. Click the Back button in your Browser Navigator bar to return to the Mapped Sources window.

Tracing Data Set Details

Click **Trace Data Set** to view the mapped dataset/s of the selected table.



To view the details of a mapped dataset, click the **Mapped Datasets** name hyperlink.

Example

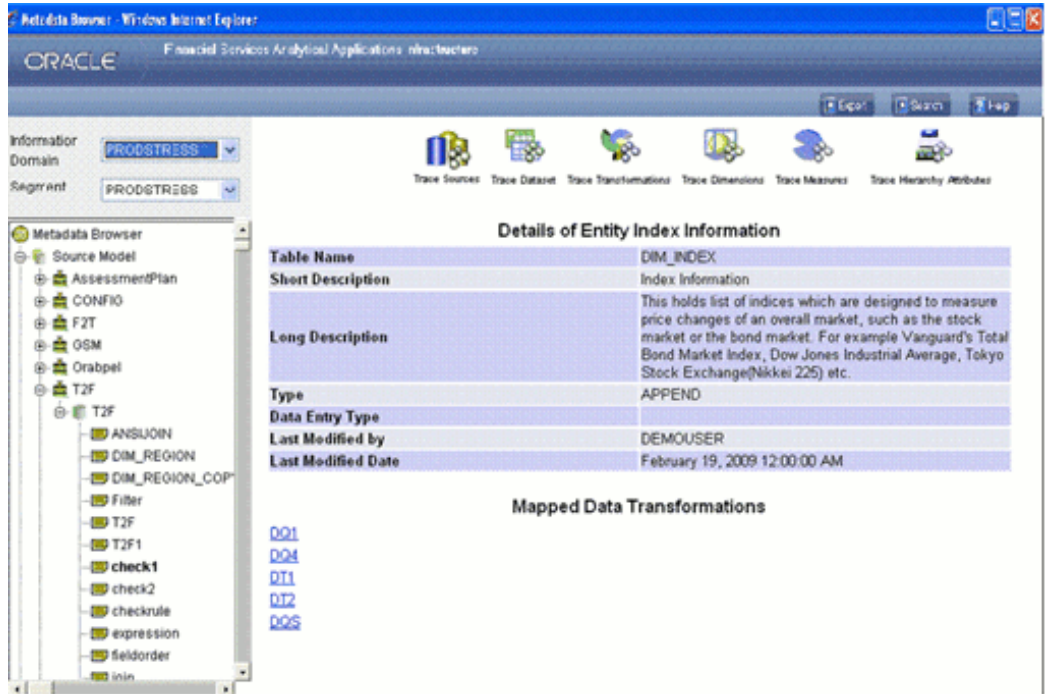
DS Credit Conc Cust

You can trace cubes, marts and definitions to which the dataset is mapped. For more information, see Browsing Data Sets, page 13-214.

Click the **Back** button in your Browser Navigator bar to return to the Mapped Sources window.

Tracing Transformation details

Click **Trace Transformations** to view the transformations applied to the selected table.

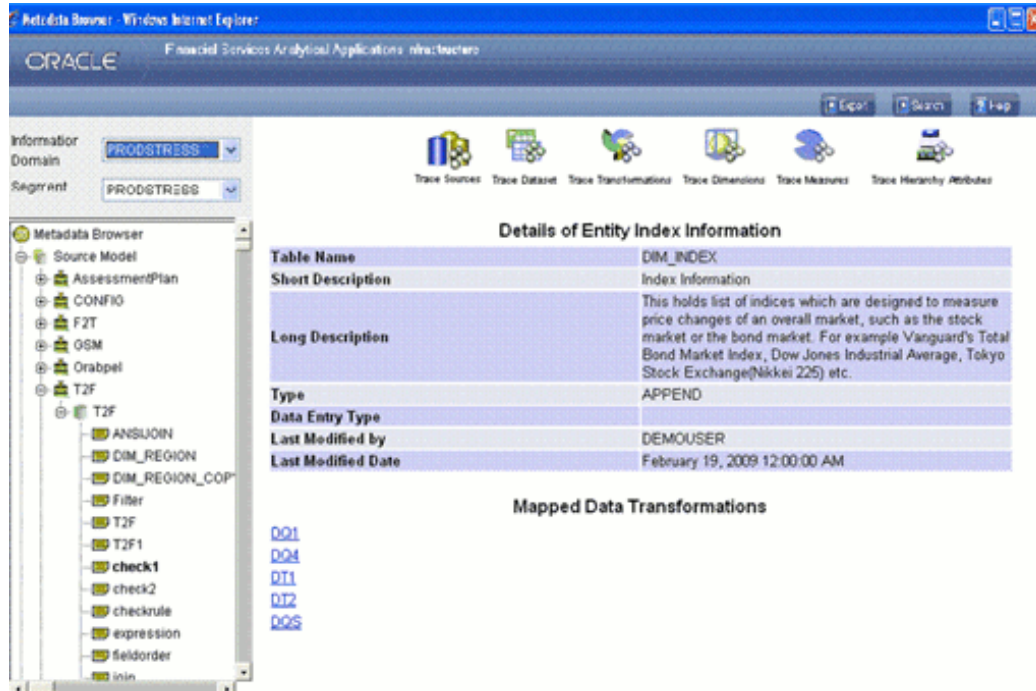


If there are no transformations defined for the table, the Mapped Data Transformations displays the message "No data transformations found".

If there are mapped data transformations defined for the table, the transformation name/s is displayed with a hyperlink/s. To view the details of the mapped data transformation, click the **Mapped Data Transformation** name hyperlink . For more information, see Tracing Data Set Details, page 13-195.

Tracing Dimensions details

Click **Trace Dimensions**, to view the dimensions, which are mapped to the selected table.



If there are mapped data transformations defined for the table, the dimension name/s is displayed with a hyperlink/s. To view the details of the mapped dimension, click the **Mapped Dimension** name hyperlink. For more information, see Tracing Data Set Details, page 13-195.

If there are no dimensions defined for the table, the Mapped Dimensions displays the message "No dimensions found".

Click the **Back** button in your Browser Navigator bar to return to the Mapped Sources

Tracing Measure details

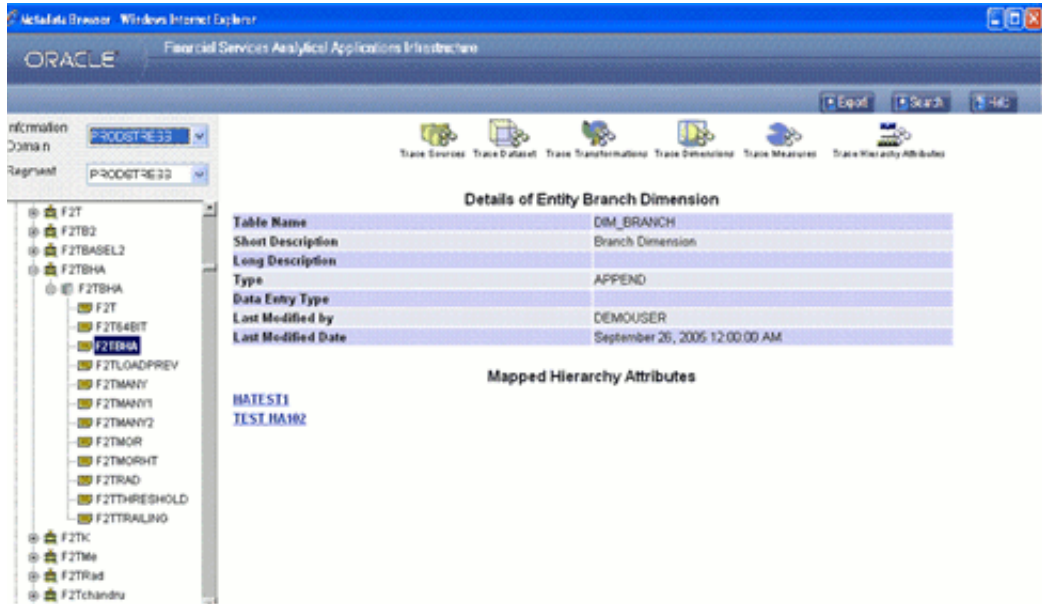
Click **Trace Measures** to view the measures, which are mapped to the selected table.



If there are mapped measures defined for the table, the measure name/s is displayed as a hyperlink/s. To view the details of the mapped measure, click the **Mapped Measure** name hyperlink. For more information, see Tracing Data Set Details, page 13-195.

Tracing Hierarchy Attribute details

Click Trace Hierarchy Attributes to view the hierarchy attributes, which are mapped to the selected table.

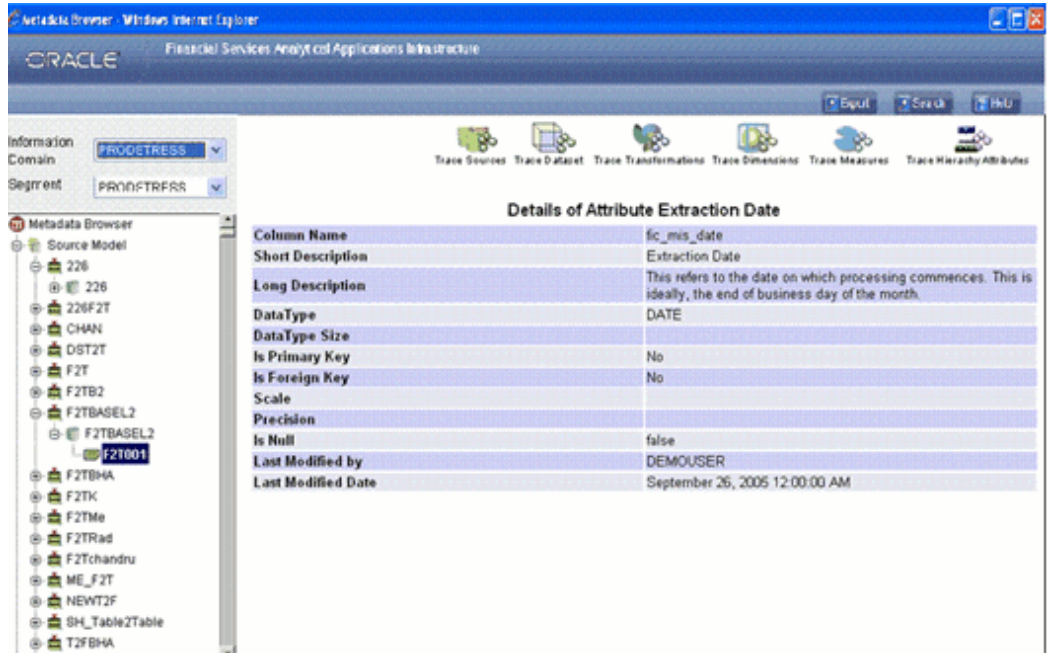


If there are no hierarchy attributes defined for the table, the Mapped Hierarchy Attributes displays the message "No Hierarchy Attributes found".

If there are mapped hierarchy attributes defined for the table, the hierarchy attribute name/s is displayed with a hyperlink/s. To view the details of the hierarchy attributes, click the **Mapped Hierarchy Attributes** name hyperlink. For more information, see Tracing Data Set details, page 13-195.

Viewing Destination Column Details

Select the definition to view the mapping details of the source. Click the Destination Column hyperlink to view the details of the table.



You can trace the source, transformation, dimensions and measures that are mapped to the selected column. For more information, see Viewing Destination Table Details, page 13-192.

Browsing Data Models

The Data Model contains tables. You can view all the columns of the table and perform a trace analysis on the same.

To browse details of Data Models you have to select the information domain and segment first.

Selecting the Information Domain

To view data warehouse models, click the **Information Domain** field to open the drop-down list. Select the information domain that contains the data warehouse model/s.

Selecting the Segment

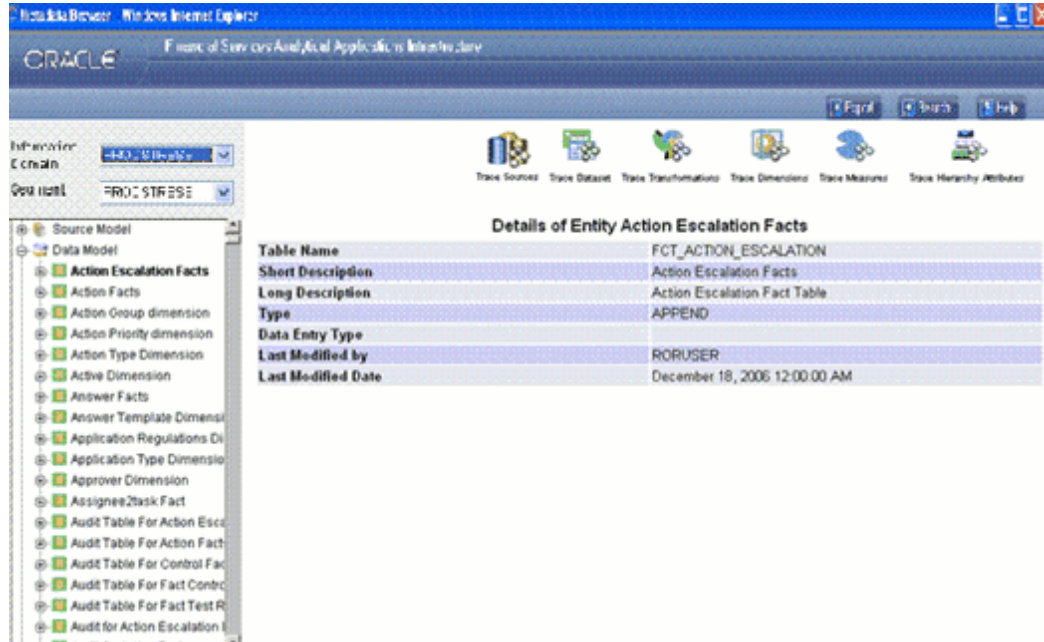
Click the **Segment** field to open the drop-down list. Select the segment of the selected information domain to which the data warehouse model/s belongs.

Viewing Data warehouse Model Table Details

Now double-click the + (plus sign) against the **Datawarehouse Model** folder displayed under the Metadata Browser in the left pane. This action will cause the folder to expand displaying the tables within it. Select a table from the list of tables to view its details.

Example

Action Escalation Key



The Table Column Name, Short and Long Description, Data Type, Data Type Size, Whether Primary or Foreign Key, Scale, Precision, whether null, Last Modified by and Last Modified Date details of the entity are displayed.

You can trace the source, dataset, transformation, dimensions, measures and hierarchy attributes that are mapped to the selected table. These are explained as follows.

Tracing Source details

Click Trace Sources to view the source to which the selected table is mapped.



If there are no sources defined for the table, the Mapped Sources displays the message "No sources found".

If there are mapped sources defined for the table, the source name/s is displayed with a hyperlink/s. To view the details of the source, click the **Mapped Sources** name hyperlink.

For more information, see Tracing Source Details, page 13-193.

Tracing Data Set details

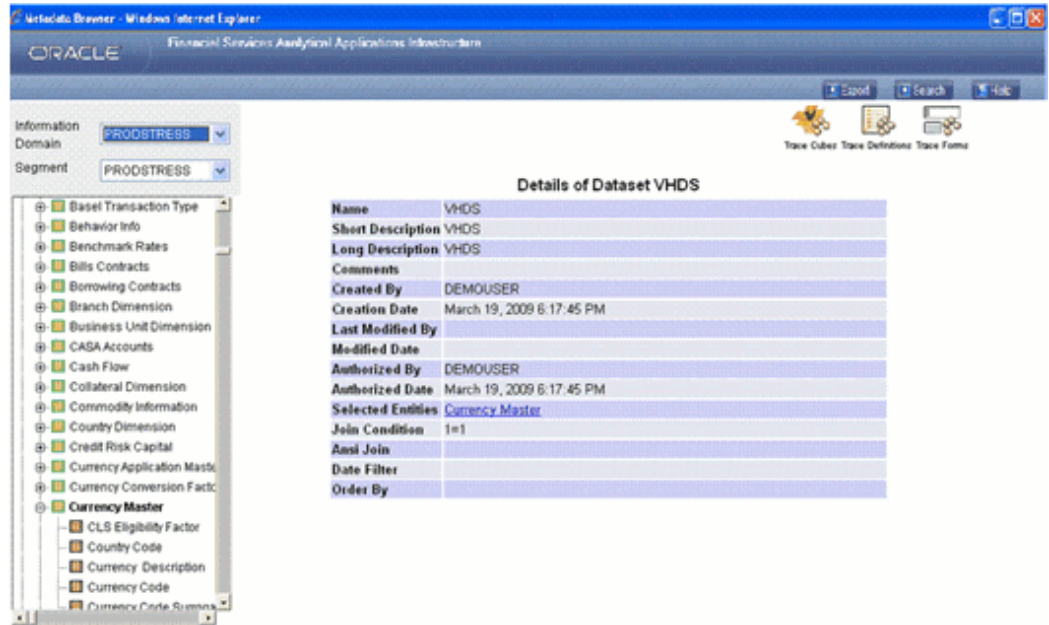
Click Trace Dataset to view the mapped dataset/s of the selected entity.



To view the details of a mapped dataset, click the **Mapped Datasets** name hyperlink.

Example

Account Wise TP Rates



The Name, Short Description, Comments, Selected Entities, Join Condition, Ansi Join and Order By details of the dataset are displayed. You can view the details of the selected tables that contain the displayed data set by clicking on the relevant hyperlink, like *DIM_TIME_DATE*.

You can trace cubes, marts and definitions to which the dataset is mapped.

For more information, see Browsing Data Sets, page 13-214.

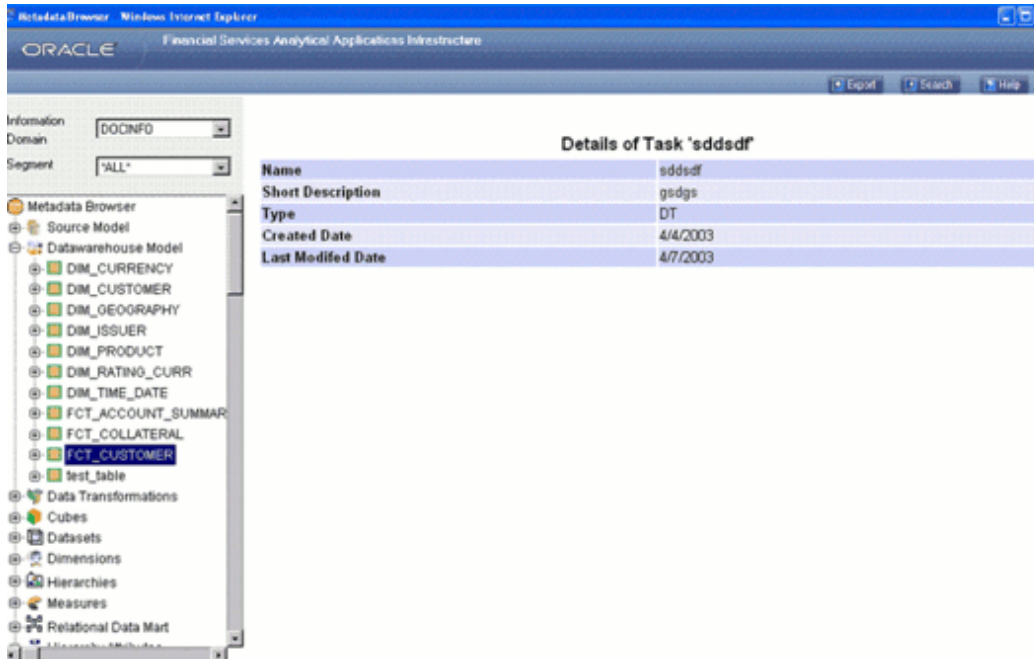
Click the **Back** button in your Browser Navigator bar to return to the Mapped Datasets window.

Tracing Transformation details

Click **Trace Transformations** to view the transformations applied to the selected table.



To view the details of a mapped transformation, click the **Mapped Data Transformations** name hyperlink.



The Name, Short Description, Type, Created Date and Last Modified Date details of the transformation are displayed.

Click the **Back** button in your Browser Navigator bar to return to the Mapped Transformations window.

Tracing Dimensions details

Click **Trace Dimensions** to view the dimensions, which are mapped to the selected entity.



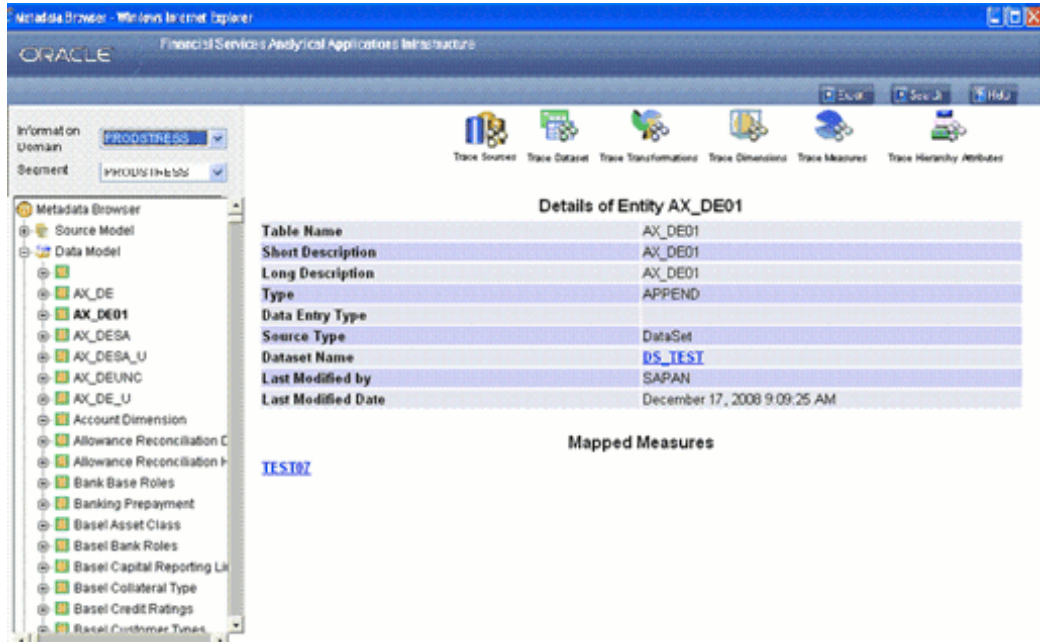
If there are no dimensions defined for the table, the Mapped Dimensions displays the message "No dimensions found".

If there are mapped dimensions defined for the table, the dimensions name/s is displayed with a hyperlink/s. To view the details of the dimensions, click the **Mapped Dimensions** name hyperlink.

For more information, see Tracing Data Set Details, page 13-195.

Tracing Measure Details

Click **Trace Measures** to view the measures, which are mapped to the selected entity.



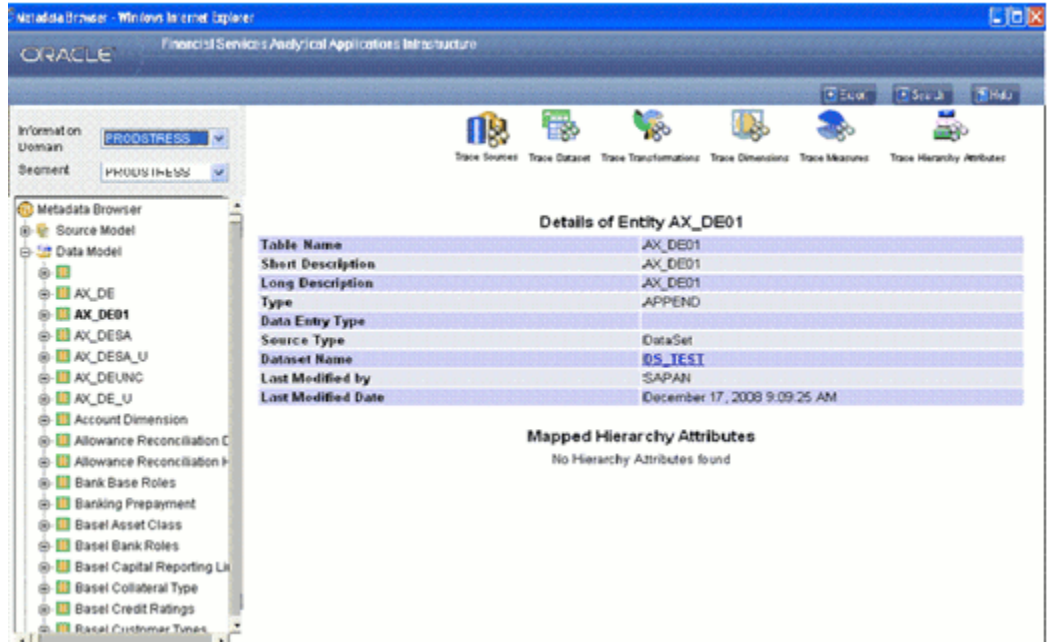
If there are mapped measures defined for the entity, the measures name/s is displayed with a hyperlink/s. To view the details of the measures, click the **Mapped Measures** name hyperlink .

If there are no measures defined for the table, the **Mapped Measures** displays the message "No measures found".

Click the Back button in your Browser Navigator bar to return to the **Mapped Sources** window.

Tracing Hierarchy Attribute details

Click **Trace Hierarchy Attributes** to view the hierarchy attributes, which are mapped to the selected table.



If there is no hierarchy attributes defined for the table, the Mapped Hierarchy Attributes displays the message "No Hierarchy Attributes found".

If there are mapped hierarchy attributes defined for the table, the hierarchy attribute name/s is displayed with a hyperlink/s. To view the details of the hierarchy attributes, click the **Mapped Hierarchy Attributes** name hyperlink.

For more information, see Tracing Data Set Details, page 13-195.

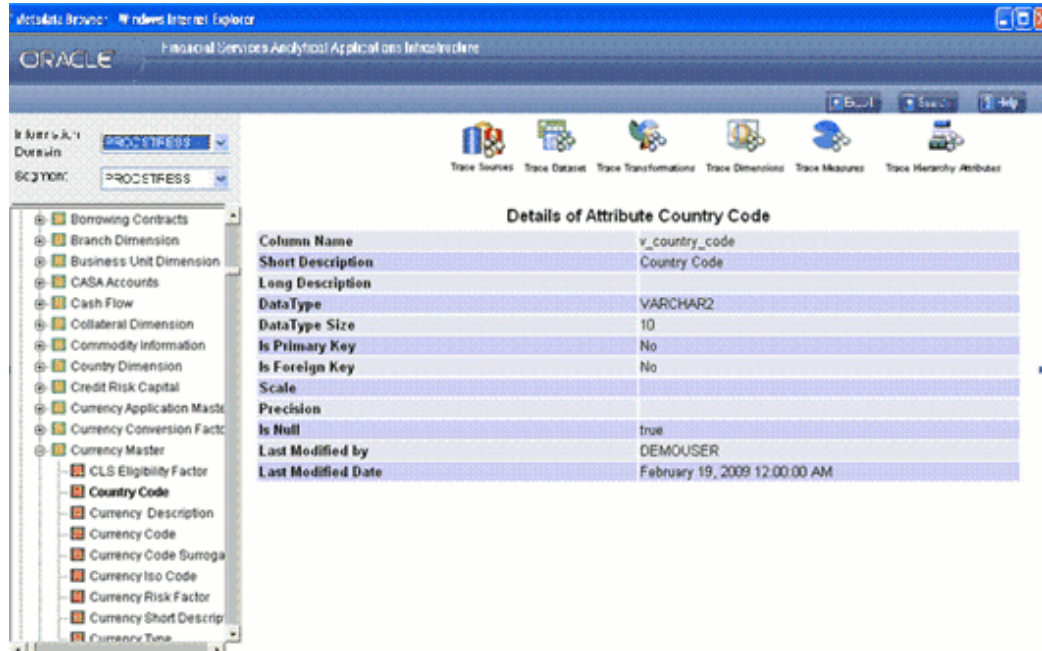
Viewing Data warehouse Model Column details

To view the column details, double-click the + (plus sign) against the **Datawarehouse Model** folder displayed under the *Metadata Browser* in the left pane. This action will cause the folder to expand displaying the tables within it. Click a table from the list of tables to view its details that is *Currency Master*. Now, double click the + (plus sign) against the table name *Currency Master* to view the columns within it. Select the column to view its details.

Note: The data entry type for the display of data warehouse model entities will appear as null. This property is for future use.

Example

Country Code



The Name, Short Description, Long Description, Data Type, Data Type Size, Is Primary, Is Foreign Key, Scale, Precision, Is Null, Last Modified by and Last Modified Date details of the attribute are displayed.

You can trace the source, dataset, transformation, dimensions, measures and hierarchy attributes to which the column is mapped

For more information, see Viewing Data warehouse Model Table , page 13-201.

Browsing Data Transformations

Data Transformation contains a set of transformations that are applied on a table. This set contains displays the type of transformation and the affected table/attribute.

To browse details of Data Transformations you have to select the information domain and segment first.

Selecting the Information Domain

To view data transformations, click the **Information Domain** field to open the drop-down list. Select the information domain that contains the data transformation/s.

Example

DOCINFO

Selecting the Segment

Click the **Segment** field to open the drop-down list. Select the segment of the selected information domain to which the data transformation/s belongs.

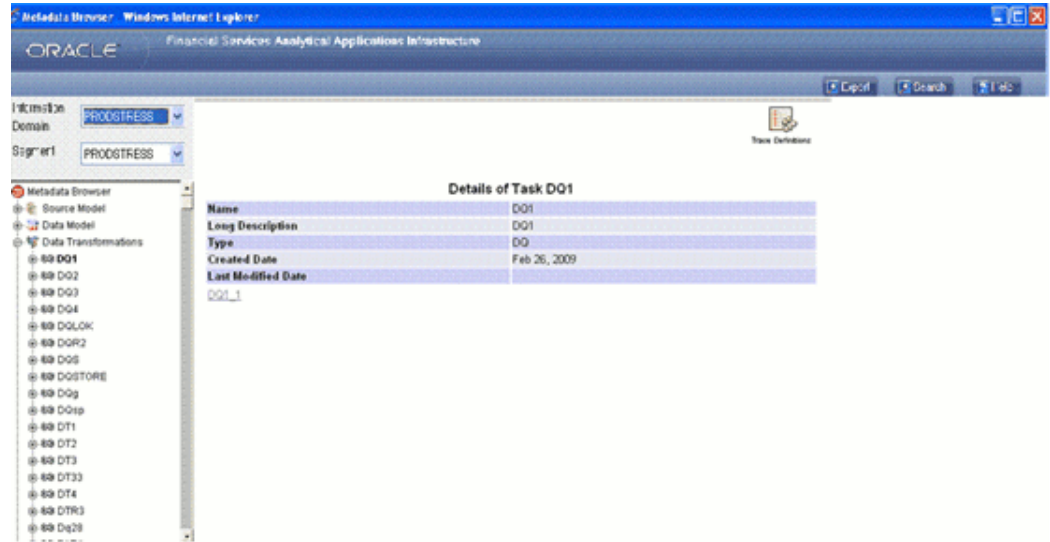
Example

ALL

Now double-click the + (plus sign) against the **Data Transformations** folder displayed under the Metadata Browser in the left pane. This action will cause the folder to expand displaying the data transformations available for the selected information domain/segment. Click a transformation to view its details.

Example

DQ1



The Name, Long Description, Type, Created Date and Last Modified Date details of the data transformation are displayed.

To view the table and attribute details of the transformation, double-click the + (plus sign) against the **Data Transformations** folder displayed under the Metadata Browser in the left pane. This action will cause the folder to expand displaying the transformations within it. Select a transformation.

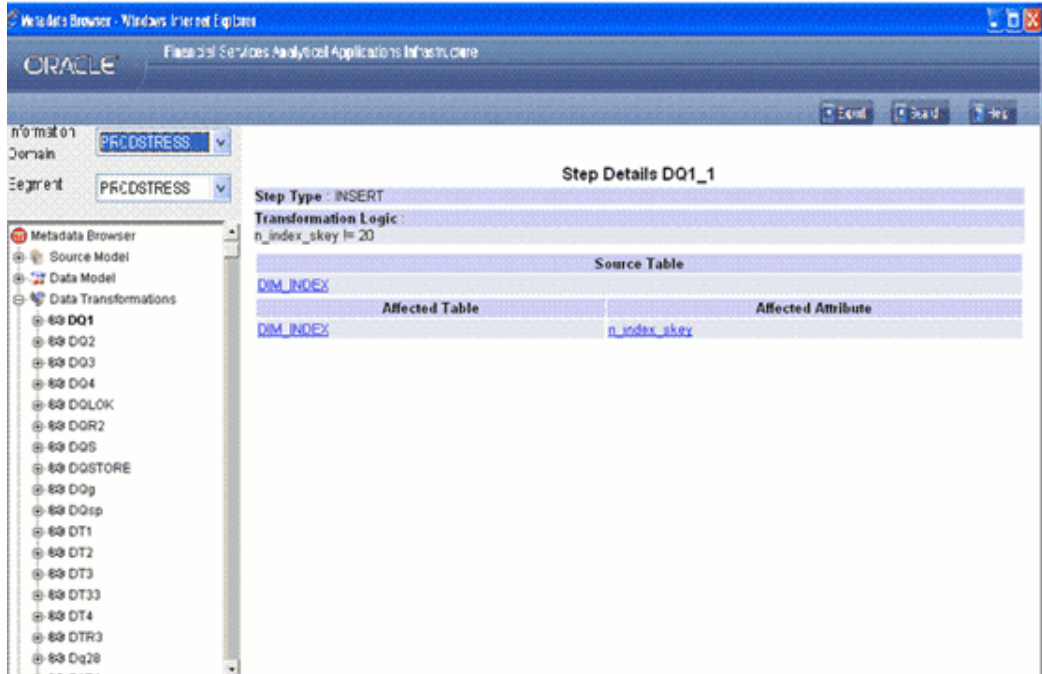
Example

2TABINSERT

Click the hyperlink provided below the task details pane or double-click the + (plus sign) against the transformation name to view the step details/ affected table and column details for the selected transformation.

Example

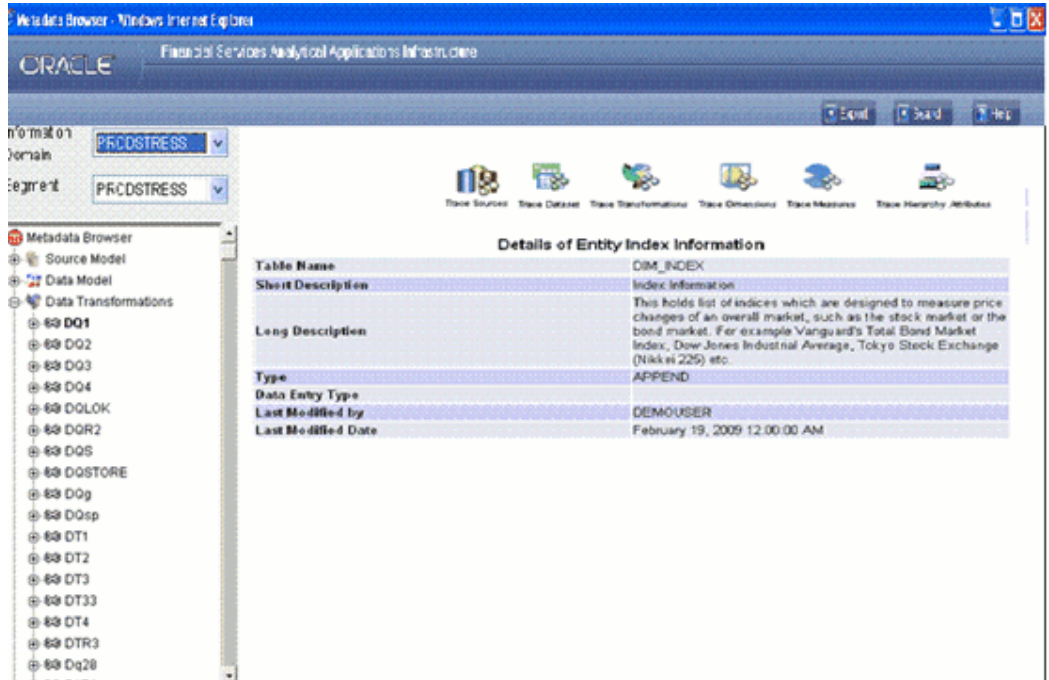
DQ1_1



Click the **Affected Table** name hyperlink to view its details.

Example

DIM_INDEX



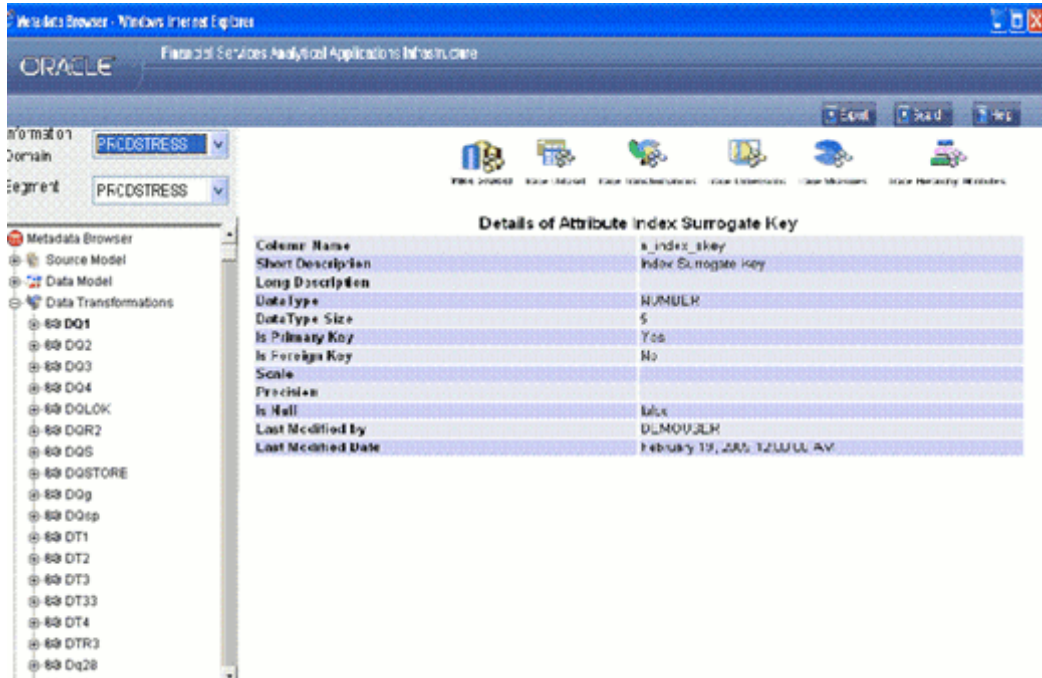
You can trace the source, transformation, dimensions and measures that are mapped to the selected column. For more information, see Viewing Destination Table, page 13-192 details.

Click the **Back** button in your Browser Navigator bar or click the transformation name listed in the left pane to return to the Table Details window. Click the Source Table and Source Column hyperlinks to view the source table and source column details.

Click the **Affected Attribute** name hyperlink to view details of the affected column/attribute.

Example

N_index_skey



You can trace the source, transformation, dimensions and measures that are mapped to the selected column. For more information, see Viewing Destination Table, page 13-192 details.

Browsing Data Sets

A Data Set is a group of tables whose inter-relationship is defined by specifying a join condition between the various tables. It is a basic building block for the creation of queries to be executed on the data warehouse for a large number of functions including creating marts as well as running queries and creating reports.

Example

A user might want to analyze the Customer Relationship Management through various profiles of a customer as against the kinds of transaction and channels of transaction through which the actual transaction happened. This information is maintained in relational tables. In a typical Star Schema implementation of the relations, the Customer profiles like Age, Gender, Sex, Residence, Region and so on is maintained in Individual Dimension tables. Similarly, the transaction types, channels would also be maintained in a separate Dimension tables. The actual transaction performed by the Customers will be stored in a Fact table. The Data Set allows the users to collate all these tables with a valid join condition. The tables defined in the data set would form the FROM clause while aggregating for the Cube.

To browse details of a Dataset you have to first select the information domain and segment first.

Selecting the Information Domain

To view data sets, click the Information Domain field to open the drop-down list. Select the information domain that contains datasets.

Example

DOCINFO

Selecting the Segment

Click the **Segment** field to open the drop-down list. Select the segment of the selected information domain to which the data sets belongs.

Example

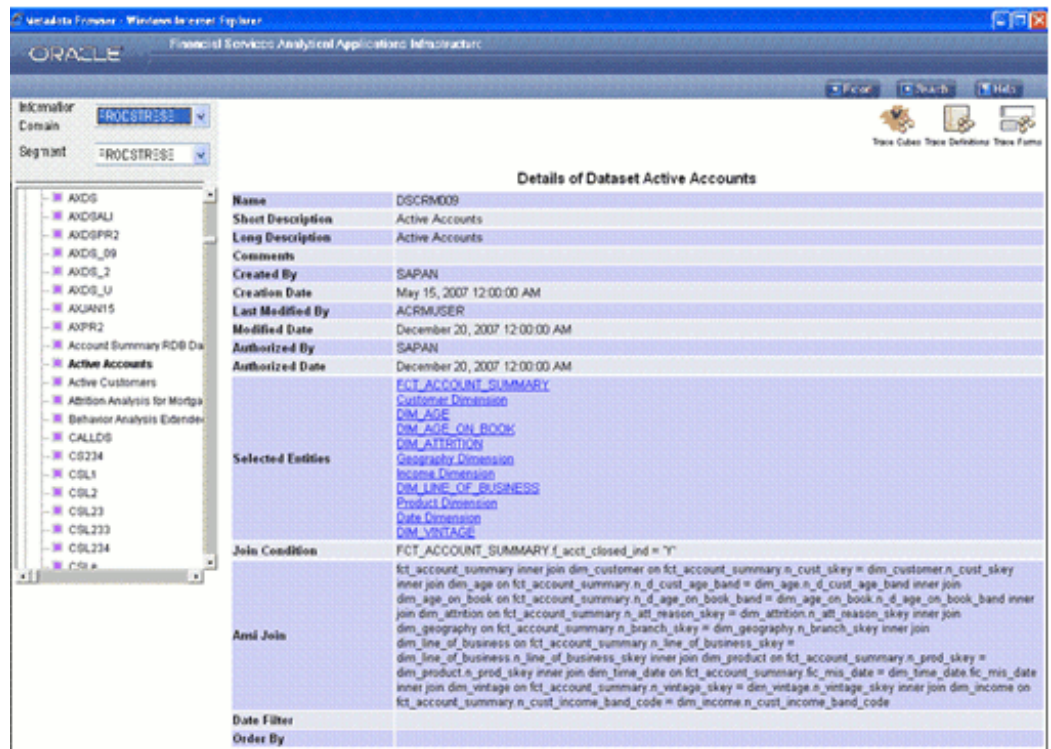
ROPRISK3

Now double-click the + (plus sign) against the **Dataset** folder displayed under the Metadata Browser in the left pane. This action will cause the folder to expand displaying the data sets available for the selected information domain/segment.

Click a data set to view its details.

Example

Active Accounts



The Name, Short Description, Long Description, Comments, Created By, Creation Date, Last Modified By, Modified Date, Authorized By, Authorized Date, Selected Entities, Join Condition, ANSI Join condition, and Order By details of the selected data set are displayed.

To view the details of the Selected Entities of the dataset, click the entity hyperlink.

Example

Date Dimension



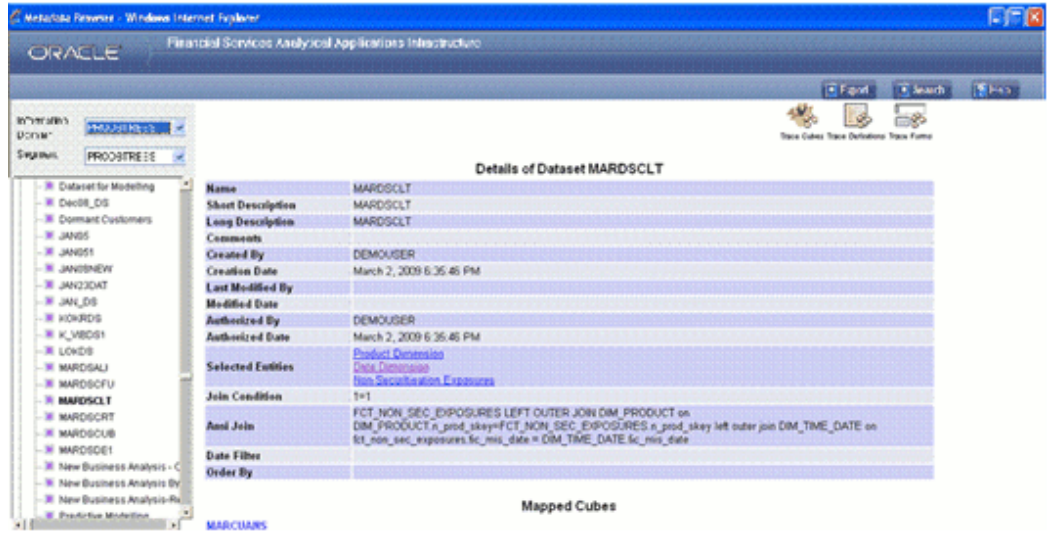
You can trace the source, dataset, transformation, dimensions, measures and affected hierarchy attributes of the selected table. For more information, see [Viewing Destination Table Details](#), page 13-192.

Click the **Back** button in your Browser Navigator bar to return to the Dataset details window.

You can trace the cube, mart and definitions to which the selected dataset is mapped. These are explained as follows:

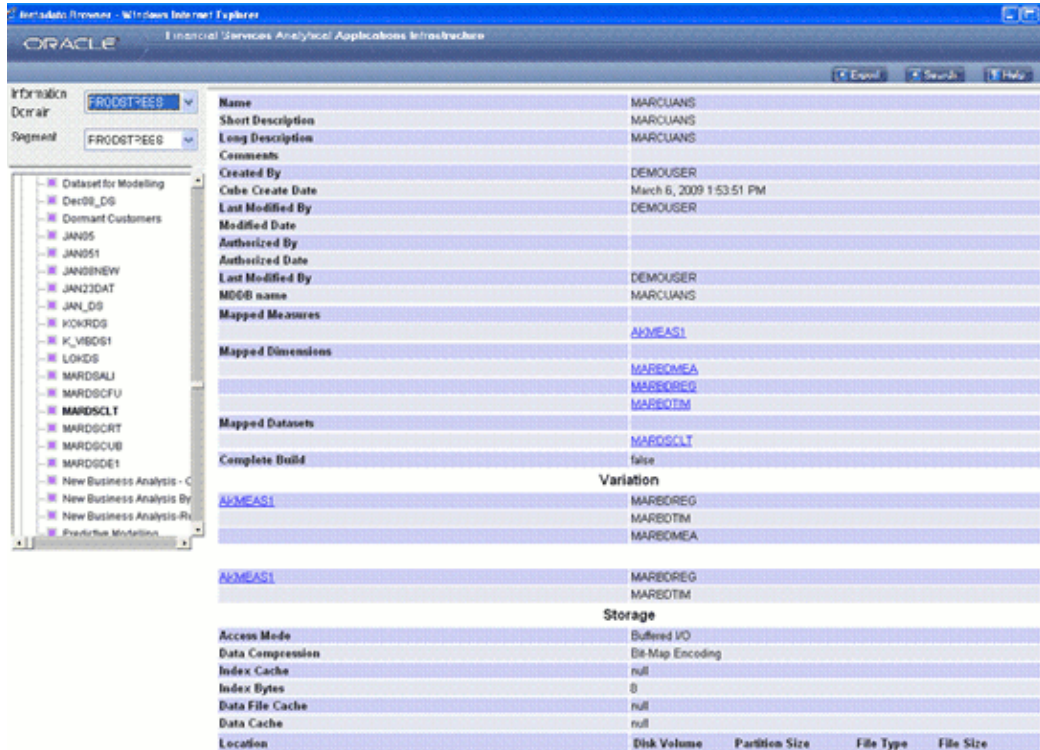
Tracing Cube Details

Click **Trace Cube** to view the cubes to which the dataset is mapped. The window reloads displaying the list of mapped cubes.



Click the cube name hyperlink to view the details of the mapped cube.

Example
MARCANS



The Name, Short Description, Long Description, Cube Creation Date, Last Modified Date, Last Modified By, MDDB name, Mapped Measures, Mapped Dimensions and Mapped Dataset details of the cube are displayed.

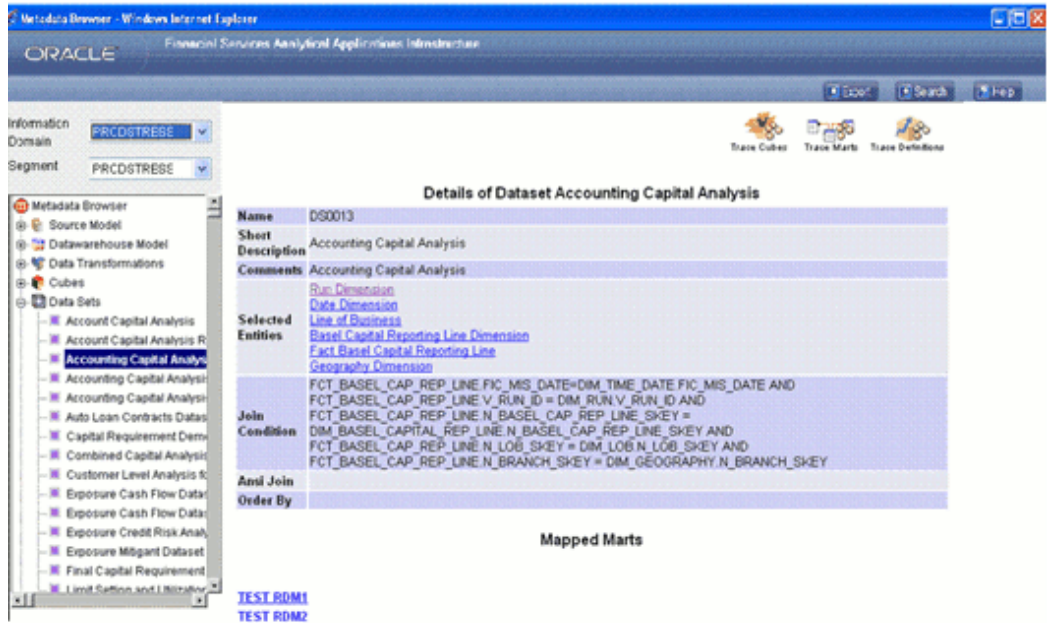
To view the details of the Mapped Measures, Mapped Dimensions, and Mapped Datasets, click the measure/dimension/dataset name hyperlinks.

You can trace the definition to which the cube is mapped. For more information, see Tracing Definition details, page 13-220.

Click the **Back** button in your Browser Navigator bar to return to the Dataset details window.

Tracing Mart Details

Click **Trace Marts** to view the data marts to which the dataset is mapped. The screen reloads displaying the mapped mart/s.

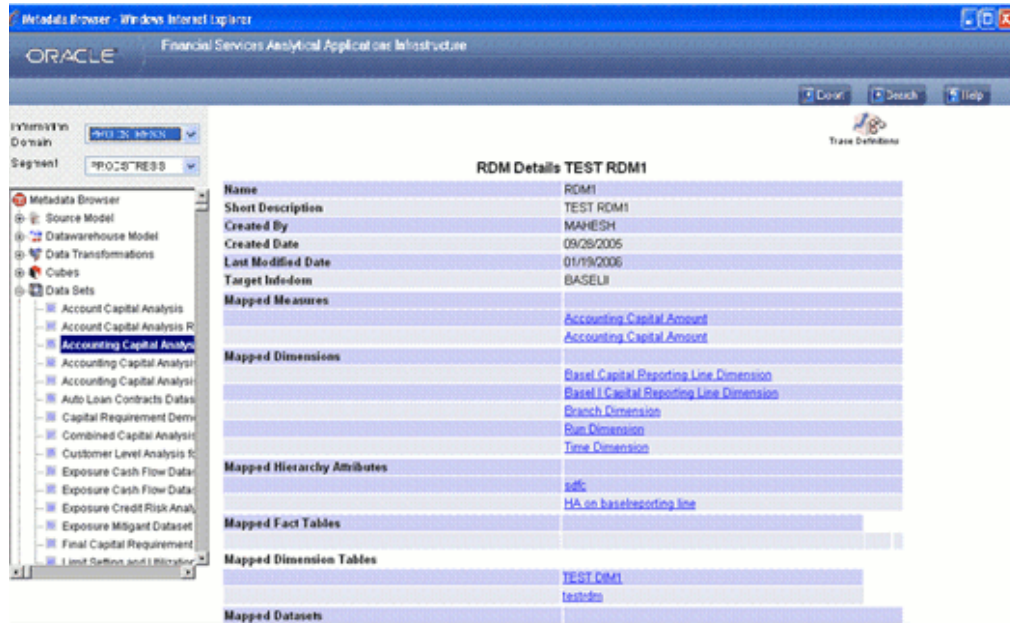


The marts mapped to the dataset will be displayed below the dataset details pane. If there are no mapped marts defined for the dataset, the Mapped Marts displays the message "No Marts found".

Click the mart name hyperlink to view the details of the mapped mart.

Example

Test RDM1



The Name, Short Description, Created By, Created Date, Last Modified Date, Target Infodom, Mapped Measures, Mapped Dimensions, Mapped Hierarchy Attributes, Mapped Fact Tables, Mapped Dimension Tables and Mapped Dataset details of the mart are displayed.

To view the details of the Mapped Measures, Mapped Dimensions, Mapped Hierarchy Attributes, Mapped Fact Tables, Mapped Dimension Tables, and Mapped Dataset, click the hyperlinks.

You can trace the definition to which the mart is mapped.

For more information, see Tracing Definition details, page 13-220.

Click the **Back** button in your Browser Navigator bar to return to the Dataset details window.

Tracing Definition Details

Click **Trace Definitions** to view the definitions that are mapped to the dataset.



If there is no mapped business processors defined for the dataset, the Mapped Business Processors displays the message "No definitions found".

If there is business processor definitions defined for the dataset, the definition name/s is displayed with a hyperlink/s. To view the details of the mapped business processor definition, click the **Mapped Business Processor** name hyperlink.

If there are rule definitions defined for the dataset, the rule definition name/s is displayed with a hyperlink/s. To view the details of the mapped rule definition, click the **Mapped Rules** name hyperlink.

If there are no mapped definitions defined for the dataset, the Mapped Definitions displays the message "No definitions found".

If there are mapped definitions defined for the dataset, the definition name/s is displayed in a display grid as shown in the figure above. Details such as Name, Type, Owner, and Last Modified On date are displayed. There are also options to Delete, Share, Edit, and View the definition and its Properties.

Click the



button to delete a definition. A message will be displayed asking "Are you sure you want to delete this definition?" Click OK to delete the definition or Cancel to close the message window.

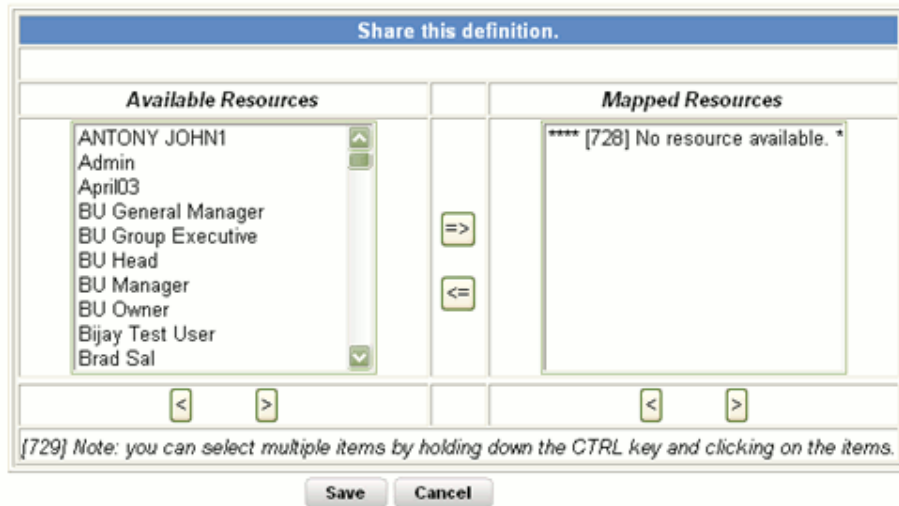
Click the



button to share the definition with another user. The Changing the share for the definition window is displayed.

Metadata Browser

Changing the share for the definition:LOKKPI



The Available Resources pane lists the names of the users available. Select a user name from the Available Resources list and click the



button to share the definition to the selected user. The selected user name would move to the Mapped Resources pane.

Note: You can select multiple non-adjacent items by holding down the CTRL key and clicking on the items. For multiple adjacent selections, use SHIFT + click.

Click the



button to move the selected users in the Mapped Resources pane back to the Available Resources pane.

Click the **Save** button to save the changes. Click **Cancel** to discard the changes.

In the Mapped Definitions display grid, click the



icon to open the definition in the Designer mode. You can edit the definition here and save the modifications.

Click the

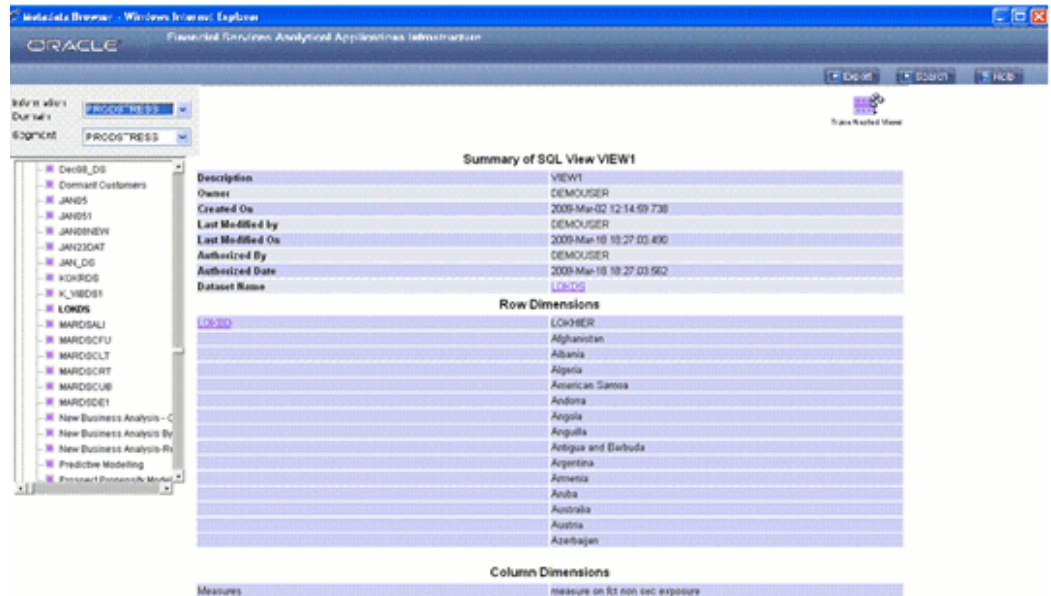


button to view the definition in the Viewer window.

Click the

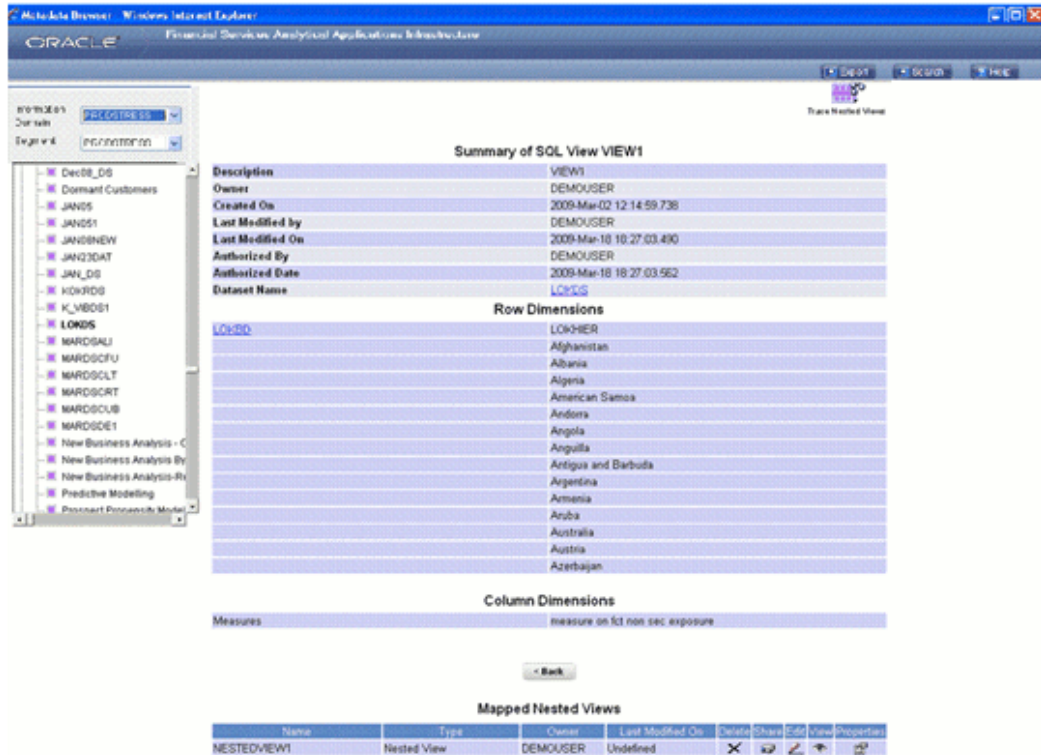


icon to view the properties of the definition. Various details of the dimension such as Description, Owner, date of creation, Data Set name, Row and Column dimensions as well as the Mapped Hierarchy Attribute are displayed as shown in the following figure.



Click the **Trace Nested Views** button to view the Nested Views mapped to this dimension.

If there are Nested views mapped to the dataset, the nested view name/s is displayed with details such as Name, Type, Owner and Last Modified date as shown in the following figure. There are also options to view the nested view in the Insight Viewer and view its Properties.



If there are no nested views mapped to the dataset, the message "No definitions found" will be displayed below Mapped Nested Views.

Click the



icon to view the nested view in the Viewer window.

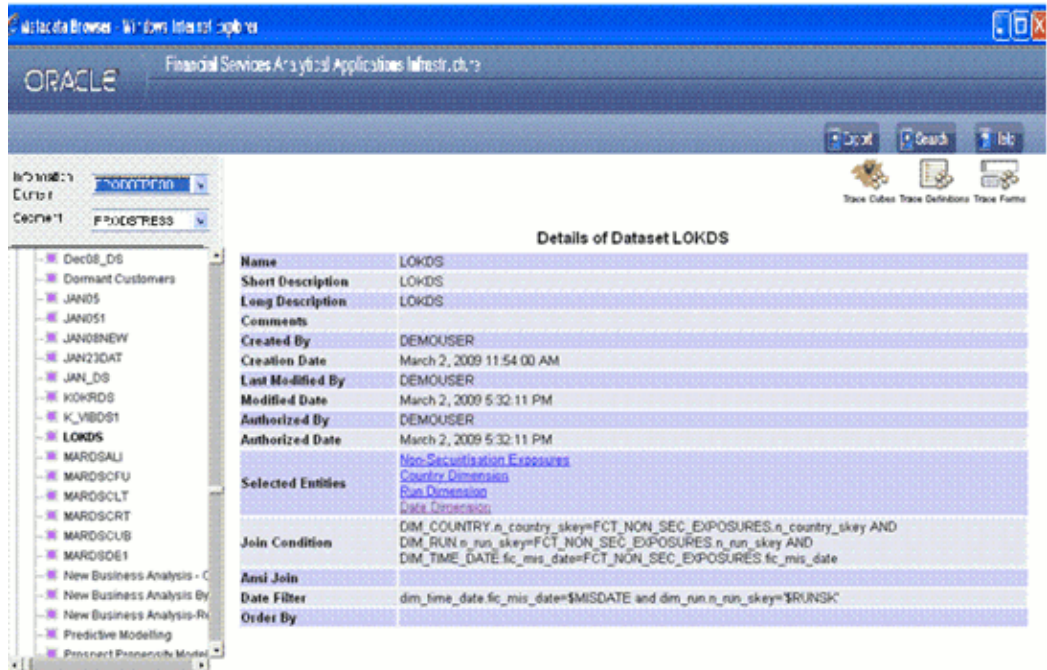
Click the



button to view the properties of the nested view. Various details of the dimension such as Description, Owner, date of creation, Data Set name and Row and Column dimensions are displayed. Click Back on the screens displayed or close the windows to return to the Metadata Browser window.

Tracing Form Details

Click the **Trace Forms** button to trace the forms created on the selected map.



Forms created on the selected map will be displayed in the bottom of the right screen below the Map definition details.

Browsing Measures

A Measure is the quantitative data that is presented to the user. It reflects information in a business understandable form. It also implies aggregated information as opposed to information at a detailed level as in aggregated information at a single account or customer level. Measures can be stored as base and computed or derived measures.

A base measure refers to a measure where the aggregation is done directly on the raw data from the database or on the raw data available.

Example

Number of existing customers or balance of amount from existing customers

A computed (derived) measure is based on the functions of base measures and computed by mathematical operations like aggregation, difference, time lag, and so on.

Example

Increase in number of existing customers over previous month is computed by taking the difference between customers existing in current month and existing customers in previous month.

To browse Measure details, you have to select the information domain and segment first.

Selecting the Information Domain

To view measures, click **Information Domain** field to open the list. Select the information domain that contains the measure/s.

Selecting the Segment

Click Segment field to open the list. Select the segment of the selected information domain to which the measure belongs.

Now click the + (plus sign) against the Measure folder displayed under the Metadata Browser in the left pane. This action will cause the folder to expand displaying the measures available for the selected information domain/segment.

Click Measure to view its details.

Example

Value at Risk



In the case of Computed Measures, the Name, Short Description, Long Description, Created By, Creation Date, Last Modified By, Modified Date, Authorized By, Authorized Date, and Derived Expression details of the measure are displayed.

If it is a Base Measure, The Name, Short Description, Long Description, Created By, Creation Date, Last Modified By, Modified Date, Authorized By, Authorized Date, Entity, Attribute, Aggregation Type, Measure Type, Summary Condition, Last Modified By and Last Modified Date.

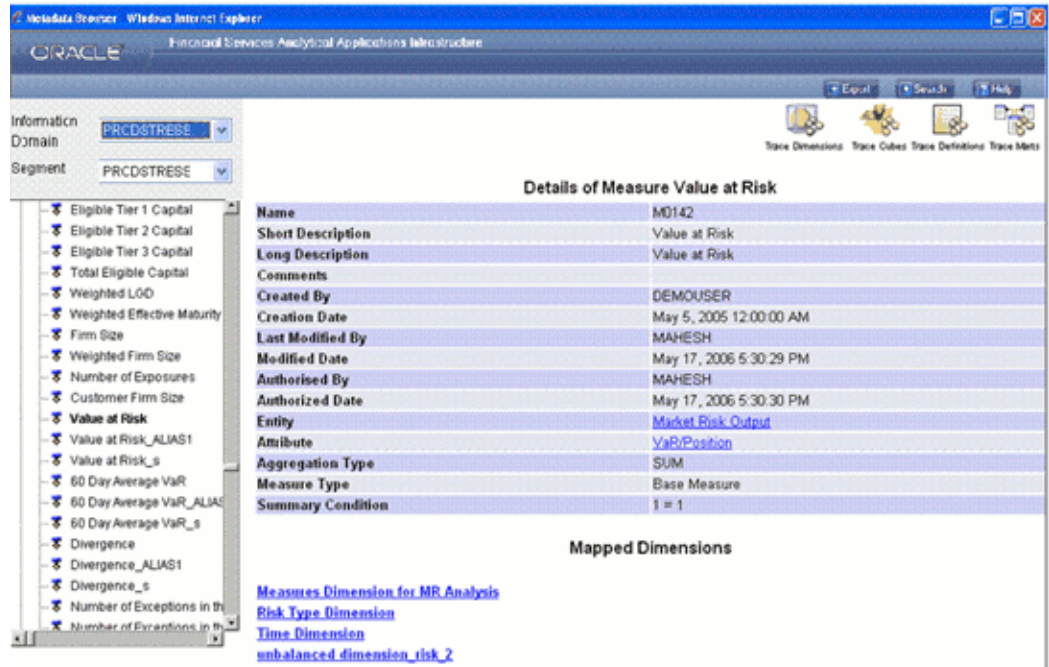
To view the details of the Entity and Attribute of the measure, click the entity / attribute name hyperlink.

You can trace the dimensions, cubes, definitions and marts to which the selected measure is mapped. These are explained as follows.

Tracing Dimensions Details

Click **Trace Dimensions** to view the dimensions to which the selected measure is

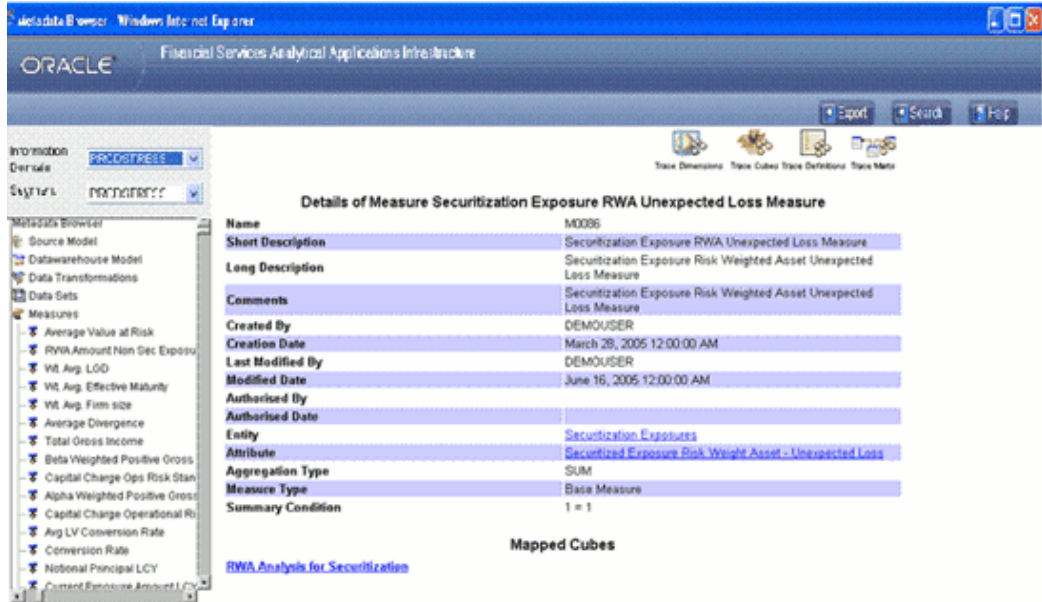
mapped. The window reloads displaying the list of mapped dimensions.



Click the hierarchy name hyperlink (for example, Loan to Value Ratio in the previous figure) to view its details. For more information, see Tracing Dimension Details, page 13-220.

Tracing Cube Details

Click **Trace Cubes** to view the cubes mapped to the selected measure. The window reloads displaying the list of mapped cubes.



If there are mapped cubes defined for the measure, the cube name/s is displayed as hyperlink/s. To view the details of the mapped cube, click the **Mapped Cubes** name hyperlink.

If there are no mapped cubes defined for the measure, the Mapped Cubes displays the message "No cubes found".

The Cube Details screen will be displayed. The Name, Short Description, Long Description, Cube Creation Date, Last Modified Date, Last Modified By, MDDDB name, Mapped Measures, Dimensions and Dataset details, Complete Build, Variation, Roll Off, Storage and Node Formula details of the cube are displayed.

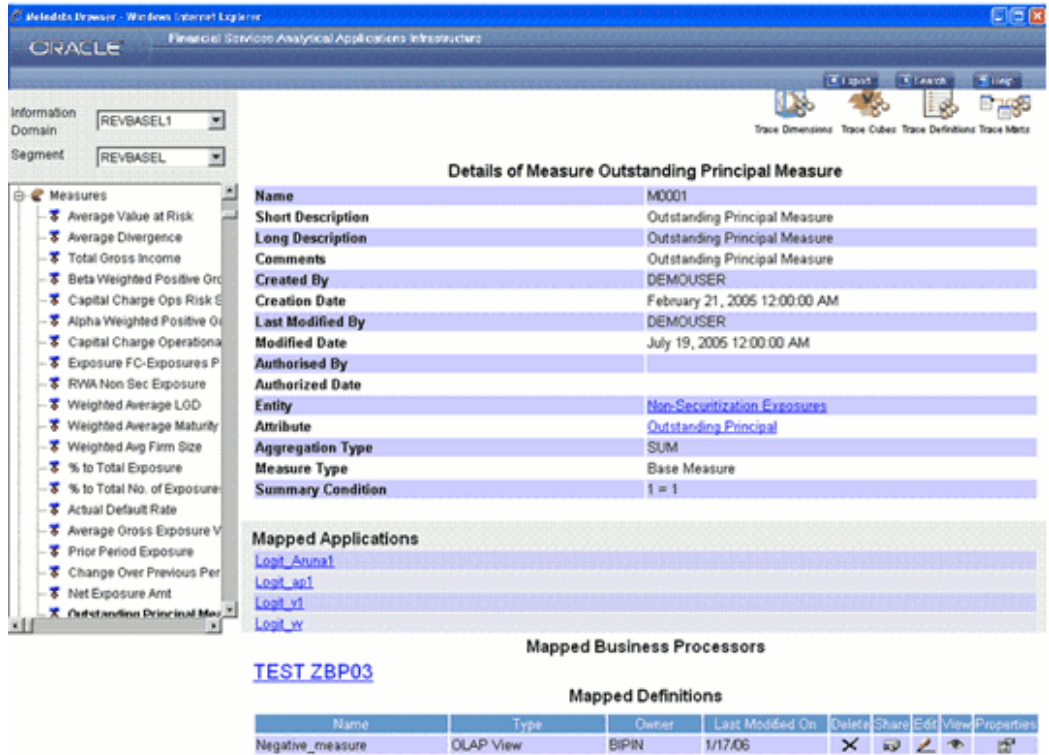
To view the details of the Mapped Measures, Mapped Dimensions, and Mapped Datasets, click the corresponding hyperlinks.

You can trace the definition to which the cube is mapped by clicking the **Trace Definitions** button. For more information, see Tracing Definition Details, page 13-220.

Click the **Back** button in your Browser Navigator bar to return to the Measure Details window.

Tracing Definition Details

Click **Trace Definitions** to view the definitions that are mapped to the measure. The window reloads displaying the list of definitions that are mapped to the measure.



You can delete, share, edit, view and check the properties of the selected definition . For more information, see Tracing Definition Details, page 13-220.

Tracing Mart Details

Click **Trace Marts** to view the data marts that are mapped to the measure. The window reloads displaying the list of data marts that are mapped to the measure.



Click the mart name hyperlink to view its details. For more information, see Tracing Mart Details, page 13-236.

Tracing Map Details

Click the **Trace Maps** button. Maps defined on the selected map definition will be displayed.

The screenshot shows the Oracle Metadata Browser interface. On the left, the 'Measures' folder is expanded to show 'KRI Value'. The main pane displays the 'Details of Measure KRI Value' table.

Details of Measure KRI Value	
Name	KRIMS05
Short Description	KRI Value
Long Description	KRI Value
Comments	
Created By	DEMOUSER
Creation Date	September 26, 2006 6:03:41 PM
Last Modified By	LJ
Modified Date	September 26, 2006 11:51:25 PM
Authorized By	LJ
Authorized Date	September 26, 2006 11:51:25 PM
Entity	KRI Measure Fact
Attribute	KRI Value
Aggregation Type	SUM
Measure Type	Base Measure
Summary Condition	1 = 1

Below the details table, there is a section titled 'Mapped Map for KRI Value' with a list of hyperlinks:

- [Organization Hierarchy](#)
- [Product Hierarchy](#)
- [Region - Country](#)
- [Mapped](#)
- [Region - Country - City](#)
- [Organization Hierarchy](#)
- [Process Hierarchy](#)
- [UserGroup - Role - OrgUnit - Loc3](#)

Click the mapped map hyperlink to view the mapper details that are mapped to the selected measure definition.

The screenshot shows the Oracle Metadata Browser interface. On the left, the 'Hierarchies' folder is expanded to show 'Mapper Hierarchy'. The main pane displays the 'Details of Map MApper1' table.

Details of Map MApper1	
Name	1163134649047
Description	MApper1
Version	1
Version Description	MApper1
Comments	NA
Usage Status	Default
Effective From	10 NOV 2006
Effective To	31 DEC 2099
Created By	KUSUM
Created Date	10-NOV-2006 10:27:28 AM
Last Modified By	NA
Last Modified Date	NA
Authorized By	KUSUM
Authorized Date	10-NOV-2006 10:27:28 AM
Parent Mapping definition (if any)	NA
Row Dimensions	Application Type
Column Dimensions	Document Type

The Name, Description, Version, Version Description, Comments, Usage Status, Effective From, Effective To, Created By, Created Date, Last Modified By, Last Modified Date, Authorized By, Authorized Date, Parent Mapping, Definition, Row Dimensions, and Column Dimensions details of the Mapper are displayed.

Tracing Form Details

Click the **Trace Forms** button to trace the forms created on the selected map.

Forms created on the selected map will be displayed in the bottom of the window, below the Map definition details.

Browsing Hierarchies

A **Business Hierarchy** is the organization of data into a logical tree structure. It represents the groupings and relations among various levels at which measure can be viewed. The value of any measure can be viewed at different levels depending upon the hierarchy breakdown of the dimension category of the measure. While number of customers is a metric, it is useful when viewed based on some categorization like customer income profile or customers having an annual income of over USD 100,000 per annum to provide better quality of information.

Example

User wants to see Number of Customers (Measure) across Income Profile (Dimension), which is further broken down by different age groups (Hierarchy).

To browse Hierarchies details, you have to select the information domain and segment first.

Selecting the Information Domain

To view hierarchies, click the **Information Domain** field to open the drop-down list. Select the information domain that contains the hierarchies.

Selecting the Segment

Click the **Segment** field to open the drop-down list. Select the segment of the selected information domain to which the hierarchies belong.

Now double-click the + (plus sign) against the **Hierarchies** folder displayed under the Metadata Browser in the left pane. This action will cause the folder to expand displaying the hierarchies available for the selected information domain/segment.

Click a Hierarchy to view its details.



The Name, Short Description, Long Description, Comments, Created By, Creation Date, Last Modified By, Modification Date, Authorized By, Authorized Date, Type, Business Intelligence Enabled (whether Yes, No), Parent Child Hierarch (whether Yes or No), Entity, Attribute, Last Modified by and Last Modified Date details of the hierarchy are displayed.

To view the details of the Entity and Attribute of the hierarchy, click the entity / attribute name hyperlink.

The **Level details** are displayed with Description and Identifier details. To view the member details, click the + (plus sign). Double-click any member to view its details.

The member code, description and node identifier of the selected member will be displayed in the **Details** window.

Level Details illustration is applicable for both BI-enabled and non-BI hierarchies. For BI Enabled-Hierarchy, the leaf level values will be dynamically fetched and displayed.

In case of a hierarchy where Parent Child option is selected in the Business Intelligence Enabled field while defining a Hierarchy, the Level details will be displayed.

You can trace the dimensions, cubes, definitions, marts, maps and forms to which the selected hierarchy is mapped. These are explained as follows.

Tracing Dimensions Details

Click **Trace Dimensions** to view the dimensions to which the selected hierarchy is mapped. The window reloads displaying the list of mapped dimensions.

Information Domain: BASELL31 Segment: BASELL31

Standard Accounting Head
 TEST FOR MEASURE HIE
 TIME HRCHY with Diff Start
 Three Month Average Exce
 Time
 Time Bands
 Time_FEB24
 Total Annual Sales
 Tranche Seniority Levels
 UNBALANCE Hierarchy FE
 Unconditionally Cancellabl
 Unrated Debt Security Eligi
 test dehier
 test dehier28
 test pmh28
 Hierarchy Attributes
 Maps
 Dimensions
 Business Processors
 Rules
 Process

Name	PMH28
Short Description	test pmh28
Long Description	test pmh28
Comments	
Created By	RADHIKA
Creation Date	February 28, 2007 11:03:54 AM
Last Modified By	SRINIVAS
Modified Date	March 1, 2007 3:55:50 PM
Authorized By	SRINIVAS
Authorized Date	March 1, 2007 3:55:54 PM
Type	MEASURE
Business Intelligence Enabled	No
Is Parent Child	No
Entity	Non-Securitisation Exposures
Attribute	Notional Principal of an Exposure
Mapped Measures	MSR - Notional Principal MSR - Current Exposure Amount

Level Details

Description	Identifier
prod meas28	
MSR - Notional Principal	1 = 1
MSR - Current Exposure Amount	1 = 1

test pmh28 **Mapped Dimensions**

Click the **Mapped Dimensions** name hyperlink to perform a trace on the mapped dimension.

Information Domain: BASELSOL Segment: *ALL*

Trace Measures Trace Cubes Trace Definitions

Details of Dimension Exposure Product Type Dimension

Name	D0001
Short Description	Exposure Product Type Dimension
Long Description	Exposure Product Type Dimension
Comments	
Created By	DEMOUSER
Creation Date	March 2, 2005 12:00:00 AM
Last Modified By	SRIDEVI
Modified Date	November 2, 2006 1:40:17 PM
Authorized By	SRIDEVI
Authorized Date	November 2, 2006 1:40:17 PM
Dimension Type	REGULAR

[Product Type](#) **Mapped Hierarchies**

Metadata Browser
 Source Model
 Data Model
 Data Transformations
 Data Sets
 Measures
 Hierarchies
 test custh31
 exposure hierarchy
 Product Type
 Customer Type
 Collateral Type
 Collateral Issuer Type
 Exposure Delinquency Bar
 Basel II Product Type
 Basel II Asset Class
 Residual Maturity for Add-o
 Original Maturity for CCF Ac
 Basel II Credit Rating
 Unrated Debt Security Eligi
 Maturity Type

The Name, Short Description, Long Description, Comments, Created By, Creation Date, Last Modified By, Modified By, Authorized By, Authorized Date, and Dimension Type details of the dimension are displayed.

By default, the Mapped Hierarchies are displayed as hyperlinks. Click the hierarchy name hyperlink, that is, *HR Profile By Industry* to view its details.

You can trace the measures, cubes and definitions that are mapped to the selected dimension. For more information, see *Viewing Destination Table Details*, page 13-192.

Click the **Back** button in your Browser Navigator bar to return to the Hierarchy details window.

Tracing Cube Details

Click Trace Cubes to view the cubes mapped to the selected hierarchy. The window reloads displaying the list of mapped cubes.

The screenshot shows the 'Details of Dimension Exposure Product Type Dimension' window. On the left is a 'Metadata Browser' tree with 'Product Type' selected. The main area contains a table with the following data:

Details of Dimension Exposure Product Type Dimension	
Name	D0001
Short Description	Exposure Product Type Dimension
Long Description	Exposure Product Type Dimension
Comments	
Created By	DEMOUSER
Creation Date	March 2, 2005 12:00:00 AM
Last Modified By	SRIDEVI
Modified Date	November 2, 2006 1:40:17 PM
Authorized By	SRIDEVI
Authorized Date	November 2, 2006 1:40:17 PM
Dimension Type	REGULAR

Below the table, there are two sections: 'Mapped Hierarchies' with a hyperlink for 'Product Type', and 'Mapped Cubes' with a hyperlink for 'test pcube2'.

Click the cube name hyperlink to view the details of the mapped cube.

Example

Test pcube2

The Cube Details screen will be displayed. The Name, Short Description, Long Description, Comments, Created By, Cube Create Date, Last Modified By, Modified Date, Authorized By, Authorized Date, Last Modified By, MDDDB Name, Mapped Measure, Mapped Dimensions, Mapped Datasets, Complete Build, Variation details, Storage details and Node Formula details of the cube are displayed.

To view the details of the **Mapped Measures**, **Mapped Dimensions**, and **Mapped Datasets**, click the hyperlinks.

You can trace the definition to which the cube is mapped. For more information, see *Tracing Definition Details*, page 13-220.

Click the **Back** button in your Browser Navigator bar to return to the Hierarchy Details window.

Tracing Definition Details

Click **Trace Definitions** to view the definitions that are mapped to the hierarchy. The window reloads displaying the list of definitions that are mapped to the hierarchy.

Information Domain: BASELII Segment: BASELII

Trace Dimensions Trace Cubes Trace Definitions Trace Marts

Details of Hierarchy Exposure Product Type cpy

Name	H0001CPY
Short Description	Exposure Product Type cpy
Long Description	Exposure Product Type
Type	REGULAR
Business Intelligence Enabled	Yes
Entity	Product Dimension
Attribute	Product Code
Hierarchy Attributes	Hierarchy attribute
Last Modified by	BIPIN
Last Modified Date	January 23, 2006 1:32:01 PM

Level Details

Description	Identifier
Exposure Product Type cpy	

Mapped Definitions

Mapped Run Definitions

[RunJan16](#)
[SimRunJan16](#)
[RunScenarioJan16](#)
[Type3](#)
[Test All](#)
[Test Type 3 With out Agg](#)
[Run](#)
[R](#)

Name	Type	Owner	Last Modified On	Delete	Share	Edit	View	Properties
ANSI_Heir_Attrib_view	SQL View	BIPIN	6/1/07	X				
Latest_time	SQL View	BIPIN	5/1/07	X				

You can delete, share, edit, view and check the properties of the selected cube. For more information, see *Tracing Definition Details*, page 13-220.

Tracing Mart details

Click **Trace Marts** to view the data marts that are mapped to the hierarchy. The window reloads displaying the list of data marts that are mapped to the hierarchy.

Information Domain: DOCINFO
Segment: *ALL*

Details of Hierarchy 'Hr Profile By Industry'

Name	HCRR001
Short Description	Hr Profile By Industry
Long Description	Hr Profile By Industry
Type	REGULAR
Business Intelligence Enabled	No
Entity	DIM_CUSTOMER
Attribute	v_d_industry_code
Last Modified by	ROOPA
Last Modified Date	Fri Jun 27 02:45:04 GMT+05:30 2003

Level Details

Description	Identifier
Basel Capital Reporting Line	

Mapped Marts

[TEST RDM1](#)

Click the mart name hyperlink to view the details of the mapped mart.

Example

Test RDM1

Information Domain: BASELII
Segment: BASELII

RDM Details TEST RDM1

Name	RDM1
Short Description	TEST RDM1
Created By	MAHESH
Created Date	09/28/2005
Last Modified Date	01/19/2006
Target Infodom	BASELII
Mapped Measures	Accounting Capital Amount Accounting Capital Amount
Mapped Dimensions	Basel Capital Reporting Line Dimension Basel I Capital Reporting Line Dimension Branch Dimension Run Dimension Time Dimension
Mapped Hierarchy Attributes	sdfc HA on baselreporting line
Mapped Fact Tables	
Mapped Dimension Tables	TEST_DIM1 testdim
Mapped Datasets	Accounting Capital Analysis_ANSIDS2

To view the details of the Mapped Measures, Mapped Dimensions, Mapped Fact Tables, Mapped Dimension Tables, and Mapped Datasets, click the measure/dimension/fact table/dimension table/dataset name hyperlinks.

Click **Trace Definitions** to view the mapped definitions of the data mart. For more information, see Tracing Definition Details, page 13-220.

Tracing Map details

Click the **Trace Maps** button. Maps defined on the selected map definition will be displayed.

The screenshot displays the Oracle Financial Services Analytical Applications Infrastructure interface. On the left, there is a navigation pane with a tree view containing various risk-related categories such as 'Product Type', 'Rating', 'Residual Maturity', and 'Risk Measures'. The main area is titled 'Details of Hierarchy test pmh28' and contains a list of metadata fields. Below this, there is a section for 'Mapped Measures' and a 'Level Details' table.

Details of Hierarchy test pmh28

Name	PMH28
Short Description	test pmh28
Long Description	test pmh28
Comments	
Created By	RADHIKA
Creation Date	February 28, 2007 11:03:54 AM
Last Modified By	SRINIVAS
Modified Date	March 1, 2007 3:55:50 PM
Authorized By	SRINIVAS
Authorized Date	March 1, 2007 3:55:54 PM
Type	MEASURE
Business Intelligence Enabled	No
Is Parent Child	No
Entity	Non-Securitisation Exposures
Attribute	Notional Principal of an Exposure
Mapped Measures	
	MSR - Notional Principal
	MSR - Current Exposure Amount

Level Details

Description	Identifier
prod meas28	

Mapped Map for test pmh28

Click the mapped map hyperlink to view the map details that are mapped to the selected hierarchy.



The Name, Description, Version, Version Description, Comments, Usage Status, Effective From, Effective To, Created By, Created Date, Last Modified By, Last Modified Date, Authorized By, Authorized Date, Parent Mapping, Definition, Row Dimensions, and Column Dimensions details of the Mapper are displayed.

Browsing Hierarchy Attributes

A Hierarchy Attribute is some generic descriptive notion about different hierarchy nodes. It provides an ability to provide further information about every hierarchy node than is available in the hierarchy structure itself.

Example

The notion of cities rolling up into states that roll up into countries is captured normally as part of the hierarchy structure and is information about these hierarchy nodes; additionally each location could have a manager responsible for its management- which is not automatically captured in the hierarchy definition, but is nevertheless useful in defining the geographical classification from a financial services institutions perspective. This descriptive notion of a branch manager is an example of a Hierarchy Attribute. Attributes are also different from the notion of Hierarchy in that commonality is not the basis for classification- so two hierarchy nodes can have the same manager and this similarity will not be the basis of aggregating of data.

To browse **Hierarchy Attributes** details, you have to select the information domain and segment first.

Selecting the Information Domain

To view hierarchies, click the **Information Domain** field to open the drop-down list. Select the information domain that contains the hierarchies.

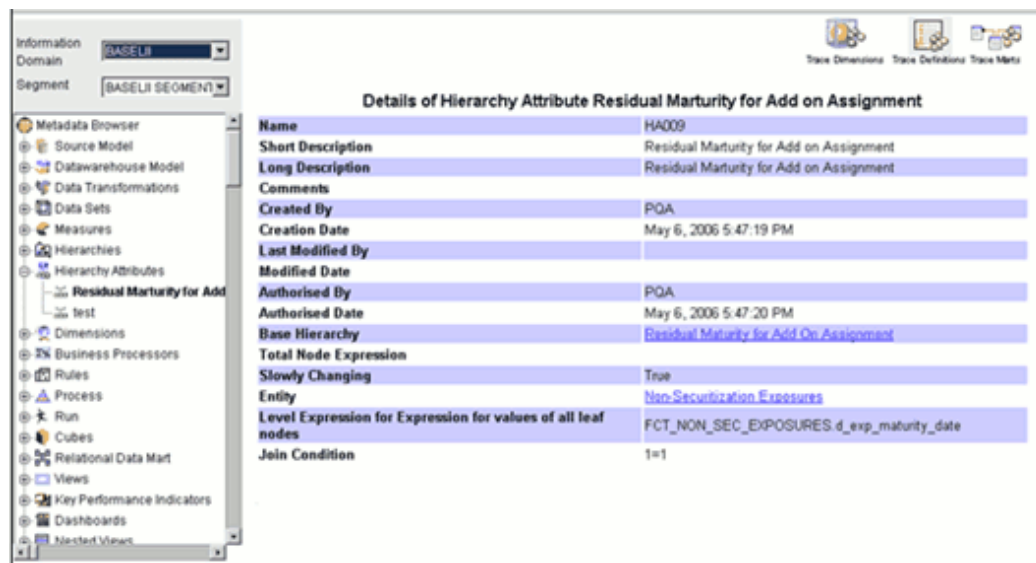
Selecting the Segment

Click the **Segment** field to open the drop-down list. Select the segment of the selected information domain to which the hierarchies belong.

Now click the + (plus sign) against the **Hierarchies** folder displayed under the Metadata Browser in the left pane. This action will cause the folder to expand displaying the hierarchies available for the selected information domain/segment.

Example

Residual Maturity for Add on Assignment



The Name, Short Description, Long Description, Comments, Created By, Creation Date, Last Modified By, Modified Date, Authorized By, Authorization Date, Base Hierarchy, Total Node Expression, Slowly Changing property, Entity, Level Expression for Expression for values of all leaf nodes, Join Condition, details of the hierarchy attribute are displayed.

To view the details of the **Base Hierarchy** and **Entity** of the hierarchy attribute, click the hyperlink against it.

You can trace the dimensions, definitions and marts defined for the selected hierarchy attribute

For more information, see Viewing Destination Table, page 13-192.

Browsing Maps

A **Map** is a set of linked hierarchies. Simple Map is created using hierarchies.

Compound Map is created using hierarchies and simple maps/compound maps. A Map is defined with Regular (BI and Non BI) hierarchies.

To browse **Map** details, you have to select the information domain and segment first.

Selecting the Information Domain

Click the **Information Domain** field to open the drop-down list. Select the information domain that contains the maps.

Selecting the Segment

Click the **Segment** field to open the drop-down list. Select the segment of the selected information domain to which the maps belong.

Now, click the + (plus sign) against the **Maps** folder displayed under the Metadata Browser in the left pane. This action will cause the folder to expand displaying the maps available for the selected information domain/segment.

Note: Only the latest authorized version of the Map definitions will be displayed under Maps in the left pane.

Click a **Map** definition to view the details in the right pane. You can trace, see history, and see mapping by clicking on the corresponding buttons provided at the top right side.

Example

Bline-Region-Country-City

The screenshot shows the Unified Metadata Manager interface. On the left, the 'Metadata Browser' is expanded to show a tree structure under 'Maps', with 'Bline-Region-Country-City' selected. The top pane shows 'Information Domain' and 'Segment' both set to 'ROPRISK'. The right pane, titled 'Details of Map Bline-Region-Country-City', displays a table of metadata for the selected map.

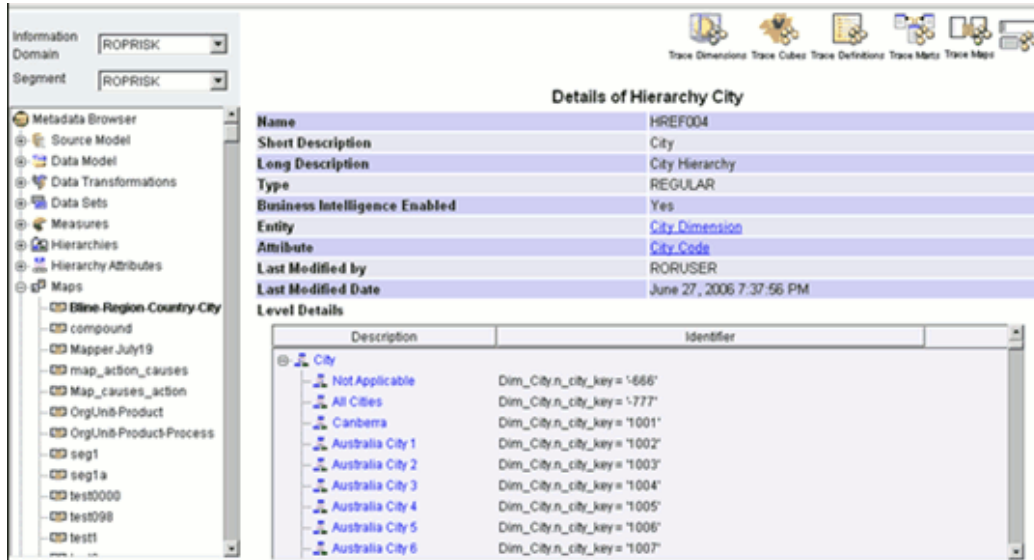
Name	1151759597354
Description	Bline-Region-Country-City
Version	1
Version Description	Bline-Region-Country-City
Comments	NA
Usage Status	Default
Effective From	01 JUL 2006
Effective To	31 DEC 2099
Created By	RORUSER
Created Date	01-JUL-2006 06:43:17 PM
Last Modified By	RORUSER
Last Modified Date	08-JUL-2006 10:01:37 PM
Authorized By	RORUSER
Authorized Date	08-JUL-2006 10:01:37 PM
Parent Mapping definition (if any)	NA
Row Dimensions	City
Column Dimensions	Country
Page Dimensions	Enterprise Business Lines Region

Details of the selected map definition such as Name, Description, Version, Version Description, Comments, Usage Status, Effective From, Effective To, Created By, Created Date, Last Modified By, Last Modified Date, Authorized By, Authorized Date, Parent Mapping definition (if any), Row Dimensions, Column Dimensions and Page Dimensions are displayed.

To view the details of the **Row Dimensions**, click the hyperlink against it.

Example

City

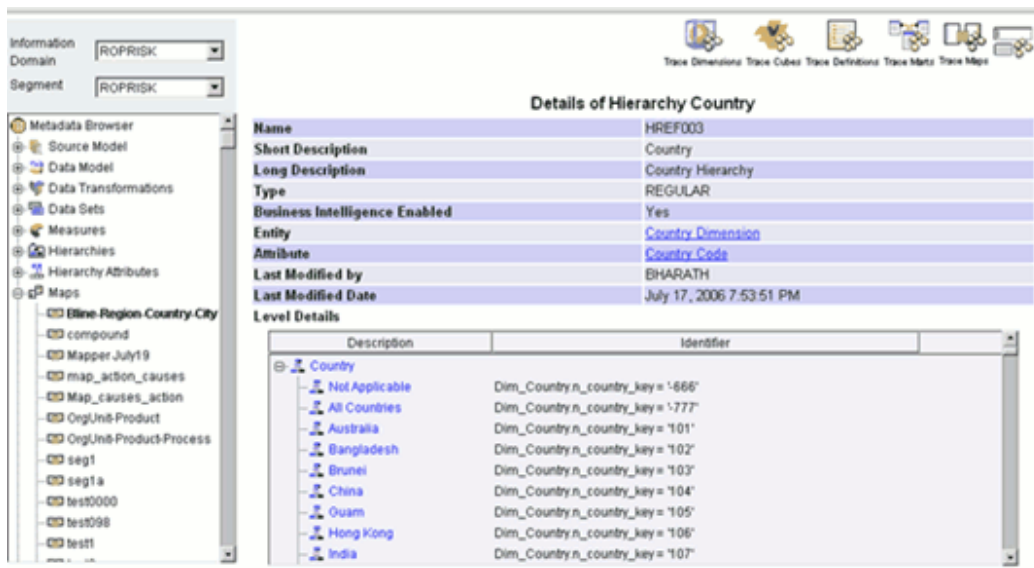


The hierarchy details of the selected row dimension are displayed. Click the **Back** button in your browser to return to the Map details window.

To view the details of the **Column Dimensions**, click the hyperlink against it.

Example

Country



The hierarchy details of the selected column dimension are displayed. Click the **Back** button in your browser to return to the Map details window.

To view the details of the **Page Dimensions**, click the hyperlink against it.

Example

Enterprise Business Lines

Note: Page dimension will be displayed only if a page dimension is selected while creating a Map.



The hierarchy details of the selected page dimension are displayed. Click the Back button in your browser to return to the Map details window.

You can trace forms, view history, trace maps and view mapping by clicking on the corresponding buttons provided at the top right side.

Tracing Forms

Click **Trace Forms** button to trace the forms created on the selected map. Forms created on the selected map will be displayed in the bottom of the window, below the Map definition details.

Tracing History

Click the **Show History** button. Version details of the selected map definition will be displayed.

Information Domain: ROPRISK
Segment: ROPRISK

Details of Map Bline-Region-Country-City

Name	1151759597354
Description	Bline-Region-Country-City
Version	1
Version Description	Bline-Region-Country-City
Comments	NA
Usage Status	Default
Effective From	01 JUL 2006
Effective To	31 DEC 2099
Created By	RORUSER
Created Date	01-JUL-2006 06:43:17 PM
Last Modified By	RORUSER
Last Modified Date	08-JUL-2006 10:01:37 PM
Authorized By	RORUSER
Authorized Date	08-JUL-2006 10:01:37 PM
Parent Mapping definition (if any)	NA
Row Dimensions	City
Column Dimensions	Country
Page Dimensions	Enterprise Business Lines Region

Version of Bline-Region-Country-City
[Bline-Region-Country-City](#)

Click the version details hyperlink to view the map details.

Information Domain: ROPRISK
Segment: ROPRISK

Details of Map Bline-Region-Country-City

Name	1151759597354
Description	Bline-Region-Country-City
Version	1
Version Description	Bline-Region-Country-City
Comments	NA
Usage Status	Default
Effective From	01 JUL 2006
Effective To	31 DEC 2099
Created By	RORUSER
Created Date	01-JUL-2006 06:43:17 PM
Last Modified By	RORUSER
Last Modified Date	08-JUL-2006 10:01:37 PM
Authorized By	RORUSER
Authorized Date	08-JUL-2006 10:01:37 PM
Parent Mapping definition (if any)	NA
Row Dimensions	City
Column Dimensions	Country
Page Dimensions	Enterprise Business Lines Region

Click the **Back** button in your browser to return to the Map details window.

Tracing Maps

Click the **Trace Maps** button. Maps defined on the selected map definition will be displayed.

Information Domain: ROPRISK
Segment: ROPRISK

Details of Map Bline-Region-Country-City

Name	1151759597354
Description	Bline-Region-Country-City
Version	1
Version Description	Bline-Region-Country-City
Comments	NA
Usage Status	Default
Effective From	01 JUL 2006
Effective To	31 DEC 2009
Created By	RORUSER
Created Date	01-JUL-2006 06:43:17 PM
Last Modified By	RORUSER
Last Modified Date	08-JUL-2006 10:01:37 PM
Authorized By	RORUSER
Authorized Date	08-JUL-2006 10:01:37 PM
Parent Mapping definition (if any)	NA
Row Dimensions	City
Column Dimensions	Country
Page Dimensions	Enterprise Business Lines Region

Trace with Bline-Region-Country-City

[OrgUnit-Product](#)

Note: For tracing maps, the selected map should be a compound map.

Click the traced map link to view its details.

Example

OrgUnit-Product

Click the Back button on your browser to return to the Map details window.

Viewing Mappings

Click the **Show Mappings** button. All the Hierarchies and Maps which are mapped to the selected Map definition will be displayed.

The screenshot displays the 'Details of Map Bline-Region-Country-City' window. On the left is a 'Metadata Browser' tree showing a hierarchy of folders including 'Bline-Region-Country-City' and its sub-items like 'compound', 'Mapper July19', and 'seg1'. The main area shows a list of metadata attributes for the selected map, such as Name, Description, Version, and Effective From. Below this is a table titled 'Mappings for Bline-Region-Country-City' which maps 'Enterprise Business Lines' to 'Region', 'Country', and 'City'.

Enterprise Business Lines	Region	Country	City
CIB	ASPAC	Australia	Australia City 1
CIB	ASPAC	Australia	Australia City 2
CIB	ASPAC	Australia	Australia City 3
CIB	ASPAC	Australia	Australia City 4

Click the Back button on your browser to return to the Map details window.

Browsing Dimensions

A **Dimension** represents the logical grouping across which measures can be viewed. A dimension can have one or more hierarchies.

Example

You want to see number of existing customers, number of accounts, number of relationships by product, time and organization, customer income.

To browse **Dimensions** details, you have to select the information domain and segment first.

Selecting the Information Domain

To view dimensions, click the **Information Domain** field to open the drop-down list. Select the information domain that contains the dimension/s.

Example

ROPRISK3

Selecting the Segment

Click the **Segment** field to open the list. Select the segment of the selected information domain to which the dimension/s belongs.

Example

ROPRISK3

Now double-click the + (plus sign) against the Dimensions folder displayed under the Metadata Browser in the left pane. This action will cause the folder to expand displaying the dimensions available for the selected information domain/segment.

Click **Dimension** to view its details.

Example

Active Dimension

The screenshot shows the Unified Metadata Manager interface. On the left, the 'Dimensions' folder is expanded, and 'Active Dimension' is selected. The main pane displays the 'Details of Dimension Active Dimension' table. Below the table, the 'Mapped Hierarchies' section shows a hyperlink 'Is Active'.

Details of Dimension Active Dimension	
Name	DREF11
Short Description	Active Dimension
Long Description	Active Dimension
Comments	
Created By	DEMOUSER
Creation Date	September 26, 2006 6:04:01 PM
Last Modified By	LJ
Modified Date	September 27, 2006 12:16:54 AM
Authorized By	LJ
Authorized Date	September 27, 2006 12:16:55 AM
Dimension Type	REGULAR

Mapped Hierarchies

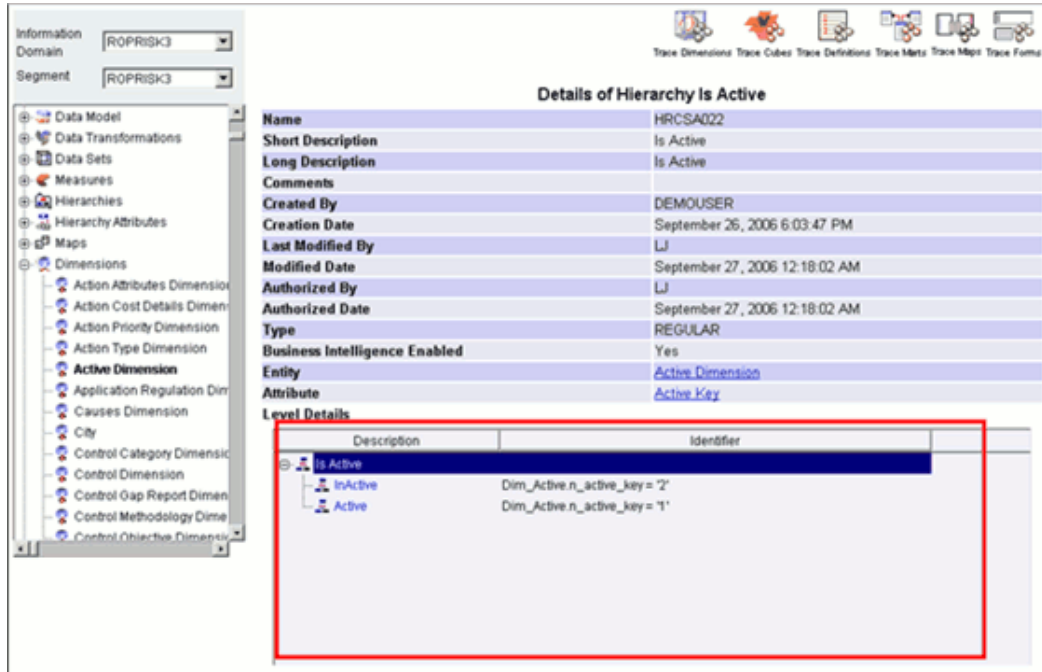
[Is Active](#)

By default, the Mapped Hierarchies are displayed with hyperlinks. Click the hierarchy name hyperlink, that is, [Is Active](#) to view its details.

You can trace the source, dimension, cube, definitions and marts to which the selected dimension is mapped. These are explained as follows.

Tracing Hierarchy Details

Click the mapped hierarchy hyperlink to view the hierarchy details that are mapped to the selected dimension.



The Name, Short Description, Long Description, Comments, Created By, Creation Date, Last Modified By, Modified Date, Authorized By, Authorized Date, Type, Business Intelligence Enabled, Entity, Attribute, Last Modified by and Last Modified Date details of the hierarchy are displayed.

To view the details of the **Entity** and **Attribute** of the hierarchy, click the entity / attribute name hyperlink.

The **Level details** are displayed with Description and Identifier details. To view the member details, click the + (plus sign).

You can trace the dimensions, cubes, definitions and marts to which the hierarchy is mapped. For more information, see *Browsing Hierarchies*, page 13-232.

Click the **Back** button in your Browser Navigator bar to return to the Dimension details window.

Tracing Measure Details

Click **Trace Measures** to view the measures to which the selected dimension is mapped. The screen reloads displaying the list of mapped measures.

The screenshot shows the 'Details of Dimension Active Dimension' window. On the left is a tree view of the metadata model. The main area displays a table of dimension details and a list of mapped measures.

Details of Dimension Active Dimension	
Name	DREF11
Short Description	Active Dimension
Long Description	Active Dimension
Comments	
Created By	DEMOUSER
Creation Date	September 26, 2006 6:04:01 PM
Last Modified By	LJ
Modified Date	September 27, 2006 12:16:54 AM
Authorized By	LJ
Authorized Date	September 27, 2006 12:16:55 AM
Dimension Type	REGULAR

is Active

Mapped Hierarchies

Mapped Measures

- [Collateral Value in LCY at Customer Level](#)
- [Credit Exposure in LCY of Customers](#)
- [No. of Customers](#)
- [Overall Limit in LCY for customer](#)

Click the measure name hyperlink to view the details of the mapped measure.

Example

No of Customers

The screenshot shows the 'Details of Measure No of Customers' window. On the left is a tree view of the metadata model. The main area displays a table of measure details.

Details of Measure 'No of Customers'	
Name	BCRR001
Short Description	No of Customers
Long Description	No. of Customers
Entity	FCT_CUSTOMER
Attribute	v_d_cust_ref_code
Aggregation Type	COUNT
Measure Type	Base Measure
Summary Condition	1 = 1
Last Modified by	ROOPA
Last Modified Date	Fri Jun 27 02:43:41 GMT+05:30 2003

The Name, Short Description, Long Description, Entity, Attribute, Aggregation Type, Measure Type, Summary Condition, Last Modified by and Last Modified Date details of the measure are displayed.

To view the details of the **Entity** and **Attribute** of the measure, click the entity / attribute name hyperlink.

You can trace the dimensions, cubes, definitions and marts to which the measure is mapped For more information, see Viewing Destination Table, page 13-192 .

Click the Back button in your Browser Navigator bar to return to the **Dimension details** window.

Tracing Cube Details

Click **Trace Cubes** to view the cubes mapped to the selected dimension. The window reloads displaying the list of mapped cubes.

The screenshot shows the Oracle Financial Services Analytical Applications Infrastructure user interface. On the left is a 'Metadata Browser' tree with 'Profile By Industry' selected. The main area is titled 'Details of Dimension 'Profile By Industry'' and contains a table with the following data:

Name	DCRR001
Short Description	Profile By Industry
Long Description	Customer Profile by Industry
Dimension Type	REGULAR
Last Modified Date	Wed Nov 27 03:08:11 GMT+05:30 2002
Last Modified By	SRV1

Below the table are two sections: 'Mapped Hierarchies' with a link 'Hr Profile By Industry', and 'Mapped Cubes' with three links: 'CUBE FOR TESTING', 'TEST_CUBE_BUILD', and 'TEST_CUBE_BUILD2'. At the top right of the window are three icons labeled 'Trace Measures', 'Trace Cubes', and 'Trace Definitions'.

Click the **Mapped Cubes** name hyperlink to perform a trace on the mapped cubes.

Information Domain: BASELI Segment: BASELI

Details of cube Accounting Capital Analysis

Name	AD007
Short Description	Accounting Capital Analysis
Long Description	Accounting Capital Analysis
Cube Create Date	May 12, 2005 4:20:49 AM
Last Modified Date	January 23, 2006 2:18:09 PM
Last Modified By	DEMOUSER
MDDB name	AD007
Mapped Measures	Accounting Capital Amount
Mapped Dimensions	Basel Capital Reporting Line Dimension Basel Capital Reporting Line Measure Branch Dimension Run Dimension Time Dimension
Mapped Datasets	Accounting Capital Analysis
Complete Build	false
Variation	
Accounting Capital Amount	Branch Dimension Time Dimension
Roll Off	
Roll Off Period	36
Dimensions	D0053
Level	MONTH
Storage	
Access Mode	Buffered IO
Data Compression	Bit-Map Encoding
Index Cache	
Index Bytes	8
Data File Cache	
Data Cache	
Location	Disk Volume Partition Size File Type File Size
Node Formula	
Basel Capital Reporting Line Dimension	
Basel Capital Reporting Line Hierarchy	
Proportion of net general allowance allocated to STD portfolios	CRL0212/CRL0214

The Name, Short Description, Long Description, Cube Creation Date, Last Modified Date, Last Modified By, MDDB name, Mapped Measures, Mapped Dimensions and Dataset details, Complete Rebuild, Variations, Roll Off, Storage and Node Formula of the cube are displayed.

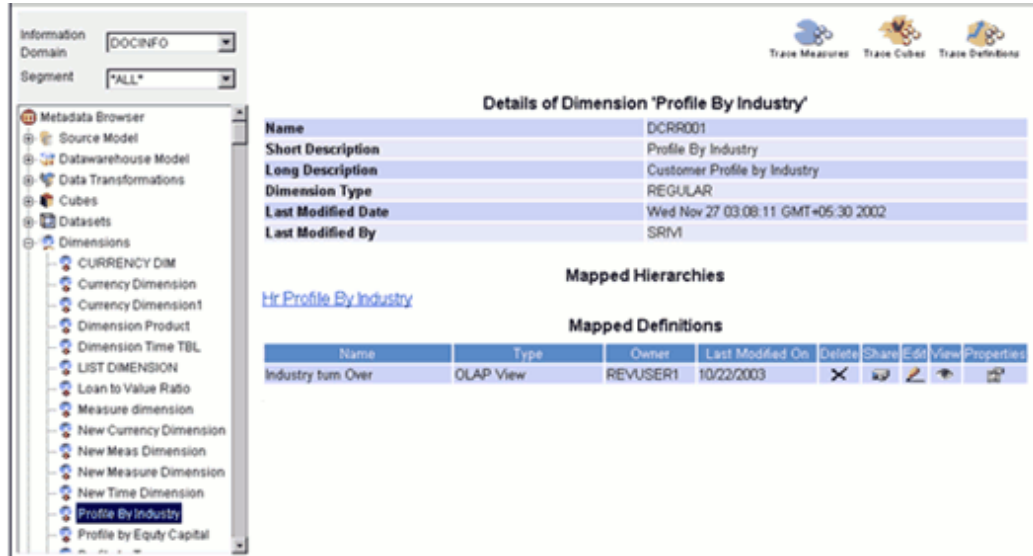
To view the details of the Mapped Measures, Mapped Dimensions, and Mapped Datasets, click the measure/dimension/dataset name hyperlinks.

You can trace the definition to which the cube is mapped. For more information, see Tracing Definition Details, page 13-220 .

Click the **Back** button in your Browser Navigator bar to return to the **Dimension details** window.

Tracing Definition Details

Click **Trace Definitions** to view the definitions that are mapped to the dimension. The window reloads displaying the list of definitions that are mapped to the cube.



You can delete, share, edit, view and check the properties of the selected cube For more information, see Tracing Definition Details, page 13-220 .

Browsing Business Processors

A Business Processor encapsulates business logic for assigning a value to a measure as a function of observed values for other measures.

The **Business Processor** function allows you to generate values that are functions of base measure values. Using the metadata abstraction of a business processor, power users have the ability to design rule-based transformation to the underlying data within the data warehouse / store.

Business Processors are designed to update a measure with another computed value. When a rule that is defined with a business processor is processed, the newly computed value is updated on the defined target.

To browse details of Business Processors, you have to select the information domain and segment first.

Selecting the Information Domain

To view Business Processors, click the **Information Domain** field to open the drop-down list. Select the information domain that contains Business Processors.

Example

ROPRISK3

Selecting the Segment

Click the **Segment** field to open the drop-down list. Select the segment of the selected information domain to which the Business Processors belongs.

Example

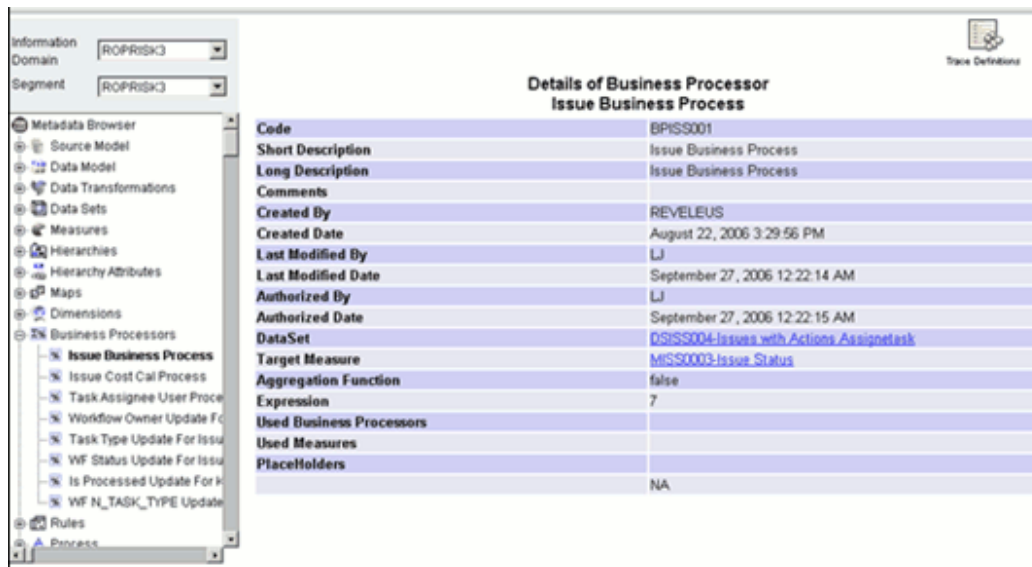
ROPRISK3

Now double-click the + (plus sign) against the Business Processor folder displayed under the Metadata Browser in the left pane. This action will cause the folder to expand displaying the business processors available for the selected information domain/segment.

Click Business Processor to view its details.

Example

Issue Business Process



Details of Business Processor Issue Business Process	
Code	BPIS001
Short Description	Issue Business Process
Long Description	Issue Business Process
Comments	
Created By	REVELEUS
Created Date	August 22, 2006 3:29:56 PM
Last Modified By	LJ
Last Modified Date	September 27, 2006 12:22:14 AM
Authorized By	LJ
Authorized Date	September 27, 2006 12:22:15 AM
DataSet	OSISS004-Issues with Actions Assign task
Target Measure	MISS0003-Issue Status
Aggregation Function	false
Expression	7
Used Business Processors	
Used Measures	
Placeholders	NA

The Code, Short Description, Long Description, Comments, Created By, Creation Date, Last Modified By, Last Modified Date, Authorized By, Authorized Date, Dataset, Target Measure, Aggregation Function, Expression, Used Business Processors, Used Measures, and Placeholders details of the selected business processor definition are displayed.

Viewing DataSet Details

To view the Dataset details of the selected business processor, click the Dataset name hyperlink in the Business Processor Screen. The Details of Dataset screen is displayed.

For more information, see Browsing Datasets, page 13-214.

The screenshot displays the Oracle Business Process Manager interface. On the left is a 'Metadata Browser' tree with 'Business Processors' expanded to show 'Issue Business Process'. The main window shows 'Details of Dataset Issues with Actions Assignetask' for dataset 'DSISS004'. The details include:

Details of Dataset Issues with Actions Assignetask	
Name	DSISS004
Short Description	Issues with Actions Assignetask
Long Description	Issues with Actions Assigne task
Comments	
Created By	RORUSER
Creation Date	September 19, 2006 9:18:38 PM
Last Modified By	LJ
Modified Date	September 26, 2006 11:14:03 PM
Authorized By	LJ
Authorized Date	September 26, 2006 11:14:16 PM
Selected Entities	Issue Facts Enterprise Business Lines Dimension Workflow Task Fact Assignee2task Fact
Join Condition	Fct_Issue.n_issue_key in (select n_issue_key from (Select n_issue_key,Sum (n_percent_complete)/Count(n_action_key) ActionComplete from Fct_Action group by n_issue_key) where ActionComplete=100) AND Fct_Issue.n_status_key=18 AND Fct_Issue.n_issue_key=Fct_Workflow_Task.n_entity_id and Fct_Workflow_Task.n_task_key = Fct_Assignee2_Task.n_task_key and Dim_Business_Line.n_business_line_key = Fct_Issue.n_business_line_key and Fct_Workflow_Task.n_entity_key=11
Ami Join	
Order By	

Tracing Definition Details

Click **Trace Definitions** button in the Business Processor window to view the definitions that are mapped to the business processor. The Business Processor window reloads displaying the list of definitions that are mapped to the business processor.

Information Domain: ROPR03K Segment: ROPR03K

Trace Definitions

Details of Business Processor Issue Business Process

Code	BPIS001
Short Description	Issue Business Process
Long Description	Issue Business Process
Comments	
Created By	REVELEUS
Created Date	August 22, 2006 3:29:56 PM
Last Modified By	LJ
Last Modified Date	September 27, 2006 12:22:14 AM
Authorized By	LJ
Authorized Date	September 27, 2006 12:22:15 AM
DataSet	OBIS004-Issues with Actions Assigntask
Target Measure	MIS0003-Issue_Status
Aggregation Function	false
Expression	7
Used Business Processors	
Used Measures	
Placeholders	NA

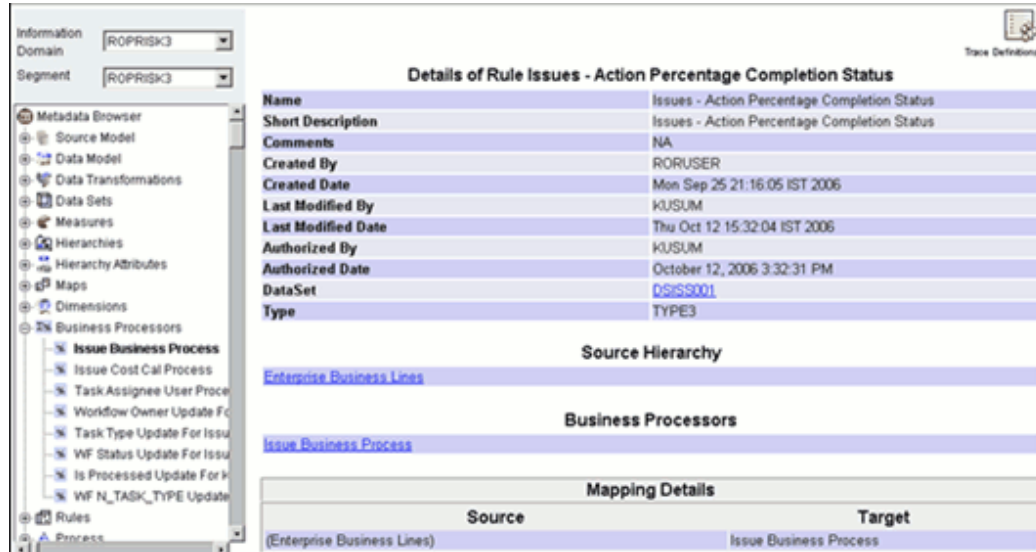
Mapped Rules

- [Issues - Action Percentage Completion Status](#)
- [Issues - Action Percentage Completion Status](#)
- [Issues - Action Percentage Completion Status](#)
- [Issue Status Update For Action Complete](#)
- [Issue Status Update For Action Complete](#)
- [Issue Status Update For Action Complete](#)
- [Issues - Action Percentage Completion Status](#)
- [Issues - Action Percentage Completion Status](#)
- [Issues - Action Percentage Completion Status](#)
- [Issue Status Update For Action Complete](#)
- [Issue Status Update For Action Complete](#)
- [Issue Status Update For Action Complete](#)

Click the **Mapped Rules** name hyperlink to view the details of the mapped rules.

Example

Issues - Action Percentage Completion Status



To view the details of the **Source Hierarchy** and **Business Processors** click the Source Hierarchy and Business Processors hyperlinks. The window also displays **Mapping Details** with Source and Target information.

Browsing Rules

The Rule option provides a framework that facilitates the definition and maintenance of a transformation. The metadata abstraction layer is actively used in the definition of rules where the user is permitted to re-classify the attributes in the data warehouse model thus transforming the data.

Selecting the Information Domain

To view the rules, click the **Information Domain** field to open the drop-down list. Select the information domain that contains the rule/s.

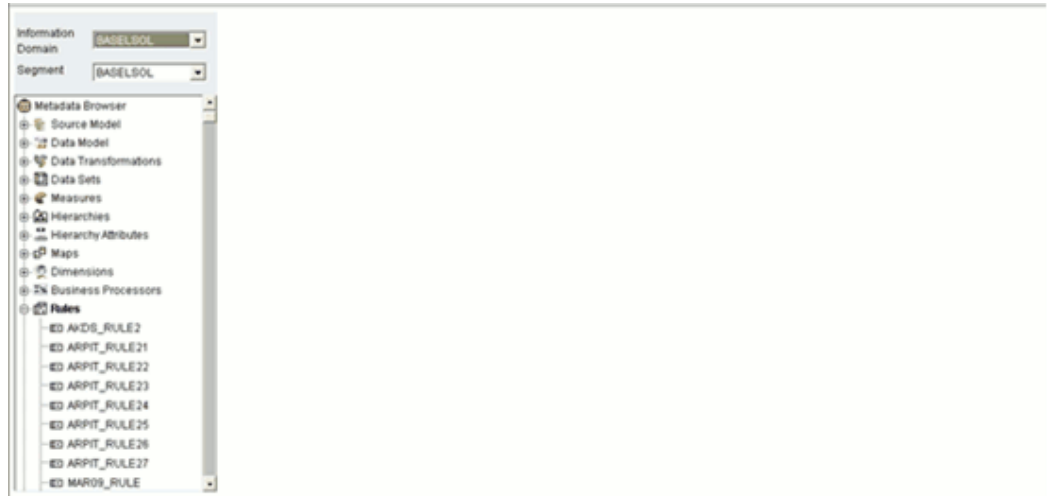
Example

BASELSOL

Select the segment from the Segment drop down list.

Example

BASELSOL

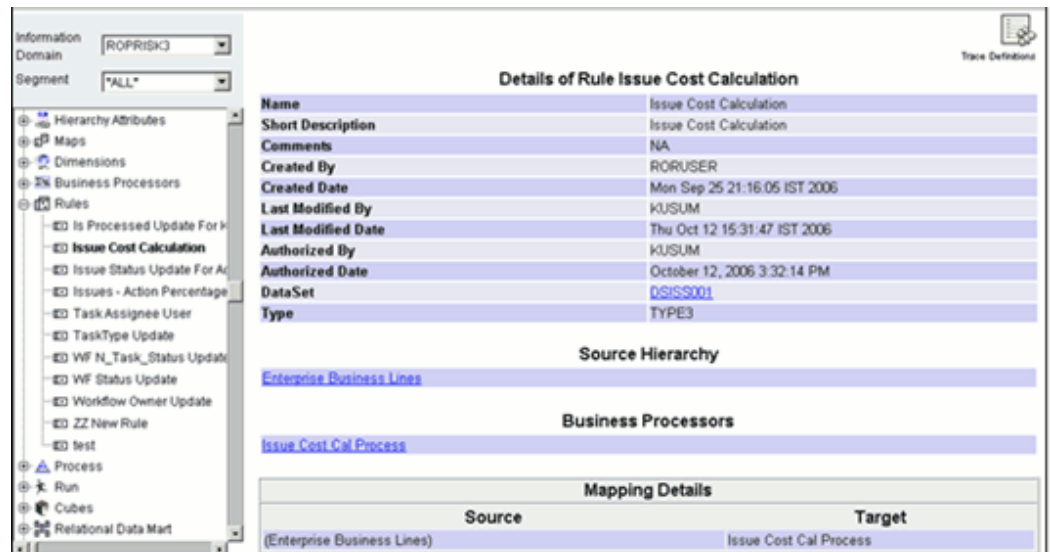


Now double-click the + (plus sign) against the Rules folder displayed under the Metadata Browser in the left pane. This action will cause the folder to expand displaying the rules available for the selected information domain.

In the Rules list in the left pane, select a Rule to view its details.

Example

Issue Cost Calculation



The Name, Short Description, Comments, Created By, Created Date, Last Modified by, Last Modified Date, Authorized By, Authorized Date, Dataset, rule type, source hierarchy, business processor used (if any), and the mapping details of the rule are displayed.

To view the details of the Dataset, Source Hierarchy and Business Processors associated with the rule; click the Dataset / Source Hierarchy / Business Processor hyperlinks.

The business processor details associated with the selected rule definition will be displayed in the grid.

The Mapping Details for the rule are displayed. This explains which members of the Source and Target hierarchy are used in the mapping.

You can also trace the definitions to which the selected rule is mapped.

Note: All the rules defined in the selected information domain and segment will be displayed under **Rules** folder in the left pane.

Tracing Definition Details

Click **Trace Definitions** to view the definitions that are mapped to the rule. The screen reloads displaying the list of definitions that are mapped to the rule. Depending on the type of the rule selected, information will be displayed.

Information Domain: ROPRISK3
Segment: ALL

Details of Rule Issue Cost Calculation

Name	Issue Cost Calculation
Short Description	Issue Cost Calculation
Comments	NA
Created By	RORUSER
Created Date	Mon Sep 25 21:16:05 IST 2006
Last Modified By	KUSUM
Last Modified Date	Thu Oct 12 15:31:47 IST 2006
Authorized By	KUSUM
Authorized Date	October 12, 2006 3:32:14 PM
DataSet	OSISS001
Type	TYPE3

Source Hierarchy

Enterprise Business Lines

Business Processors

Issue Cost Cal Process

Mapping Details

Source	Target
(Enterprise Business Lines)	Issue Cost Cal Process

Mapped Processes

Issue Cost Calculation Process
Issue Cost Calculation Process
Issue Cost Calculation Process
Issue Cost Calculation Process
Issue Cost Calculation Process
Issue Cost Calculation Process
Issue Cost Calculation Process
Issue Cost Calculation Process
Issue Cost Calculation Process
Issue Cost Calculation Process

Click **Mapped Processes** hyperlink to view the process details.

Details of Process Issue Cost Calculation Process

Name	Issue Cost Calculation Process
Short Description	Issue Cost Calculation Process
Comments	NA
Created By	RORUSER
Created Date	Mon Sep 25 21:16:05 IST 2006
Last Modified By	LJ
Last Modified Date	Wed Sep 27 01:38:58 IST 2006
Authorized By	LJ
Authorized Date	September 27, 2006 1:02:01 AM
Type	Base Process

Details of Process Tree

Process Tree	Predecessor Tasks	Type
Issue Cost Calculation Process		
Issue Cost Calculation Process		

In the **Details of Process Tree** section, click on the + sign to expand the **Process Tree**.
Click the rule name to view its details

Viewing DataSet Details

To view the Dataset Details of the selected rule, click the Dataset hyperlink in the **Details of Rules** window.

Details of Dataset Issues with Actions

Name	DSISS001
Short Description	Issues with Actions
Long Description	Issues with Actions
Comments	Issues with Actions
Created By	RORUSER
Creation Date	August 22, 2006 1:18:37 PM
Last Modified By	RORUSER
Modified Date	August 22, 2006 3:43:18 PM
Authorized By	
Authorized Date	
Selected Entities	Issue Facts Action Facts Enterprise Business Lines Dimension
Join Condition	1=1
Ansi Join	FCT_ISSUE INNER JOIN FCT_ACTION ON fct_issue.n_issue_key = fct_action.n_issue_key INNER JOIN DIM_BUSINESS_LINE ON FCT_ISSUE.N_BUSINESS_LINE_KEY = DIM_BUSINESS_LINE.N_BUSINESS_LINE_KEY
Order By	

The Name, Short Description, Long Description, Comments, Created By, Creation Date, Last Modified By, Modified Date, Authorized By, Authorized Date, Selected Entities, Join Condition, ANSI Join, and Order By details are displayed.

To view the details of the Selected Entities, click the hyperlink.

You can trace the cubes, definitions and marts to which the selected rule is mapped.

Tracing Cube Details

Click Trace Cubes to view the cubes mapped to the selected dataset of the rule selected. The window reloads displaying the list of mapped cubes.

The screenshot displays the 'Details of Dataset Accounting Capital Analysis' window. On the left is a 'Metadata Browser' tree with 'Rules' expanded to 'UM Rule1'. The main pane shows the following details:

Details of Dataset Accounting Capital Analysis	
Name	DS0013
Short Description	Accounting Capital Analysis
Long Description	Accounting Capital Analysis
Comments	
Created By	DEMOUSER
Creation Date	May 12, 2005 3:38:11 AM
Last Modified By	MAHESH
Modified Date	May 22, 2006 6:59:43 PM
Authorized By	MAHESH
Authorized Date	May 22, 2006 6:59:44 PM
Selected Entities	Run Dimension Date Dimension Line of Business Basel Capital Reporting Line Dimension Fact_Basel Capital Reporting Line Geography Dimension
Join Condition	1=1
Ansi Join	FCT_BASEL_CAP_REP_LINE INNER JOIN DIM_TIME_DATE ON FCT_BASEL_CAP_REP_LINE.FIC_MIS_DATE=DIM_TIME_DATE.FIC_MIS_DATE INNER JOIN DIM_RUN ON FCT_BASEL_CAP_REP_LINE.V_RUN_ID = DIM_RUN.V_RUN_ID INNER JOIN DIM_BASEL_CAPITAL_REP_LINE ON FCT_BASEL_CAP_REP_LINE.N_BASEL_CAP_REP_LINE_SKEY = DIM_BASEL_CAPITAL_REP_LINE.N_BASEL_CAP_REP_LINE_SKEY INNER JOIN DIM_LOB ON FCT_BASEL_CAP_REP_LINE.N_LOB_SKEY = DIM_LOB.N_LOB_SKEY INNER JOIN DIM_GEOGRAPHY ON FCT_BASEL_CAP_REP_LINE.N_BRANCH_SKEY = DIM_GEOGRAPHY.N_BRANCH_SKEY
Order By	

Below the details pane, the 'Mapped Cubes' section lists the following hyperlinks:

- [Accounting_Capital_Test_Cube](#)
- [Accounting_Capital_Analysis](#)
- [Basel.I.Accounting.Capital.Analysis](#)
- [Basel.I.Accounting.Capital.Analysis_PCUBES](#)

To view the details of the mapped cube, click **Mapped Cubes** name hyperlink.

Example

Accounting Capital Analysis

The screenshot displays the 'Details of cube Accounting Capital Analysis' window. On the left is the 'Metadata Browser' showing a tree view of the metadata structure. The main area is divided into several sections:

- General Information:** Name (A0007), Short Description (Accounting Capital Analysis), Long Description (Accounting Capital Analysis), Comments, Created By (MAHESH), Cube Create Date (May 12, 2005 12:00:00 AM), Last Modified By (MAHESH), Modified Date (May 23, 2006 12:00:59 PM), Authorized By, Authorized Date, Last Modified By (MAHESH), and MDDDB name (A0007).
- Mapped Measures:** Accounting Capital Amount
- Mapped Dimensions:** Basel Capital Reporting Line Dimension, Basel Capital Reporting Line Measure, Branch Dimension, Line of Business Dimension, Run Dimension, and Time Dimension.
- Mapped Datasets:** Accounting Capital Analysis
- Variation:** Accounting Capital Amount is linked to Line of Business Dimension, Branch Dimension, Time Dimension, Run Dimension, Basel Capital Reporting Line Dimension, and Basel Capital Reporting Line Measure.
- Storage:** Access Mode (Buffered I/O), Data Compression (Bt-Map Encoding), Index Cache, Index Bytes (8), Data File Cache, and Data Cache.
- Node Formula:** A table with columns for Location, Disk Volume, Partition Size, File Type, and File Size.

The Name, Short Description, Long Description, Cube Creation Date, Last Modified Date, Last Modified By, Authorized By, Authorized Date, MDDDB name, Mapped Measures, Mapped Dimensions and Mapped Dataset details of the cube are displayed. Also, details such as Variation, Storage and Node Formula for the cube definition are also displayed.

To view the details of the Mapped Measures, Mapped Dimensions, and Mapped Datasets, click the measure/dimension/dataset name hyperlinks.

Click the **Back** button in your Browser Navigator bar to return to the **Rules** window.

Tracing Mart Details

Click **Trace Marts** to view the data marts to which the dataset is mapped. The screen reloads displaying the mapped mart/s.

The screenshot displays the 'Details of Dataset Accounting Capital Analysis' window. On the left, a tree view shows a hierarchy of 'Rules', with 'sh_Type_2_Rule' selected. The main panel shows the following details:

Details of Dataset Accounting Capital Analysis	
Name	DS0013
Short Description	Accounting Capital Analysis
Comments	Accounting Capital Analysis Run Dimension Date Dimension
Selected Entities	Line of Business Basel Capital Reporting Line Dimension Fact_Basel_Capital_Reporting_Line Geography Dimension
Join Condition	FCT_BASEL_CAP_REP_LINE.FIC_MIS_DATE=DIM_TIME_DATE.FIC_MIS_DATE AND FCT_BASEL_CAP_REP_LINE.V_RUN_ID = DIM_RUN.V_RUN_ID AND FCT_BASEL_CAP_REP_LINE.N_BASEL_CAP_REP_LINE_SKEY = DIM_BASEL_CAPITAL_REP_LINE.N_BASEL_CAP_REP_LINE_SKEY AND FCT_BASEL_CAP_REP_LINE.N_LOB_SKEY = DIM_LOB.N_LOB_SKEY AND FCT_BASEL_CAP_REP_LINE.N_BRANCH_SKEY = DIM_GEOGRAPHY.N_BRANCH_SKEY
Anti Join	
Order By	

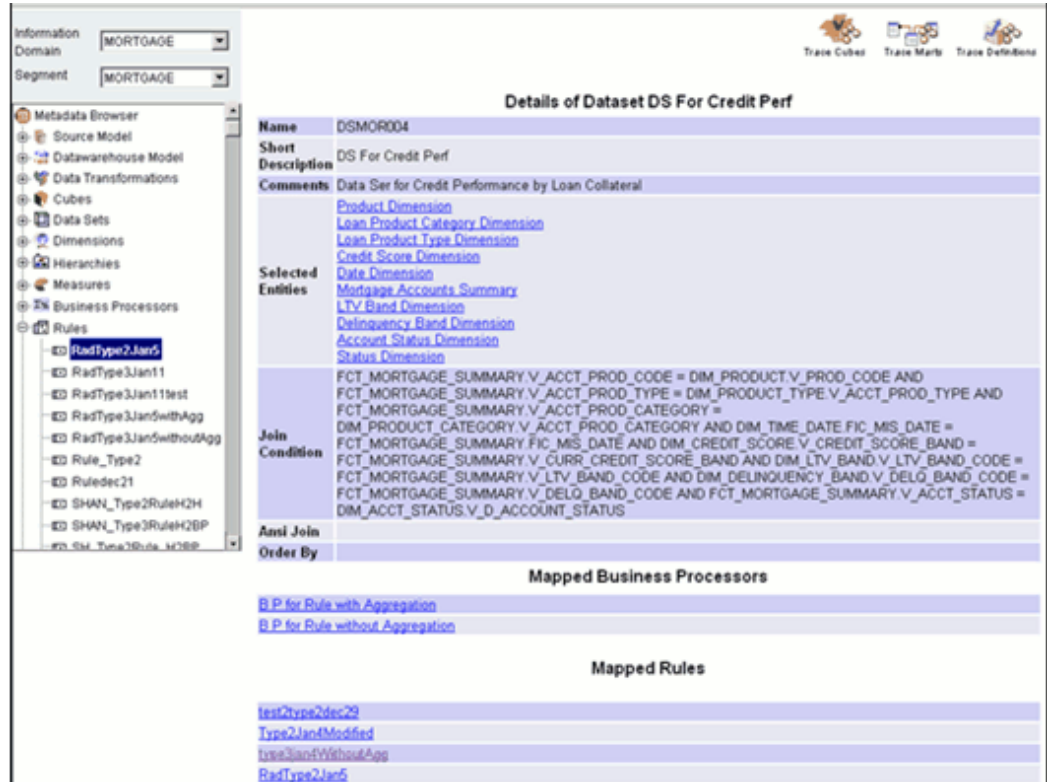
Below the details, there is a section for 'Mapped Marts' with two hyperlinks: [TEST RDM1](#) and [TEST RDM2](#).

Click the mart name hyperlink, to view its details.

If there are no mapped marts available for the measure, the "No Marts found" message is displayed.

Tracing Definition Details

Click **Trace Definitions** to view the definitions that are mapped to the rule. The screen reloads displaying the list of definitions that are mapped to the rule.



You can delete, share, edit, view and check the properties of the selected definition.

Note: Only the users with appropriate access permissions can perform a share, delete or edit operation.

If there are no mapped definitions available for the rule, the "No definitions found" message is displayed.

Browsing Process

The Process option provides a framework that facilitates the definition and maintenance of a process. A hierarchical structure is adopted to facilitate the construction of a process tree. A process tree can have many levels and one or many nodes within each level. Sub-processes are defined at level members and rules form the leaf members of the tree. Through the definition of Process, the user is permitted to group a collection of rules that pertain to a functional process logically.

Selecting the Information Domain

To view the Processes, click the **Information Domain** field to open the drop-down list. Select the information domain that contains the processes.

Selecting the Segment

Select the segment from the **Segment** list.

Now double-click the + (plus sign) against the **Process** folder displayed under the Metadata Browser in the left pane. This action will cause the folder to expand displaying the processes available for the selected information domain.

Click **Process** to view its details.

Example

UM Base Process1

The screenshot displays the Oracle Financial Services Analytical Applications Infrastructure User Guide interface. On the left, the Metadata Browser shows a tree structure under the 'Process' folder, with 'UM Base Process1' selected. The main pane is titled 'Details of Process UM Base Process1' and contains a table with the following data:

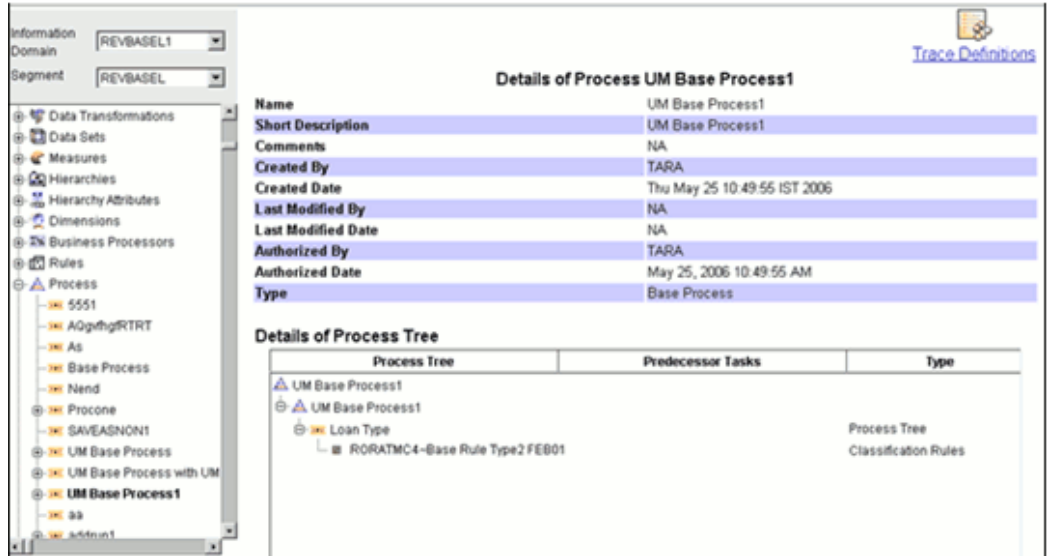
Property	Value
Name	UM Base Process1
Short Description	UM Base Process1
Comments	NA
Created By	TARA
Created Date	Thu May 25 10:49:55 IST 2006
Last Modified By	TARA
Last Modified Date	Mon May 29 12:05:22 IST 2006
Authorized By	TARA
Authorized Date	May 29, 2006 12:05:23 PM
Type	Base Process

Below this table is a 'Details of Process Tree' section with a grid:

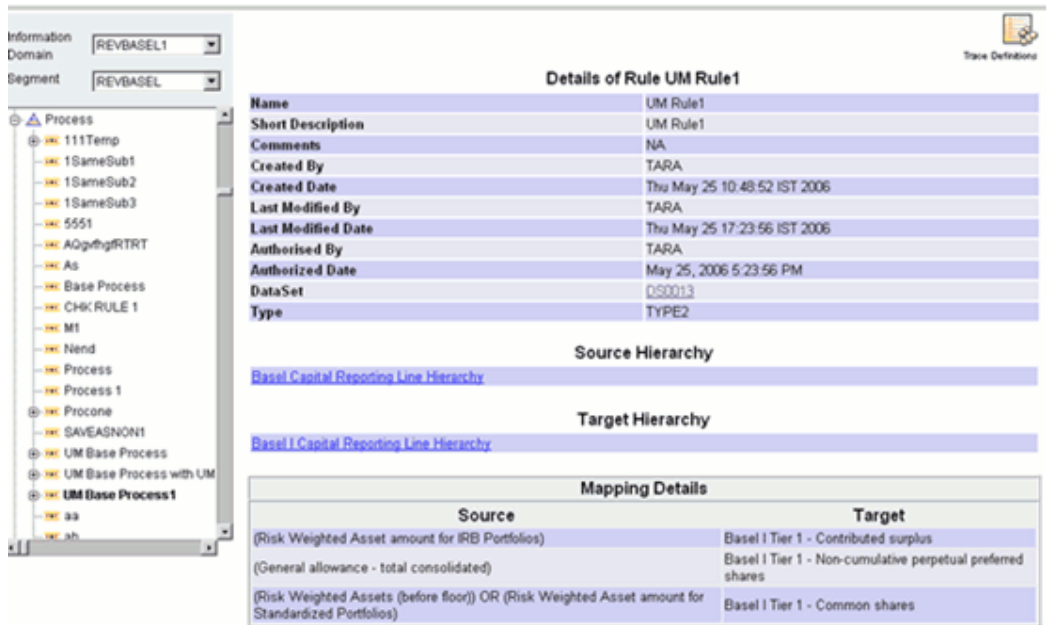
Process Tree	Predecessor Tasks	Type
UM Base Process1		
UM Base Process1		

The Name, Short Description, Comments, Created By, Created Date, Last Modified by, Last Modified Date, Authorized By, Authorized Date and Type details of the selected process definition are displayed.

In the grid below, expand the process tree to view the various sub-processes and the constituent rules that make up the process tree. If any leaf members of the process tree are preceded by any other members, the task precedence is also displayed. To view the details of the Base Rules of the process, click the Base Rule member.



Double-click the node displayed in the process tree to view the details of the selected node.



The Name, Short Description, Comments, Created By, Created Date, Last Modified by, Last Modified Date, Authorized By, Authorized Date, Dataset and Type details of the selected rule are displayed.

To view the details of the Dataset, Source Hierarchy and Mapping Details associated with the rule are displayed. Click the Dataset/Source / Business Processor hyperlinks to view the associated details.

You can trace the definitions to which the selected process is mapped.

Note: All the process defined in the selected information domain and segment will be displayed under the **Process** folder in the left pane.

Tracing Definition Details

Click **Trace Definitions** to view the definitions that are mapped to the process. The screen reloads displaying the list of run definitions that are mapped to the process.

The screenshot shows the 'Details of Rule UM Rule1' window. The left pane has 'Information Domain' set to 'REVBASEL1' and 'Segment' set to 'REVBASEL'. The tree view shows 'Process' expanded to 'UM Base Process1'. The main window displays the following information:

Details of Rule UM Rule1	
Name	UM Rule1
Short Description	UM Rule1
Comments	NA
Created By	TARA
Created Date	Thu May 25 10:48:52 IST 2006
Last Modified By	NA
Last Modified Date	NA
Authorized By	TARA
Authorized Date	May 25, 2006 10:48:53 AM
DataSet	D50013
Type	TYPE2

Source Hierarchy
[Basel Capital Reporting Line Hierarchy](#)

Target Hierarchy
[Basel I Capital Reporting Line Hierarchy](#)

Mapping Details	
Source	Target
(General allowance - total consolidated) OR (Risk Weighted Asset amount for Standardized Portfolios)	Basel I Tier 1 - Non-cumulative perpetual preferred shares
(Risk Weighted Asset amount for IRB Portfolios) OR (Risk Weighted Assets (before floor))	Basel I Tier 1 - Common shares

Mapped Processes
[UM Base Process1](#)

Mapped Scenario Processes
[UM Scenario Process1](#)

To view the details of the Run Definitions that contain the process, click the **Run** hyperlink.

Click the **Back** button in your Browser Navigator bar to return to the **Process** window.

If **Scenario Process** definition has been defined for the selected base process definition, click the process definition name in the left pane to expand the same.

Example

UM Base Process1

This displays the scenario process definition name below the selected process definition name. Click the **Scenario Process** definition to view its details.

Example

UM Scenario Process1

The screenshot displays the 'Details of Scenario Process UM Scenario Process1' window. On the left, a tree view shows the hierarchy of process definitions, with 'UM Scenario Process1' selected. The main area contains a metadata table and a 'Details of Process Tree' section.

Property	Value
Name	UM Scenario Process1
Short Description	UM Scenario Process1
Comments	NA
Created By	TARA
Created Date	Thu May 25 10:50:52 IST 2006
Last Modified By	NA
Last Modified Date	NA
Authorized By	TARA
Authorized Date	May 25, 2006 10:50:52 AM
Type	Scenario Process
Base Process	UM Base Process1

Process Tree	Predecessor Tasks	Type
UM Scenario Process1		
UM Scenario Process1		

In the grid below, the details of the selected scenario process definition will be displayed.

Expand the process tree to view the various sub-processes and the constituent rules that make up the process tree. If any leaf members of the process tree are preceded by any other members, the task precedence is also displayed.

This screenshot shows the 'Details of Scenario Process UM Scenario Process1' window with the process tree expanded. The left-hand tree view now includes many more sub-items, and the 'Details of Process Tree' table shows a hierarchical structure of tasks and rules.

Property	Value
Name	UM Scenario Process1
Short Description	UM Scenario Process1
Comments	NA
Created By	TARA
Created Date	Thu May 25 10:50:52 IST 2006
Last Modified By	NA
Last Modified Date	NA
Authorized By	TARA
Authorized Date	May 25, 2006 10:50:52 AM
Type	Scenario Process
Base Process	UM Base Process1

Process Tree	Predecessor Tasks	Type
UM Scenario Process1		
UM Scenario Process1		
Loan Description		Process Tree
RORATMC4-Base Rule Type2 FEB01		Classification Rules

To view the details of the **Base Rules** of the process, click the Base Rule member.

The screenshot displays the 'Details of Rule UM Rule1' in the Oracle Financial Services Analytical Applications Infrastructure. The interface includes a left-hand navigation pane with a tree view of processes, a top section for 'Details of Rule UM Rule1' with fields like Name, Short Description, Comments, Created By, Created Date, Last Modified By, Last Modified Date, Authorized By, Authorized Date, DataSet, and Type. Below this are sections for 'Source Hierarchy' and 'Target Hierarchy', and a 'Mapping Details' table.

Mapping Details	
Source	Target
(General allowance - total consolidated) OR (Risk Weighted Asset amount for Standardized Portfolios)	Basel I Tier 1 - Non-cumulative perpetual preferred shares
(Risk Weighted Asset amount for IRB Portfolios) OR (Risk Weighted Assets (before floor))	Basel I Tier 1 - Common shares

To view the details of the Dataset, Source Hierarchy and Mapping Details associated with the rule are displayed. Click the Dataset/Source / Business Processor hyperlinks to view the associated details.

Note: The Metadata Export and Metadata Search functionality is not available for Process.

Browsing Run

The Run Framework enables the various Rules defined in the Rules Framework to be combined together (as processes) and executed as different 'Runs' for different underlying approaches. Different approaches are achieved through process definitions. Further, run level conditions or process level conditions can be specified while defining a 'Run'.

Selecting the Information Domain

To view the run definition, click the **Information Domain** field to open the drop-down list. Select the information domain that contains the run definitions.

Selecting the Segment

Select the segment from the Segment list.

Now double-click the + (plus sign) against the **Run** folder displayed under the Metadata Browser in the left pane. This action will cause the folder to expand displaying the run definitions available for the selected information domain.

Click **Run** to view its details.

Example

umbaserun1

The screenshot displays the 'Details of Run umbaserun1' window. On the left, a tree view shows the hierarchy of information domains and segments, with 'umbaserun1' selected. The main pane shows the following details:

Property	Value
Name	umbaserun1
Short Description	umbaserun1
Comments	NA
Created By	TARA
Created Date	Thu May 18 19:49:49 IST 2006
Last Modified By	NA
Last Modified Date	NA
Authorized By	TARA
Authorized Date	May 18, 2006 7:49:49 PM
Type	Baseline Run

Below the details, there is a section titled 'Mapped Processes' with a hyperlink 'UM Base Process'. Under this link, the following processes are listed:

- Customer Category
- Asset Size UM
- range1
- Asset Size UM
- paramprod1
- test1
- paramval1

The Name, Short Description, Comments, Created By, Created Date, Last Modified by, Last Modified Date, Authorized By, Authorized Date and Type details of the selected run definition are displayed.

Additionally, you can also view details about Mapped Processes, Run Conditions, and Process Conditions.

To view the details of the Mapped Processes and Run Conditions, and Process Conditions of the run, click the Mapped Processes, Run Conditions, or Process Conditions hyperlinks.

Note: All the run definitions in the selected information domain and segment will be displayed under the left pane.

Viewing Mapped Process Details

Click the **Mapped Processes** hyperlink to view the details about the Mapped Processes.

The screenshot displays the 'Details of Process UM Base Process' window. On the left, there is a navigation pane with a tree view of processes. The 'Domain' is set to 'REVBASEL1' and the 'Segment' is 'REVBASEL'. The tree view shows a hierarchy of processes, with 'umbaserun1' selected. The main area is divided into two sections: 'Details of Process UM Base Process' and 'Details of Process Tree'.

Details of Process UM Base Process

Name	UM Base Process
Short Description	UM Base Process
Comments	NA
Created By	KJUSUM
Created Date	Thu May 18 15:36:08 IST 2006
Last Modified By	TARA
Last Modified Date	Mon Jun 05 14:01:20 IST 2006
Authorized By	TARA
Authorized Date	June 5, 2006 2:01:20 PM
Type	Base Process


Details of Process Tree

Process Tree	Predecessor Tasks	Type
UM Base Process		
UM Base Process		

Click the + sign next to the process tree. This lists the processes and the sub-processes in the tree.

The window also displays the Predecessor Tasks and the Type. You can click a process to view the details about the task. Double-click the node displayed in the process tree to view the details of the selected node.

Information
Domain: REVBASEL1
Segment: REVBASEL


[Trace Definitions](#)

- edest1
- inforun2
- just1
- keytest22
- mdbrun1
- param base run1
- paraminforun1
- paramrun1
- placrun1
- rule2run1
- runone
- runlara1
- runlara2
- runlara3
- runfc1
- runfstkey1
- sample
- save2
- segfst1
- umbaserun1**
- yam1

Details of Process UM Base Process

Name	UM Base Process
Short Description	UM Base Process
Comments	NA
Created By	KUSUM
Created Date	Thu May 18 15:36:08 IST 2006
Last Modified By	TARA
Last Modified Date	Mon Jun 05 14:01:20 IST 2006
Authorized By	TARA
Authorized Date	June 5, 2006 2:01:20 PM
Type	Base Process

Details of Process Tree

Process Tree	Predecessor Tasks	Type
UM Base Process		
UM Base Process		
Customer Category		Process Tree
range1	Asset Size UM	Classification Rules
Asset Size UM	range1	Computation Rules
Asset Size UM		Computation Rules

Click Trace Definitions to view the definitions that are mapped to the process.

The screenshot displays the 'Details of Process UM Base Process' window. On the left is a tree view of the system hierarchy. The main area shows process details and a process tree.

Information
 Domain: REVBASL1
 Segment: REVBASEL

Details of Process UM Base Process

Name	UM Base Process
Short Description	UM Base Process
Comments	NA
Created By	KUSUM
Created Date	Thu May 18 15:36:08 IST 2006
Last Modified By	KUSUM
Last Modified Date	Thu May 18 15:49:08 IST 2006
Authorized By	KUSUM
Authorized Date	May 18, 2006 3:49:08 PM
Type	Base Process

Details of Process Tree

Process Tree	Predecessor Tasks	Type
UM Base Process		
UM Base Process		

Mapped Run Definitions
[runtc1](#)

Mapped Simulation Runs
[111SimRun2](#)
[111SimRun3](#)

The window reloads displaying the list of run definitions that are mapped to the process.

Viewing Mapped Run Definition Details

Click the link provided in the Mapped Run Definitions pane to view the details of the run condition.

The screenshot shows the 'Details of Run runtct1' window. On the left, there is a tree view of the domain 'REVBASL1' with various runs listed. The main pane displays the following details for 'runtc1':

Name	runtc1
Short Description	runtc1
Comments	NA
Created By	TARA
Created Date	Thu May 18 16:25:33 IST 2006
Last Modified By	TARA
Last Modified Date	Thu May 18 16:41:31 IST 2006
Authorized By	TARA
Authorized Date	May 18, 2006 4:41:32 PM
Type	Baseline Run

Below the details is a 'Mapped Processes' section with a list of processes:

- rhymora1
 - sub1
- rhymula1
- pro2
- placora1
- processor1
 - sub1

At the bottom, the 'Run Conditions' section shows hierarchies and selected members:

Hierarchies	Selected Members
Basel II Exposure Type	Bank (OR) CASH (OR) GOLD (OR) Missing
Geography	Geography

To view the details of the hierarchies that are mapped to the Run, click a hierarchy in Run Condition.

Example

Basel II Exposure Type

The screenshot shows the 'Details of Hierarchy Basel II Exposure Type' window. On the left, the tree view shows the hierarchy expanded. The main pane displays the following details for 'Basel II Exposure Type':

Name	H0007
Short Description	Basel II Exposure Type
Long Description	Basel II Exposure Type
Comments	
Created By	DEMOUSER
Creation Date	February 22, 2005 12:00:00 AM
Last Modified By	MAHESH
Modified Date	May 24, 2006 5:30:24 PM
Authorized By	MAHESH
Authorized Date	May 24, 2006 5:30:24 PM
Type	REGULAR
Business Intelligence Enabled	Yes
Entity	Basel Exposure Types
Attribute	Basel Exposure Type Code

Below the details is a 'Level Details' table:

Description	Identifier
Basel II Exposure Type	

Click the + sign next to the hierarchy. This lists the members of the hierarchy along with their identifiers.

You can click a process to view the details about the task.

Click the **Simulation Run** definition in the left pane to view its details.

Example

scn1

The screenshot shows the 'Details of Simulation Run scn1' pane. The left-hand navigation tree includes a tree view with 'scn1' selected under 'umbaserun1'. The main pane is divided into three sections:

- Details of Simulation Run scn1:** A table with the following data:

Name	scn1
Short Description	scn1
Comments	NA
Created By	TARA
Created Date	Mon May 22 12:34:10 IST 2006
Last Modified By	NA
Last Modified Date	NA
Authorized By	TARA
Authorized Date	May 22, 2006 12:34:10 PM
Type	Simulation Run
Base Line Run	umbaserun1
- Mapped Processes:** A list of processes including 'UM_Base_Process[SUR->um_scenario]', 'Customer Category', 'Asset Size UM', 'range1', 'Asset Size UM', 'param001', 'test1', and 'param001'.
- Run Conditions:** A table with two columns: 'Hierarchies' and 'Selected Members'. The data row shows 'Basel # Customer Type' in both columns.

The Name, Short Description, Comments, Created By, Created Date, Last Modified by, Last Modified Date, Authorized By, Authorized Date and Type details of the scenario mapped to the simulation run definition will be displayed.

The details about the mapped processes are displayed in the **Mapped Processes** pane.

Browsing Cubes

A **Cube** represents data in a multidimensional context i.e. measures along multiple dimensions and at different logical levels within each dimension.

Example

User wants to see number of customers, number of accounts, and number of relationships by product, time and organization.

To browse details of Cubes you have to select the information domain and segment first.

Selecting the Information Domain

To view cubes, click **Information Domain** field to open the drop-down list. Select the information domain that contains cube/s.

Example

DOCINFO

Selecting the Segment

Click **Segment** field to open the drop-down list. Select the segment of the selected information domain to which the cube/s belongs.

Example

ALL

Now double-click the + (plus sign) against the Cubes folder displayed under the Metadata Browser in the left pane. This action will cause the folder to expand displaying the cubes available for the selected information domain/segment.

Click **Cube** field to view its details.

Example

ARPCUBE22

The screenshot shows the 'Details of cube ARPCUBE22' window. The left pane shows the 'Cubes' folder expanded under 'BASELSOL'. The main area displays the following details:

Details of cube ARPCUBE22	
Name	ARPCUBE22
Short Description	ARPCUBE22
Long Description	ARPCUBE221
Comments	
Created By	DEMOUSER
Cube Create Date	March 10, 2009 11:11:56 AM
Last Modified By	DEMOUSER
Modified Date	March 10, 2009 1:00:20 PM
Authorized By	
Authorized Date	
Last Modified By	DEMOUSER
MDDB name	ARPCUBE
Mapped Measures	ARMEAS1
Mapped Dimensions	MARDMEA MARDREG MARDTDM
Mapped Datasets	MARDSCUB
Complete Build	false
Variation	
ARMEAS1	MARDREG MARDTDM MARDMEA
Storage	
Access Mode	Buffered I/O
Data Compression	Bit-Map Encoding
Index Cache	null
Index Bytes	0
Data File Cache	null
Data Cache	null

The cube details displays the Name, Short Description, Long Description, Cube Creation, Last Modified Date, Last Modified By, MDDB name, list of Mapped Measures, Mapped Dimensions and Mapped Datasets names with hyperlinks that allows you to trace measures, cubes, definitions, dimensions and marts For more information, see Viewing Destination Table details, page 13-192.

This window also displays the Variation, Storage and Node Formula details as shown in the following screenshot.

The screenshot displays the Oracle Metadata Browser interface. On the left, the 'Metadata Browser' pane shows a tree view with 'Cubes' expanded to 'Accounting Capital Analysis'. The main area is divided into several sections:

- Variation:** A table listing dimensions and measures for the 'Accounting Capital Amount' cube.

Accounting Capital Amount	Branch Dimension
	Time Dimension
	Run Dimension
	Basel Capital Reporting Line Dimension
	Basel Capital Reporting Line Measure
- Storage:** A table listing storage-related properties.

Access Mode	Buffered I/O
Data Compression	Bit-Map Encoding
Index Cache	
Index Bytes	8
Data File Cache	
Data Cache	
Location	Disk Volume Partition Size File Type File Size
- Node Formula:** A table listing formulas for various nodes.

Basel Capital Reporting Line Dimension	
Basel Capital Reporting Line Hierarchy	
Proportion of net general allowance allocated to STD portfolios	CRL0212/CRL0214
Net general allowance allocated to standardized portfolios	CRL0211*CRL0221
Eligible general allowance for inclusion in Tier 2a capital	@MIN(CRL0222, CRL0212 * 1.25)
Proportion of net general allowance allocated to IRB portfolios	CRL0213/CRL0214

Note: Metadata Browser does not detail the cube node level formula.

Tracing Definition Details

Click **Trace Definitions** to view the definitions that are mapped to the cube. The window reloads displaying the list of definitions that are mapped to the cube.

Example

ATM TxnAnalysis



You can delete, share, edit, view and check the properties of the cube definition.

Deleting a Cube definition

You can delete a Cube definition by clicking



against it. An alert is displayed, which reads, "Are you sure you want to delete this definition?" Click **OK** to confirm deletion or **Cancel** to cancel the request.

Sharing a Cube definition

You can share a Cube definition by clicking



against the cube definition that you want to share with another user/s to open the Share this definition screen.

Example

Equity Capital

Select the users from the Available resources pane and click



to move them to the Mapped Resources pane. To select multiple resources, hold the < CTRL > key and select the resources. To deselect the resources, select the name/s of the resources from the Mapped Resources pane and click .

Click **Save** to save the selected resource mapping. Click **Cancel** to reset the mapping and exit the window.



The cube definition that you chose will be shared with the selected users. That is, the resources under the Mapped Resources pane.

Example

The cube definition TDCAP003OLAP1 will be mapped to selected user names.

Click the **Back** button in your Browser Navigator bar to return to the Mapped Definitions window.

Editing a Cube definition

You can edit a Cube definition by clicking



against the cube definition to open the Designer window where you can modify it

Viewing a Cube definition

You can view a Cube definition by clicking



against the cube definition that you want to view to open the Insight Viewer window.

By default, the cube will be displayed as a Bar Graph.

Viewing Cube Properties

You can view the Cube properties by clicking



against the cube definition.

You can click the hyperlinks displayed in the properties screen to view the details of the cube definition.

Click the **< Back** button in your Browser Navigator bar or click ATM TxnAnalysis listed under Cubes in the left pane to return to the **Cube details** window.

Browsing Forms

Forms in Oracle Infrastructure are metadata driven and configurable based on need. Definition of Forms in Oracle Infrastructure is a two step process, Forms Definition and Forms Rendering.

A Form definition is broadly composed of the following activities: Business Metadata

Definition, Forms and Layout Definition and Metadata Association.

To browse **Forms** details, you have to select the information domain and segment first.

Selecting the Information Domain

Click the **Information Domain** field to open the drop-down list. Select the information domain that contains the maps.

Selecting the Segment

Click the **Segment** field to open the drop-down list. Select the segment of the selected information domain to which the Forms belong.

Click the + (plus sign) against the **Forms** folder displayed under the Metadata Browser in the left pane. This action will cause the folder to expand displaying the Forms available for the selected information domain/segment.

Note: Only the latest authorized version of the Forms definitions will be displayed under Forms in the left pane.

Click a Form definition to view the details in the right pane.

The screenshot displays the Unified Metadata Manager interface. On the left, the 'Information Domain' is set to 'RORDEV' and the 'Segment' is also 'RORDEV'. The 'Forms' folder is expanded, showing a list of forms including 'new Questionnaire', 'Key Risk Indicator', 'Loss Recovery', 'Question Block List Page', 'Risk ID Selection', 'Question Block Page', 'Questionnaire', 'FrmAttachDocGrid', and 'FrmAttachDocGrid_CRP'. The 'Key Risk Indicator' form is selected. The right pane, titled 'Details of Form Key Risk Indicator', displays the following information:

Field	Value
Name	FrmKri
Short Description	Key Risk Indicator
Long Description	Key Risk Indicator
Workflow Name	RISK
Map Name	Process Hierarchy
Dataset Name	KRI Dataset
Created By	RORUSER
Created Date	6/26/2006
Last Modified by	RORUSER
Last Modified Date	6/26/2006
Mapped Hierarchies	Business Line Region Country City
Mapped Hierarchy Attributes	Status Status KRI ID KRI Name Comment Grid_Group_Control

Details of the selected Form definition such as Name, Short and Long Description, Workflow Name, Map Name, Dataset Name, Creation and Modification Details, Mapped Hierarchies and Hierarchy Attributes are displayed.

To view the details of the **Map**, click the hyperlink against it.

Example

Process Hierarchy

Information Domain: RORDEV
Segment: RORDEV

Trace Forms Show History Trace Maps Show Mappings

Details of Map Process Hierarchy

Name	1150585725642
Description	Process Hierarchy
Version	1
Version Description	Process Hierarchy
Comments	NA
Usage Status	Default
Effective From	28 JUN 2006
Effective To	01 JUN 2008
Created By	DEMOUSER
Created Date	28-JUN-2006 12:00:00 AM
Last Modified By	RORUSER
Last Modified Date	25-AUG-2006 09:46:57 PM
Authorized By	RORUSER
Authorized Date	25-AUG-2006 09:46:57 PM
Parent Mapping definition (if any)	Product Hierarchy
Row Dimensions	Process
Column Dimensions	Enterprise Business Lines
Page Dimensions	Region
	Country
	City

The details of the selected Map are displayed. Click the **Back** button in your browser to return to the Form details window.

To view the details of the **Dataset**, click the hyperlink against it.

Example

KRI Dataset

The screenshot shows the 'Details of Dataset KRI Dataset' window in the Unified Metadata Manager. The window is titled 'Details of Dataset KRI Dataset' and displays the following information:

Field	Value
Name	DRCSA007
Short Description	KRI Dataset
Long Description	KRI Dataset
Comments	KRI Dataset
Created By	RORUSER
Creation Date	July 5, 2006 12:02:49 PM
Last Modified By	RORUSER
Modified Date	July 6, 2006 2:30:30 PM
Authorized By	
Authorized Date	
Selected Entities	KRI Group Dimension KRI Type Dimension KRI Definition Fact Causes Dimension Enterprise Business Lines Dimension City Dimension Country Dimension Process Dimension Product Dimension Region Dimension
Join Condition	FCT_KRI_DEF.N.CAUSE_KEY = DIM_CAUSES.N.CAUSE_KEY(+) AND FCT_KRI_DEF.N.KRIGROUP_KEY = DIM_KRI_GROUP.N.KRIGROUP_KEY(+) AND FCT_KRI_DEF.N.KRI_TYPE_KEY = DIM_KRI_TYPE.N.KRI_TYPE_KEY(+) AND FCT_KRI_DEF.N.BUSINESS_LINE_KEY = DIM_BUSINESS_LINE.N.BUSINESS_LINE_KEY(+) AND FCT_KRI_DEF.N.REGION_KEY = DIM_REGION.N.REGION_KEY(+) AND FCT_KRI_DEF.N.COUNTRY_KEY = DIM_COUNTRY.N.COUNTRY_KEY(+) AND FCT_KRI_DEF.N.CITY_KEY = DIM_CITY.N.CITY_KEY(+) AND FCT_KRI_DEF.N.PRODUCT_KEY =

The details of the mapped dataset are displayed. Click the **Back** button in your browser to return to the Form details window.

To view the details of the **Mapped Hierarchies**, click the hyperlink against it.

Example

Business Line

The screenshot displays the 'Details of Hierarchy Enterprise Business Lines' window. The left sidebar shows a tree view with 'Key Risk Indicator' selected. The main area contains a metadata table for the hierarchy.

Details of Hierarchy Enterprise Business Lines	
Name	HREF001
Short Description	Enterprise Business Lines
Long Description	Enterprise Business Lines Hierarchy test
Comments	
Created By	RORUSER
Creation Date	June 27, 2006 12:00:00 AM
Last Modified By	HARI
Modified Date	February 2, 2007 5:04:07 PM
Authorized By	HARI
Authorized Date	February 2, 2007 5:04:11 PM
Type	REGULAR
Business Intelligence Enabled	Yes
Entity	Enterprise Business Lines Dimension
Attribute	Enterprise Business Line Code
Level Details	
Description	Identifier
Enterprise Business Lines	
Not Applicable	Dim_Business_Line.n_std_business_line_code = '1666'
All Business Line	Dim_Business_Line.n_std_business_line_code = '777'
Corporate and Investment Banking	Dim_Business_Line.n_std_business_line_code = '1001'
Private Banking	Dim_Business_Line.n_std_business_line_code = '1002'
Retail Banking	Dim_Business_Line.n_std_business_line_code = '1003'

The hierarchy details are displayed. Click the **Back** button in your browser to return to the Form details window.

To view the details of the Mapped Hierarchy Attributes, click the hyperlink against it.

Example

KRI ID

The screenshot displays the 'Details of Hierarchy Attribute KRI ID' window. The left sidebar shows 'Key Risk Indicator' selected. The main area contains a metadata table for the attribute.

Details of Hierarchy Attribute KRI ID	
Name	KRIAT01
Short Description	KRI ID
Long Description	KRI ID
Comments	KRI ID
Created By	RORUSER
Creation Date	July 5, 2006 5:26:56 AM
Last Modified By	RORUSER
Modified Date	July 5, 2006 5:26:56 AM
Authorized By	
Authorized Date	
Base Hierarchy	KRI Hierarchy
Total Node Expression	
Slowly Changing	True
Entity	KRI Definition Fact
Level Expression for LEVEL0	Fct_Kri_Def.n_kridef_key
Join Condition	

The hierarchy attributes details are displayed. Click the **Back** button in your browser to return to the Form details window.

Browsing Questionnaires

To browse Questionnaires you have to select the information domain and segment first.

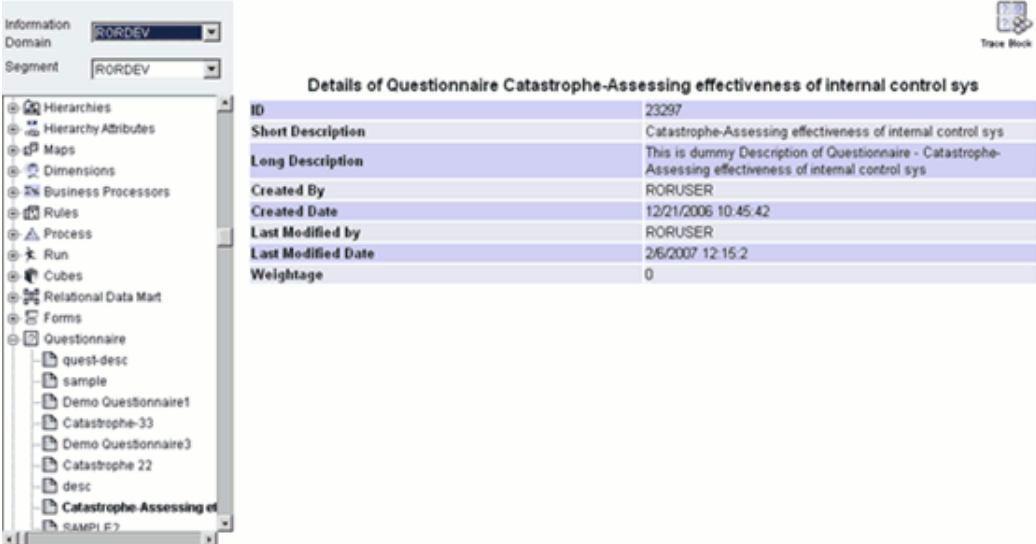
Selecting the Information DomainTo browse different Questionnaires, click the **Information Domain** field to open the drop-down list. Select the information domain that contains the Questionnaires.

Selecting the Segment

Click the **Segment** field to open the drop-down list. Select the segment of the selected information domain to which the Questionnaire belongs.

Click the + (plus sign) against the **Questionnaire** folder displayed in the Metadata Browser screen in the left pane. This action will cause the folder to expand displaying the Questionnaires available for the selected information domain/segment.

Click the Questionnaire name to view its details.



The screenshot displays the Unified Metadata Manager interface. On the left, a tree view shows the 'Questionnaire' folder expanded, listing several questionnaire entries, including 'Catastrophe-Assessing et'. The main pane shows the 'Details of Questionnaire Catastrophe-Assessing effectiveness of internal control sys' with the following information:

Details of Questionnaire Catastrophe-Assessing effectiveness of internal control sys	
ID	23297
Short Description	Catastrophe-Assessing effectiveness of internal control sys
Long Description	This is dummy Description of Questionnaire - Catastrophe-Assessing effectiveness of internal control sys
Created By	RORUSER
Created Date	12/21/2006 10:45:42
Last Modified by	RORUSER
Last Modified Date	2/6/2007 12:15:2
Weightage	0

Details of the selected Questionnaire definition such as ID, Short and Long Description, Creation and Modification Details and Weightage are displayed.

Tracing Blocks

Click **Trace Block**, to view the blocks to which the selected Questionnaire is mapped.

The screenshot shows the Oracle Financial Services Analytical Applications Infrastructure user interface. On the left is a navigation tree with categories like Hierarchies, Maps, Dimensions, Business Processors, Rules, Process, Run, Cubes, Relational Data Mart, Forms, and Questionnaire. The 'Questionnaire' category is expanded, showing a list of questionnaires including 'Catastrophe-Assessing of internal control sys'. The main area displays the details for this questionnaire:

Details of Questionnaire Catastrophe-Assessing effectiveness of internal control sys	
ID	23297
Short Description	Catastrophe-Assessing effectiveness of internal control sys
Long Description	This is dummy Description of Questionnaire - Catastrophe-Assessing effectiveness of internal control sys
Created By	RORUSER
Created Date	12/21/2006 10:45:42
Last Modified by	RORUSER
Last Modified Date	2/6/2007 12:15:2
Weightage	0

Below the questionnaire details, there is a section titled 'Mapped Blocks' which lists several hyperlinks: [CatastropheB1](#), [CatastropheB3](#), [CatastropheB6](#), [CatastropheB8](#), and [CatastropheB2](#).

The name of the Blocks to which the Questionnaire is mapped is displayed. Click the Block Name hyperlink to view its details.

The screenshot shows the Oracle Financial Services Analytical Applications Infrastructure user interface. The navigation tree on the left is the same as in the previous screenshot. The main area displays the details for the 'CatastropheB1' block:

Details of Block CatastropheB1	
ID	1
Short Description	CatastropheB1
Created By	RORUSER
Created Date	12/21/2006 10:30:51
Last Modified by	RORUSER
Last Modified Date	1/13/2007 0:29:43
Weightage	0.8

At the top right of the main area, there are two icons: a magnifying glass and a document. Below these icons are the labels 'Trace Question' and 'Trace Questionnaire'.

The Questions that are mapped to this block as well as the Questionnaire to which this block is mapped to can be traced from this window.

Click **Trace Question** to trace the questions that are mapped to the block.

Information Domain: RORDEV
Segment: RORDEV

Details of Block CatastropheB1

ID	1
Short Description	CatastropheB1
Created By	RORUSER
Created Date	12/21/2006 10:30:51
Last Modified by	RORUSER
Last Modified Date	1/13/2007 0:29:43
Weightage	0.8

Mapped Questions

- [What is the typical loss size in such a scenario?](#)
- [Extent of loss of profits as a consequence of a catastrophe](#)

Click the Question hyperlinks to view the question details.

Information Domain: RORDEV
Segment: RORDEV

Trace Block

ID	1
Short Description	What is the typical loss size in such a scenario?
Created By	RORUSER
Created Date	12/20/2006 16:50:7
Last Modified by	RORUSER
Last Modified Date	12/21/2006 16:58:42
Weightage	0.1

Click **Trace Blocks** to view the blocks to which this question is mapped.

Click the Block name hyperlink to view the details. In the Block details window, click **Trace Questionnaire** to view the questionnaires to which this block is mapped. Click the Questionnaire name hyperlink to view the Questionnaire details.

Browsing Views

To browse **Views** you have to select the information domain and segment first.

Selecting the Information Domain

To browse different Views, click the **Information Domain** field to open the drop-down

list. Select the information domain that contains the view/s.

Example

DOCINFO

Selecting the Segment

Click the **Segment** field to open the list. Select the segment of the selected information domain to which the view belongs.

Example

ALL

Now double-click the + (plus sign) against the **Views** folder displayed under the Metadata Browser in the left pane. This action will cause the folder to expand displaying the views available for the selected information domain/segment.

Click the view name to view its details.

Information Domain: MORTGAGE
Segment: MORTGAGE

Summary of OLAP View New_Paymentcube_with2heirdim_dyncalc

Description	New_Paymentcube_with2heirdim_dyncalc
Owner	BIPIN
Created On	January 17, 2006
Cube Name	Payment Analysis_Copy of ADMOR005

Row Dimensions

Loan Pricing	Current Interest Rate upto 5 pct
	Current Interest Rate between 5 pct and 6 pct
	Current Interest Rate between 6 pct and 7 pct
Time	1999
	1999 Quarter 3
	1999 Dec

Column Dimensions

Measure Dimension for ADMOR005	Average \$ Outstanding
	\$ Foreclosed
	\$ Prepayment

Page Dimensions

Credit Score Current	Credit Score Current Total
Prepayment Reasons	Prepayment Reasons Total
	Low Market Rate
Mortgage Loan Category	Product Category Total
	First Mortgage
	Second Mortgage

Click the **Row Dimensions** or **Page Dimensions** hyperlink to view its details.

For more information, see Browsing Key Performance Indicators, page 13-289 and Browsing Dashboard Details, page 13-291.

Click the **Time** dimension link displayed under the **Row Dimension** pane to view the details of the Time Dimension.

Information Domain: MORTGAGE Segment: MORTGAGE

Details of Dimension Time

Name	DTIME01
Short Description	Time
Long Description	Time Dimension
Dimension Type	TIME
Last Modified Date	January 13, 2006 5:24:56 PM
Last Modified by	Imported Metadata

[Time Hierarchy](#)

Mapped Hierarchies

Click the **Time Hierarchy** hyperlink displayed under the **Mapped Hierarchies** to view the details of the Time hierarchy.

Information Domain: MORTGAGE Segment: MORTGAGE

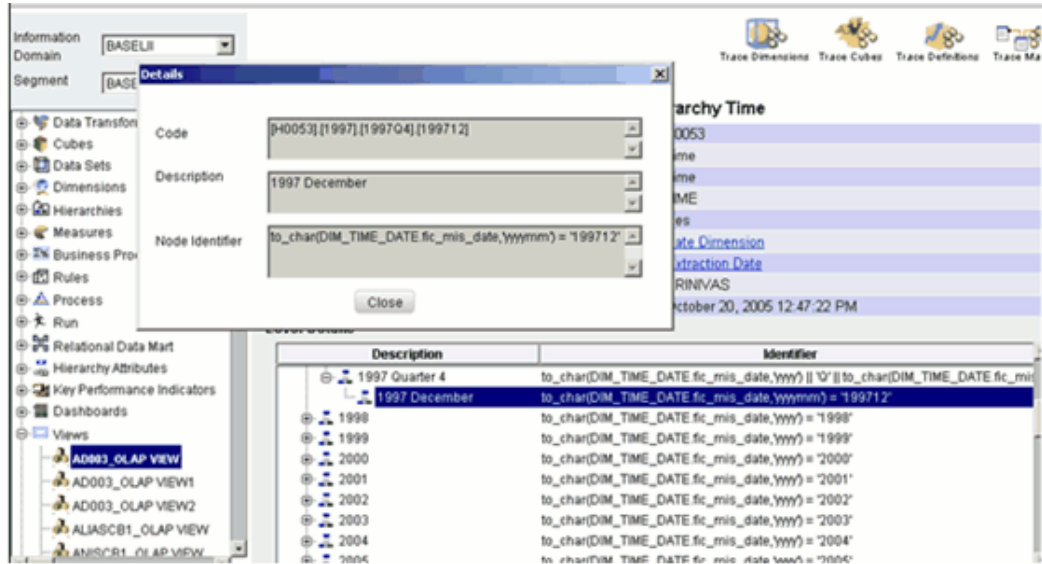
Details of Hierarchy Time Hierarchy

Name	HTIME01
Short Description	Time Hierarchy
Long Description	Time BI Hierarchy
Type	TIME
Business Intelligence Enabled	Yes
Entity	Date Dimension
Attribute	Year
Hierarchy Attributes	Hier_attribute
Last Modified by	MEHAR
Last Modified Date	February 2, 2006 8:07:54 PM

Level Details

Description	Identifier
Time Hierarchy	
1999	DIM_TIME_DATE.v_time_year = '1999'
2000	DIM_TIME_DATE.v_time_year = '2000'
2001	DIM_TIME_DATE.v_time_year = '2001'
2002	DIM_TIME_DATE.v_time_year = '2002'

In the grid below, expand the Time Hierarchy to view the level details of the time hierarchy. To view the details of the hierarchy, click the hierarchy.



Double-clicking the node displayed under the time hierarchy will open the Details window.

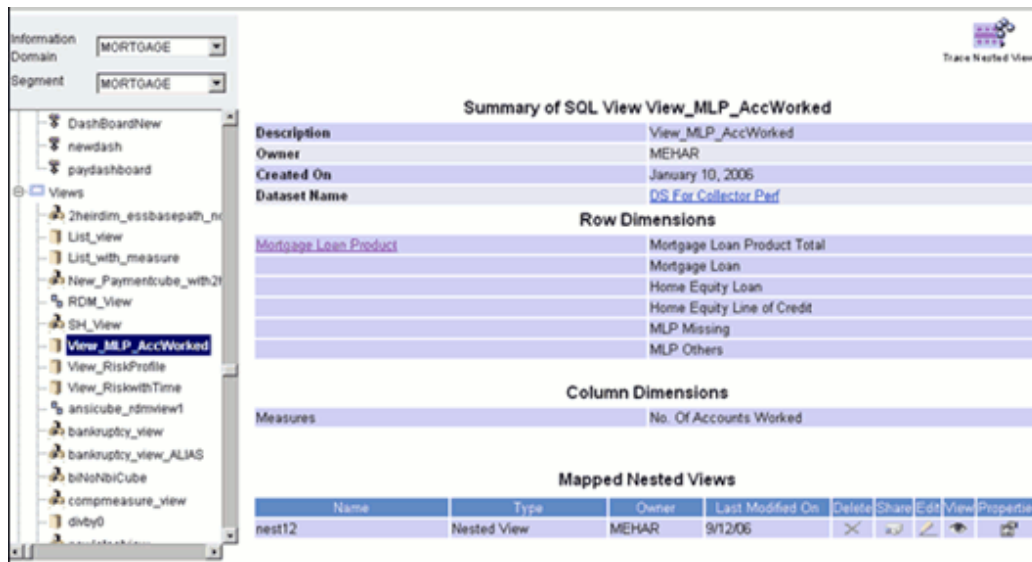
Example

1997 December

The details of the selected node will be displayed in the Details window. Click **Close** to close the window.

Tracing Nested Views

Click **Trace Nested Views** to view the nested view to which the selected view is mapped.



If there are no mapped nested views defined for the View, the Mapped Nested Views displays the message "No definitions found".

If there are mapped nested views defined for the view, the nested view name is displayed under Mapped Nested Views. Details such as the Nested view name, Type, Owner and last Modified date is displayed in the grid. You can also delete, share, edit, view and check the properties of the selected Nested View.

Browsing Key Performance Indicator Details

A Key Performance Indicator (KPI) is a graphical representation of a business value, indicative of a particular aspect of business performance.

To browse KPI details, you have to select the information domain and segment first.

Selecting the Information Domain

To view a KPI, click the **Information Domain** field to open the drop-down list. Select the information domain that contains the KPI/s.

Example

BASELII

Selecting the Segment

Click the **Segment** field to open the list. Select the segment of the selected information domain to which the KPI belongs.

Example

BASELII

Now double-click the + (plus sign) against the **Key Performance Indicator** folder displayed under the Metadata Browser in the left pane. This action will cause the folder to expand displaying the KPIs available for the selected information domain/segment.

Click the KPI displayed in the left pane to view its details.

Summary of Key Performance Indicator KPI1

Description	KPI1
Owner	BASEL
Created On	February 28, 2006

Row Dimensions

Basel II Exposure Type Dimension	Bank
--	------

Column Dimensions

Measure Hierarchy For Exposure Credit Risk Analysis Dimension	Actual Loss
---	-------------

Data as on

Name	[H0053] [2045] [2045Q1] [2045Q1]
Short Description	2045 January
Unique Code	[H0053] [2045] [2045Q1] [2045Q1]

To view the **Row Dimensions** details, click the hyperlink.

Example

Basel II Exposure Type Dimension

Details of Dimension Mortgage Loan Product

Name	DMOR026
Short Description	Mortgage Loan Product
Long Description	Mortgage Loan Product
Dimension Type	REGULAR
Last Modified Date	January 13, 2006 3:36:32 PM
Last Modified by	Imported Metadata

Mapped Hierarchies

[Mortgage Loan Product](#)

By default, the Mapped Hierarchies are displayed with hyperlinks. Click the hierarchy name hyperlink, that is, Mortgage Loan Product to view its details.

You can trace measures, cubes and definitions of the mapped dimension. For more information, see Tracing Measure, page 13-198.

Browsing Dashboard Details

A **Dashboard** is a graphical representation of a business value, indicative of a particular aspect of business performance.

To browse Dashboard details, you have to select the information domain and segment first.

Selecting the Information Domain

To view a Dashboard, click the **Information Domain** field to open the drop-down list. Select the information domain that contains the dashboard/s.

Example

BASELII

Selecting the Segment

Click the **Segment** field to open the drop-down list. Select the segment of the selected information domain to which the dashboard belongs.

Example

BASELII

Now double-click the + (plus sign) against the **Dashboard** folder displayed under the Metadata Browser in the left pane. This action will cause the folder to expand displaying the dashboards available for the selected information domain/segment.

Click Dashboard to view its details.

Example

BizUnitNew

The screenshot shows the Oracle BI Desktop interface. On the left is the Metadata Browser with a tree view containing various models and dashboards. The 'Dashboards' folder is expanded, showing 'BizUnitNew' and 'Compensation value analysis'. The main window displays the 'Summary of Dash Board 'BizUnitNew'' with the following details:

Description	BizUnitNew
Owner	DEMOUSER
Created On	04/10/2002
Cube Name	

Row Dimensions

Time Dimension	Last 4 Members
----------------	----------------

Column Dimensions

Measures Dimension	Base Compensation Value
	Cash Compensation Value

Page Dimensions

Business Unit Dimension	By Business Unit
-------------------------	------------------

Data as on

Name	[TIMEHER] [2000] [2000Quarter2]
Short Description	2000Quarter2
Unique Code	[D_TIME] [TIMEHER] [2000] [2000Quarter2]

To view the **Page Dimensions** details, click the hyperlink.

Example

Business Unit Dimension

The screenshot shows the Oracle BI Desktop interface with the 'Details of Dimension 'Business Unit Dimension'' displayed. The Metadata Browser on the left shows the 'Dashboards' folder expanded to 'BizUnitNew'. The main window displays the following details:

Name	D_BUS_UNIT
Short Description	Business Unit Dimension
Long Description	Business Unit Dimension
Dimension Type	REGULAR
Last Modified Date	Wed Apr 10 03:14:48 GMT+05:30 2002
Last Modified By	MANU

At the top right, there are three icons: 'Trace Measures', 'Trace Cubes', and 'Trace Definitions'. Below the details, there is a section for 'Mapped Hierarchies' with a hyperlink: [By Business Unit](#).

By default, the Mapped Hierarchies are displayed with hyperlinks. Click the hierarchy name hyperlink, that is, By Business Unit to view its details.

You can trace measures, cubes and definitions of the mapped dimension . For more information, see Tracing Measures, page 13-198.

Browsing Nested Views

Nested Views are report formats that contain more than one OLAP and SQL Views.

To browse **Nested Views** you have to select the information domain and segment first.

Selecting the Information Domain

To browse different Nested Views, click the **Information Domain** field to open the drop-down list. Select the information domain that contains the nested view/s.

Example

BASELII

Selecting the Segment

Click the **Segment** field to open the drop-down list. Select the segment of the selected information domain to which the nested view belongs.

Example

BASELII

Now double-click the + (plus sign) against the **Nested Views** folder displayed under the Metadata Browser in the left pane. This action will cause the folder to expand displaying the nested views available for the selected information domain/segment.

Click **Nested View** to view its details.

Example

NestedviewTest



The screenshot shows the Unified Metadata Manager interface. On the left, the 'Information Domain' is set to 'BASELII' and the 'Segment' is also 'BASELII'. The 'Nested Views' folder is expanded, showing 'NestedViewTest' and 'test nested with label'. The main pane displays a table titled 'Summary of Nested View NestedviewTest' with the following data:

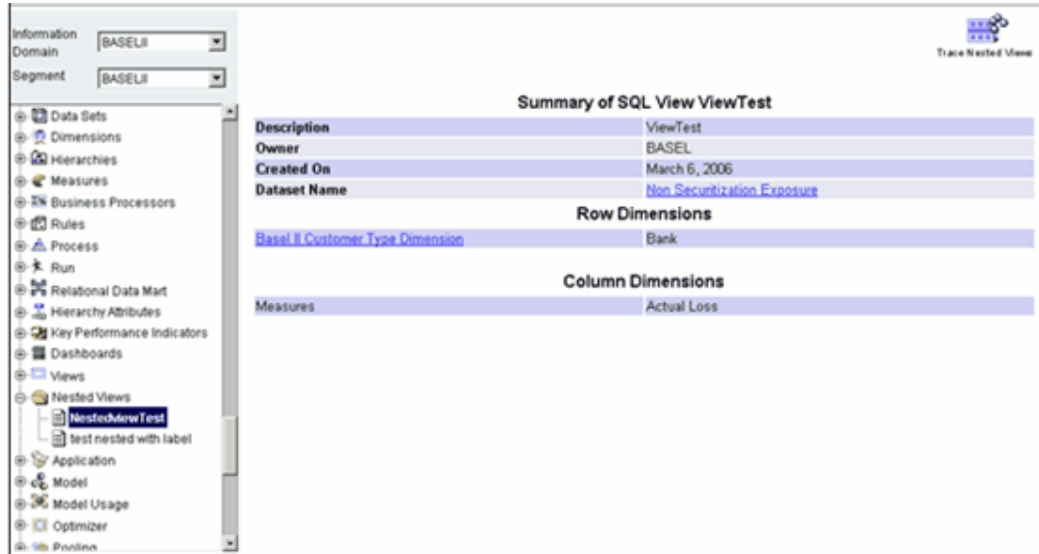
Summary of Nested View NestedviewTest	
Description	NestedviewTest
Owner	BASEL
Created On	March 9, 2006
View Details	ViewTest

The Description, Owner, and Created On date of the selected nested view are displayed.

To view the details of the nested views, click the **View Details** hyperlink.

Example

ViewTest



Click the **Dataset Name** hyperlink to view the details of the dataset that is part of the selected view.

Note: Excel export is not supported for the Nested Views.

Click the **Row Dimensions** or **Mapped Hierarchy Attributes** hyperlink to view its details. For more information, see *Browsing Key Performance Indicators*, page 13-289 and *Browsing Dashboard details*, page 13-291.

Browsing Optimizer

The optimizer defined takes compact listing of the constraint coefficients as input and produces as output, which is also a similar compact listing of optimal solution values and related information.

The optimizer definition enables the user to find the optimal value (maximal or minimal value) of a certain number of variables, given a set of constraints on these variables.

Note: This option will be available if the Modeling Framework module is licensed to the user.

Selecting the Information Domain

To view the Optimizer definition, click the **Information Domain** field to open the list. Select the information domain that contains the optimizer definitions.

Example

Basel II

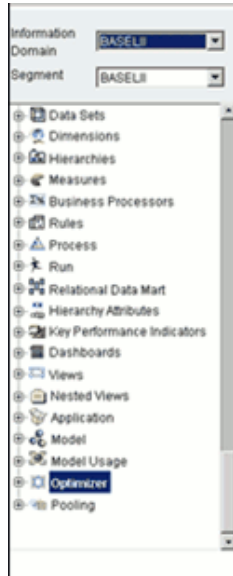
Selecting the Segment

To view the Optimizer definition, click the **Segment** field to open the list. Select the segment that contains the optimizer definitions.

Example

Basel II

Note: The default Segment will be displayed in the Segment drop down list and also the user can select the segment.



Now double-click the + (plus sign) against the **Optimizer** folder displayed under the Metadata Browser in the left pane. This action will cause the folder to expand displaying the optimizer definitions available for the selected information domain.

Click the **Optimizer** definition to view its details.

Example

LGD Application for Auto Loan

Details of Optimizer Opti_With_CyclicBusinessProcessor

Name	Opti_With_CyclicBusinessProcessor
Code	1142586271162
Created By	SHANKAR
Created Date	17-MAR-2006 02:04:31 PM
Last Modified By	NA
Last Modified Date	NA
Comments	NA
DataSet	Exposure Credit Risk Analysis
Operation Type	Minimize

Objective Function X Variable
[PD Rands_LIST](#)

Objective Function Coefficient
[RP083-Business Processor](#)

Constraints

0	Test	Constraint Identifier	PD Rands_LIST
		Constraint Coefficient	RP with more than one place holder_mar
		Operator	<=
		Condition Value	RP with more than one place holder_mar

X Variable Bounds
[RP083-Business Processor](#) > X

Output

Pooling Required	No
Auto Pooling	NA
Pooling Basis	NA
Output	CCF Percent Measure

The Name, Code, Created By, Created Date, Last Modified by, Last Modified Date, Comments, Dataset Selected, and Operation type details of the selected optimizer definition are displayed.

Click the **Objective Function X Variable** hyperlink to view the details of the hierarchies selected as the objective function variable defined for the optimizer definition.

Click the **Objective Function Co-efficient** hyperlink to view the details of the business processors selected as the objective function co-efficient defined for the optimizer definition.

The constraints defined for the optimizer definition will be displayed in the Constraints pane. Click the hyperlinks provided to view the associated details.

The X variable bounds defined for the optimizer definition will be displayed in the X Variable Bounds pane. Click the hyperlink provided to view the associated details.

The output variables defined for the optimizer definition will be displayed in the Output pane. Click the hyperlink provided to view the associated details.

Browsing Pooling

The Pooling framework enables the user to configure the intended data attributes for which the pooling is needed to be performed and eventually break down to smaller sets for ease of processing. The Pooling definitions can be added as process members in Rules framework.

Note: • This option will be available if the Modeling Framework module is licensed to the user.

Selecting the Information Domain

To view the pooling definition, click the **Information Domain** field to open the drop-down list. Select the information domain that contains the pool definitions.

Example

Basel II

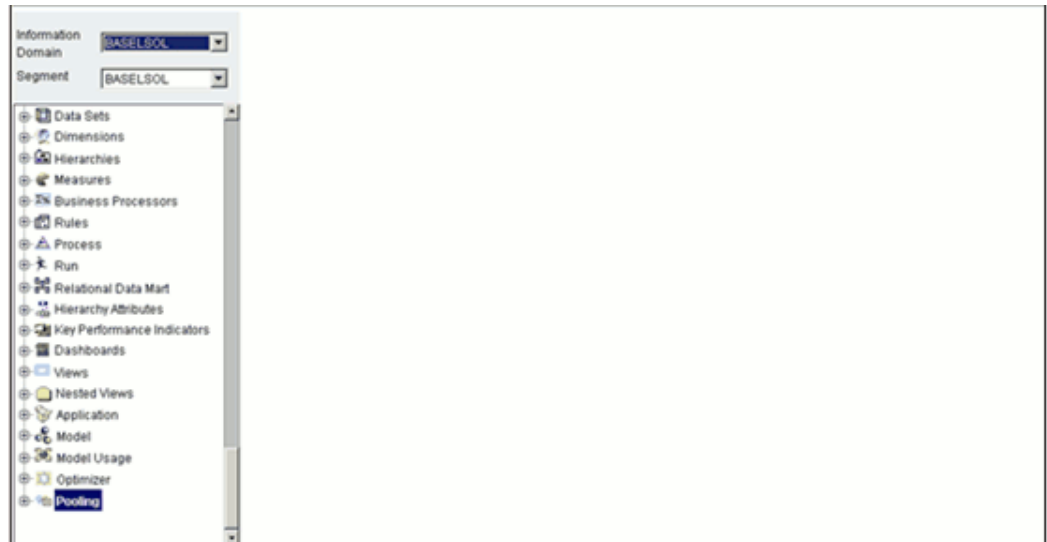
Selecting the Segment

To view the Pooling definition, click the **Segment** field to open the drop-down list. Select the segment that contains the pooling definitions.

Example

Basel II

Note: The default Segment will be displayed in the Segment drop down list and also the user can select the segment.



Now double-click the + (plus sign) against the **Pooling** folder displayed under the Metadata Browser in the left pane. This action will cause the folder to expand displaying the pooling definitions available for the selected information domain.

Click the **Pooling** definition to view its details.

Example

UM Pooling



The Name, Code, Created By, Created Date, Last Modified by, Last Modified Date, Comments and Dataset Selected details of the selected pooling definition are displayed.

Click the **Dataset** hyperlink to view the details of the dataset selected for the pooling definition.



Click the **Pooling Basis** hyperlink to view the details of the hierarchy details selected as pooling basis defined for the selected pool definition.

Click the **Output** hyperlink to view the details of the measure details selected as output for the selected pool definition.

Browsing Modeling Framework

The **Modeling Framework** environment helps in performing statistical analysis using historical data and can be used for prediction (using the pre-defined models) and also for validation of the existing models.

Note: This option will be available if the Modeling Framework module is licensed to the user.

Selecting the Information Domain

To view the pooling definition, click the **Information Domain** field to open the drop-down list. Select the information domain that contains the Modeling Framework definitions.

Selecting the Segment

To view the Pooling definition, click the **Segment** field to open the list. Select the segment that contains the Modeling Framework definitions.

Browsing Model Objectives

Click the + (plus sign) against the Modeling Framework folder displayed under the Metadata Browser in the left pane. This action will cause the folder to expand displaying the following options:

- Model Objectives
- Models
- Variables

Select the + sign adjacent to Model Objectives folder. The folder will expand displaying the Model Objectives definitions available for the selected information domain.

Select a Model Objective definition to view its details.

Name	ARIMA
Description	ARIMA model
Mapped Models	
Model Name	Model Version
ARIMA	0
ARIMA_1	1
ARIMA_1	2
arima_18/12	0
arima_18/12	1
ARIMA_Cashflow	0
ARIMA_HDEC	0
ARIMA_HDEC	1
ARIMA_HDEC	2
ARIMA_HDEC	3
ARIMA_HDEC	4
bb_01Aer_Arma_ida	1
bb_21Arma	1
bb_CFW_Arma	0
Model_ARIMA	0
raj_arima_21	0
raj_arimafilters_21	0
raj_arimafilters_21	1
raj_arima_21	0
re62	0
re62	1
ReQ_ARIMA_2	1
Stress_ARIMA_1	0

Model Objective Details such as Name and Descriptions are displayed along with mapped models. The models to which the selected model objective is mapped will be displayed under Mapped Models. Click on the **Mapped Model** hyperlink if any to view the details of the Model.

Browsing Models

The Model is the instance of a Modelling Framework defined by the user. A Model is designed to suit the needs of individuals and departments.

Note: This option will be available if the Modeling Framework module is licensed to the user.

Selecting the Information Domain

Click the **Information Domain** field to open the drop-down list. Select the information domain that contains the model/s.

Example

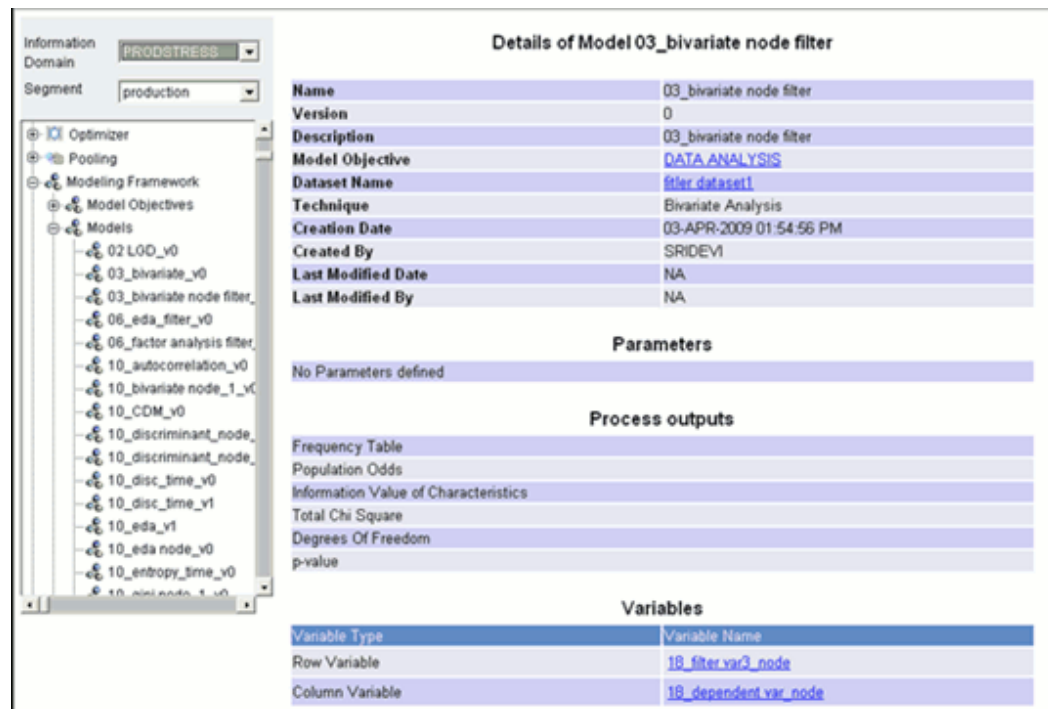
PRODSTRESS

Selecting the Segment

Click the **Segment** field to open the drop-down list. Select the segment of the selected information domain to which the source model/s belongs.

Note: The default Segment will be displayed in the Segment drop down list and also the user can select the segment.

Now double-click the + (plus sign) against the **Model** folder displayed under the **Metadata Browser** in the left pane. This action will cause the folder to expand displaying the list of models. Click a model to view its details.



The Model details window displays details such as Name, Version, Description, Model Objective, Dataset Name, Technique, Creation Date, Created By, Last Modified By, Last Modified Date, Parameters, Process Outputs and Variables. To further navigate the details of the Model, click the hyperlinks provided.

Click the hyperlink provided to view the respective mapping information.

Each model will have a set of parameters and output specification. These are displayed against Outputs and Parameters.

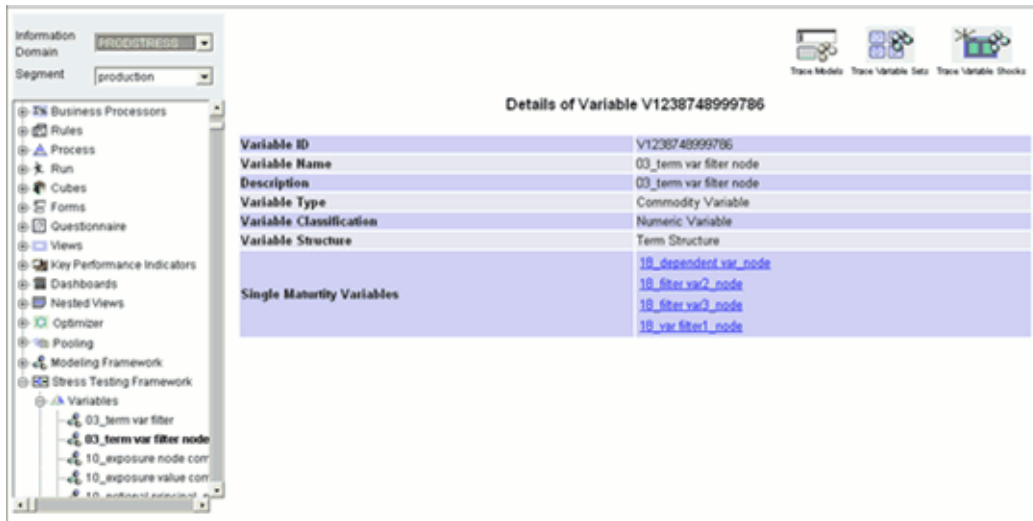
Browsing Variables

Click the + (plus sign) against the **Modeling Framework** folder displayed under the **Metadata Browser** in the left pane. This action will cause the folder to expand displaying the following options:

- Model Objectives
- Models
- Variables

Select the + sign adjacent to Variables folder. The folder will expand displaying the Variable definitions available for the selected information domain.

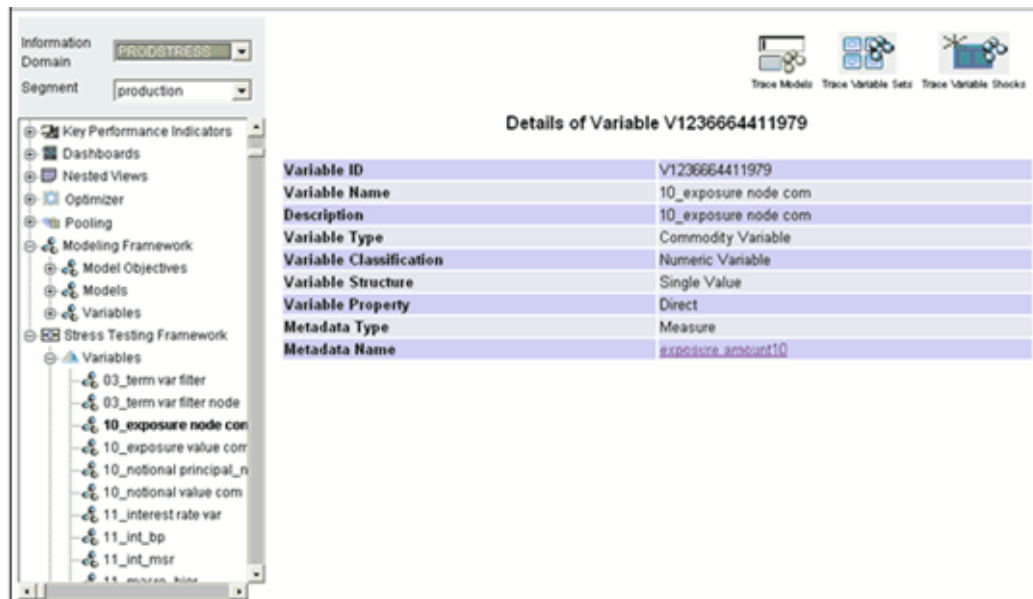
Select a Variable definition to view its details.



Details such as the Variable ID, Name, Description, Variable Type, Variable Classification, Structure and Single Maturity Variables are displayed in case the Term Structure Variable is selected.

Click on the hyperlinks provided to Navigate further.

If the Single Value Variable is selected than the below window is displayed.



Details such as the Variable ID, Name, Description, Variable Type, Variable Classification, Variable Structure, Variable Property, Metadata Type and Metadata Name are displayed in case the Single Value Variable is selected.

Metadata Name will be displayed as hyperlink and corresponding details can be

viewed by clicking on it.

Tracing Models

Click the Trace Models button to view the Models which are mapped to the selected Variable.

The screenshot displays the 'Details of Variable V1192105809755' page. On the left is a navigation tree with categories like Key Performance Indicators, Dashboards, Nested Views, Application, Model, Model Usage, Optimizer, Pooling, Modeling Framework, Model Objectives, Models, and Variables. The 'Variables' section is expanded, showing a list of variables including 'var3'. The top right of the main area has three buttons: 'Trace Models', 'Trace Variable Sets', and 'Trace Variable Shocks'. The main content area contains a metadata table and a 'Mapped Models' table.

Variable ID	V1192105809755
Variable Name	var3
Description	var3
Variable Type	Direct
Metadata Type	Measure
Metadata Name	measure.st

Mapped Models	
Model Name	Model Version
fact	0
fact1	1
fact4	0
fact1	0
fact4	1
gini	0
gini	0
entropy	0
entropy	0
entropy2	0
entropy2	0
cred	0

Details such as the Model Name and Model Version are displayed. To further navigate the details of the Independent Model, click the hyperlinks provided.

If no Models are mapped, a message will be displayed stating no models are found.

Tracing Variable Sets

Click the **Tracing Variable Sets** button to view the Variable Set which is mapped to the selected Variable.

The screenshot displays the Oracle Financial Services Analytical Applications Infrastructure user interface. On the left is a navigation tree with categories like Questionnaire, Views, Key Performance Indicators, Dashboards, Nested Views, Optimizer, Pooling, Modeling Framework, Model Objectives, Models, Variables, and Stress Testing Framework. The main area shows 'Details of Variable V1236665121070' with the following table:

Details of Variable V1236665121070	
Variable ID	V1236665121070
Variable Name	10_exposure value com
Description	10_exposure value com
Variable Type	Commodity Variable
Variable Classification	Numeric Variable
Variable Structure	Single Value
Variable Property	Direct
Metadata Type	Measure
Metadata Name	exposure amount10

Below this is a table titled 'Mapped Variable Sets':

Mapped Variable Sets	
Variable Set Name	Variable Set Code
31_var_sst	VS1238600113761

At the top right, there are three buttons: 'Trace Models', 'Trace Variable Sets', and 'Trace Variable Shocks'.

Details such as the Variable Set Name and Variable Set code are displayed. The Variable Set Name will be displayed as hyperlink and corresponding details can be viewed by clicking on it.

If no Variable Sets are mapped, a message will be displayed stating "No Variable Sets found".

Tracing Variable Shocks

Click the **Tracing Variable Shocks** button to view the Variable Shocks which are mapped to the selected Variable.



Details such as the Variable Shock Name and Variable Shock code are displayed. The Variable Shock Name will be displayed as hyperlink and corresponding details can be viewed by clicking on it.

If no Variable Sets are mapped, a message will be displayed stating "No Variable Shock found".

Browsing Stress Framework

Selecting the Information Domain

To view the Variable Definitions, click the **Information Domain** field to open the drop-down list. Select the information domain that contains the Stress Framework definitions.

Selecting the Segment

To view the Variable Definition, click the **Segment** field to open the drop-down list. Select the segment that contains the Stress Framework definitions.

Browsing Variables

Click the + (plus sign) against the **Stress Framework** folder displayed under the Metadata Browser in the left pane. This action will cause the folder to expand displaying the following options:

- Variables
- Variable Sets
- Variable Shocks

- Rule Shocks
- Scenario
- Stress Definition

Select the + sign adjacent to Variables folder. The folder will expand displaying the Variable definitions available for the selected information domain.

Select a Variable definition to view its details.



Details such as the Variable ID, Name, Description, Variable Type, Variable Classification, Structure and Single Maturity Variables are displayed in case the Term Structure Variable is selected.

Click on the hyperlinks provided to Navigate further.

If the Single Value Variable is selected, then the following window is displayed.

The screenshot shows the Unified Metadata Manager interface. On the left is a navigation tree with categories like Key Performance Indicators, Dashboards, Nested Views, Optimizer, Pooling, Modeling Framework, and Stress Testing Framework. The 'Modeling Framework' section is expanded, showing 'Variables' with a list of items including '10_exposure node com'. The top bar shows 'Domain: PRODSTRESS' and 'Segment: production'. On the right, there are three icons: 'Trace Models', 'Trace Variable Sets', and 'Trace Variable Shocks'. Below these icons is the title 'Details of Variable V1236664411979' and a table of metadata.

Details of Variable V1236664411979	
Variable ID	V1236664411979
Variable Name	10_exposure node com
Description	10_exposure node com
Variable Type	Commodity Variable
Variable Classification	Numeric Variable
Variable Structure	Single Value
Variable Property	Direct
Metadata Type	Measure
Metadata Name	exposure_amount10

Details such as the Variable ID, Name, Description, Variable Type, Variable Classification, Variable Structure, Variable Property, Metadata Type and Metadata Name are displayed in case the Single Value Variable is selected.

Metadata Name will be displayed as hyperlink and corresponding details can be viewed by clicking on it.

Tracing Models

Click the **Trace Models** button to view the Models which are mapped to the selected Variable.

Details of Variable V123664411979

Variable ID	V123664411979
Variable Name	10_exposure node com
Description	10_exposure node com
Variable Type	Commodity Variable
Variable Classification	Numeric Variable
Variable Structure	Single Value
Variable Property	Direct
Metadata Type	Measure
Metadata Name	exposure amount10

Mapped Models

Model Name	Model Version
11_random.num.for.gamma.dist.node	0
11_linear_regression.node	0
11_linear.ML.node	0
10_hier.cluster.node.absol	0
10_kmeans.node	0
11_linear.BEML.node	0
10_sda	1
10_hier.clust.abs	0
10_kmeans.boundary.node	0
10_non_distfitng	0
11_factor.analysis.node	0
10_linear.reg.node	0
11_arima.node	0
10_non_distfitng	1

Details such as the Model Name and Model Version are displayed. To further navigate the details of the Independent Model, click the hyperlinks provided.

If no Models are mapped, a message will be displayed stating no models are found.

Tracing Variable Sets

Click the **Tracing Variable Sets** button to view the Variable Set which is mapped to the selected Variable.

Details of Variable V1233223081979

Variable ID	V1233223081979
Variable Name	11_interest rate var
Description	interest rate variable
Variable Type	Interest Rate Variable
Variable Classification	Numeric Variable
Variable Structure	Single Value
Variable Property	Direct
Metadata Type	Measure
Metadata Name	MSR - Add On Percent

Mapped Variable Sets

Variable Set Name	Variable Set Code
11_interest varset	VS1233223342181

Details such as the Variable Set Name and Variable Set code are displayed. The Variable Set Name will be displayed as hyperlink and corresponding details can be viewed by clicking on it.

If no Variable Sets are mapped, a message will be displayed stating "No Variable Sets

found".

Tracing Variable Shocks

Click the **Tracing Variable Shocks** button to view the Variable Shocks which are mapped to the selected Variable.

The screenshot displays the Unified Metadata Manager interface. On the left, a metadata browser shows a tree structure under 'Stress Testing Framework' > 'Variables'. The main pane is titled 'Details of Variable V1238748999786'. It contains a table with the following data:

Property	Value
Variable ID	V1238748999786
Variable Name	03_term var filter node
Description	03_term var filter node
Variable Type	Commodity Variable
Variable Classification	Numeric Variable
Variable Structure	Term Structure

Below this table, a section titled 'Single Maturity Variables' lists four hyperlinks: [10_dependent var_node](#), [10_filter var2_node](#), [10_filter var3_node](#), and [10_var filter1_node](#).

At the bottom, a table titled 'Mapped Variable Shocks' shows one entry:

Variable Shock Name	Variable Shock Code
03_term_shk_abs_para_inst	1238750668379

Details such as the Variable Shock Name and Variable Shock code are displayed. The Variable Shock Name will be displayed as hyperlink and corresponding details can be viewed by clicking on it.

If no Variable Sets are mapped, a message will be displayed stating "No Variable Shock found".

Browsing Variable Sets

Click the + (plus sign) against the Stress Framework folder displayed under the Metadata Browser in the left pane. This action will cause the folder to expand displaying the following options:

- Variables
- Variable Sets
- Variable Shocks
- Rule Shocks
- Scenario
- Stress Definition

Select the + sign adjacent to Variable Sets folder. The folder will expand displaying the Variable Sets available for the selected information domain.

Select a Variable Set to view its details.



Details such as the Variable Set ID, Name, Description and Variables are displayed. Variables will be displayed as hyperlink and corresponding details can be viewed by clicking on it.

Tracing Scenarios

Click the **Tracing Scenarios** button to view the Scenario which is mapped to the selected Variable Set.



Details such as Scenario name and Code are displayed. Click on the Scenario Name to view further details of the Scenario. To further navigate to the details of the Stress, Click on the hyperlinks provided.

Browsing Variable Shocks

Click the + (plus sign) against the **Stress Framework** folder displayed under the Metadata Browser in the left pane. This action will cause the folder to expand displaying the following options:

- Variables
- Variable Sets
- Variable Shocks
- Rule Shocks
- Scenario
- Stress Definition

Select the + sign adjacent to Variable Shock folder. The folder will expand displaying the Variable shocks available for the selected information domain.

Select a Variable Shock to view its details.

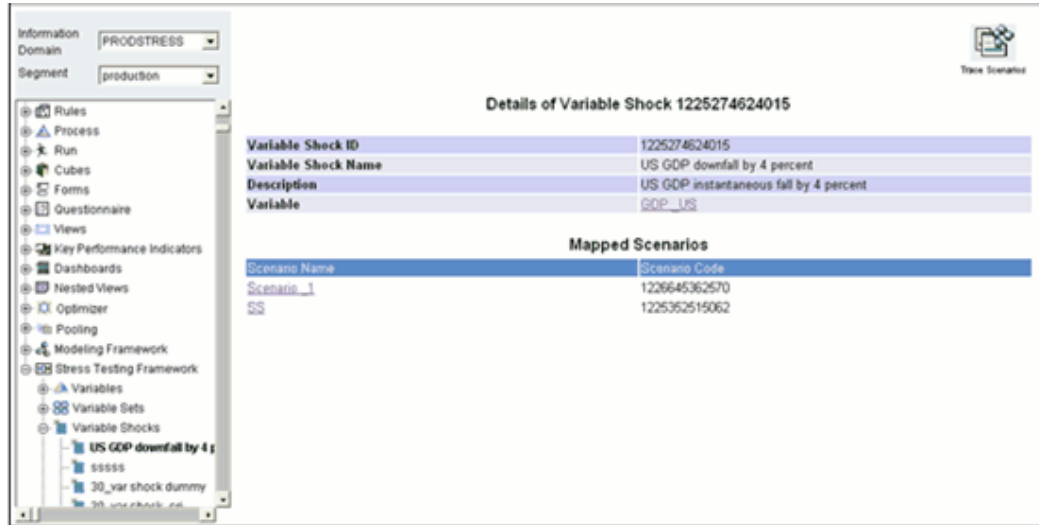
The screenshot shows the Unified Metadata Manager interface. On the left, the 'Information Domain' is set to 'PRODUCTION' and the 'Segment' is 'production'. The left pane shows a tree view of the metadata browser, with the 'Stress Framework' folder expanded to show 'Variable Shocks'. The 'Variable Shocks' folder is further expanded to show 'US GDP downfall by 4 p', 'sssss', '30_var shock dummy', and '30_var shock.c'. The main pane displays the 'Details of Variable Shock 1225274624015' in a table format.

Details of Variable Shock 1225274624015	
Variable Shock ID	1225274624015
Variable Shock Name	US GDP downfall by 4 percent
Description	US GDP instantaneous fall by 4 percent
Variable	GDP_US

Details such as Variable Shock ID, Name, Description and Variable are displayed. Click on the Variable to view its details.

Tracing Scenarios

Click the **Tracing Scenarios** button to view the Scenario which is mapped to the selected Variable Set.



The details regarding the Scenario Name and ID to which the Variable Shock has been mapped to, is displayed.

To navigate further click on the Independent Scenario, Click the hyperlinks provided.

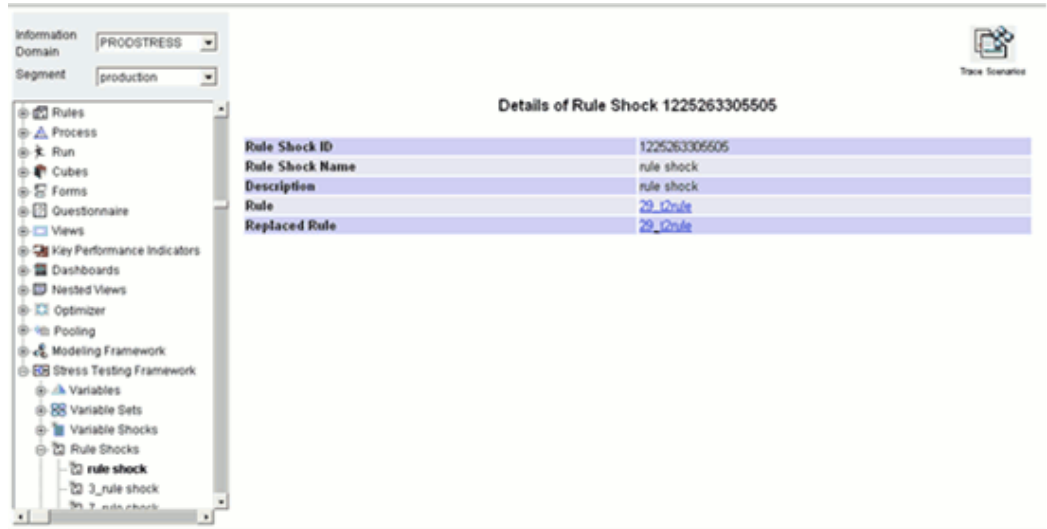
Browsing Rule Shocks

Click the + (plus sign) against the **Stress Framework** folder displayed under the Metadata Browser in the left pane. This action will cause the folder to expand displaying the following options:

- Variables
- Variable Sets
- Variable Shocks
- Rule Shocks
- Scenario
- Stress Definition

Select the + sign adjacent to Rule Shock folder. The folder will expand displaying the Rule Shocks available for the selected information domain.

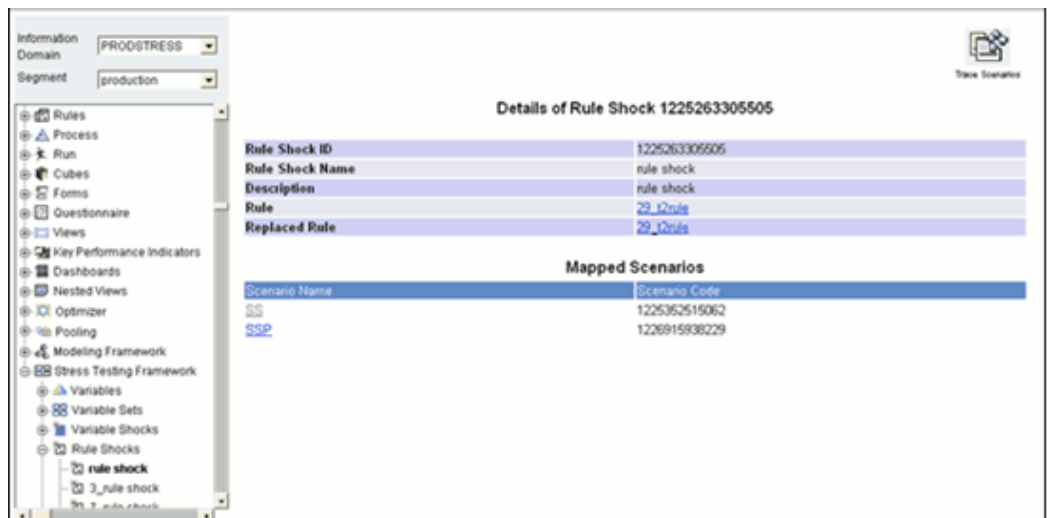
Select a Rule Shock to view its details.



Details such as Rule Shock ID, Name, Description, Rule and Replaced Rule are displayed. Rule and Replaced Rule will be displayed as hyperlink and corresponding details can be viewed by clicking on it.

Tracing Scenarios

Click the **Tracing Scenarios** button to view the Scenario which is mapped to the selected Rule Shock.



The details regarding the Scenario Name and ID to which the Rule Shock has been mapped to, is displayed.

To navigate further click on the Independent Scenario, Click the hyperlinks provided.

Browsing Scenarios

Click the + (plus sign) against the **Stress Framework** folder displayed under the

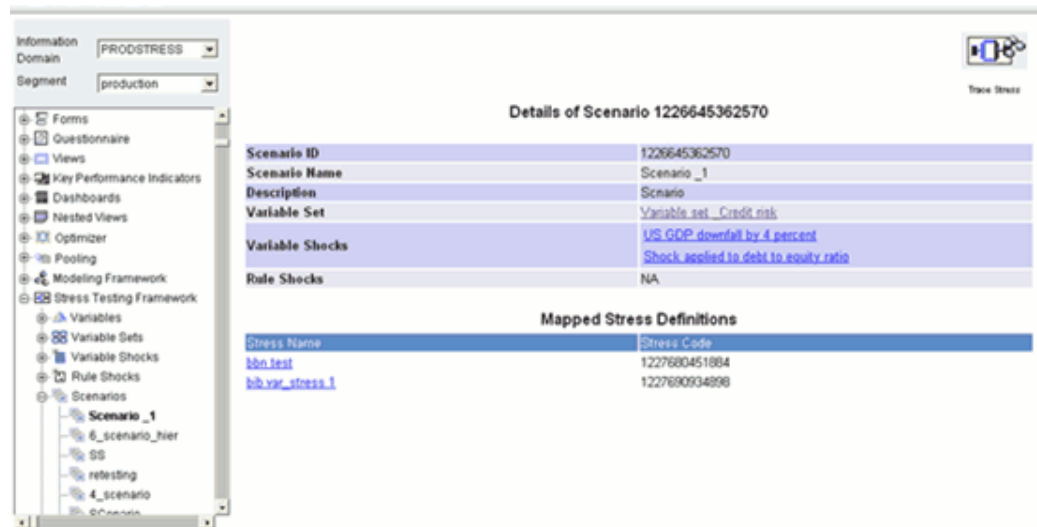
Metadata Browser in the left pane. Select the + sign adjacent to Scenarios folder. The folder will expand displaying the Scenarios available for the selected information domain.



Details such as Scenario ID, Name, Description, Variable Set, Variable Shocks and Rule Shocks are displayed. Click on Variable Set and Variable Shocks hyperlink to view the corresponding details.

Tracing Stress

Click the **Tracing Stress** button to view the Stress, which is mapped to the selected Scenario.



Details such as the Stress Name and Stress Code are displayed. To further navigate to the details of the Stress Details mapped with the selected Scenario, Click on the hyperlinks provided.

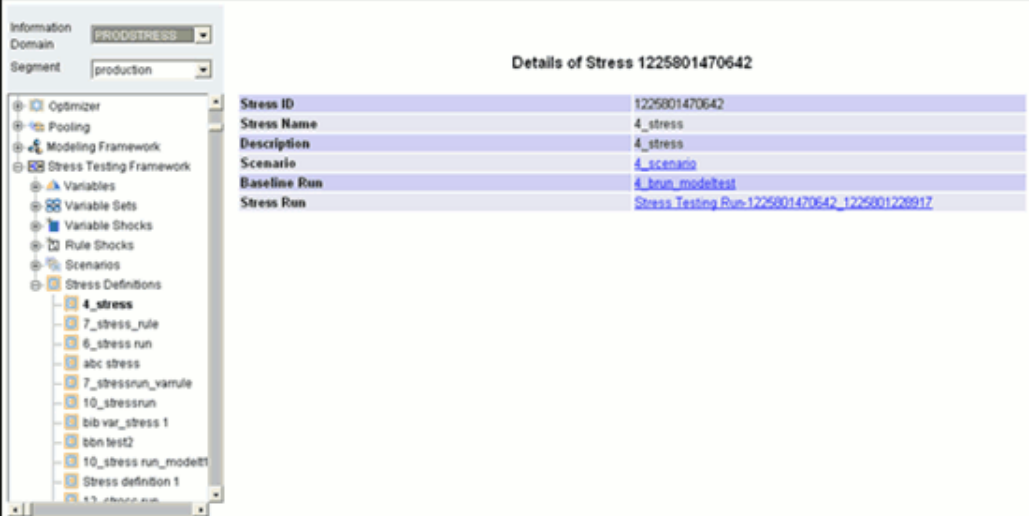
Browsing Stress Definitions

Click the + (plus sign) against the **Stress Framework** folder displayed under the Metadata Browser in the left pane. This action will cause the folder to expand displaying the following options:

- Variables
- Variable Sets
- Variable Shocks
- Rule Shocks
- Scenario
- Stress Definition

Select the + sign adjacent to Stress Definition folder. The folder will expand displaying the Stress Definitions available for the selected information domain.

Select a Stress Definition to view its details.



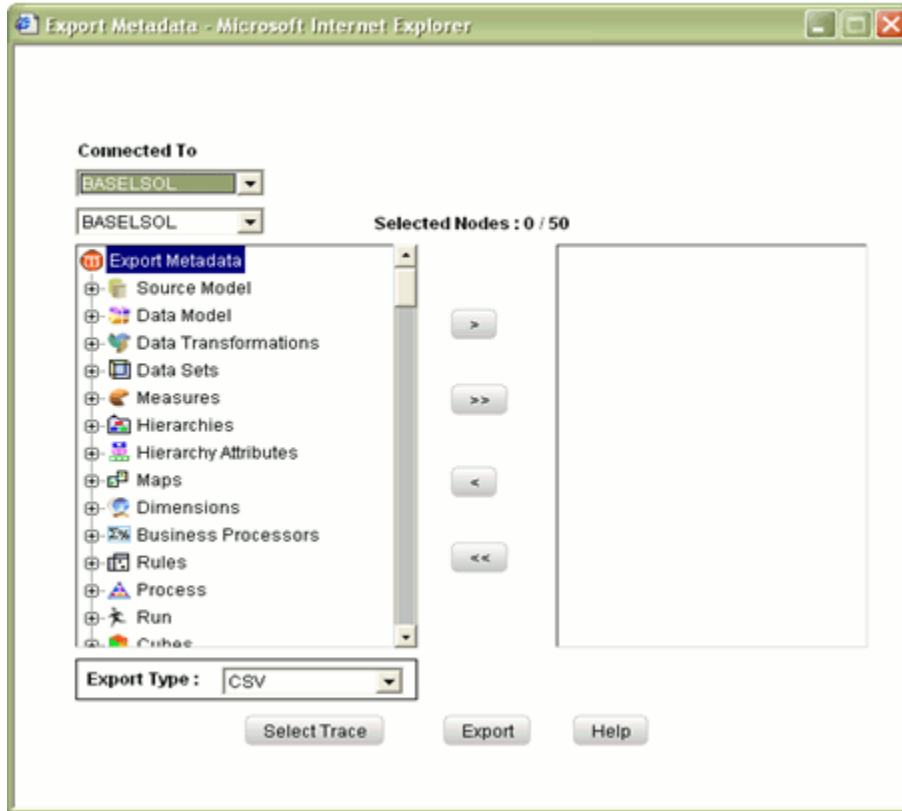
The screenshot shows the Metadata Browser interface. On the left, the 'Stress Framework' folder is expanded to show 'Stress Definitions'. The 'Stress Definitions' folder is selected, and its details are displayed in the right pane. The details pane shows the following information:

Details of Stress 1225801470642	
Stress ID	1225801470642
Stress Name	4_stress
Description	4_stress
Scenario	4_scenario
Baseline Run	4_brun_modeltest
Stress Run	Stress_Testing_Run-1225801470642_1225801228917

Details such as Stress ID, Name, Description, Scenario, Baseline Run and Stress Run are displayed. To view the corresponding details click on the hyperlinks provided.

Exporting Metadata

To export Metadata definitions, click **Export** in the top pane to open the the**Export Metadata** window.



To export metadata, you need to select the information domain and segment from the **Connected To** lists. First, select the information domain and then the segment from which you want to export the metadata.

Example

Connected To

INSIGHT – information domain

ALL - segment

Selecting Metadata

In order to export metadata, you need to select the same. The right pane of the **Export Metadata** window has the list of metadata definitions that you can select.

Double-click the + (plus sign) against the metadata folder displayed in the left pane to under the Export Metadata in the left pane. This action will cause the folder to expand displaying the definitions available for the selected information domain/segment.

Select the metadata that you want to export and click



to the right pane.

Example

Source Model – F2TAppln

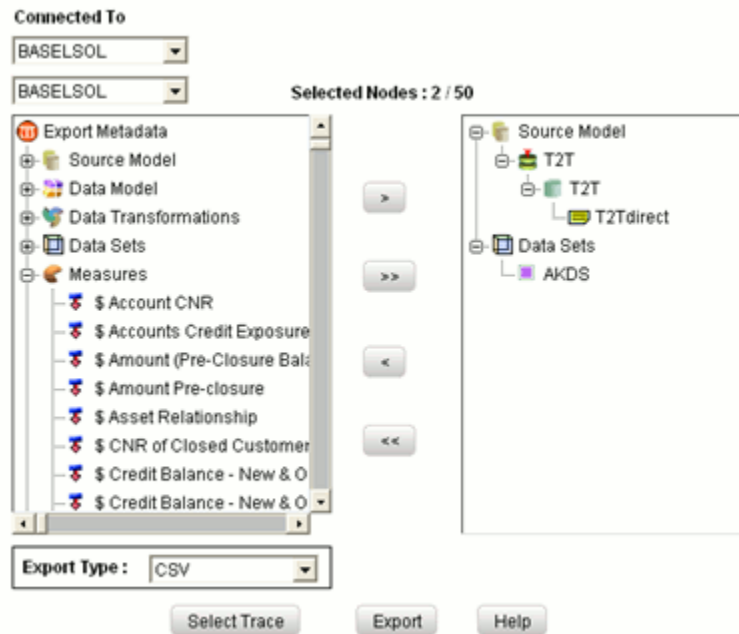
Datawarehouse Model – Account Dimension

Measures – Acct Cap Amount

Business Processors – Business Processor1

Rules – Residual Maturity

Process – Credit Residual Maturity



Click



to select all the metadata definitions listed under the *Export Metadata* pane. To remove a metadata from the right (selected metadata) pane, select the metadata that you want to deselect and click



To remove all the selected metadata, click



Next, choose the **Export Type** from the list. You can export the selected metadata to three types of format – PDF, HTML or CSV.

Note:

- Maximum of 50 items (PDF, HTML or CSV) can be exported using the export option and also the user has the option to define the parameter for export to wanted levels.
- All the metadata defined in the selected information domain and segment will be displayed in the left pane.

Click **Export**. A message is displayed "Successfully Exported" and the exported PDF file is displayed in a separate window.

Tracing Metadata Definitions

Besides choosing metadata definitions, you can also choose the trace definitions of the selected metadata. To select trace definitions, double-click the + (plus sign) against the metadata folder displayed in the left pane to under the Export Metadata in the left pane. This action will cause the folder to expand displaying the definitions available for the selected information domain/segment.

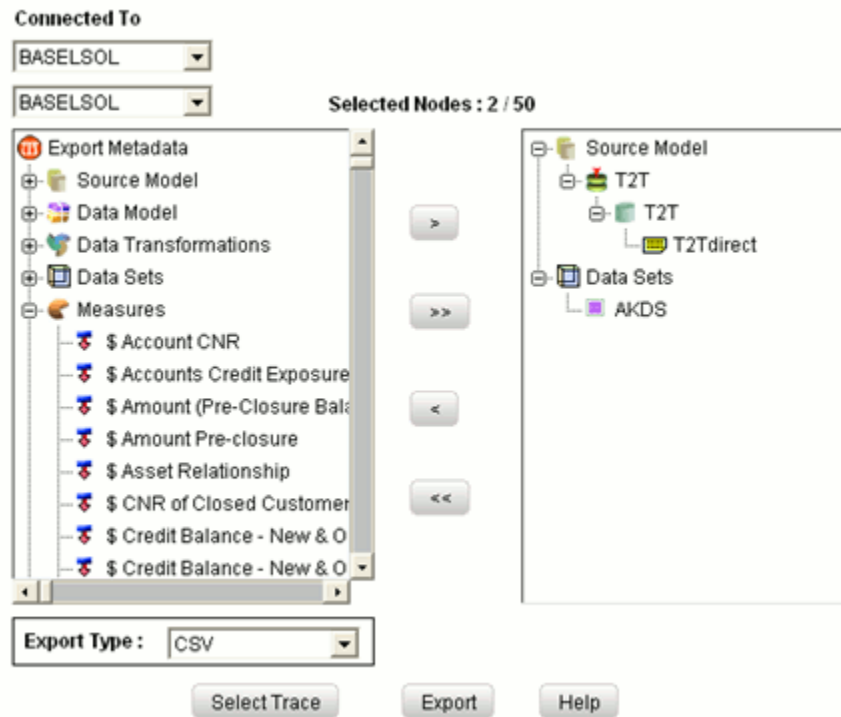
Select the metadata that you want to export along with its trace definition and click



to the right pane.

Example

UMSLNo2 from Process, Calculation of Current Exposure from Business Processor and Credit Residual Maturity from Run



To remove a metadata from the right (selected metadata) pane, select the metadata that you want to deselect and click



Note: Trace Information cannot be selected for different type of Metadata Objects. However, you can choose more than one metadata objects of the same type and select the trace information for the same.

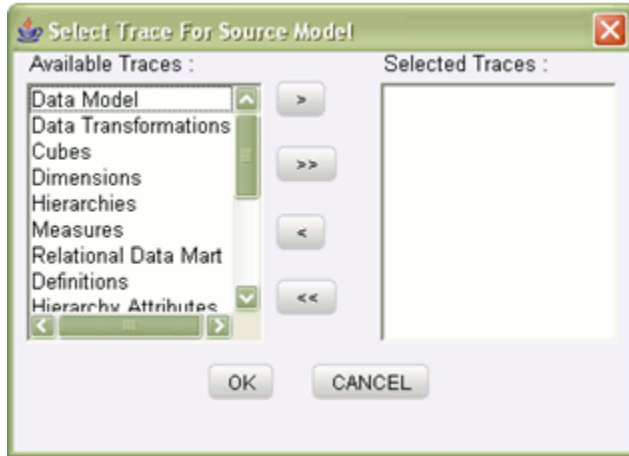
Now click **Select Trace** to open the **Select Trace for < Metadata Object type >** pop-up. The Metadata Object type depends on what you have chosen. That is, Source Model.

Next, select the trace information that you want from the **Available Traces** pane and click



Example

Definitions, Data Transformations, Cubes and Relational Data Mart



To select all the traces listed under the Available Traces pane, click



To remove trace information from the Selected Traces pane, select the trace that you want to deselect and click



To remove all the selected traces, click



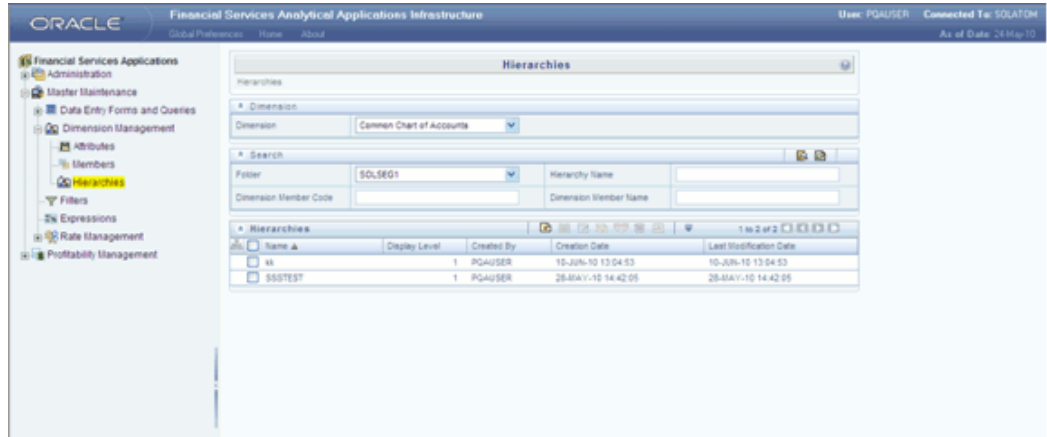
Click **OK** to save the selected traces or click **Cancel** to exit the pop-up without saving the selected traces.

Now click **Export** in the Export Metadata window. A message is displayed "Successfully Exported" and the exported PDF file is displayed in a separate window.

If you do not want to export metadata, click **Cancel** in the **Export Metadata** window.

Searching Metadata

To search for Tables, Measures, Dimensions, Hierarchies, Cubes, Marts, Business Processors, Rules, Process, Run, Views, Dashboards, Key Performance Indicators and Nested Views and All, click **Search** to open the **MetaSearch** pop-up.



The MetaSearch pop-up has two tabs – **Search** and **Advanced Search**. By default, the Search tab is selected.

Note: Global Search option does not recognize Alias table name and the corresponding table properties.

Entering a Search Keyword

Enter an alphabet or keyword in the **Search for** field.

Example

Enter the letter C

OR

Enter a keyword **Customer**

Selecting the Information Domain

Click the **Information Domain** field to open the list. The list contains the information domains created. Select the information domain on which you want to perform the search.

Example

CRRDOM

Selecting the Segment

An Information Domain can have various segments or sub-sections of information. Click the **Segment** field to open the list. The list contains the segments that are part of the selected information domains. The search will be performed on the information domain and segment selected.

Example

All

Selecting the Definition

Click **In** field to open the list. It lists out the types of definition – Tables, Measures,

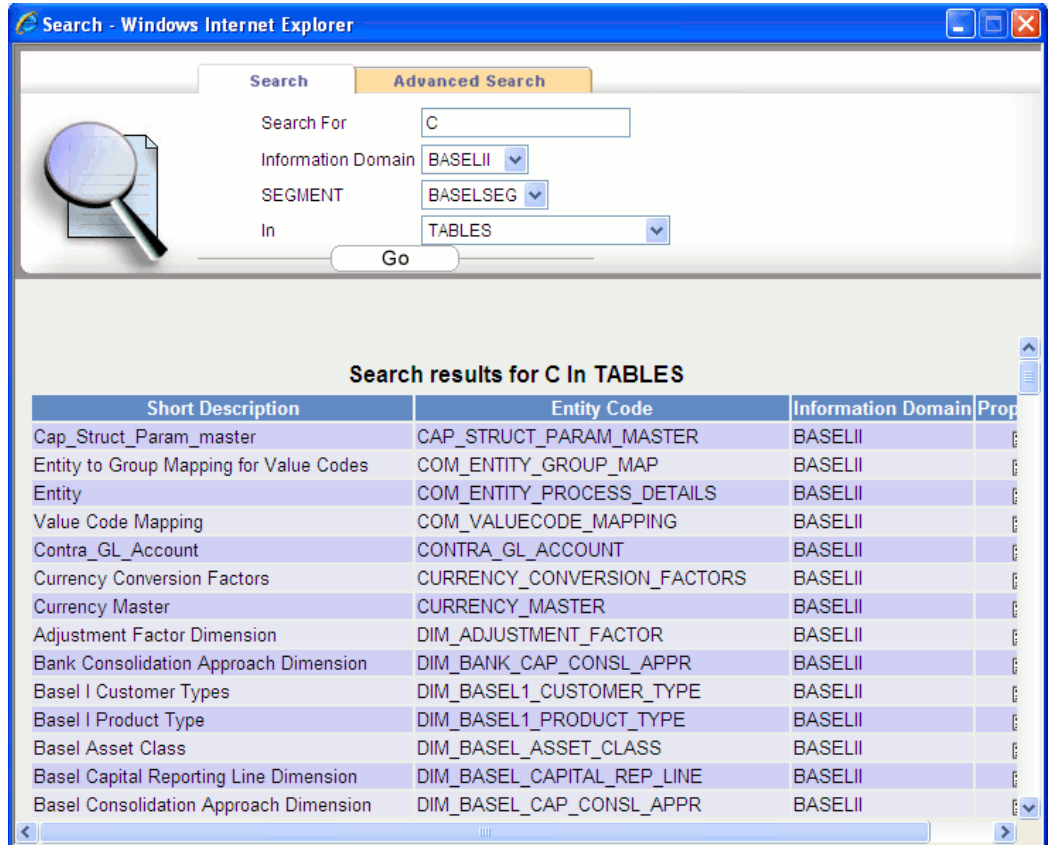
Dimensions, Hierarchies, Cubes, Marts, Business Processors, Rules, Process, Run, Optimizer, Pooling, Maps, Views, Dashboards, KPIs, Model Objectives, Models, Variables, Variable Set, Variables Set, Variable Shocks, Rule Shocks, Scenario Definition, Stress Definitions, Nested Views and ALL. Select the type of definition to search the keyword.

The screenshot shows a search interface with two main sections. The top section is titled 'Dimension' and contains a dropdown menu with the text 'Dimension' and a downward arrow. Below this is a search input field with the text 'Common Chart of Accounts' and a downward arrow. The bottom section is titled 'Search' and contains a table with the following rows:

Code	
	Common Chart of Accounts
	Financial Element
	General Ledger Account
	Organizational Unit
	Product

Viewing Search Results

On having selected the options for the search, click **Go**. This action will maximize the Search pop-up based on the keyword or alphabet.



The search results corresponding to the given key word is displayed in a table with **Short Description, Code, Information Domain, Properties** and **Select** columns.

If there is no matching keywords found when you search, it will return you blank results stating that the specific keyword was not found.

Viewing Properties

To view the Properties of the measure containing the keyword, click **properties** icon against the search result.

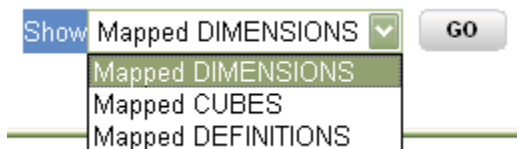
The screen refreshes to display the properties of the selected measure. You can trace the source, transformation, dimensions and measures of the measure entity and attribute by clicking the link

For more information, see Browsing Measures, page 13-225, Browsing Cubes, page 13-274 and Browsing KPI's, page 13-289)

Click **<Back** to go the previous screen.

Viewing Mapped Definitions

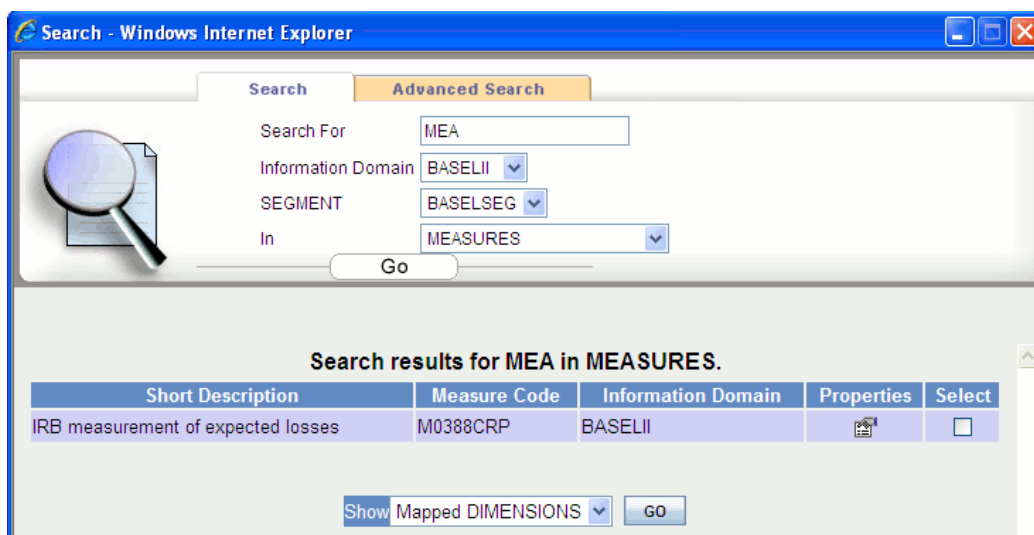
To view the different definitions that the measure is mapped to, select the option against the search result. Next, click **Show** to open the list.



You can select Mapped DIMENSIONS, Mapped CUBES or Mapped DEFINITIONS. Mapped definitions display the measure mapping across all definitions. That is, dimensions, cubes, key performance indicators and dashboards. Select the definition and click **GO**.

Example

MAPPED DIMENSIONS



The mapped dimensions are displayed in a table with the Short Description, Information Domain, Properties and Select columns (Repeat the steps mentioned under Viewing Properties and Viewing Mapped Definitions).

If there are no mapped dimensions, it will return you blank results stating that the specific mapped dimensions were not found.

Performing an Advanced Search

The **Advanced Search** option allows you to search a node in a hierarchy and across hierarchies. To perform an advanced search, select the **Advanced Search** tab.

Entering a Search keyword

Enter an alphabet or keyword in the **Search for** field.

Example

Enter the letter C

Selecting the Information Domain

Click the **Information Domain** field to open the list. The list contains the information domains created. Select the information domain on which you want to perform the search.

Example

INSIGHT

Selecting the Segment

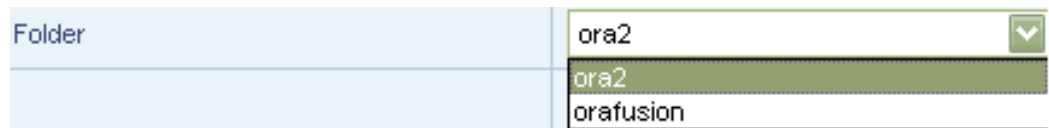
An Information Domain can have various segments or sub-sections of information. Click the **Segment** field to open the list. The list contains the segments that are part of the selected information domains. The search will be performed on the information domain and segment selected.

Example

INSIGHT

Viewing Search Results

Since you are searching a hierarchy node, by default the search will be performed on hierarchies. Now click **Go**. This action will maximize the **Search** pop-up based on the keyword or alphabet.



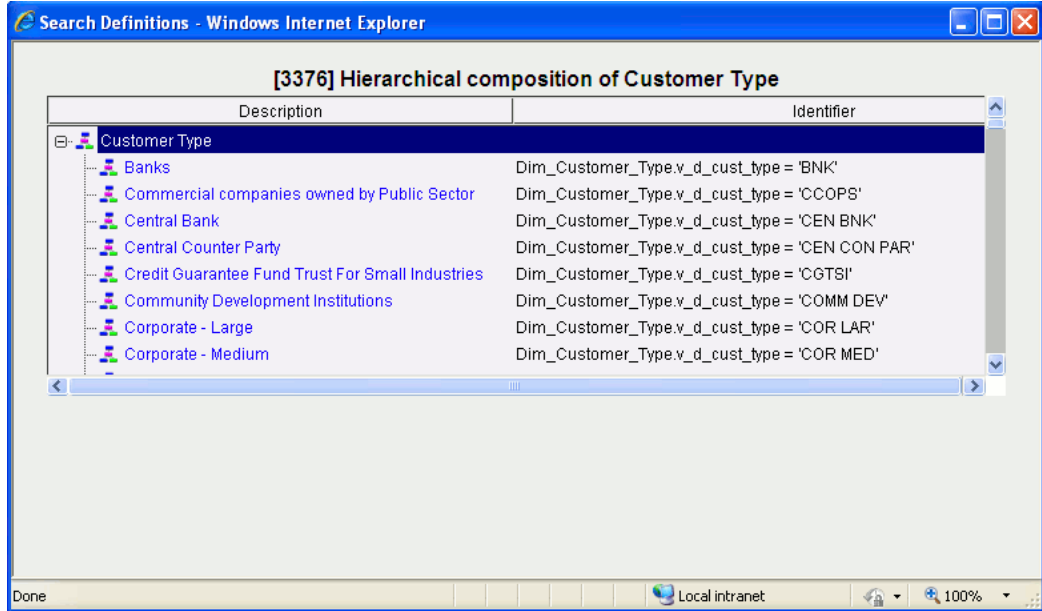
The result displays the keyword across hierarchies. The search keyword is displayed in a table with Member Description, Container Hierarchy, Information Domain and Properties.

The member description displays the keyword and the container hierarchy refers to the hierarchy to which it belongs. It also displays the information domain to which it belongs. You can check the properties of a node by clicking properties icon against the member description.

Note: The advanced search results are sorted based on the second column.

Viewing the Hierarchical Composition

You can view the hierarchical tree of a selected node by clicking the **Member Description** link.



The **Search Definition** pop-up opens displaying the hierarchical composition of the selected hierarchy. Click + (plus sign) to expand the hierarchy to view the members/levels within it. Each of the members is displayed with the Identifier details.

To minimize the **Search Definition** pop-up, click



To maximize, click



To close the Search Definition pop-up, click



Viewing the Hierarchy details

To view the details of the hierarchy, click the **Container Hierarchy** link.

Example

Measure Hierarchy

Initial Display Level	1 - Level 1 ▼
	1 - Level 1
	2 - Level 2
	3 - Level 3
	4 - Level 4
	5 - Level 5

The details of the hierarchy, namely, Name, Short Description, Long Description, Type, Business Intelligence Enabled, Entity, Attribute, Last Modified by, Last Modified Date, Mapped Measure and Level Details rows are displayed. The level details displays the hierarchy members and identifier details.

In the grid below, expand the Measure Hierarchy to view the level details of the measure hierarchy. To view the details of the measure, click the **measure**.

You can trace the source, transformation, dimensions and measures of the hierarchy entity and attribute by clicking the link (For more information, see Browsing Data warehouse Models, page 13-201). Similarly, you can view the mapped measures by clicking on the hyperlinks.

AMHM to UMM Hierarchy Conversion Utility

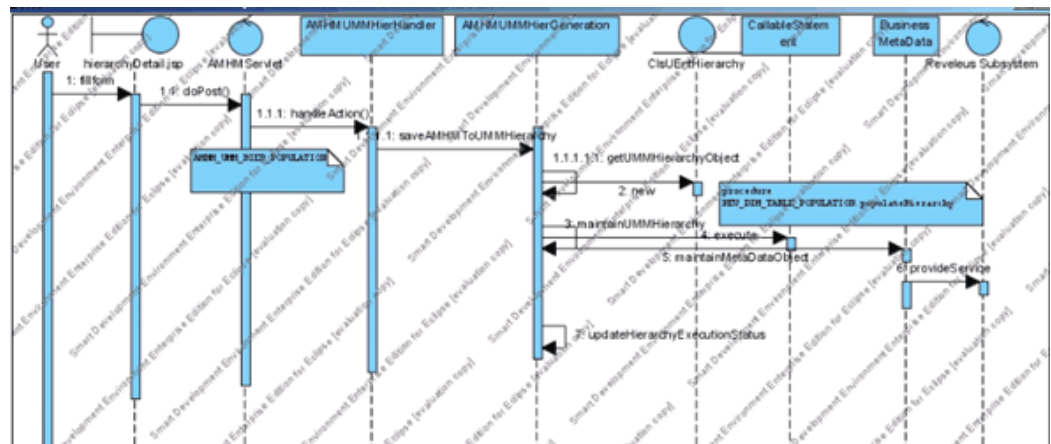
Introduction to AMHM to UMM Hierarchy Conversion Utility

This chapter describes the design of AMHM to UMM Hierarchy conversion Utility that enables you to convert or translate the Hierarchy definitions available or in process of definition using the AMHM Hierarchy window to the existing OFSAAI UMM Hierarchy format and also facilitates viewing (only) of the same in the UMM Hierarchy screens alongside the other existing definitions. This utility comes as from OFSAAI v7.2 onwards.

Architecture

This section describes the high level architecture for the conversion utility.

The Sequence diagram for the flow of Online Conversion is depicted below.



Note: The sequence diagram does not deliberately include the method parameters and the return values for readability and space constraint

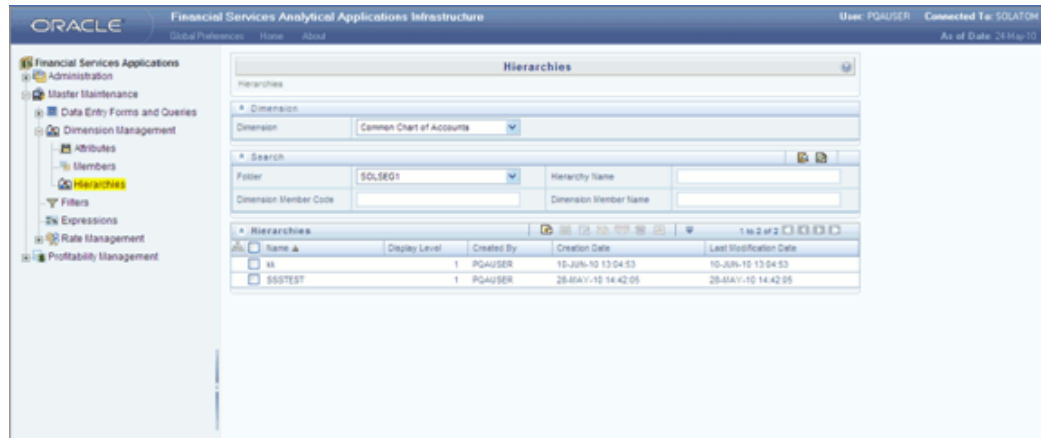
reasons.

As against the online conversion the offline conversion is a 2 step process of

- Generating the Mapping information
- Generating the UMM format entries in the related tables i.e Metadata definition and rev_bihier.

System Interfaces / UI design

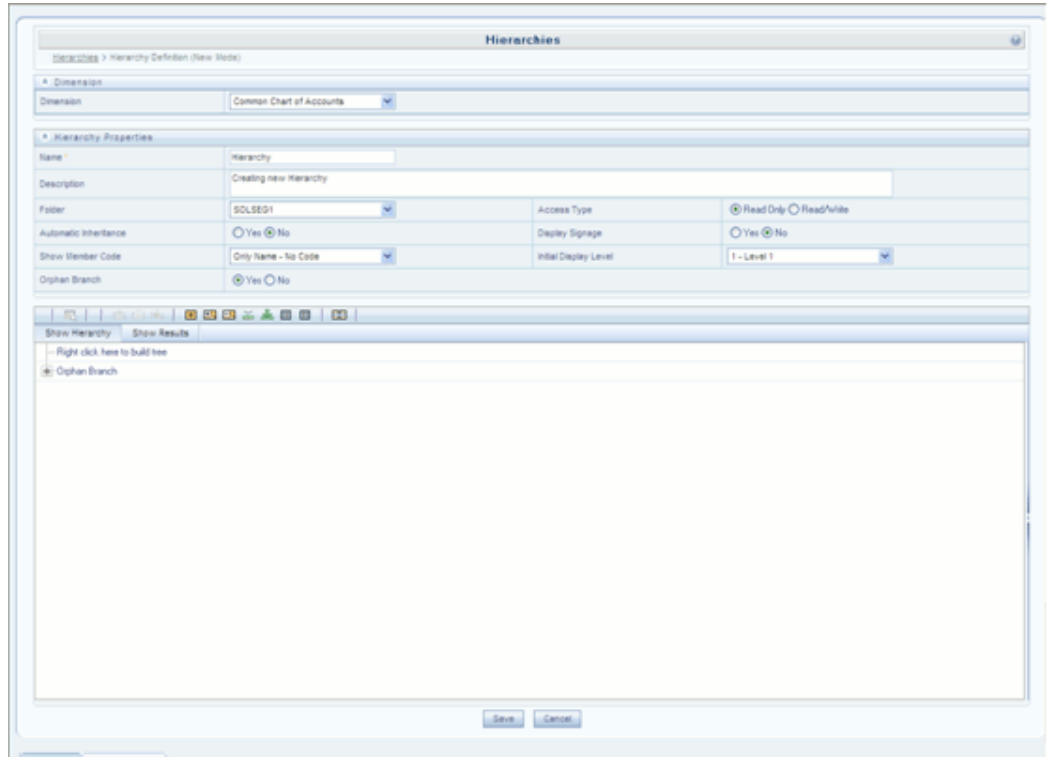
After logging in, select the Infodomain as SOLATOM. Select **Financial Services Application** under Advanced Analytics Infrastructure. The Financial Services Application window opens. From the **Master Maintenance menu**, select **Dimension Management**, then select **Hierarchies**.



For more information on Hierarchy window, see OFSAA Hierarchies, page 7-1.

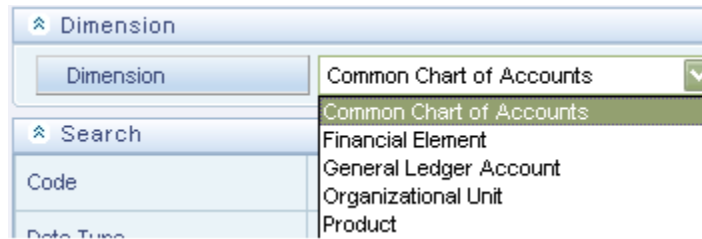
Adding a New Hierarchy

Click the **Add** button in the Hierarchies Toolbar to create a new Hierarchy. The **New Hierarchies** page opens.



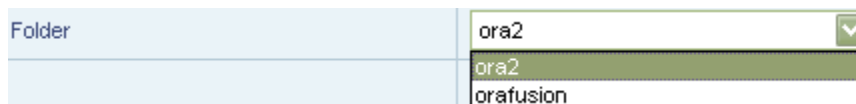
Selecting Dimension

Selected Dimension from the **New – Hierarchy** window will be displayed as the dimension for which member has to be defined. It can be modified by clicking on the list from the Dimension panel.



Entering the Hierarchy Properties

Enter the Valid Name and Description adjacent to the respective fields. Click the list from the Folder field and select the required segment where the hierarchy has to be stored.



Select the radio button **Read Only** or **Read/Write**. If Read Only is selected then the

other users will not be able to edit the defined hierarchy. If Read/ Write option is selected then the other user can edit the defined hierarchy.

Access Type	<input type="radio"/> Read Only <input checked="" type="radio"/> Read/Write
-------------	---

Click **Yes** or **No** from the Automatic Inheritance field. Click **Yes** if you want to inherit the hierarchy properties of the parent to the child. Click **No** if you want to define a new hierarchy.

Automatic Inheritance	<input type="radio"/> Yes <input checked="" type="radio"/> No
-----------------------	---

Click **Yes** or **No** adjacent to the Display Signage field. This displays the Signage to the right hand side of the member in the Show hierarchy panel.

Display Signage	<input checked="" type="radio"/> Yes <input type="radio"/> No
-----------------	---

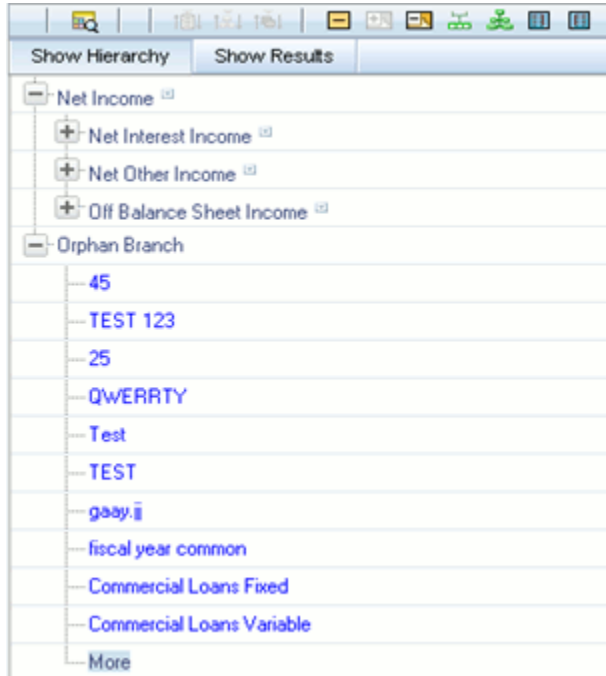
Select the list adjacent to **Show Member Code** and select the type of display. If **Only Name – No Code** is selected, only the name of the member is displayed. If **Code to Left of Name** is selected, the code appears at the left of the member name. If **Code to Right of Name** is selected, the code appears at the right side of the member name in Show Hierarchy pane.

Show Member Code	Only Name - No Code
Orphan Branch	Code to Left of Name
	Code to Right of Name
	Only Name - No Code

Select the list adjacent to Initial Display Level field. You can find the options from Level 1 to Level 5. This displays the number of levels in the Hierarchy in tree Structure.

Initial Display Level	1 - Level 1
	1 - Level 1
	2 - Level 2
	3 - Level 3
	4 - Level 4
	5 - Level 5

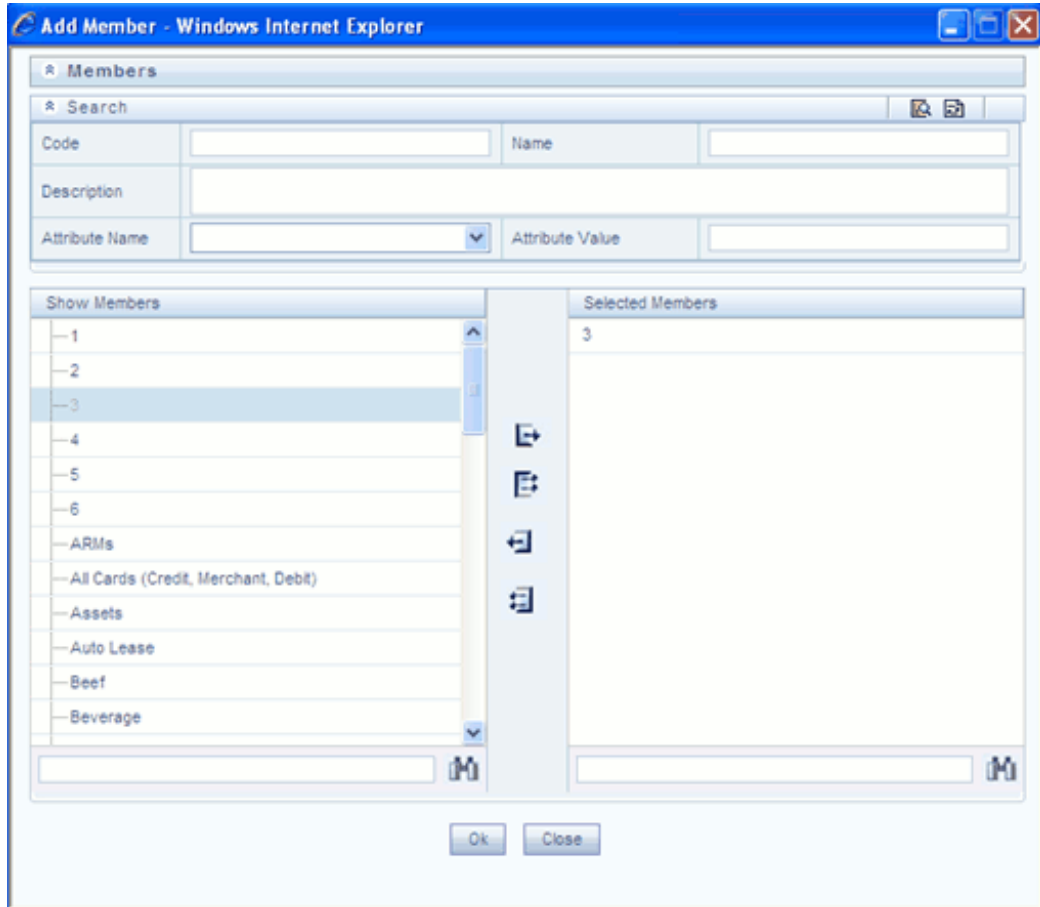
Select **Yes** or **No** radio button adjacent to Orphan Branch. If Yes is selected than Orphan Branch would be displayed in Show Hierarchy panel in the New – Hierarchy window.



Adding Child - Show Hierarchy and Show Results Panel

In the Show Hierarchy panel, you can find a message "Right click here to build tree".

Right click the message. You can find **Add Child** option. Select the same. The **Add Member** window is displayed.



Select the Member from the Show Members panel and click the



button to move it to the Selected Members panel.

To select all Members click



The Search options are not mandatory.

To move the selected Members from the Selected Members panel back to the Show Members panel. Click the



To deselect the members selected click



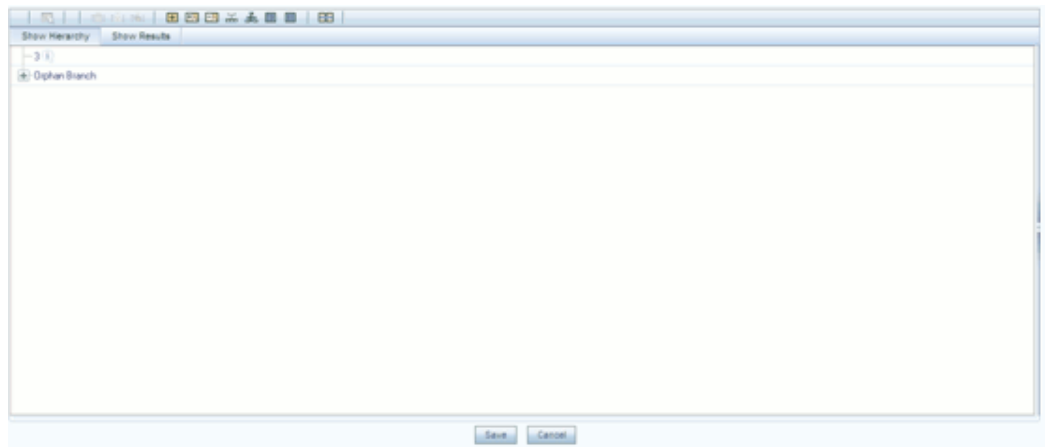
You can also search for a particular Member based on Code, name, Description, Attribute name or Attribute Value. None of the fields are mandatory.

Click



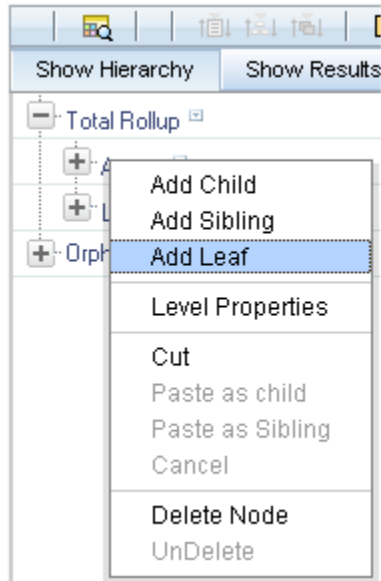
button, the Search panel is displayed. Enter the keyword in the Search field and click search button.

Once the required Member is selected, click **Ok**. The selected Member will be displayed as Child under Show Hierarchy panel in the **New – Hierarchy** window.

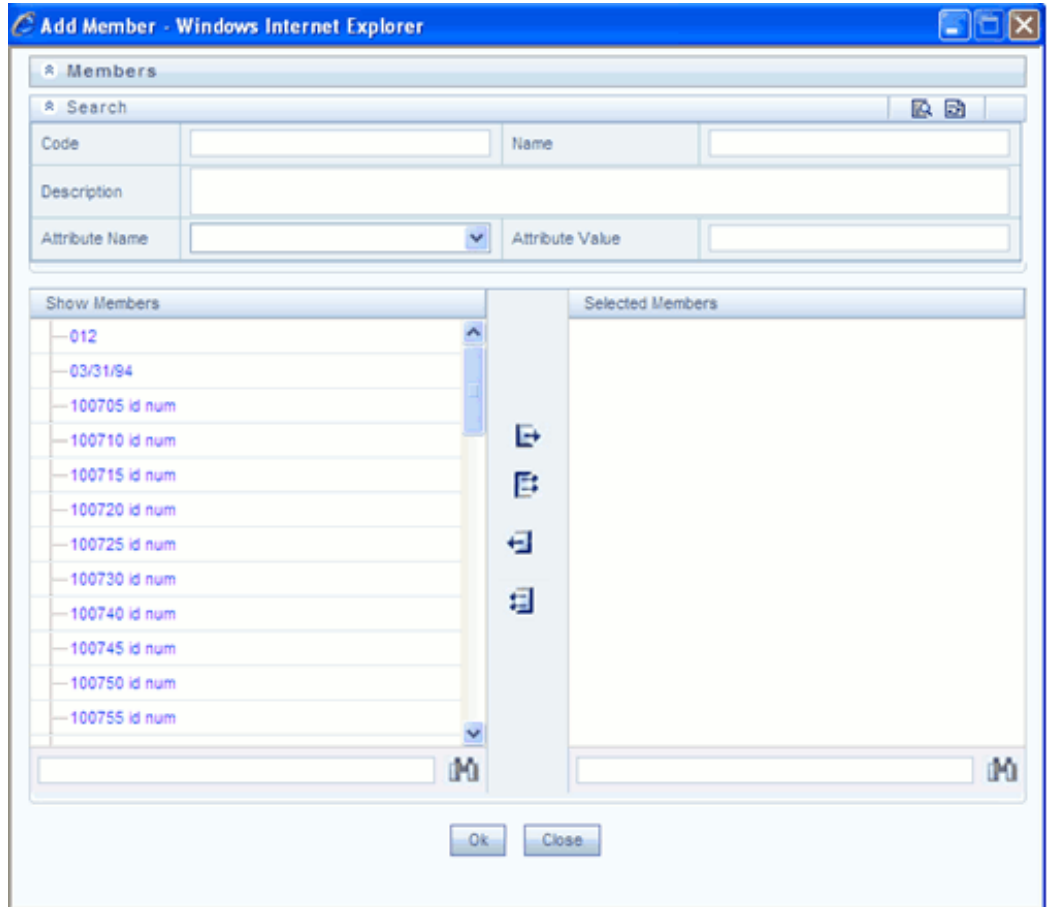


Adding Leaf

Adding of leaf can be under a Parent, Child or Sibling. Right click on the Parent or Child and select Add Leaf.



The **Add Member** window is displayed.



Select the Member from the Show Members panel and click the



button to move it to the **Selected Members** panel.

To select all Members click



The Search options are not mandatory.

To move the selected Members from the Selected Members panel back to the Show Members panel. Click the



To deselect the members selected click



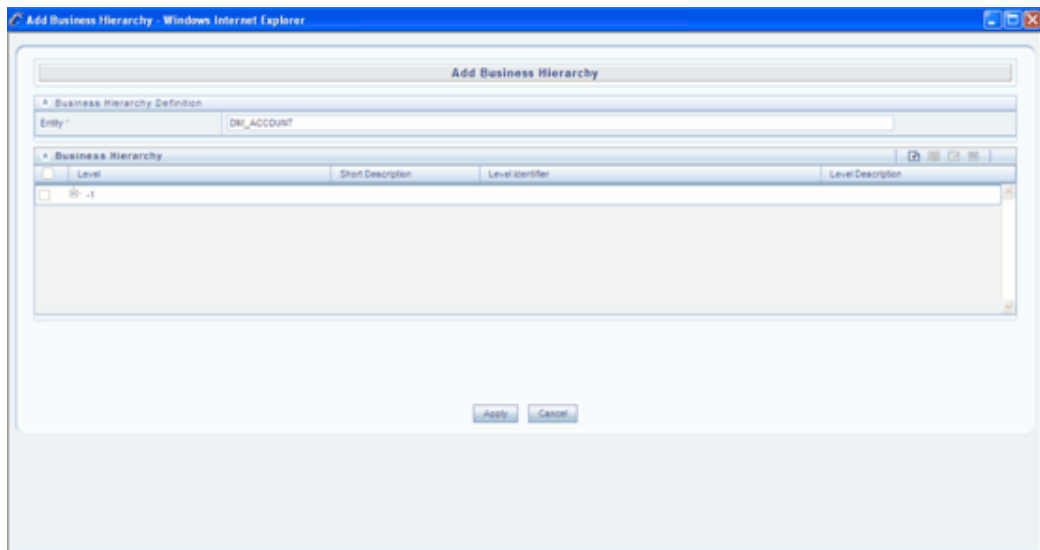
You can also search for a particular Member based on Code, name, Description, Attribute name or Attribute Value. None of the fields are mandatory.

Click

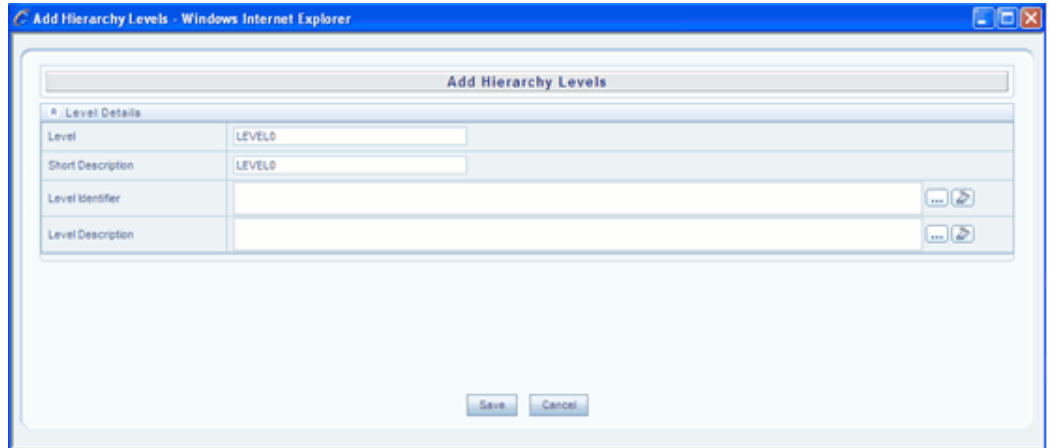


button, the Search panel is displayed. Enter the keyword in the Search field and click search button.

Click **Advanced Properties** icon. The **Add Business Hierarchy** page appears.



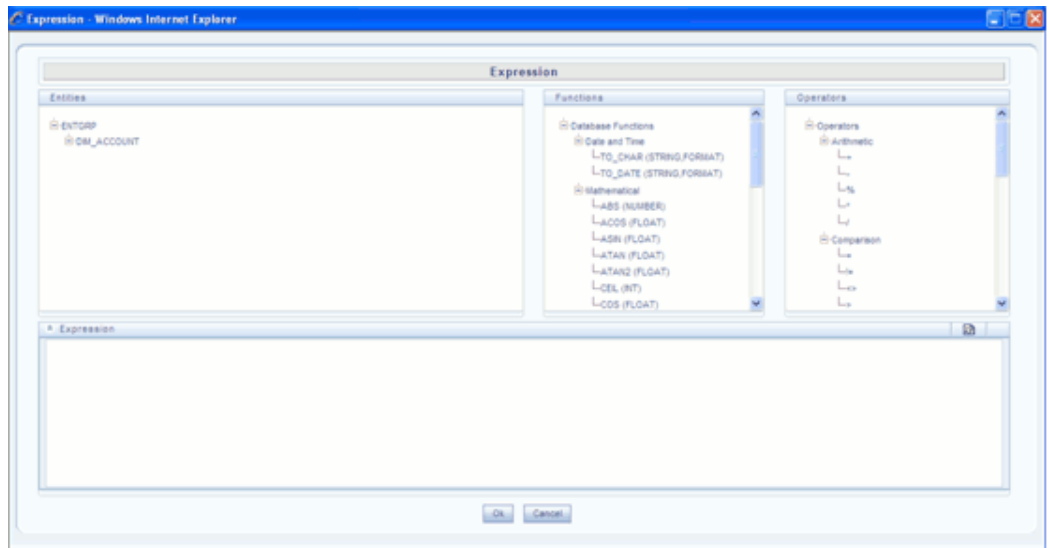
Click the **Add** icon. The **Add Hierarchy Levels** window opens.



You can enter the details in the level Identifier field or click the browse button



next to level Identifier. The **Expressions window** opens.



The Expression screen

The Entities Panel

This contains the Entities folder with the list of tables that you selected from the Entity Groups folder. Double-click the Entities folder to view the selected dimension tables, namely, the Product and Segment tables.

Select the entity of the fact table to which you want join the dimension entities.

Example

FCT_NON_SEC_EXPOSURES.d_exposure_end_date

The Functions Panel

This contains functions that are specific to databases like Oracle and MS SQL Server. You can use these functions along with Operators to specify the join condition.

The Functions categories are displayed based on the database types.

Transact SQL is specific to Sybase/MS SQL server, which consists of Date & Time, Math and System functions.

SQL OLAP is specific to Microsoft OLAP, which consists of Array, Dimension, Hierarchy, Logical, Member, Number, Set, and String functions.

SQL is specific to Oracle, which consists of Character, Conversion, Date, Misc, and Numeric functions.

Note: It is not *mandatory* to specify a Function for a join condition.

The Operators Pane

This contains the Operators folder. Double-click the folder to view the list of available operators.

There are *six* categories of Operators.

Arithmetic – Arithmetic operators are +, -, %, * and /

Example

Plus sign -- (balance + interest_computed)

Minus sign -- (actual_balance – minimum_balance)

Comparison – Comparison operators are '=', '!=', '<>', '>', '<', 'IN', 'NOT IN', 'ANY', 'SOME', 'LIKE' and 'ALL'.

Example

= -- (account_status = O)

IN -- account_status IN {O, A, C}

Logical – Logical operators are 'NOT', 'AND' and 'OR'

Example

'NOT' -- 'NOT' (account_status = O)

'AND' -- (actual_balance – minimum_balance) >1000 'AND' (actual_balance – minimum_balance) <2000

'OR' -- (actual_balance > 1000 'OR' <2000)

Set - Set operators are UNION, UNION ALL, INTERSECT and MINUS

Others – The Other operators are 'PRIOR', '(+)', '(' and ')'.
'PRIOR' -- (actual_balance > 1000 'PRIOR' <2000)

Now select the operator, which you want to use for the join condition.

Example

Comparison. That is, =

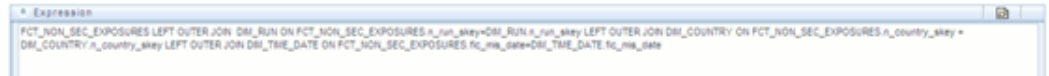
Now select the second entity from the Entities pane that you want to join with the first entity that was selected.

Note: You can choose more than one dimension table to link to the fact table but it is not mandatory.

The Expression Field

The join condition that you specify will be shown in the Expression field.

After you have specified the join condition, click **OK** to save it and return to the Data Set screen. Click **Cancel** to exit the Define Expression screen without saving the changes. Click **Clear** to reset the join condition that you defined. This is applicable only when you are defining a new expression. While modifying an existing expression, click **Clear** to return to the existing condition.



Note: In case of SQL Server/Esbase, Oracle/Esbase the definition of data set is important. Since multiple cubes can be built with a single pass, the underlying data set definition should be the same for all the cubes mapped in that Pass number. This will reduce the aggregation time considerably.

Click **Save**, to save all changes made. Click **Cancel** to exit without saving.

Similarly you can enter the details in the Level description field or click



next to it. Click **OK** to save changes. The selected Expressions will be reflected in Add Hierarchy Levels window.

Click **Save**, to save all changes made. Click **Cancel** to exit without saving.

The saved options will be added in the Add Business Hierarchy window. Select the Level and click **Apply**.

Click **Save** in the New Hierarchies page to save all changes made. Click **Cancel** to exit without saving. The saved Hierarchy (newly created) will be displayed in the main Hierarchies page. The same Hierarchy will be displayed in **Business Hierarchy** page (Unified Metadata manager > Business Metadata Management > Business Hierarchy).

Special Validation Logic

Online Population: If online population checkbox is enabled, then user has to mandatorily enter the mapping details, if bypassed, on 'Save' the mapping popup is launched automatically.

Hierarchy Id/Name: The Hierarchy Id and name should be unique across all the definitions, inclusive of existing UMM Hierarchies, failure to comply with this constraint will throw up an error message during **Save**.

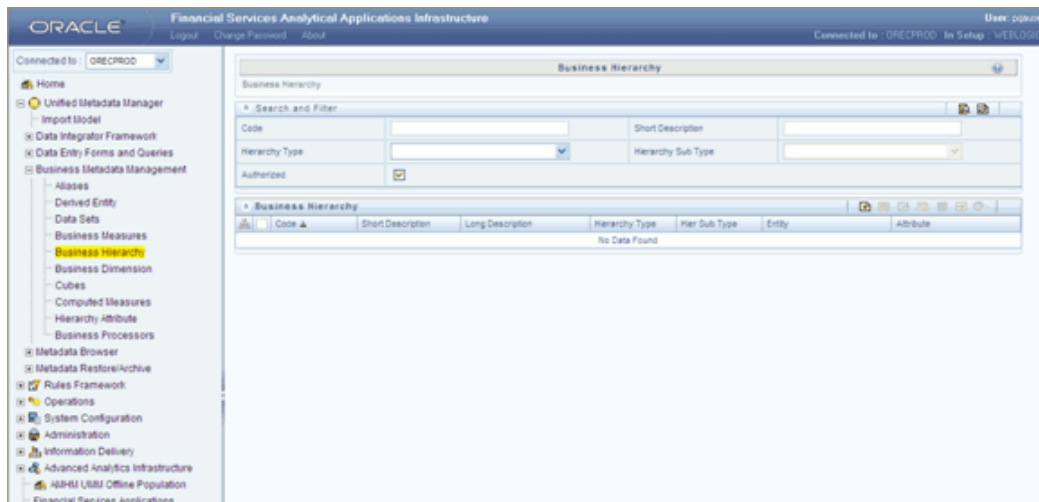
Levels: The number of levels in the AMHM tree and the levels entered in UMM Mapping screen should be an exact match, the mappings are not Saved if this condition is not met.

UMM Hierarchy in Business Hierarchy screen

After the Hierarchy is created, you can check the Hierarchy in the Business Hierarchy window.

Select **SOLATOM** as the infodomain and navigate to **Unified Metadata Manager > Business Metadata Management > Business Hierarchy**.

The Business Hierarchy window appears.



This window will consist of the **Search** and **Filter** panel and the Business Hierarchy panel.

You can search for a particular Hierarchy in the Search and Filter panel by entering the **Code** or **Short Description** or by selecting the Hierarchy Type from the list.

The Business Hierarchy panel provides a detailed list of the Hierarchies that have been created. Details such as the Code, Short and Long description, Hierarchy Type, Hier Sub Type, Entity and Attribute will be displayed.

Only the Add button will be enabled initially.

Once a Hierarchy is selected, the View, Copy and Delete buttons get enabled and Add button gets disabled.

Viewing a Hierarchy

Select the Hierarchy you wish to view in the Business Hierarchy screen and click the **View** button in the Toolbar to view the details of the selected Hierarchy.

The **View Business Hierarchy** window is displayed.

Level	Short Description	Level Identifier	Level Description
1	200124		
2	LEVELS	DM_ACCOUNT_e_accnt_skey	DM_ACCOUNT_f_inetnet_fac

Field	Value	Field	Value
Created By	PGAUSER	Created Date	Jun 4, 2010 12:00:00 AM
Last Modified By	PGAUSER	Modified Date	Jun 4, 2010 4:47:24 PM
Authorized By	PGAUSER	Authorized Date	Jun 4, 2010 4:47:24 PM

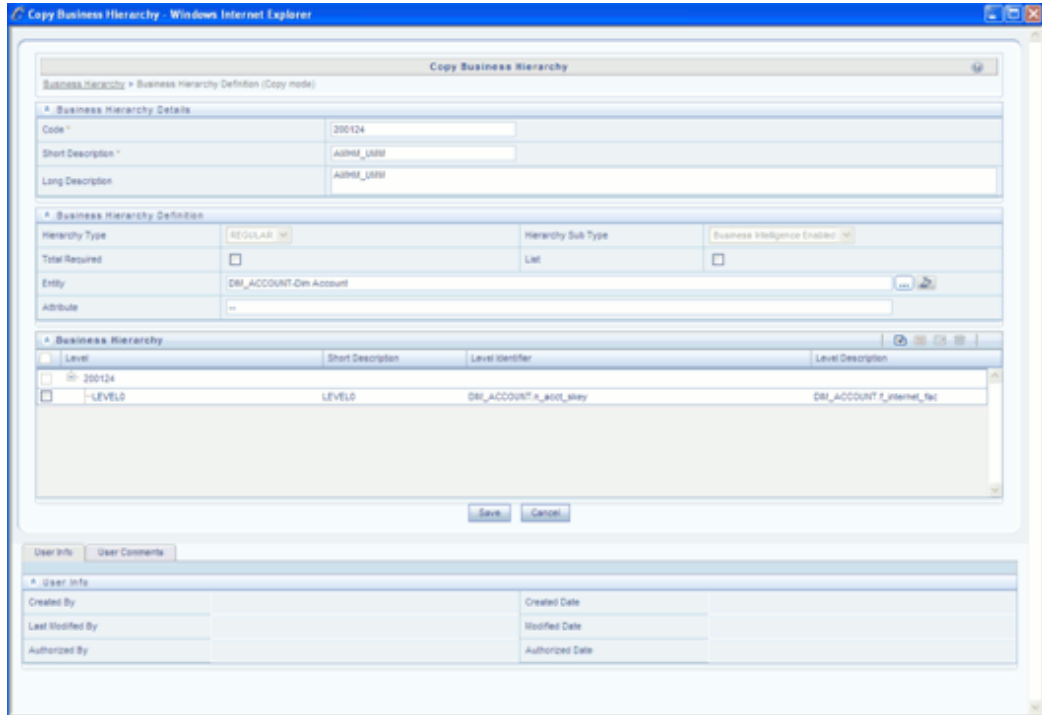
Details such as Code, Short and Long Description and Business Hierarchy details are displayed.

These details cannot be modified from this window. After viewing the details, click **Close** to close the window.

The User Information grid displays details such as Created By, Creation Date, Last Modified By and Last Modified Date. The Created by and Creation date fields displays the Creator name and corresponding date. If a user has made any modification for that particular Hierarchy Definition, the Modified by and Modification date will reflect the user name and date of modification. If no modifications have been done, NA will be displayed in these fields.

Copying a Hierarchy

Select a Hierarchy and click the **Copy** button in the toolbar to save the selected Hierarchy definition details as new definition with required changes. The **Copy Business Hierarchy** window is displayed.



The Business Hierarchy Details and the Business Hierarchy can be edited in this screen. Make the necessary changes and click **Save** to save the changes. You will receive the confirmation message as "Records updated successfully"

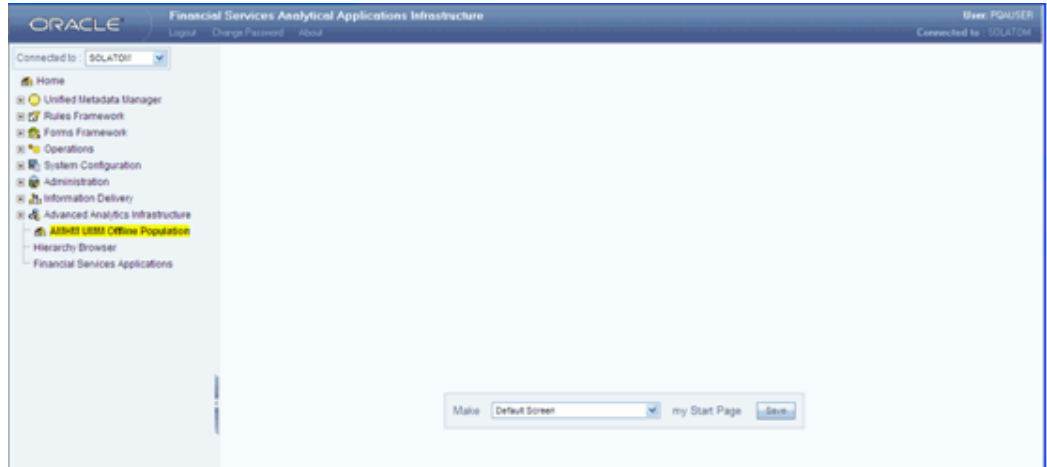
Total Required and List options are mentioned in chapter Unified Metadata Manager.

Deleting a Hierarchy

Select a Hierarchy in the Business Hierarchy summary screen and click the **Delete** button in the tool bar to delete a Hierarchy. The Hierarchy will be deleted and a confirmation message will be displayed.

Offline Execution

Click **AMHM UMM offline population** from the left menu.



The AMM UMM offline population window opens.

Select the Dimension from the list. In the Hierarchies Selection panel, the Hierarchies need to be mapped. Select the Hierarchy from the Hierarchies panel and click the



button to move it to the **Selected Hierarchies** panel.

To select all Hierarchies click

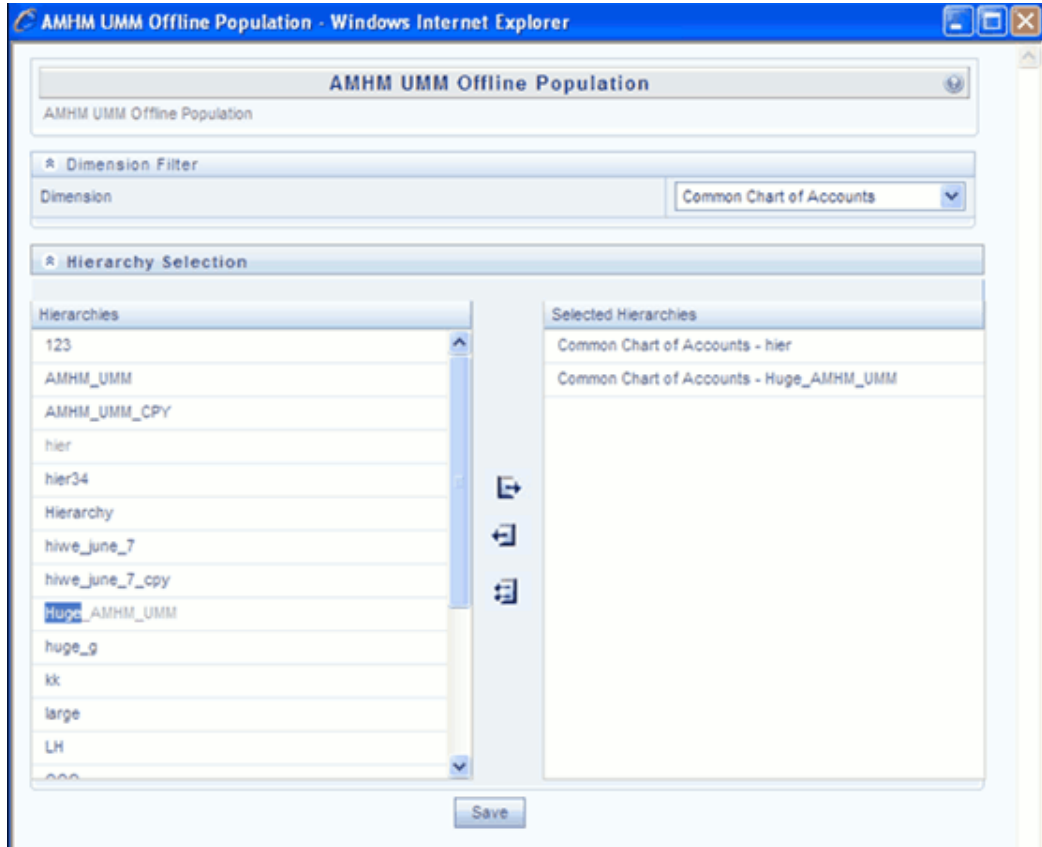


To move the selected Hierarchies from the Selected Hierarchies panel back to the Show Hierarchies panel. Click the



To deselect the hierarchies selected click





Click **Save**. The **Hierarchy Execution** panel shows the status.

AMHM UMM Offline Population

AMHM UMM Offline Population

* Dimension Filter

Dimension Common Chart of Accounts ▼

* Hierarchy Selection

Hierarchies	Selected Hierarchies
sdsa	Common Chart of Accounts - sdsa
SSSS	
SSSS1	
Test1	
Test1	
Test2	
Test28	
Test288	
Test3	
Test4	
Test5	
Test6	
wegWG	

* Hierarchy Execution

Name	Status
Common Chart of Accounts - sdsa	NOT STARTED

Click **Submit**. This will execute the Hierarchy.

Note:

- Allows for multiple selection of Hierarchies whose conversion process is triggered in the offline mode here by clicking on **Execute Offline** button.
- The window also displays the Conversion Execution Status of the selected AMHM Hierarchy definitions on click of 'Refresh Status' button.

Metadata Restore/Archive

Introduction to Metadata Restore/Archive

This chapter deals with the metadata restore and archive options. The Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) Archive Metadata function allows you to archive the metadata definitions as a file. This file can then be restored on to a remote OFSAAI location using the Restore Metadata feature of Oracle Infrastructure.

The Metadata Restore and Archive feature in OFSAAI is designed to function as a wizard, taking you through a step by step process of archiving or restoring metadata.

Note: You should be mapped with the Export Metadata and Import Metadata functions, to access the Metadata Restore /Archive utility.

Limitations of Metadata Restore/Archive Utility

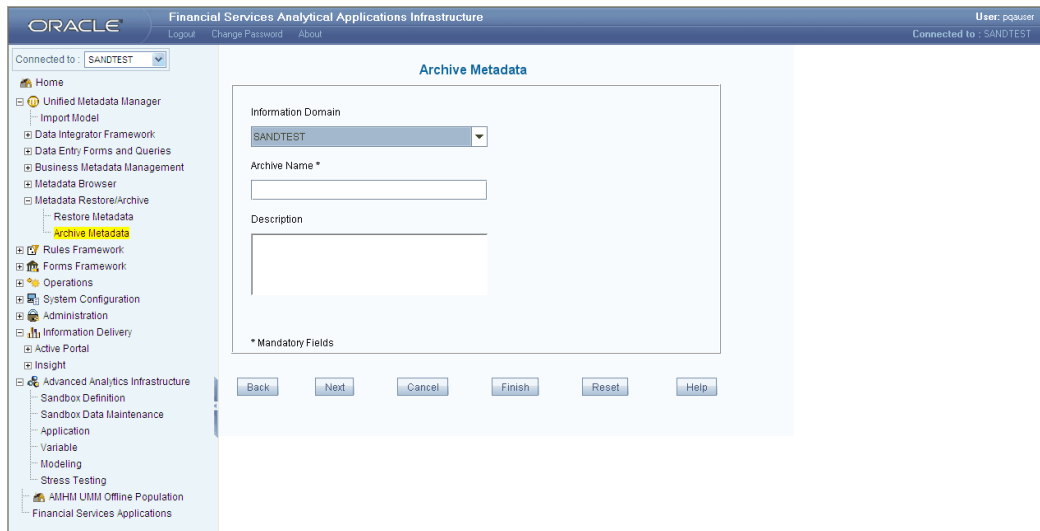
- The Database type and OLAP type of the source and destination should be the same.
- Data model should be the same on the source and destination information domains.

Archiving Metadata

Click the **Metadata Restore/Archive** function menu in the left pane. The two options listed below are Restore Metadata and Archive Metadata.

Click **Archive Metadata** sub menu displayed under the Restore Metadata /Archive Metadata function menu in the left pane. The Archive Metadata window is displayed. This is a wizard which lays down a step by step process for archiving metadata.

Note: The imported metadata will always be marked as Authorized. No further authorization is required by Administrator.



Selecting the Information Domain

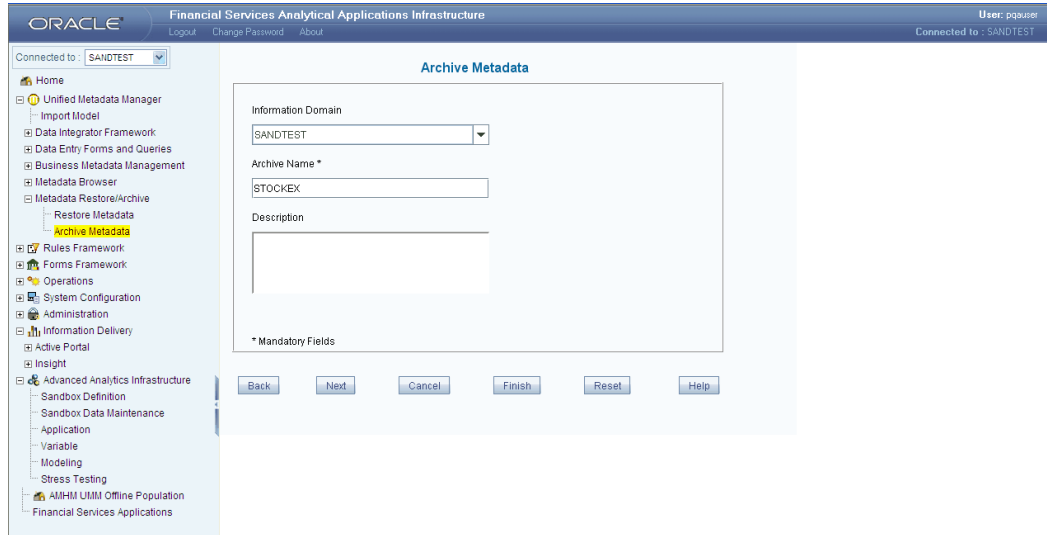
To archive metadata, you need to select the information domain to which you are connected. Select the information domain from which you want to archive the metadata from the **Information Domain** list.

Example

REVBASEL1

Entering the Archive Name

In the **Archive Name** field, enter a distinct name for this metadata archive operation. The file which will contain the metadata that is archived will be saved in this name.



Example STOCKEX

Note:

- The mandatory fields are marked with asterisks (*).
- There can be more than one instance of archival process running at the same time but the archive name and the information domain combination should be different.

Entering the Description

In the **Description** field, enter the description for this metadata archive operation.

Click **Next** to continue the metadata archive process. The Archive Metadata window is displayed.

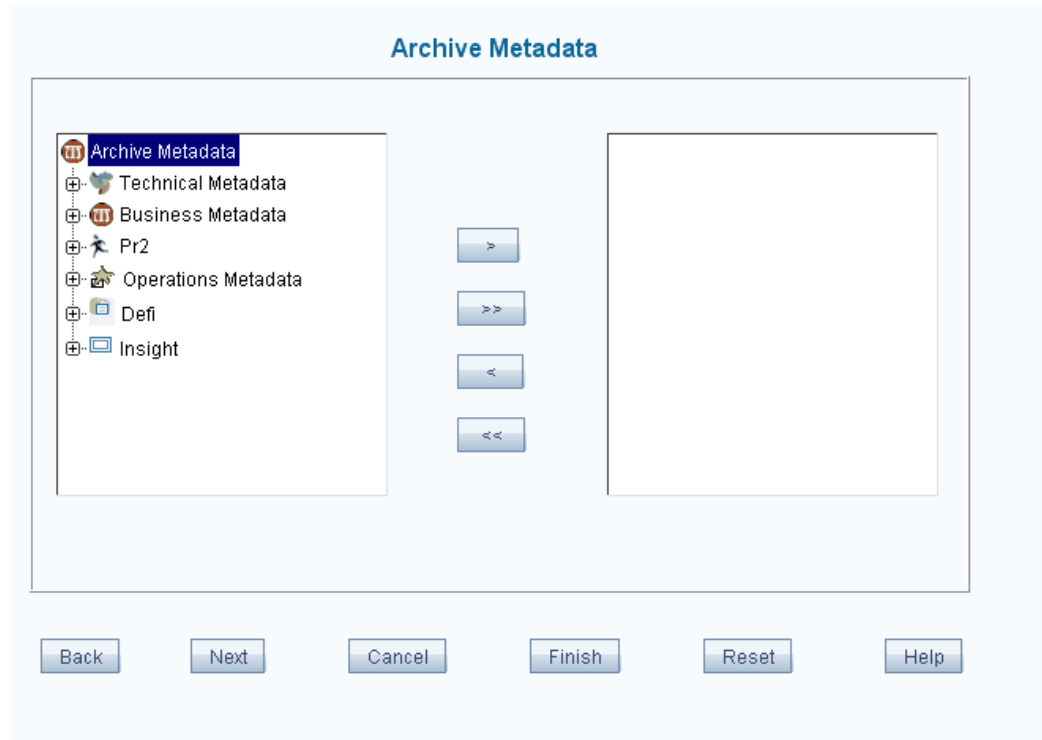
Click **Cancel** at any point during the operation to discard the metadata archival.

Click **Help** to access the online help pertaining to Archive Metadata process.

Selecting Metadata to Archive

The Archive Metadata window has two panes, the left pane lists the available metadata and the right pane displays the selected metadata. The available metadata pane lists all the Metadata available in the selected information domain in a tree structure.

Note: This window will list only the authorized metadata. Unauthorized metadata cannot be archived.



The expanded metadata tree is as follows:

Technical Metadata

- Extracts/Files
- Data Transformations
- Data Quality Rules

Business Metadata

- Business Processors
- Cubes
- Dimensions
- Hierarchies
- Measures
- Data Sets
- Alias

- Hierarchy Attributes
- Derived Entity
- Maps

PR2

- Rules
- Process
- Run

Operations Metadata

- Batches
- Batch Groups

DeFi

Forms

Insight

Views

Click the + sign to expand and view the metadata definitions.

Select the required metadata from the left pane and click the > button or double-click the required items. The selected metadata will move to the right pane.

Note: If a parent node is selected and the > button is clicked, all child nodes are moved to the right pane.

Click >> to move all the available metadata from the left pane to the selected metadata pane in the right.

If you wish to remove an item from the selected metadata pane, click the < button.

Click << to remove all the selected metadata from the right pane.

Note: The dependent metadata does not get automatically selected. You have to ensure that all dependent metadata is also explicitly selected for archival purposes. For example, if the user exports a cube, only the cube definition will be exported. The definition of the underlying hierarchy and/or dimension and/or measures or Data Set and so on. will not be exported.

Click **Finish** to start the metadata archiving process. The selections made in the

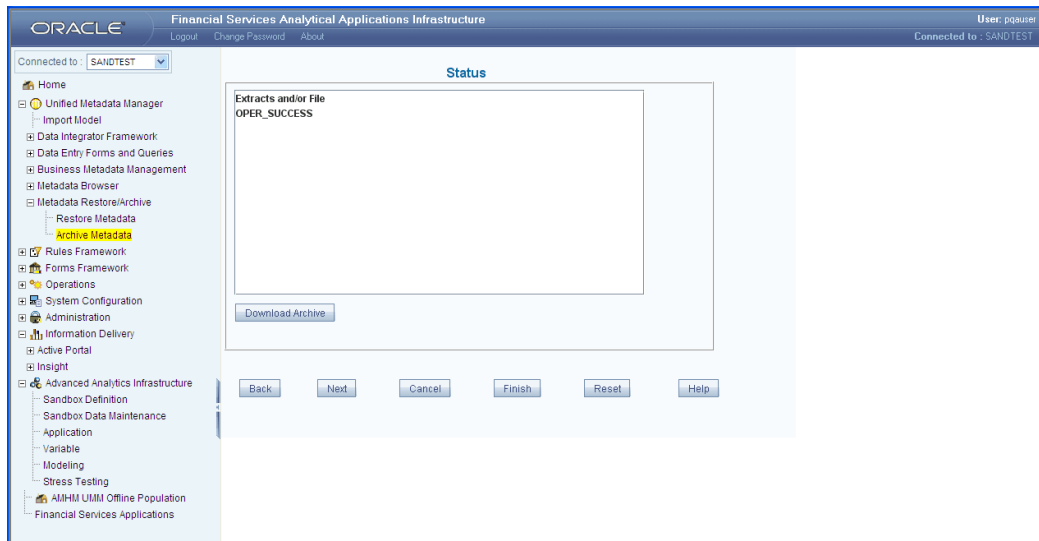
metadata window will be saved only when you click the **Finish** button.

Click **Back** to go back to the previous window. If you make a selection and click the **Back** button, the changes/selection made will be lost.

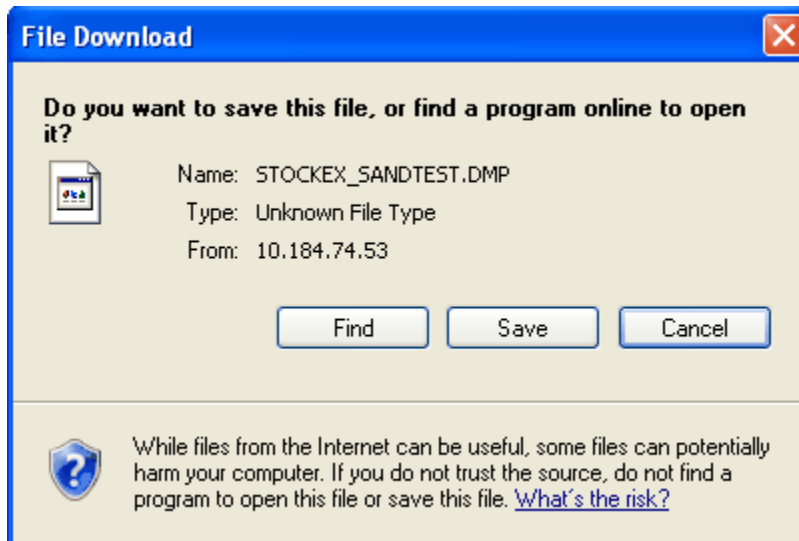
Click **Cancel** at any point during the operation to discard the metadata archival process.

Click **Help** to access the online help pertaining to metadata archive process.

The metadata archive process will be carried out and the Status window is displayed.



Click the **Download Archive** button to download the archived metadata. The File Download window is displayed.



Click **Save** to save the file containing the archived metadata information. The Save As window is displayed. Specify the File Name and the location where you want to save the file. Click **Save**.

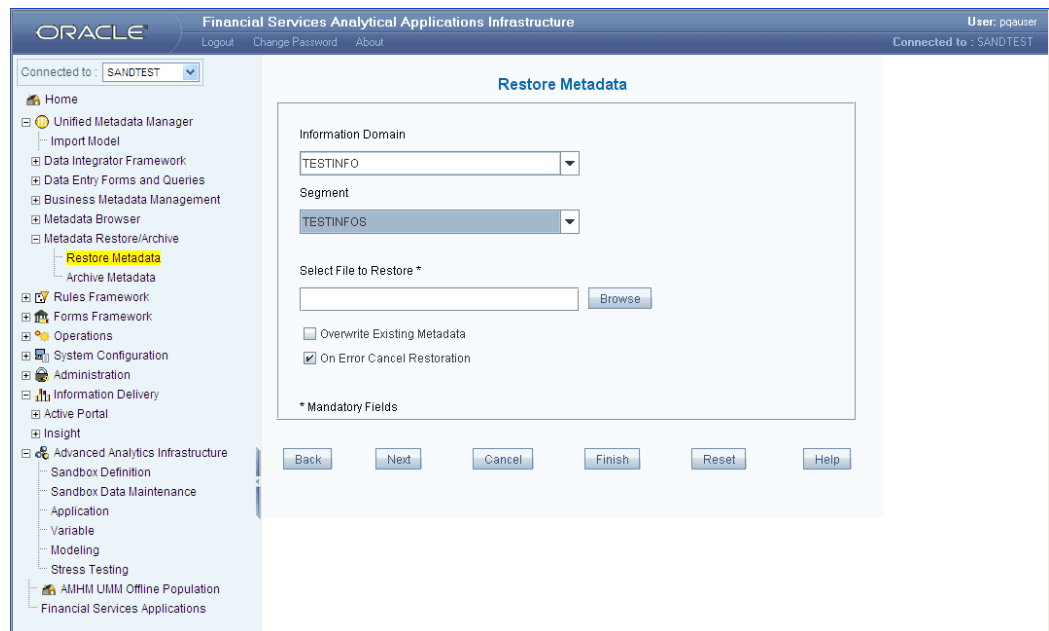
This saved file containing the metadata information can be sent / copied to the destination.

Click **Reset** to go to the first screen of the Archive Metadata window.

Restoring Metadata

Click the **Metadata Restore/Archive** function menu in the LHS pane. The two options listed below are Restore Metadata and Archive Metadata.

Click the **Restore Metadata** sub menu displayed under the Metadata Restore function menu in the left pane. The Restore Metadata window is displayed. This is a wizard which lays down a step by step process for restoring metadata.



Selecting the Information Domain

To restore metadata, you need to select the information domain. Select the information domain from which you want to restore the metadata from the **Information Domain** list.

Example

REVBASEL1

Selecting the Segment

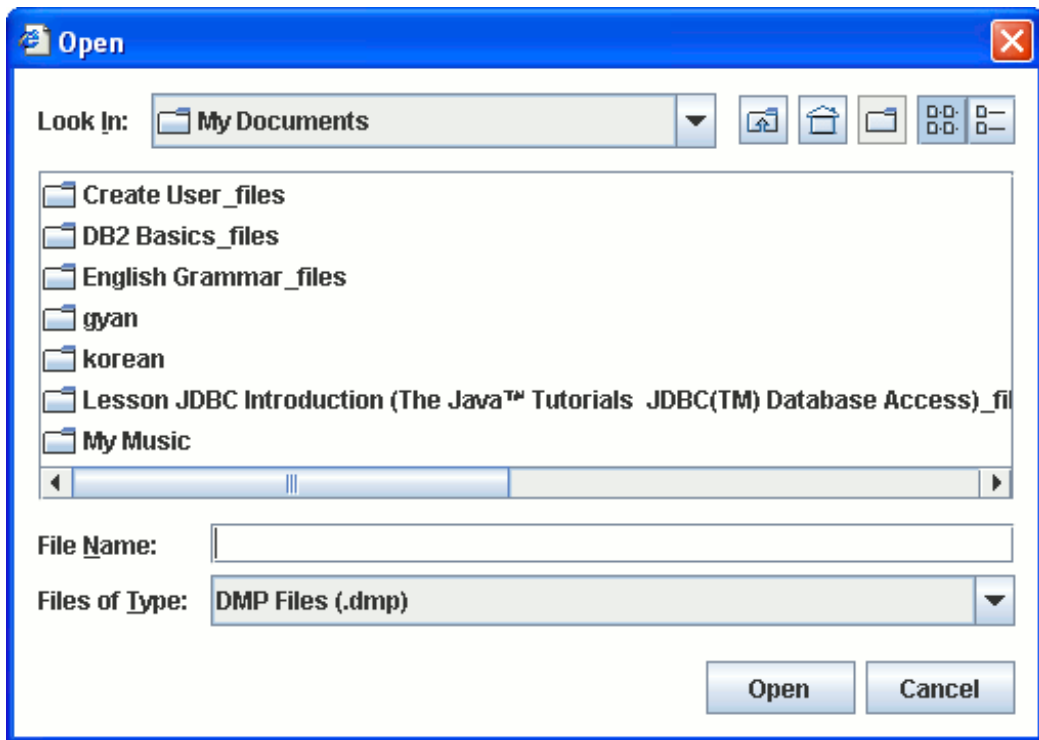
Select the Segment of the selected information domain to which the metadata is to be restored from the Segment list.

Example

REVBASEL

Click **Browse** to select the metadata archive file to be restored. The Open dialog box is

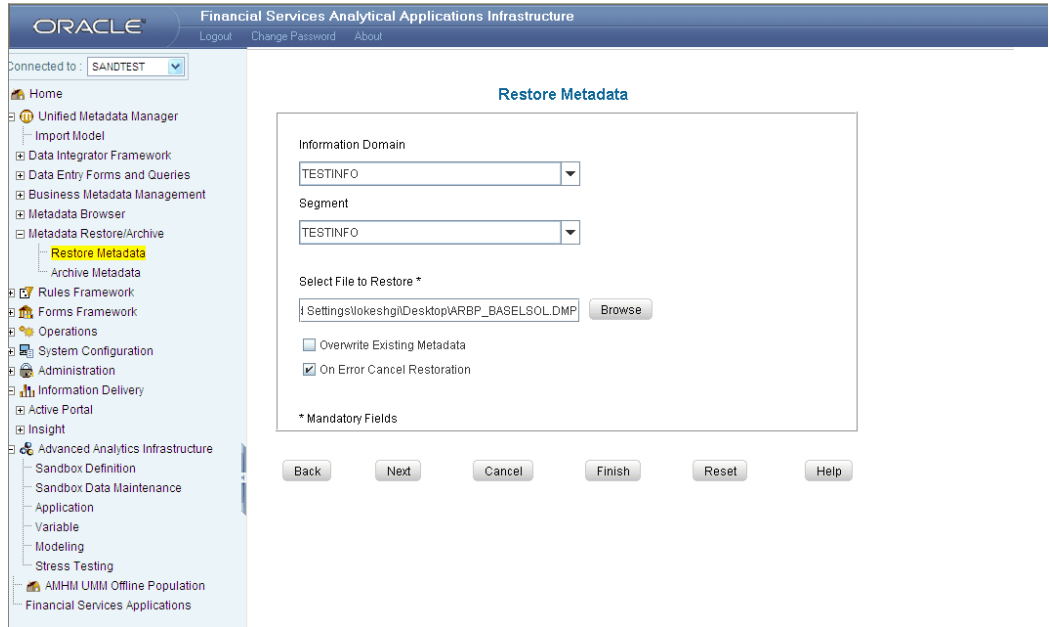
displayed.



Select the file to be restored from the location where it is saved after archiving the metadata using the Archive Metadata utility of OFSAAI.

Refer to the Archiving Metadata, page 15-1 section for more information.

Note: The system will display an alert message if the source database/OLAP type and the destination database/OLAP type are not matching for the selected information domain and the selected metadata file.



Select the **Overwrite Existing Metadata** check box to overwrite the metadata if it is already restored.

Enabling the **On Error Cancel Restore** check box will stop the Restore process if there is any error during the restore process.

The **On Error Cancel Restore** check box will be selected by default.

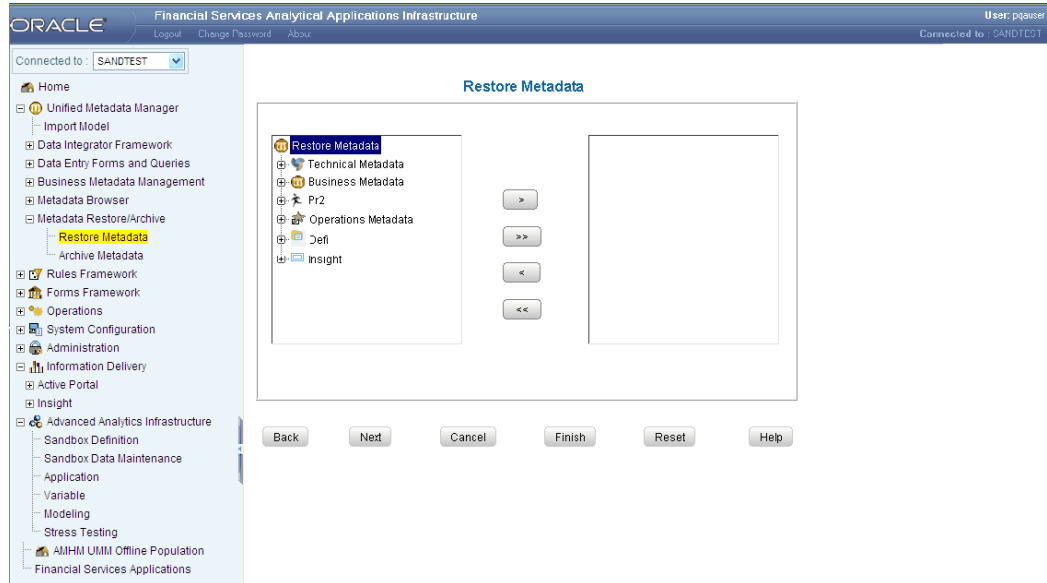
Click **Next** to continue the metadata restore process. The Restore Metadata window of the Restore Metadata wizard is displayed.

Click **Cancel** at any point during the operation to discard the metadata restore process.

Click **Help** to access the online help pertaining to metadata restore process.

Selecting Metadata to Restore

The Restore Metadata window has two panes, the left pane lists the available metadata and the right pane displays the metadata selected from those available. The available metadata pane lists all the Metadata available in the file selected to be restored in a tree structure.



The expanded metadata tree is the same as that explained in the Archive Metadata section.

Click the + sign to expand and view the metadata definitions selected during the archival process.

Select the required metadata from the left pane and click the > button or double-click the required items. The selected metadata will move to the right pane.

Note: If a parent node is selected and the > button is clicked, all child nodes are moved to the right pane.

Click >> to move all the available metadata from the left pane to the selected metadata pane in the right.

If you wish to remove an item from the selected metadata pane, click the < button.

Click << to remove all the selected metadata from the right pane.

Note: The dependent metadata does not get automatically selected. The user has to ensure that all dependent metadata is also explicitly selected for restoration purposes. For example, if the user imports a cube, only the cube definition will be imported. The definition of the underlying hierarchy and/or dimension and/or measures and so on will not be restored.



Click **Finish** to start the metadata restoration process. The selections made in the metadata window will be saved only when the user clicks the **Finish** button.

Click **Cancel** at any point during the operation to discard the metadata restoration process.

Click **Help** to access the online help pertaining to metadata restore process.

The metadata restore process will be carried out and the **Status** window is displayed.



The Status window of the Metadata Restore wizard displays the status of the restoration operation of all the metadata that are selected.

All the Restored data will be mapped to the selected segment in the selected information domain.

Note:

- If the **Overwrite Existing Metadata** checkbox is not selected, and if the data's to be restored already exist, the restore process would fail with an equivalent message (Duplicate code). If the **Overwrite Existing metadata** checkbox is selected, the metadata elements would be overwritten over the existing definitions.
- When the existing metadata definitions are overwritten by selecting the **Overwrite Existing Metadata** checkbox, the status of the Restored data will be displayed as Update Successful.

Click **Reset** to go back to the first window of the Restore Metadata window to carry out more restoration operations.

Data Integrator

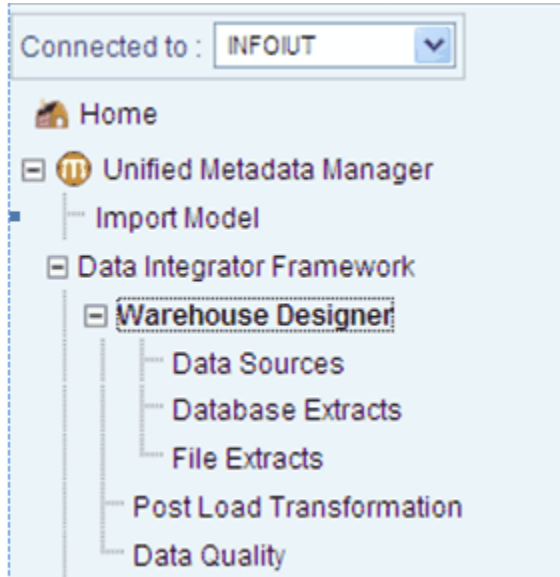
Maintaining the Data Integrator

The main emphasis in the Data Integrator is improvising business performance tracking with the help of the Unified Metadata tools that form part of Infrastructure. The Data Integrator comes with a set of automated tools and a tested data integration methodology that allows you to position its advanced N-tier web-based architecture, thus reducing development and support costs. With its capabilities the integrator integrates enterprise data sources from the mainframe to the desktop.

For users who are mapped to ETL Analyst role can perform actions in Data Integrator.

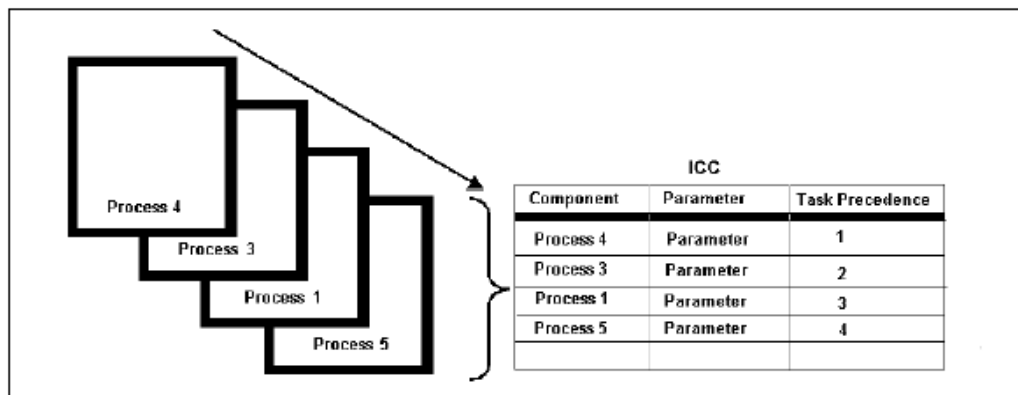
Data integrator offers ready-to-use adaptors for over 50 enterprise data sources including:

- Relational Data bases
- Flat Files



Process Flow

Infrastructure Data Integrator is designed to unify and standardize heterogeneous source system data into a single standard format to enable meaningful analysis on the data. The Data Integrator primarily populates the warehouse in a defined periodicity with high performance ETL processes for data extraction, transformation and loading.



The process of ETL begins as follows:

- Extracting data (operational data that is detailed data used to run the day-to-day operations of the business) like source data containing extracts and table to table data, flat file/ASCII formats.
- Creating the Information domain, uploading the data model and mapping the source to the destination table (data model).

- Applying data transformation and quality rules.

Firstly extract data based on the client database and then create an information domain specific to the database. Then the business data model which is based in a format that is suitable to the client requirements is uploaded. A business data model is uploaded during the initial creation of a the purpose of process flow, you need to understand the process

The data for the ETL process is obtained from the source files, popularly referred to as operational data that is all banking operations/transactions.

The process of extraction, transformation and loading of operational data is as follows:

1. Define Application
2. Define Data Source
3. Map Data Source to Application
4. Generate Source Data Model
5. Define Database Extracts
6. Define Flat-Files extract
7. Define Expression (Row level transformation)
8. Define Mapping
9. Define Post Load Transformations
10. Data Quality

Every Application has a data source associated with it. A data source definition refers to the physical location of data and its connection attributes, servicing one or more source applications.

Data sources are of two main types:

- RDBMS files – refers to Relational databases
- Flat-Files – refer to text or ASCII files

Source Data Models should be generated from the source systems to enable the definition of source extracts. Infrastructure Data Integrator allows the generation of the Source Data Models for a Source Application-Data Source combination. Data Models can be complete or partial. Entity Filters are applied to extract source information only for a particular set of source entities.

- For Flat-Files there is no source generation. The flat-files are downloaded.
- RDBMS Files (Extracts) are loaded from the respective RDBMS Source for which the Source Model would have been generated.

How to Generate and Save the Source Model in Infrastructure

For more information, please see: How to Generate and Save the Source Model in Infrastructure, page 18-1

Designing the Source

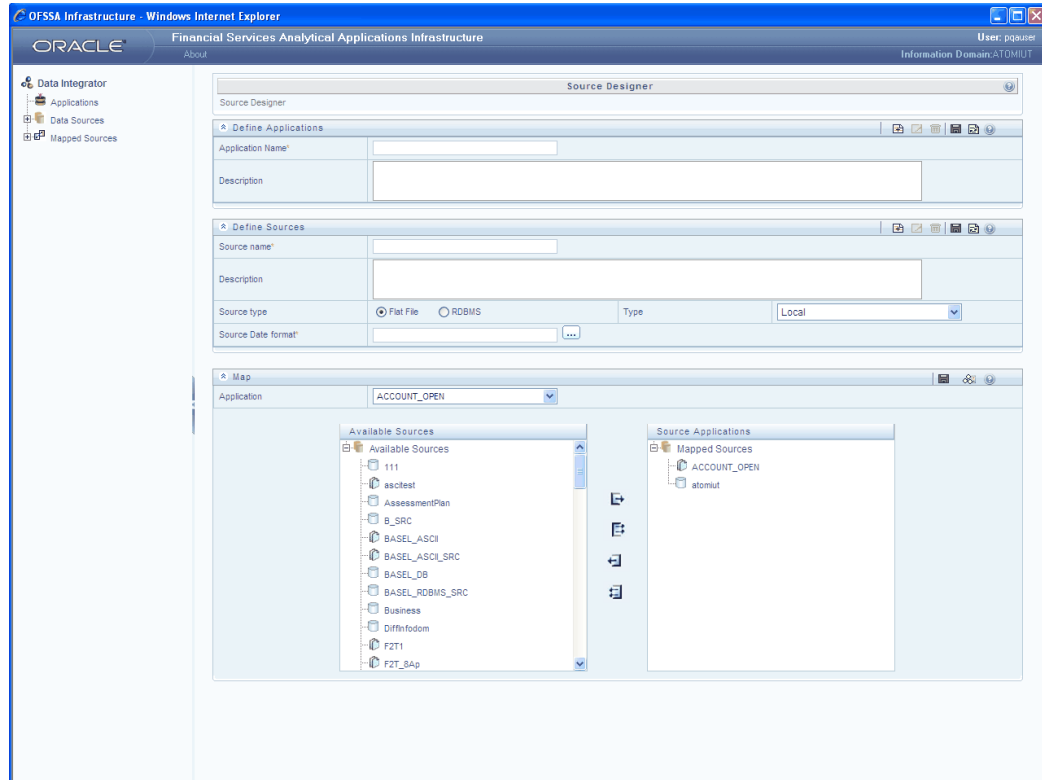
Data Source Designer

Click on the + sign next to Warehouse Designer. Data Sources option will appear. On clicking Data Sources option on the Left hand side, the Data Source Designer page appears.

With the source designer you define source applications and their data sources; map data sources to applications and generate source data models for each application.

The source designer window holds 3 panels which are as follows:

- Define Application
- Define Source
- Map



Define Application

Data Sources refer to the physical structure or location of the source file. The upper pane of the source designer screen gives you the ability to define the source business application. This screen helps you to define new application, modify the created application and remove the created application.

An **application** is a logical group of Data Sources. An Application can have one or more sources of one or more source types as described above.

In the **Define Applications** screen you are able to define new source applications. The source application name that you define and describe in this screen should contain the name/information pertaining to the source data required.

Example

SEIBEL is a Source Application and data can be extracted from Oracle, which is an RDBMS.

Defining a New Application

You can also define a new application in the Define Source Application screen.

The **Application Name** field should contain the name by which the application can be identified.

The **Description** field should contain information pertaining to the description of the application. The description you enter could also be an elaboration of the Application name itself.

You can enter the information by entering the Application Name in the **Application Name** field and Enter the Description in the **Description** field.

Click **Save** to ensure that the information entered in this screen is saved in the metadata store.

Example

An example for Application is **SEIBEL Corporate**.

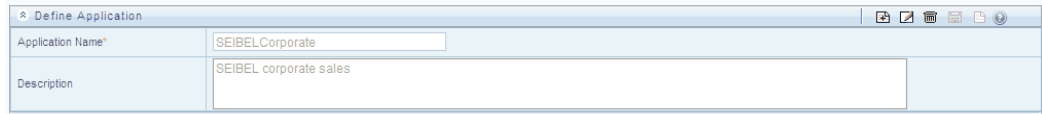
An example for Description is SEIBEL corporate sales application which is a source of Data to the Warehouse.

If you wish to define another new application, click **Add** button.

To **Delete** an application, click to select the application you want in the existing application list and click the Delete button.

Note: An Application can be deleted only when it is not mapped to any Source and the source cannot be un-mapped from an application if the model is generated.

Clicking **Cancel** performs the refresh function to display a fresh screen. All information entered in the screen is lost if you cancel without saving.



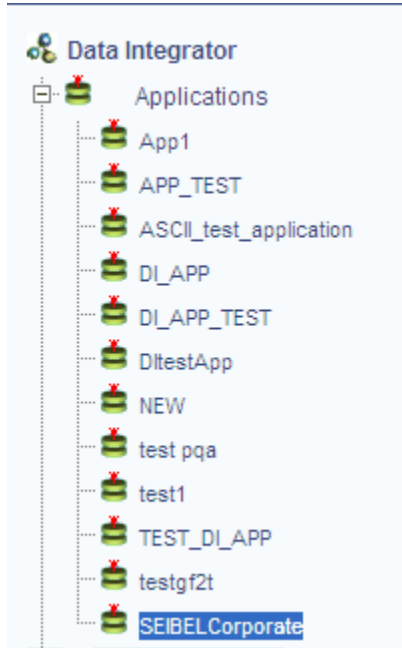
Define Application	
Application Name*	SEIBELCorporate
Description	SEIBEL corporate sales

Selecting an existing Application

The fields that you can view in this screen are the Existing Application, the Application name and Description fields.

The existing applications are applications that have already been defined in the database are listed in the browser tree view on the LHS side. Expand the + sign against the Applications node under Data Integrator to list all the defined applications. On a single click on an existing application from the list, the Application Name and the Description for the same are populated in the fields provided on the work area (RHS) of the screen which aids in viewing the details.

For editing, click Edit and make the required changes. Click save to save the changes made.



Define Data Sources

In the Define Data sources field you can define the data source details for the defined applications.

The middle pane of the source designer screen gives you the ability to define the source data for various sources.

These sources could be defined. In this screen you have the option of either modifying source data that has already been defined or define new data source.

The 'Define Sources' dialog box contains the following fields and options:

- Source name: [Text input field]
- Description: [Text input field]
- Source type: Flat File, RDBMS, Real Application Clusters
- Type: Remote (dropdown menu)
- Database name: [Text input field]
- TNSNAME: [Text input field]
- Table Owner: [Text input field]
- Database: [Text input field with browse button (...)]
- Server name: [Text input field]
- JDBC Drivers: [Text input field with browse button (...)]
- Server port: [Text input field]
- Source Date format: [Text input field with browse button (...)]
- User ID: [Text input field]
- Locale: [Text input field with browse button (...)]
- Password: [Text input field]

Example

Define SEIBEL Database as an RDBMS.

Source Details

Source Name refers to the name that you give for the source. The source name you give helps you to identify the specific source name.

Description refers to the description of the source data. The description could also be an elaboration of the source name itself.

Server Name refers to the name of the server on which the Data Source is present. You could enter the server name or the IP Address of the server machine in the field provided.

Server Port refers to the port on which the Database Server listens. This is optional and is specific to the JDBC Driver implementation.

User ID refers to the User Id required to connect to the server. This would be the Database User ID in case of an RDBMS Source Types and FTP User ID in case of Flat-File source on a remote server.

Password refers to the password required to connect to the server. This would be the Database User Password in case of an RDBMS source types and FTP User Password in case of Flat-File source on a remote server.

Database name refers to the name of the Source Database from which the extraction is required to be done.

Table Owner refers to the owner of tables in the source database.

Database refers to the database vendor. A list of Databases supported by the application will be displayed to choose from.

- If the source database is DB2, then the DB2 client is required to be installed on the Infrastructure Application Server machine.
- To establish connection with the DB2 database on a separate machine, the profile of the user used to connect to the Infrastructure Install Area must have the following entry:
- Run the .profile by typing .profile on the command prompt of the identified Web Server, Application Server, and Database Server.
- If DB2 Database support is required, then the user profile on which Infrastructure is to be installed have to be modified to include the DB2 related environment variables as follows:

```
DB2PATH=/<path of db2instance>/<db2instancename> export DB2PATH
```

Add the following lines:

```
If [-f $DB2PATH/sql/lib/db2profile]; then
```

.\$DB2PATH/sql/lib/db2profile

If PATH=\$PATH:\$DB2PATH/sql/lib/bin

db2set DB2ENVLIST=EXTSHM

The PATH environment variable should be updated with the DB2 profile path \$DB2PATH/sql/lib/db2profile in case of a window environment

JDBC Drivers refers to the supported JDBC Drivers for the database chosen. The Infrastructure Administrator configures the list of JDBC Drivers during the configuration of Infrastructure after installation.

Source Date format refers to the date format to be used for extracting date information from the source system. This format will be used as the default date format for source data extraction unless specified otherwise in the Define Extracts screen.

Source Type refers to whether you wish to save the source type as RDBMS, non-RDBMS or as a Flat-file source.

Locale refers to the language. For example: English, Chinese, and Korean.

Define Data Sources	
Source type	<input type="radio"/> ASCII <input checked="" type="radio"/> RDBMS
Type	Remote
Data Source name*	DATA_SOURCE_RDBMS
Database name*	fsgbu
Description	Data source for rdbms
Table Owner	
Database*	Oracle
JDBC Drivers*	Oracle Driver
Server name*	10.184.74.119
Server port*	1523
Source Date format*	mm-dd-yyyy
User ID*	diatomic
Locale*	en_US
Password*	*****
TNSNAME	fsgbu

When the Data Source is RAC, you should check the Real Application Cluster checkbox.

Define Sources	
Source name *	
Description	
Source type	<input type="radio"/> Flat File <input checked="" type="radio"/> RDBMS
Real Application Clusters	<input checked="" type="checkbox"/>
Type	Remote
User ID *	
Source Date format *	
Password *	
Locale *	
JDBC Url *	
TNSNAME *	

The JDBC connection string has to be provided in the **JDBC url** text box.

Flat file location You are provided two options in this field. You could set your flat-file location to be either Local or remote. A 'Local' setting would expect the ASCII flat-file to be available under the respective sources in the staging area of the Infrastructure Database Server.

If the Source type is selected as ASCII and the type is Remote, the following source details will be required.

Source Name refers to the name that you give for the flat file source. The source name you give helps you to identify the specific source name.

Description refers to the description of the flat file source data. The description could also be an elaboration of the source name itself.

Server Name refers to the name of the server on which the Data Source is present. You could enter the server name or the IP Address of the server machine in the field provided.

Server Port refers to the port on which the Database Server listens or where the flat file is present.

User ID refers to the User Id required to connect to the server. This would be the FTP User ID in case of Flat-File source on a remote server.

Source Date format refers to the date format to be used for extracting date information from the source system. This format will be used as the default date format for source data extraction unless specified otherwise in the Define Extracts screen.

FTP Share the File Transfer Protocol share refers to the location where the ASCII files are available for loading if the files are in a staging area that is different from the default staging area of Infrastructure Database Server. This is required only in the case of Remote ASCII Flat File sources.

- This is required only in case of Windows NT and Windows 2000 installations of FLEXCUBE Information Center.
- FTP Drive Defaults to home directory of FTP user in case of Unix Servers.

What is a Flat-File Source?

Flat file data source lets you define the flat file present locally or remotely with FTP access to remote server. Data files can be made available in the standard staging area configured in OFSAAI.

A Flat-File Data Source is a local data source residing in the staging area of the Infrastructure Database Server. A Flat-File data file remotely available on a server supporting a TCP/IP connection can also be defined as a Flat-File Data Source. FTP is used to bring the remote data-file into the Staging area of the Infrastructure Database Server.

The Data Source for a Flat-File serves the purpose of logically grouping a set of Flat-Files getting loaded into the Warehouse from a defined source application.

The details captured for a Flat-File Data Source are the Source Name, Description and the Source Date Format, as appearing in the Data Files extracted from the source.

Additionally the Server Name, Server port, FTP Share name (applicable only for Windows Servers), FTP Drive (Defaults to home directory of FTP user in case of Unix Servers), User ID – FTP User ID and Password – FTP Password is captured for a remote Flat-File Data Source.

What is an RDBMS Data Source?

RDBMS Data Sources Relational data sources can be defined to connect to any of the RDBMS - Oracle, Sybase, IBM DB2, MS SQL Server and any RDBMS through native connectivity drivers or ODBC. RDBMS data source lets you define the RDBMS engine present locally or remotely with FTP access to remote server.

The list of installed Drivers is available to choose from, for each Database.

The following fields are to be filled for an **RDBMS Data Source**:

Source Name *	The Data Source Name
Description	The Data Source Description
Server Name*	The Server on which the Database is running.
Server Port	The Port on which the Database listens on the server.
User ID	The Database User ID which will be assumed as the Schema name in case of Oracle, if the Table's Owner field is left blank.

Password	The Database User Password
Database Name*	The Database Instance name
Table(s) Owner	The Owner of the Database Tables. Schema name in case of Oracle and Owner in case of SQL Server and other Databases.
Source Date Format	The Default Format of the Source Database. Useful in extraction and Source-Destination Mapping.
Locale	At least one of the following locales must be installed on the machine in which Infrastructure Database components will be installed. en_US.UTF8 en_US.iso88591
Database	SQL Server, Oracle or DB2.
JDBC Drivers*	It is mandatory for you to choose one of the supporting drivers for each Database.
TNSNAME	It is mandatory to enter the TNS Name if the database selected is Oracle. This is the database name that was created for the infodm. This field is inactive if the database selected is SQL or DB2.

What is a RAC Source?

In an Oracle RAC environment, two or more computers (each with an instance) concurrently access a single database. This allows an application or user to connect to either computer and have access to a single coordinated set of data. It addresses areas like fault tolerance, load balancing and scalability.

The following fields are to be filled for an RDBMS RAC Data Source:

Source Name *	The Data Source Name
Description	The Data Source Description
User ID	The Database User ID which will be assumed as the Schema name in case of Oracle, if the Table's Owner field is left blank.

Password	The Database User Password
Source Date Format	The Default Format of the Source Database. Useful in extraction and Source-Destination Mapping.
Locale	At least one of the following locales must be installed on the machine in which Infrastructure Database components will be installed. en_US.UTF8 en_US.iso88591
JDBC url*	It is mandatory for you to provide the JDBC connection string.
TNSNAME	It is mandatory to enter the TNS Name if the database selected is Oracle. This is the database name that was created for the infodm. This field is inactive if the database selected is SQL or DB2.

Map Sources

The lower pane of the source designer screen gives you the ability to map one or more data source to service multiple applications as separate source of data into the warehouse. The Application groups Data sources. It gives you the ability to identify the source data with reference to the source business application.

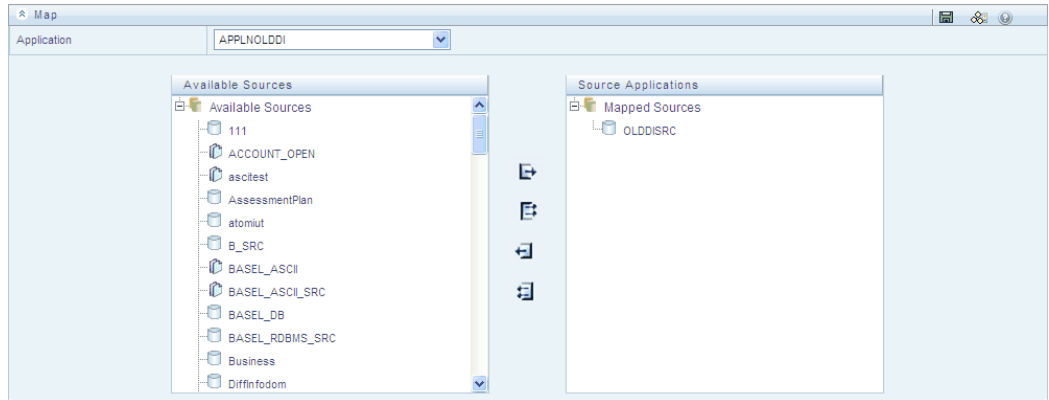
Mapping Data Sources to Applications

With this feature you will be able to Map data sources to applications. There are two functions in this screen, the Source Applications tree-view and the available data sources list.

The mapping of Data Sources to application can be done in two ways:

1. Selecting the application from the Mapped Sources list on the DI Browser tree.
2. Selecting the application from the Map panel Application drop down.

After selecting the Application (by either of the above methods) the Available Sources and Mapped Sources (if any sources are mapped) will get populated.



Mapped Sources is the list of sources that have already been mapped to the application.

Available Sources is the list of available sources that can be mapped to one or more applications. Select the Application to which you want to map an available data source.

Click to select the source name from the **Available Sources** list and click Select button >. The source will appear in the tree-view under the Mapped Sources.

Click to select the source name from the mapped application sources field and click Deselect button < to remove a data source for an Application. Un-mapping of sources will remove the Source Model.

Note: Click Select All >> button to map all the available sources. Click Deselect All << button to un-map all the sources.

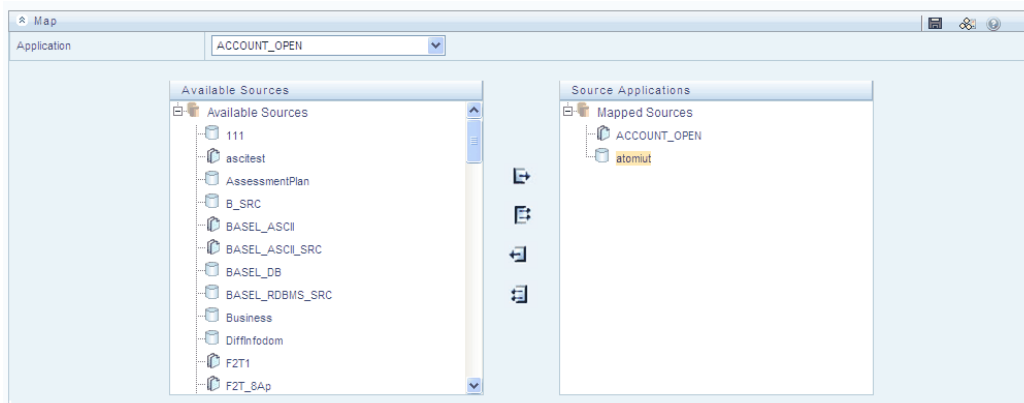
Generating the Source Model

Generating the Source Model

How to Generate and Save the Source Model in Infrastructure

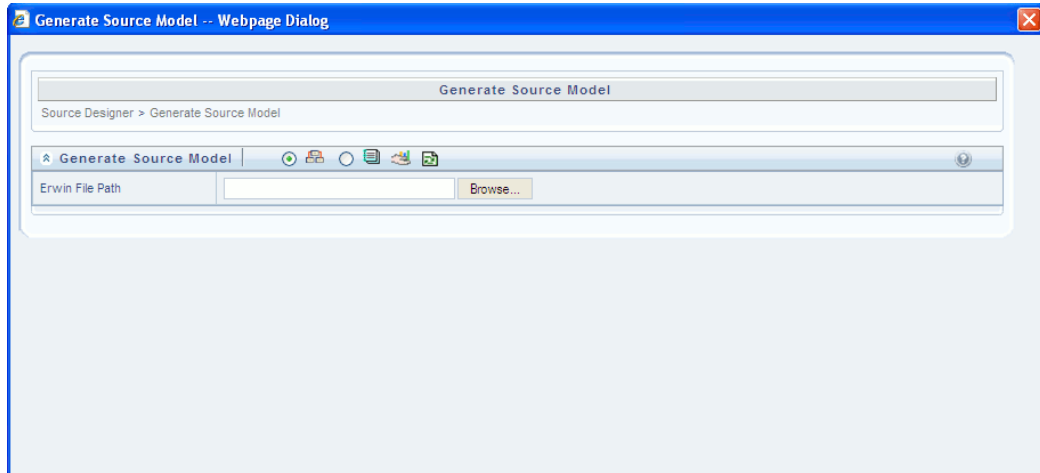
From the LHS browser, from the mapped sources node, choose any of the application. The chosen application and its mappings reflects in the third frame – the map sources frame on the RHS side.

Once the Source is mapped to Application, the RDBMS Source model can be generated.



Note: Source model can be generated only for RDBMS source and not for Flat Files (ASCII).

Select the RDBMS source from the mapped sources panel and click **Generate Source Model** icon. The Generate Source Model window appears.



You will be able to generate source models using either the **ERwin** table structures or the data **Catalogs** that are defined in the database.

If you choose to load the ERwin files, you will have to specify the path for the same as shown in the above figure. **ERwin File path** is the path of the ERwin XML file that you require to upload for a source model.

Selecting ERwin

If the source model is available in the ERwin format, click to select the ERwin option. The System expects an ERwin model file in ERwin XML format.

Click the Browse button adjacent to the ERwin File Path field to specify the file path. Choose the ERwin XML File on the hard disk.

In the browse window, click Open to confirm selection of file or click Cancel to return to the **Generate Source Model** screen without selecting the file.

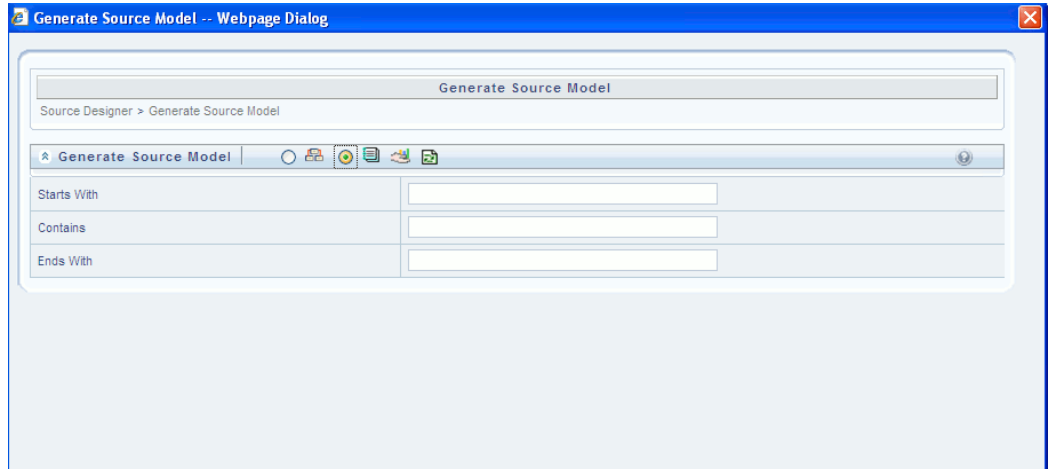
If the source data model is available in the ERwin XML format, you will have to enter the folder path where the ERwin XML is available.

Example

D:\erwin_filename.xml

The source data model is stored in the source data model repository. The Source Data Model can be generated either from an Entity-Relationship designer ERwin stored in the XML format or from the Database catalogs of the Source System. When you generate the source model you are importing source models for each application-source combination into the Infrastructure metadata repository.

Click **Generate** button to generate and store the Source Model. If you prefer to extract the source model from source Catalogs, select the **Catalog** option and enter a filter for selection, if any.



Filters are patterns for entity names in the Database and can be used to restrict the source model generation to a specific set of entities. Click Generate button would generate the source model.

Note: Filters can be provided for entities that have names beginning with characters using 'starts with' or names that 'contain' characters or names that 'end with' characters. In the given filter if any one of the condition matches then the source model will be generated. You can specify multiple conditions for a single filter type using comma-separated values.

Example

Tables starting with TB and tables starting with TM can be specified as TB, TM While generating the source model you will receive a message stating whether the model was generated successfully or if the operation failed at some point.

A confirmation message comes up if the source model has been If source model has already been generated, a confirmation message is displayed stating "Model already exists for the source. Do you want to replace existing model?" If the user clicks Yes, the source model is regenerated.

If the generation has been successful you will have to extract/transfer the source model to the Business Data Model.

Note: If ERwin 7.x is used for data modeling, the RAM size of the application-tier of Infrastructure should be proportional to the size of the ERwin model. For optimal performance, the RAM size must be around 20 times the size of the ERwin model. Please refer to the Infrastructure Installation Manual for more information and configuration details.

Defining Extracts

Defining an Extract

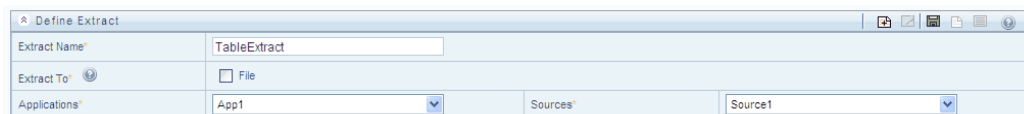
Extraction is the process of reading and understanding source data and in the process copying parts that are required, to the staging area/Business Data Model. Extracts are defined as a subset of the source model and can have one or more Source entities.

Extraction can be done to:

- **Table**
- **File**

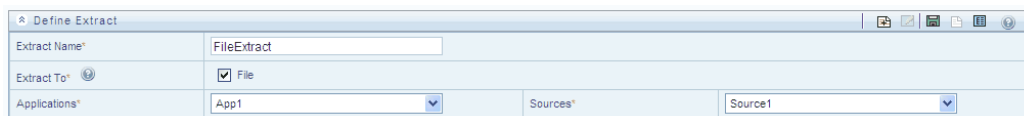
Database Extracts

By default **Extract To Table** is selected.



Define Extract			
Extract Name*	TableExtract		
Extract To*	<input type="checkbox"/> File		
Applications*	App1	Sources*	Source1

Click the Extract To check box adjacent to File for selecting the option Extract to File.



Define Extract			
Extract Name*	FileExtract		
Extract To*	<input checked="" type="checkbox"/> File		
Applications*	App1	Sources*	Source1

Note: Extract to table load – This functionality is applicable only when the source and target tables belong to the same database type.

Following are the pre-requisites before using the Database Extract Designer:

- Define extracts
- Define extract properties
- Map the extracts to target model
- Add Row Level Transformations

To define and map a Database extract, follow the below steps:

Navigate to **Unified Metadata Manager >> Data Integrator Framework >> Warehouse Designer >> Database Extracts**.

This opens the Database extracts designer. Enter the **Extract Name**.

The screenshot shows the 'Database Extract' designer window. The 'Define Extract' section has 'Extract Name' set to 'T2T', 'Extract To' checked for 'File', 'Application' set to 'PFTApplication', and 'Source' set to 'PFTSource1'. The 'Extract Entities' table is as follows:

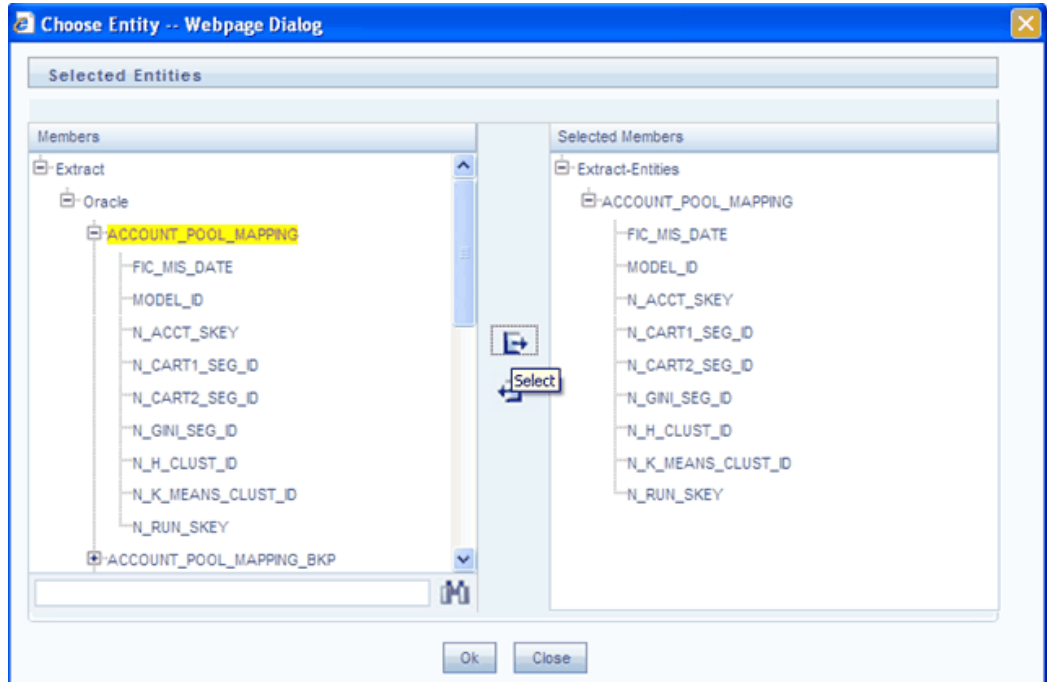
Source Table	Source Column	Order	Data Type	Length	Date Format	Expression Value
BP_MEAS_MAP	V_BP_CODE	1	String	10		
BP_MEAS_MAP	V_MEAS_CODE	2	String	10		

The 'Join/ Filter/ ANSI Join/ Hint' section shows an ANSI Join of 'Ans_Prd_ext' with a join type of '2', and a Filter of 'Ans_Prd_Filtr' with the hint expression '/*+ FIRST_ROWS(2) */'. The 'Source - Target mappings' section is empty, showing 'No Record Found'. The 'Hint' section contains the expression '/*+ FIRST_ROWS(2) */'.

For **Extract to File**, select the **File** check box. By default, **Extract to Table** is selected. Select the **Application** and **Source Name** from the respective drop down menu.

The screenshot shows the 'Define Extract' section with 'Extract Name' set to 't2t_contracts_pay', 'Extract To' unchecked for 'File', 'Applications' set to 'FSAPP_T2T', and 'Sources' set to 'FS_SOURCE'.

Click **Choose Entity** in the 'Database extract entities' panel. A pop-up window opens with **Source Model** entities populated on the left hand side. Select the required Source Entities (Members) and move all the attributes to the chosen entities (Selected members) on the right hand side.



The selected source entities would be reflected in the Database extracts entities panel.

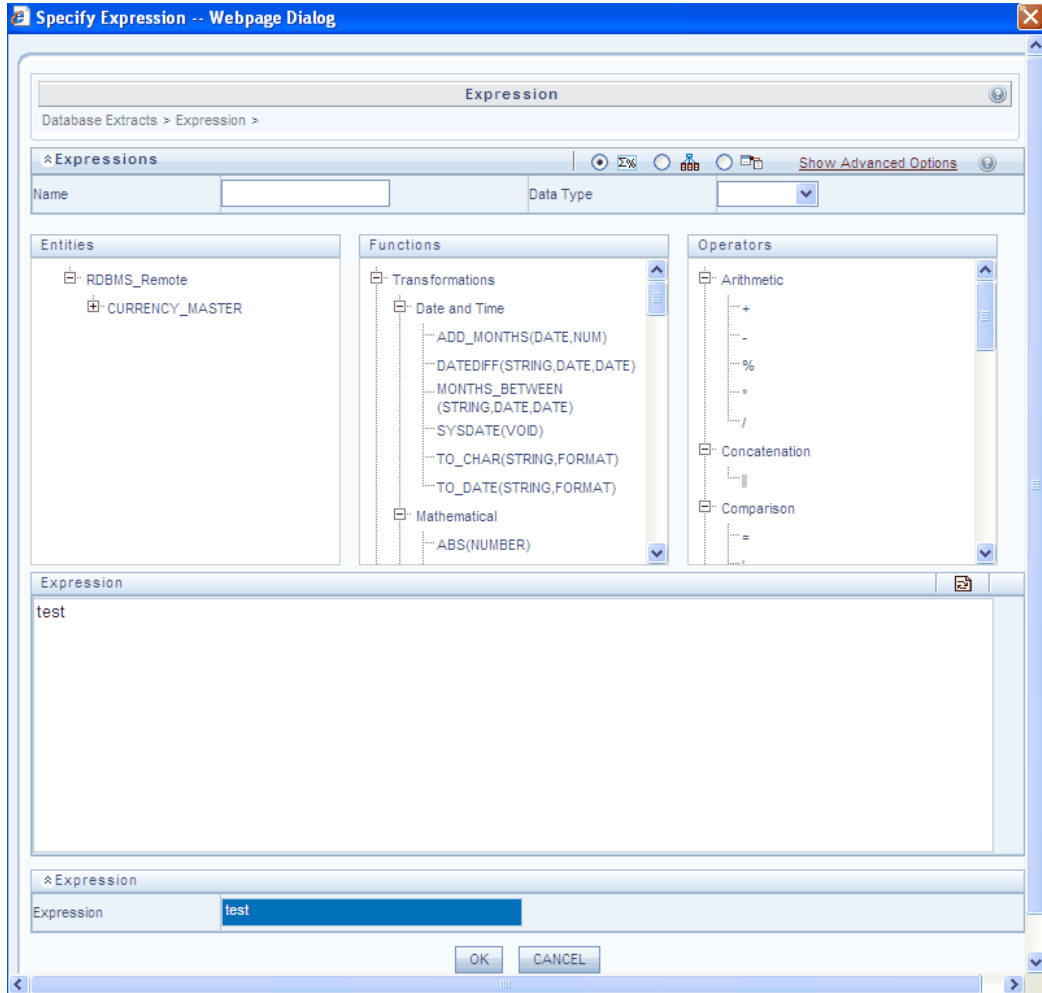
Source Table / Column	Order	Data Type	Date Format	Expression
D_QUOTE_DATE	2	Date Time		
FIC_MIS_DATE	3	Date Time		
N_CONVERSION_FACTOR	4	Number		
V_DATA_SOURCE_NAME	5	String		
V_DEST_CCY_CODE	6	String		
V_QUOTE_TYPE	7	String		
V_SRC_CCY_CODE	8	String		
▼ DIM_BRANCH				
D_RECORD_END_DATE	24	Date Time		
D_RECORD_START_DATE	25	Date Time		

Choose the Properties button in the Define Extract panel and provide the definition (Source) properties.

Note: Extract to Table does not have any definition (Source) properties.

Click on Expressions button in the Extract Entities panel.

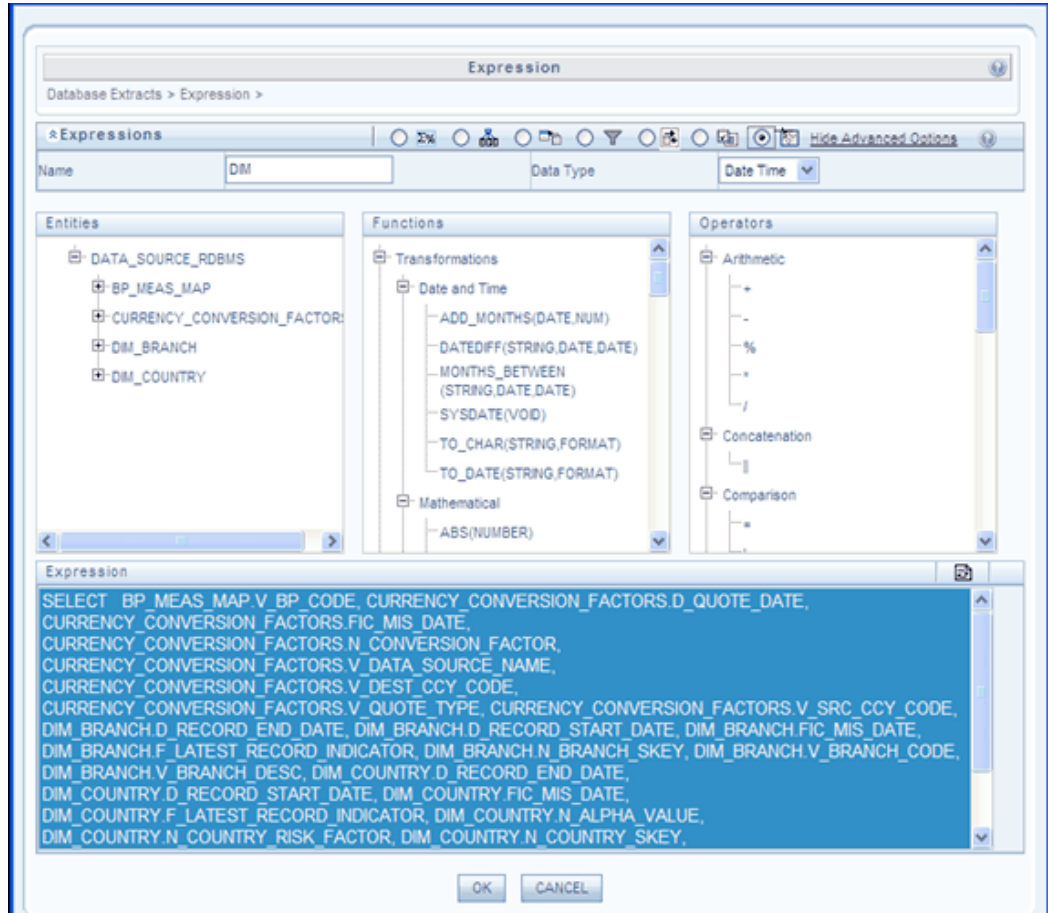
This opens the expression window to define any expression, filter, Hint or joins (as marked in the screen below). Click OK. The defined expression would be reflected in the database extract entities panel.



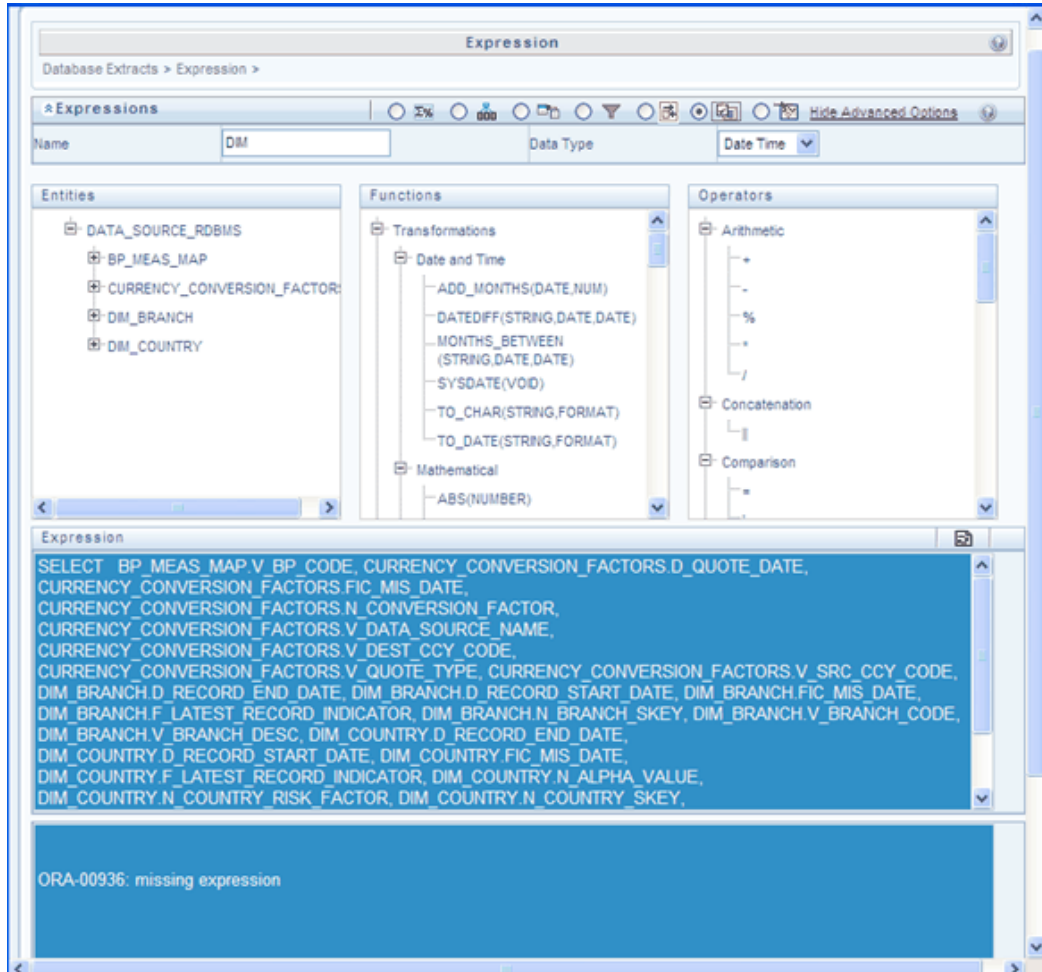
There are advanced options which can be viewed by clicking 'Show Advanced Options'.

This includes options such as Hint, Validate, and View SQL.

Hint allows you to specify Oracle hints (Rules) if any. View SQL acts as a print command for the complete query.



Validate will execute/validate the query by converting to the selected RDBMS source. If Validate is successful /*+ */. The lower pane shows the explain plan for the SQL query. If the validation is not successful, it shows as the SQL Exception.



Filter allows you to specify the Filter Condition for Database Extracts if any. ANSI Join or Join should be specified for the Database Extracts if more than one Source Entities are selected.

Note: Oracle hints to follow this format: /*+ RULE */

Hints, Viewing the entire query in the white board and validating the entire query could be done choosing the advanced options in the expression window.

Example

\$MISDATE is allowed as a filter specification for run-time substitution of the MIS Date for extraction. Click the Filter option in the define extract screen to define the filter condition.

- If the expression defined uses functions that contain a placeholder for String data type, then you must enclose the value for the placeholder within single quotes. Enclosing it within double-quotes may generate an error during the extract

definition and/or during batch execution.

- If the expression defined calls a stored procedure that contains a placeholder for String data type, you must enclose the value for the placeholder within single quotes. Enclosing it within double-quotes may generate an error during the extract definition itself.
- Expressions with functions that contain placeholders for Date/Timestamp data type are not supported.

Infrastructure has the capability to extract data from any RDBMS data source along with the other sources. While extracting data from an RDBMS Source, data can be extracted incrementally based on certain criteria.

The criteria can be built based on the following functions that can be used while defining the filter condition:

List of values from table LOVT (table name)

Values can be taken from a Table. You can specify that data should be extracted based on the distinct values in the table.

Example

FCT_CUSTOMER.V_PROD_CODE in LOV (Extract_Table.Product_code)

List of values from file LOVF(filename)

Values can be taken from a Flat file (Delimited by a delimiter)

Example

FCT_CUSTOMER.V_PROD_CODE in LOVF(File Name). This file has to be manually copied in STAGE folder of DB Server.

Select the **TABLEGROUP**, **Functions** and **Operators** to specify the filter. Click **OK** to apply the filter or click **Cancel** to close the pop-up and return to the **Define Extracts** screen.

- All selected file entities would be populated in '**Database extract entities**' panel and the data within the panel would be grouped by entity name. Double click on the panel rows to edit any of the column.

Database Extract

Define Extract

Extract Name* T2T

Extract To* File

Application* PFTApplication Source* PFTSource1

Extract Entities

Source Table	Source Column	Order	Data Type	Length	Date Format	Expression Value
BP_MEAS_MAP	V_BP_CODE	1	String	10		
BP_MEAS_MAP	V_MEAS_CODE	2	String	10		

Join/ Filter/ ANSI Join/Hint

ANSI Join	Ans_Prd_ext	Join	2
Filter	Ans_Prd_Filtr	Hint	/+ FIRST_ROWS(2) */

Source - Target mappings

Source Table	Source Column	Target Table	Target Column	Expression
No Record Found				

Hint

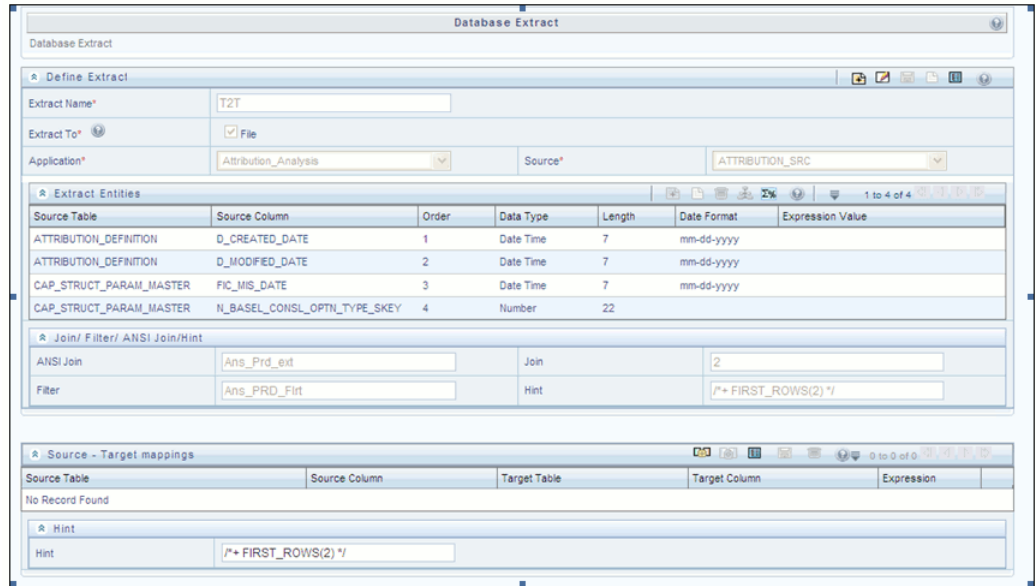
Hint	/+ FIRST_ROWS(2) */
------	---------------------

ANSI Join, Join, Filter, Hints entered if any will be reflected in the Database extracts screen.

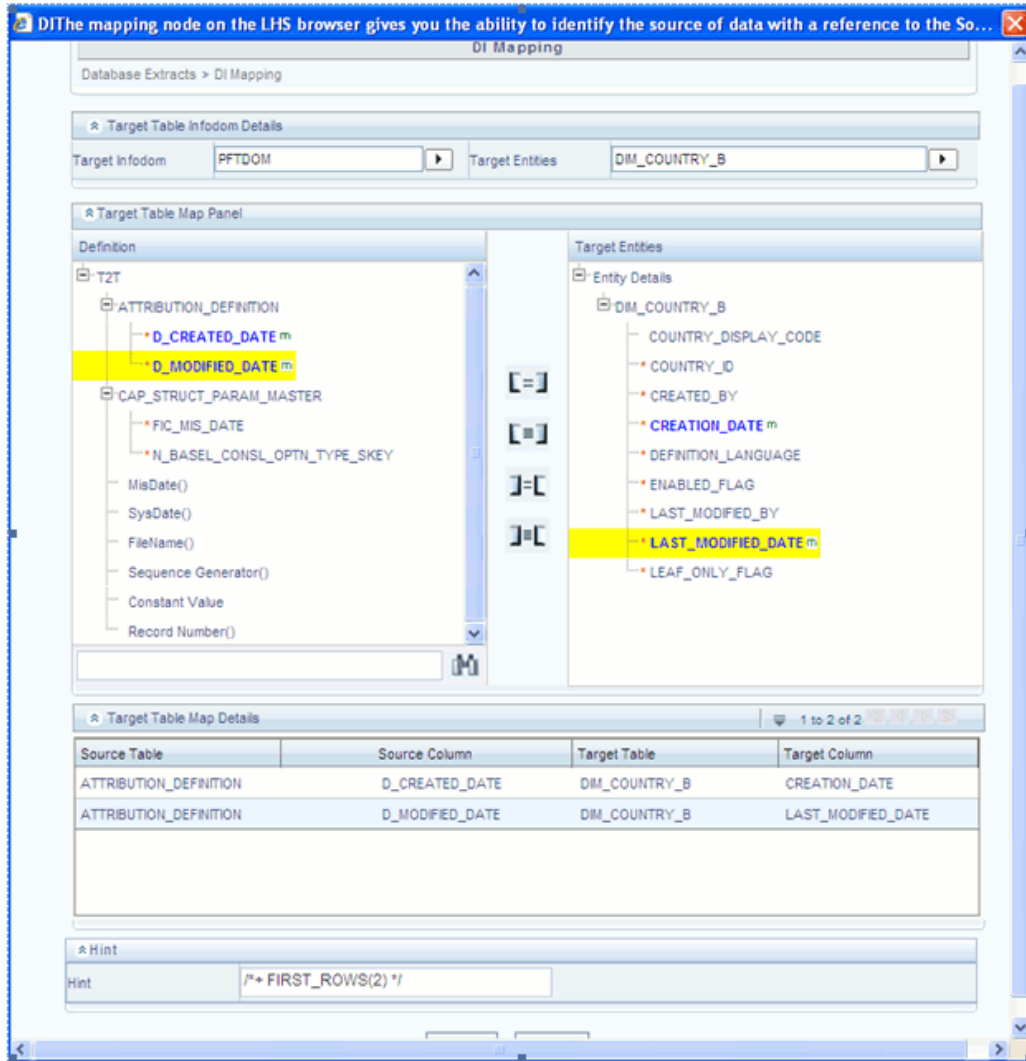
Join/ Filter/ ANSI Join/Hint

ANSI Join	VW_ACR_ACTIVITY_RISK FC INNER JOI	Joins	
Filter	NOT EXISTS (SELECT '1' FROM FCT_CA	Hint	

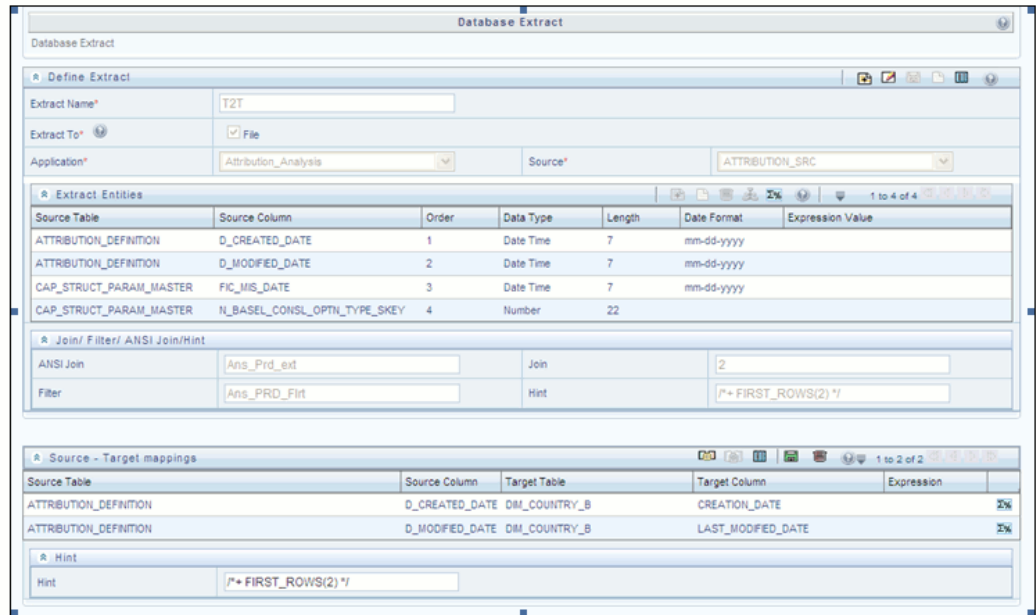
- Click **Save** option placed on the top frame tool bar. This would alert the user if mandatory properties are not saved and validate the grid data (if the validate grid data is not chosen explicitly).



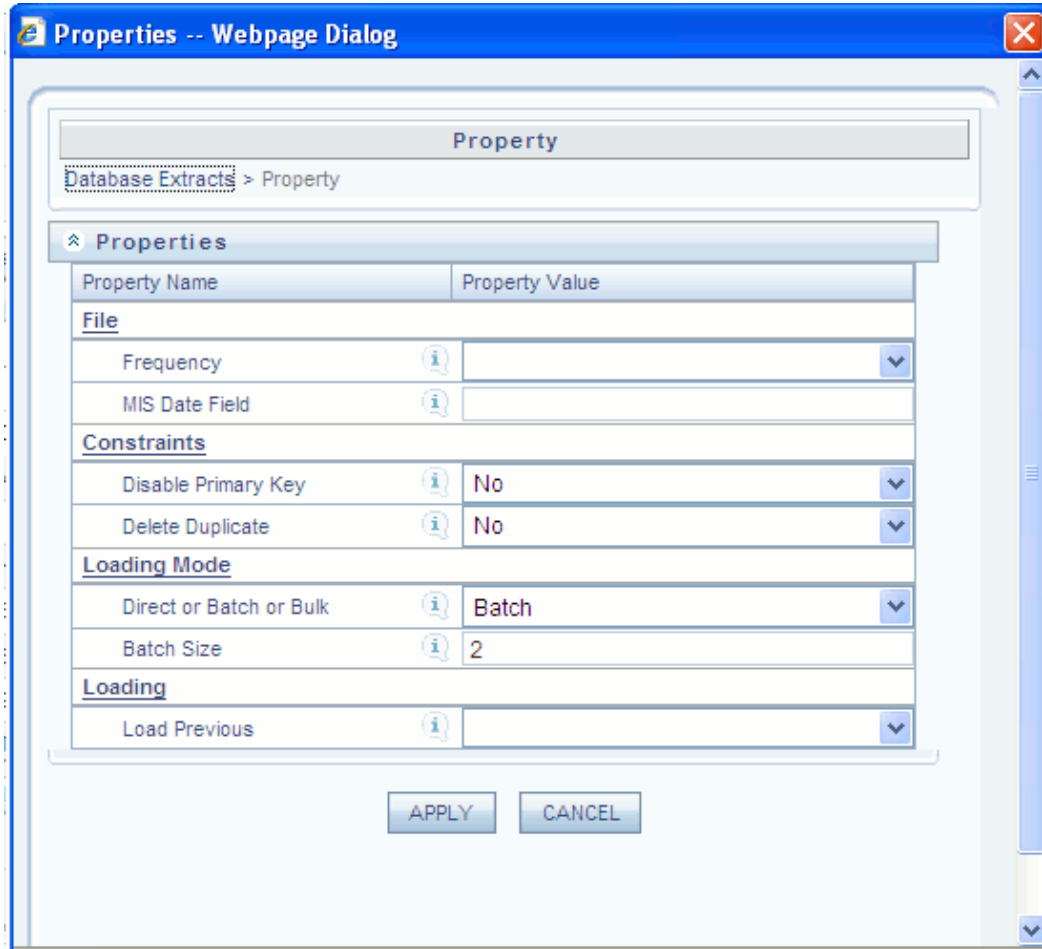
- Click **Define Mapping** option in source - target table mapping panel. This opens the DI mapper screen.
 - The Target Table Infodom Details panel of the DI Mapper screen has two drop down menus. The Target Infodom drop down holds the list of Information Domains where you can select the desired Target Infodom. The Target Entities drop down holds the Target Entities (Tables) of the selected Infodom.
- The left hand side of the Target table Map panel contains Source File entities. Select the required Target Entity from the drop down menu which populated the entities in the Target Entities. You will now see the map, un-map, map all, un-map all options enabled.
- (Optional) In the Hint tool bar, specify hints (Rules) if any, for faster loading. Oracle hints follow (/*+ RULE */) format. For example, /*+ FIRST_ROWS(2) */.



- Coming to the main page, all the mapped details along with the transformations would be displayed in the tabular form within the panel – 'Target table map details'.



- If you have selected Date Time as Data Type, you need to set the Date Format by double clicking the attribute/field from the Source Entities panel.
- Click the Property icon to input the loading (Target) properties. If not specified, the mapping will be saved with the default properties after confirmation.
You will be prompted to enter the mandatory properties if any.



Properties for Table to Table

Various properties can be set for extracts. The same can be used to determine the extraction, validations, data integrity checks and other load properties for the extract. Properties apply to extracts as well as flat-file definitions. The properties for the selected file can be defined by either grouping the Fields or by Sorting fields.

Click to select the Group Fields option to group fields or select the Sort field option to sort the fields in ascending order before you proceed with defining properties.

Note: In **Batch & Bulk Mode**, if any of the foreign keys are in Disabled state before loading the data using T2T and the property **Disable Primary Key** is set to **Yes**, then all the Primary Keys and corresponding Foreign Keys are disabled before loading and are enabled back after loading. Hence, the initial status of foreign and primary keys can be changed from **Disabled** to **Enabled**. In case of **Direct Mode**, the Foreign Keys will not return to its initial state.

File

Frequency

You can specify the frequency of the extract to be either daily weekly, monthly, quarterly, yearly or a one-time load. Frequency is linked to the MIS Date or Information Date for which data needs to be available in the Warehouse.

The frequency, along with the MIS Date will be considered while processing and validating some of the properties. Click the drop-down list box of the value field provided for the Frequency property to select the frequency.

MIS Date Field

The MIS Date field captures the Source Field Name for the date field that is designated as the field containing the MIS Date. This is useful in determining processing requirements for the warehouse.

The MIS Date field takes a source field name as input. This field is expected to contain the MIS Date in the extracted source data file.

Note: It is not mandatory for you to provide the MIS Date as part of the source data since the data integrator has the capability to generate MIS Date information and store it in the warehouse through the functions available in the entity-source mapping function. Click the value field provided for the MIS Date property to specify the MIS Date.

Constraints

Disable Primary Key

This property lets the user have the option of loading the file to the mapped destination entity or entities with the primary key enabled or disabled. Disabling the Primary Key while loading will enhance the load performance by reducing the load time. Disabling the primary key while ensuring faster loads, will not guarantee that Data Integrity is maintained. If you are confident of data integrity issues then the disabling of the Primary is recommended for faster data loads. When the Primary Key is disabled the loading should be successful and the primary key should not be validated.

Delete Duplicate

The Delete Duplicate field allows the user to remove or retain the duplicate records. Determining duplicate row is based on the primary key columns.

If the Load mode is selected as "Direct" based on the Delete Duplicate property field, it is determined whether to remove or enable Primary Key constraints. If the Load mode is selected as "Batch" the Delete Duplicate property field works together with the Disable Primary Key.

For "Batch" load, if <DISABLEPRIMARYKEY>key is set to "No", then the rows violating the Primary Key constraints are already loaded into the ERROR LOG table and no duplicate row is loaded into the destination table. In this case you can say that the property field <DELETEDUPLICATE> has no effect.

Loading Mode

Direct or Batch or Bulk Loading

Direct Loading refers to database functionality to load the data from source table to destination table without creating a record set which uses the Oracle database functionality.

Batch Loading refers to Table to Table load, when the T2T engine forms select, insert statements and creates a record set to load the data to the destination table.

Bulk Loading refers to Table to Table load, which is used to load data to the destination tables with a high performance.

Note: For Bulk size loading, there is no Batch Size option. Commit will happen at the end of the load. In Bulk mode, for less records, loading will be faster compared to the Batch mode. But for large number of records, you may lose data if some problem occurs in between.

Batch Size

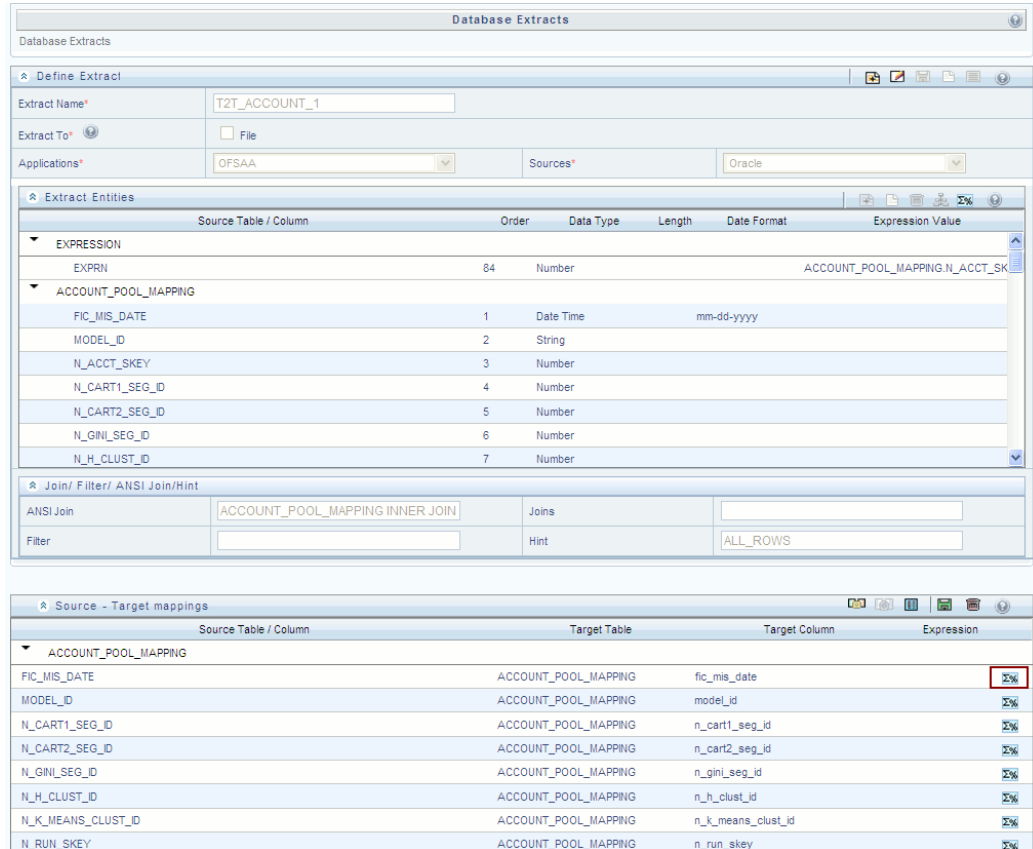
Batch Size should be specified to commit size for the data loading. If not specified, commit is assumed on the entire set

Loading

Load Previous

Load Previous is an option to copy the previous period's data as current period's data in case the current period's data is not available. This is a useful option when it becomes necessary to copy static data across periods without the overhead of extracting the same static data again and again.

These functions could be edited/modified by choosing the row level expression (image adjacent to the target column). This would launch the expression builder window. Here, the user could edit the expression and un-map/map function to the target column. Click **OK**.



All the saved database extract definitions and target table mappings are reflected on the LHS side of the Database Extracts Designer screen. Double click selection on any of these definitions would populate the work area on the right side frame for any further edition/deletion/map/un-map operations on the Database extract definitions.

File Extracts

File Extracts

Click on **File Extracts** option for the respective page to appear.

The three main steps involved are:

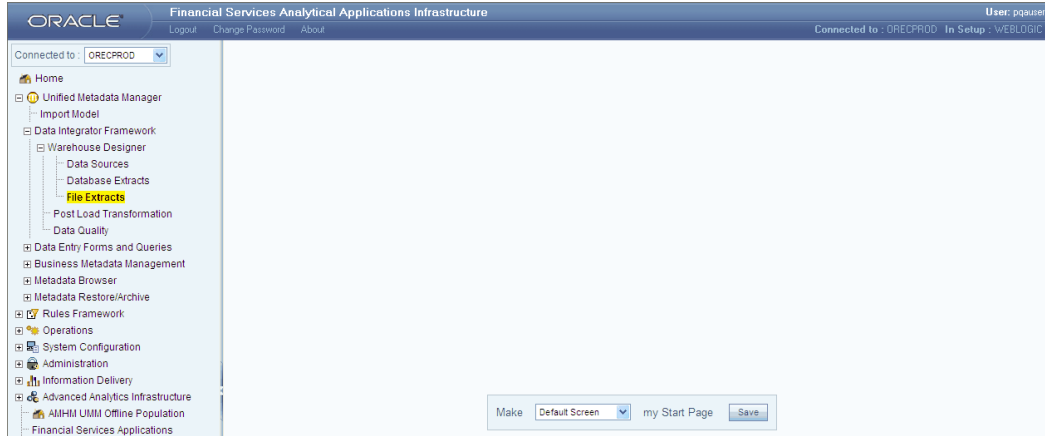
1. Create a flat file definition
2. Define flat file properties
3. Map the flat file to the Target model

Flat file Properties are of two types:

- Definition (Source) properties: This needs to be specified at the time of defining the

Flat File Extracts.

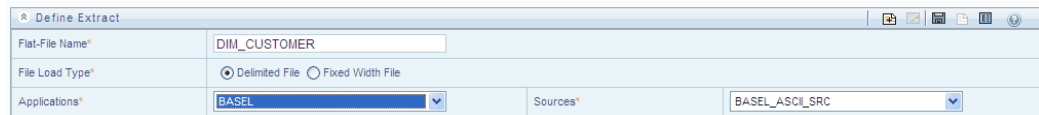
- Loading (Target) properties: This needs to be specified at the time of mapping the Flat File Extracts.



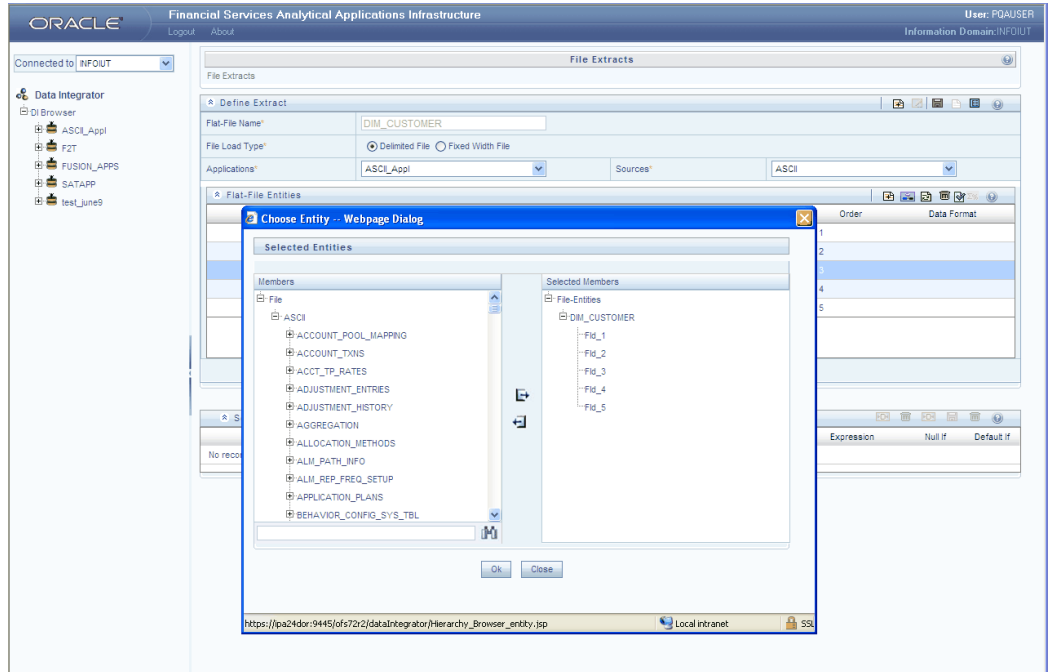
Note: File to Table Load – ASCII files ftp'd to the staging area in a binary mode is likely to corrupt the file and cause a loading failure.

To Define a flat file and map it to a table, follow the steps provided below:

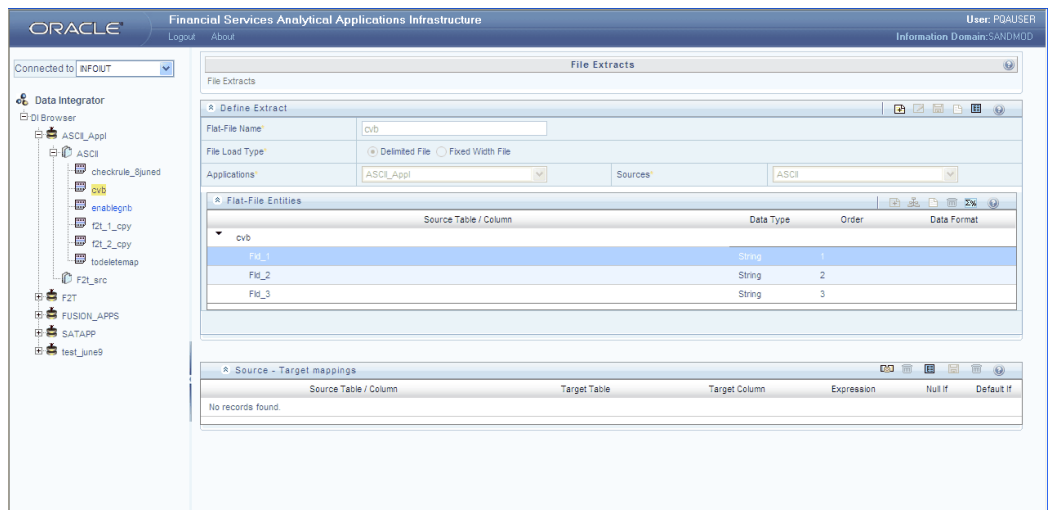
1. Navigate to **Unified Metadata Manager >> Data Integrator Framework >>> Warehouse designer >> File Extracts**
2. In the Flat File Extract Designer window , Input the Flat-File Name
3. Choose the file load type as **Delimited File**



4. Select the Application and the Source name from the drop down menu.
5. Columns can be defined in two ways:
 - Click on **Add** , a drop down will appear where in the number of columns to be generated can be specified. It allows the user to define their own columns (with properties like Name, Data Type, length and so on).
 - You can also click on **Choose Entity** icon, a pop-up window opens with target model entities populated in it. Single-click on any of the entities to expand and select needed columns by choosing the select > or < un-select options. Click on OK.



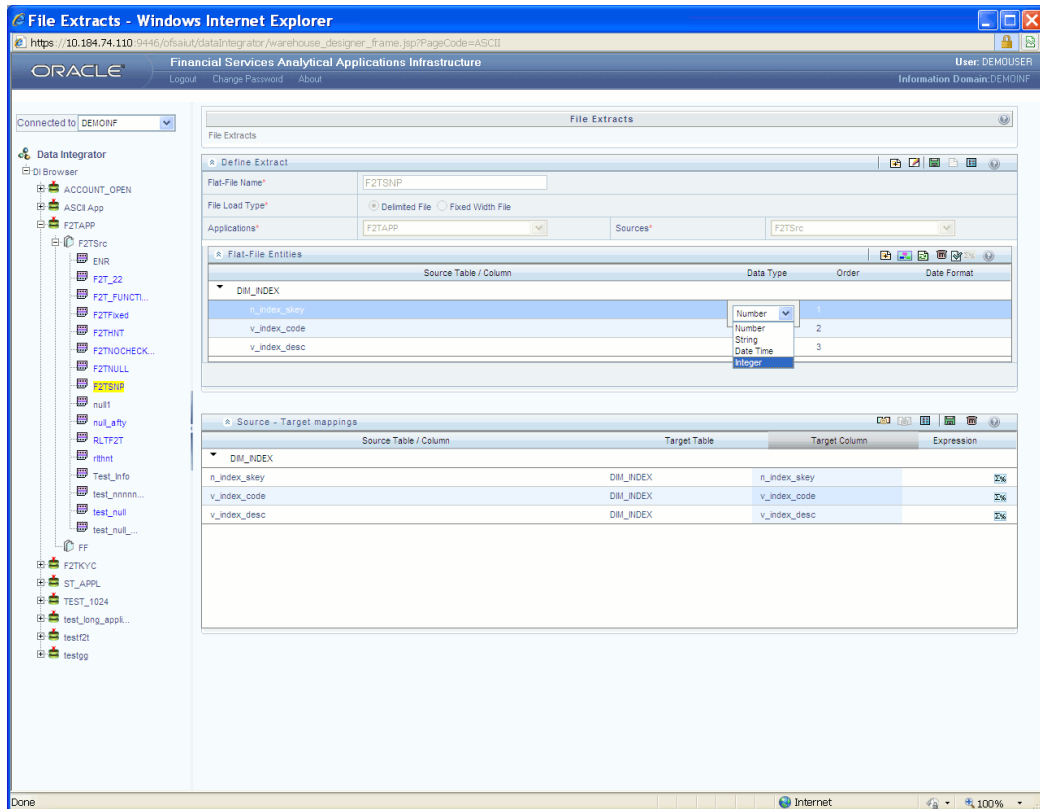
6. All selected file entities would be populated in **Flat file extract entities grid** panel and the data within the panel would be grouped by entity name. Double click on the panel rows to edit any of the column values. Single or multiple rows could be selected to delete any of the rows in the panel.



Note: A row can be deleted by clicking on Delete button. If the Order was changed and you would like the Data Type to be in the original order, click Refresh button.

If the Column is editable, it can be edited on double clicking on the

respective column. In the flat file extract designer screen, top frame tool bar, select the properties option. This opens the properties window with the list of definition (Source) properties which are applicable to a flat file. Click on Apply.



7. Modify the sequence order as stated in the flat file. **Validate Grid** option placed in the panel bar gives the flexibility in validating the grid data explicitly and display the error messages in one go in a tabular form. Click on the error message link would highlight the respective erroneous record in the above panel **Flat file extract entities**.

Row Id	Message	Table	Column
1	Missing Date format	DIM_BRANCH	D_RECORD_END_DATE
2	Missing Date format	DIM_BRANCH	D_RECORD_START_DATE
3	Missing Date format	DIM_BRANCH	FIG_MIS_DATE
4	Missing Date format	DIM_LOB	D_RECORD_END_DATE
5	Missing Date format	DIM_LOB	D_RECORD_START_DATE
6	Missing Date format	DIM_LOB	FIG_MIS_DATE

8. Open the Definition Property window from the **Define Extracts** panel. The Property window appears.

Properties -- Webpage Dialog

https://10.184.74.110:9446/ofsaiut/ETLExtractionServlet?SCREENID=1108&ACTI...

Property

File Extracts > Property

⌵ **Properties**

Property Name	Property Value
Field Delimiter*	,
Data File Locale*	000-000-0001
File Sort	
Sort Basis	
Sort Fields	
Sort the File	
Sort Order	
Misc	
File Date Format	
Record Delimiter	
Rules	
Check Rules	
Header Identifier	
Data File Name	
Information Date	
No of Records	
Check Sum	
Basis of Check Sum	
Trailer Identifier	
Header Field Order	
Trailer Field Order	

APPLY CANCEL

https://10.184.74.110:9446/ofsaiut/ETLExtractionServle Internet

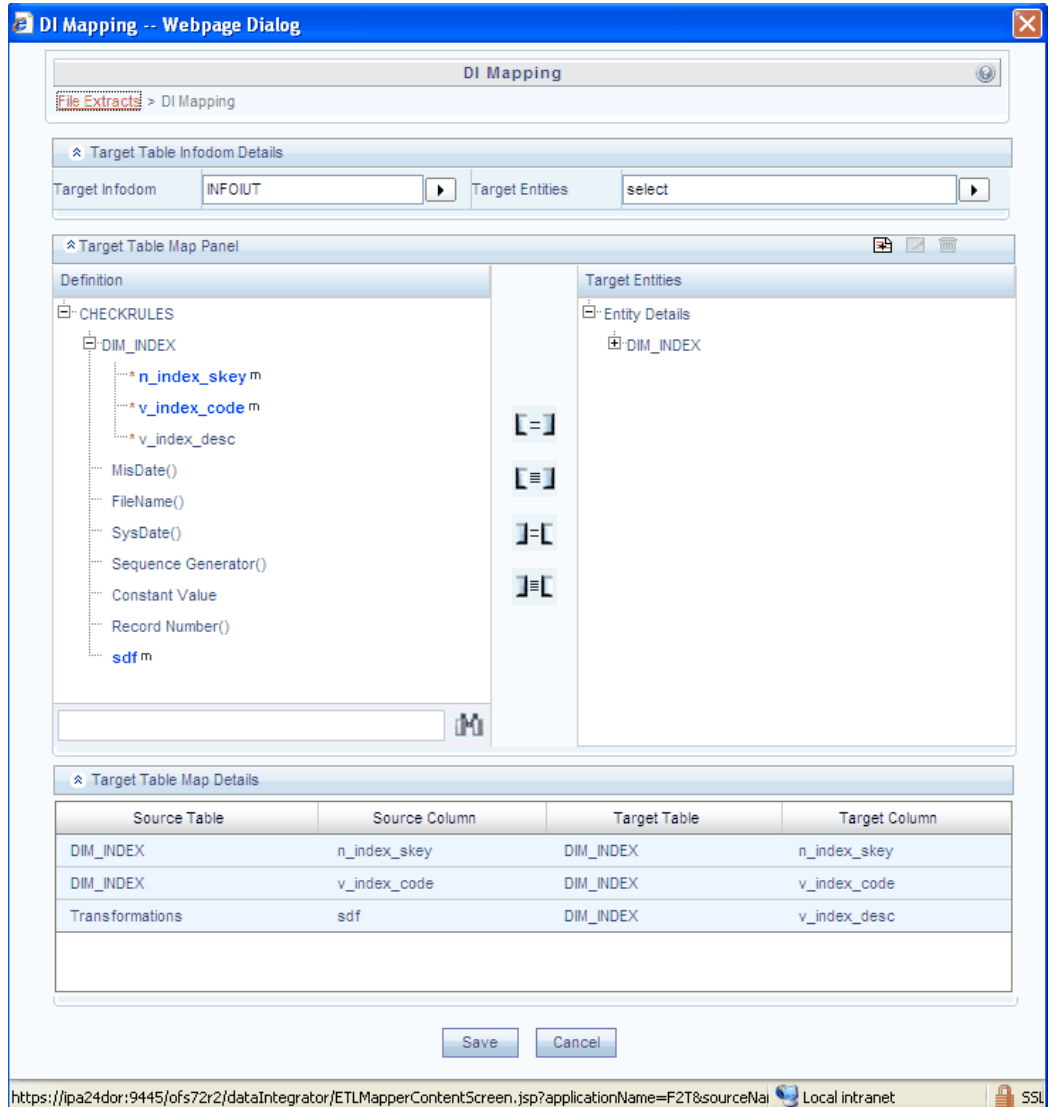
Enter the mandatory fields and click on **Save**, to save the flat-file definition. This completes defining a **Flat File**.

9. The saved flat file definition loads in the LHS browser. Click on the saved flat-file.

The definition loads in the work area. Click on the Mapping icon in the target mapping grid, which opens the DI mapper screen.

10. The Target Table Infodom Details panel of the DI Mapper screen has two drop down menus. The Target Infodom drop down holds the list of Information Domains where you can select the desired Target Infodom. The Target Entities drop down holds the Target Entities (Tables) of the selected Infodom.

The left hand side of the Target table Map panel contains **Source File** entities. Select the required **Target Entity** from the drop down menu which populated the entities in the Target Entities. You will now see the map, un-map, map all, un-map all options enabled.



11. Click on auto-map, this will map all the attributes of the selected source file entity with the target table. Click on OK.

Expressions are moved to the definition. There may be certain fields that might not get mapped due to mismatch in formats, length, data type and so on. In such cases, a message pops up informing you of the reason for the mapping failure. View the details to find out the reason for failure and the possible suggestions for mapping them.

Use **Row Level Transformations** functions to map incomputable data types to convert date formats or a part of the source data field. These functions are provided on the mapping frame tool bar, top right corner. For example, if the user wants to calculate the age of a customer. Input a relevant function name and define the needed expression using the find age () transformation function. Click OK. This saves the function.

12. Click on **Add** button which opens the expression window. Input the transformation name and add the needed expression. Click on OK.

Properties -- Webpage Dialog

https://10.184.74.110:9446/ofsaiut/ETLExtractionServlet?SCREENID=1108&ACTI...

Property

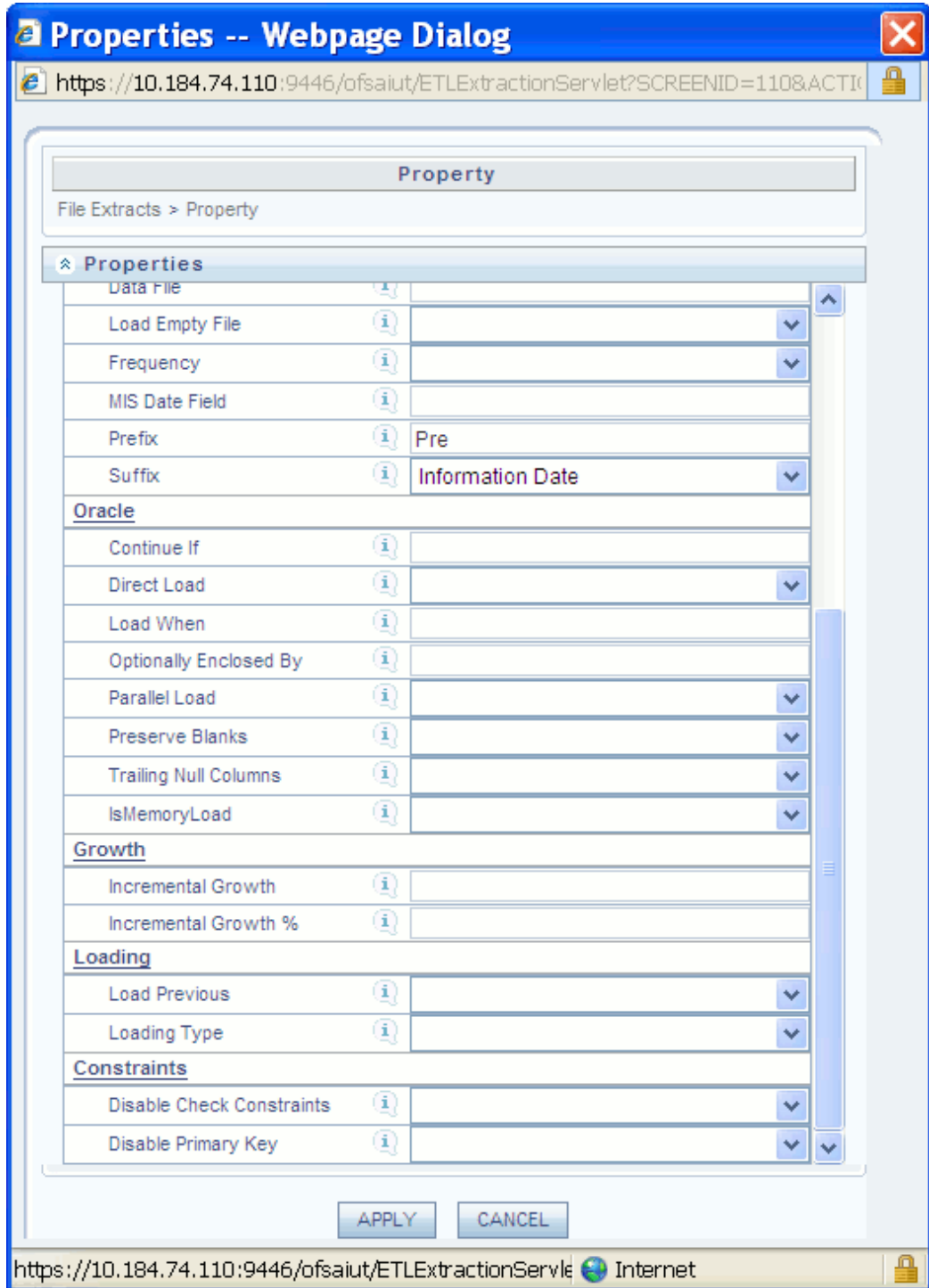
File Extracts > Property

⌵ **Properties**

Property Name	Property Value
Duplicate Row	
Duplicate Row Checks	
Duplicate Row	
Misc	
Abort-Failure Condition	
Query	
Discard Max	
Edit and Reload	
Rejection	
Rejection Threshold	
Rejection Threshold %	
File	
Data File	
Load Empty File	
Frequency	
MIS Date Field	
Prefix	Pre
Suffix	Information Date
Oracle	
Continue If	
Direct Load	
Load When	
Optionally Enclosed By	

APPLY CANCEL

https://10.184.74.110:9446/ofsaiut/ETLExtractionServlet Internet



Various properties can be set for extracts. The same can be used to determine the extraction, validations, data integrity checks and other load properties for the extract. Properties apply to extracts as well as flat-file definitions. The properties for the selected file can be defined by either grouping the Fields or by Sorting fields. Click to select the

Group Fields option to group fields or select the Sort field option to sort the fields in ascending order before you proceed with defining properties.

Sort Basis

With the sort basis option you can specify the basis for the file to be sort. Select the Sort Basis type for the file.

Sort Field

The sort field property is relevant when the Sort Basis is chosen as List of Fields. Enter the field order of the fields defined.

Sort the file

The data file can be sorted before load. The sort basis determines the order in which the data file is sorted. Click the drop-down list box provided for the corresponding value field to select 'ascending', 'descending' or 'No sort'.

Duplicate Row Checks

With this property you can choose to/choose not to check the data file for duplicate rows, before data is loaded into tables. Click the drop-down list box of the value field provided for the Duplicate row property to select 'Yes' or 'No'.

Duplicate Row

This property helps the system determine which row to keep in case duplicate rows occur in the database. Click the drop-down list box of the value field provided for the Duplicate row property to select either the 'keep last occurrence' or 'keep first occurrence' option.

Miscellaneous

Abort-Failure Condition

The abort failure condition property uses the values 'Stop' or 'Continue'. All validity rules (except Check Sum), incremental growth variance and rejection threshold are linked to this property. Click the drop-down list box of the value field provided for the Abort-failure property to select 'Stop' or 'Continue'.

Discard Max

This property determines the maximum errors allowed for SQL*Loader Discards while loading.

Edit and Reload

The Edit and Reload option is provided for the purpose of editing the bad/error files generated as a consequence of data loading. Select 'Yes' for the Edit and Reload option to be enabled. Select 'No' for the edit and reload property to remain disabled.

Rejection

Rejection Threshold – Absolute and Percentage terms

Rejection threshold is a data load property. This property determines the number of errors that can be allowed in a data-load operation

You can specify the rejection threshold to constitute the absolute values of the number of records or the percentage of the number of records in the data file.

If the number of errors/ rejects exceeds the threshold specified, the data load operation is marked as a 'Failure'. If however, the number of errors/ rejects falls within the specified threshold, the data load is marked as 'Successful'.

Click the value field provided for the Rejection threshold property to enter the rejection threshold value.

Example

Rejection Threshold - 3

Click the field provided for the Rejection threshold % property to enter the percentage for the rejection threshold.

Example

Rejection Threshold % - 2

File

Data File Name

The Data File Name takes the Physical File Name of the Data File that is to be loaded. This property allows you to have data file names that are different from Definition File Names. Click the value field provided for Data File Name property to specify the Data file name.

Frequency

You can specify the frequency of the extract to be either daily, weekly, monthly, quarterly, yearly or a one-time load. Click the drop-down list box of the value field provided for the Frequency property to select the frequency.

MIS Date Field

The MIS Date field captures the Source Field Name for the date field that is designated as the field containing the MIS Date. This is useful in determining processing requirements for the warehouse. Click the value field provided for the MIS Date property to specify the MIS Date.

- It is not mandatory for you to provide the MIS Date as part of the

source data since the data integrator has the capability to generate MIS Date information and store it in the warehouse through the functions available in the entity-source mapping function.

- Edit and Re-load Load property in Flat File Definition is not supported when Application and Database layers are on different machines.

Prefix

Data File names can have prefixes and the same can be input in the properties window. The prefix is used to identify the data file name.

The Prefix and the data file name are separated using an underscore (_) character in the physical data file name.

Click the value field provided for the Prefix property to specify the prefix.

Suffix

The Suffix that is provided as an Information Date (MIS Date) is also available for use in identifying the Data File Name. The Suffix is displayed after the data file name.

It is separated from the data file by the Under Score character (_).

Click the drop-down list box of the value field for the Suffix property to select 'Information date' or 'No suffix'.

Oracle

Continue If

This property specifies that you can continue load if the entered condition is met. Enter the condition in the value field provided for the Continue If property.

Direct Load

Direct Load is applicable only to Oracle and is the fastest way of ensuring that data gets loaded into the Oracle database table. This property ensures that all constraints are disabled during load and loads data directly into oracle data blocks.

Select 'Yes' from the drop-down list box provided in the Value field for the Direct Load property to state that you wish to perform a direct load. Selecting 'No' confirms that you don not wish to perform a direct load.

Load When

This property implies that the system can load only when the condition is satisfied.

Click the value field provided for the Load When property to specify the load condition.

Optionally Enclosed By

This property refers to the optional field identifier in the data field. Enter the optional identifier in the value field provided for the 'Optionally enclosed by' property.

Parallel Load

This property provides the option of loading data into tables on a parallel level, at a faster pace. Select 'Yes' from the drop-down list box provided for the Parallel load property to specify that you wish to conduct a parallel load of data. Selecting 'No' will confirm that you do not require performing a parallel load.

Preserve Blanks

This property allows you to retain blank values in the data without trimming. Select 'Yes' from the drop-down list box of the value field provided for the Preserve blanks property to retain/preserve blank values. Select 'No' to confirm that you do not require retaining blank values.

Trailing Null Columns

This property allows to you to retain trailing null columns in the data file. Select 'Yes' in the drop-down list box of the value field provided for the trailing null columns property to retain trailing null columns. Select 'No' to specify that you do not require retaining trailing null columns.

IsMemoryLoad

This feature refers to whether the file will be loaded from the memory or the conventional SQL Loader. Clicking Yes will obtain the file from the memory content. Clicking No will obtain the file from the Conventional SQL Loader instead.

Incremental Growth – Absolute & Percentage terms

Incremental Growth expected for the source data file is captured here and the same is used to compare with the number of records in the previous period data file as determined by the frequency and MIS Date.

Loading**Load Previous**

Load Previous is an option to copy the previous period's data as current period's data in case the current period's data is not available. This is a useful option when it becomes necessary to copy static data across periods without the overhead of extracting the same static data again and again.

Loading Type

This property is applicable only to Oracle and the loading type determines the loading

option to be used.

Constraints

Disable Check Constraints

Disable Check Constraints is applicable only for SQL Server loading and is an option to disable the check constraints on any fields of the underlying database table to ensure faster loading. If the checks are important then it is advised to keep this option as 'No'.

Choose the value to be 'Yes' if the check constraints are created for purposes other than data loading.

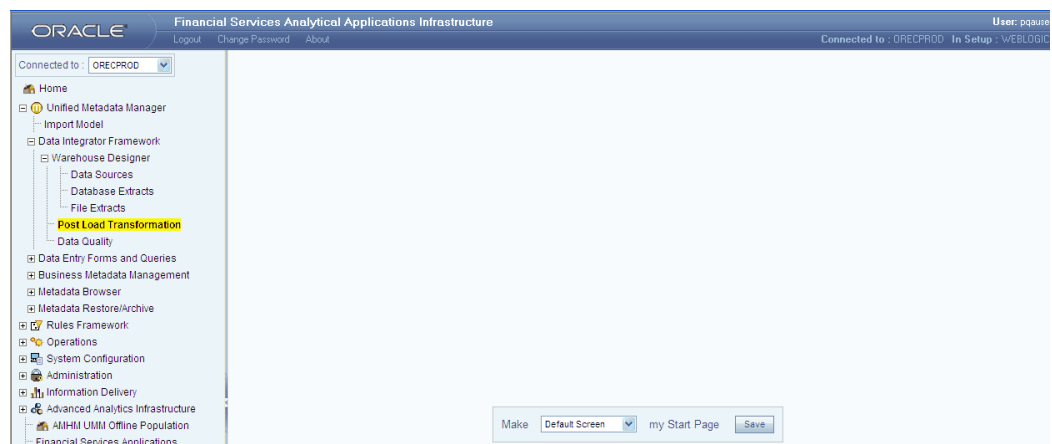
Disable Primary Key

This property lets the user have the option of loading the file to the mapped destination entity or entities with the primary key enabled or disabled. Disabling of the primary key while ensuring faster loads, will not guarantee that Data Integrity is maintained. If you are confident of data integrity issues then the disabling of the Primary is recommended for faster data loads.

If the sort option is selected and the primary key is enabled then the load time will still be faster since the data in the data file is sorted based on the primary key. If the Remove Duplicates option is selected and you are sure that the database will not have duplicate records as compared to the data file to be loaded then the Disable Primary Keys option can be set to 'Yes' to achieve better performance.

Post Load Transformation

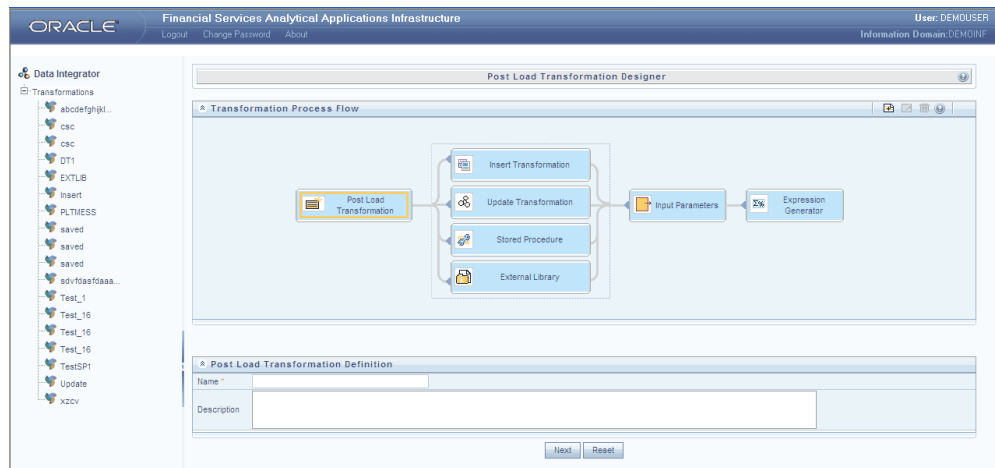
In this section, we can define an insert type transformation, update type transformation, stored procedure transformation, and an external library.



Click 'Post Load Transformation' as shown above.

Insert Transformation

1. Navigate to **Unified Metadata Manager >> Technical Metadata Manager >> Data Integrator Framework >> Transformations >> Post Load Transformation**.
2. The Post load transformation screen appears. The screen is designed in a form of a wizard consisting of series of steps. This screen has two panels. The upper panel displays the **Post Load Transformation** process flow and the lower panel displays the upper panel selected corresponding inputs.
3. Click **Add**.



4. The Post Load Transformation definition section appears in the lower panel. Input a Transformation name and description. Click **Next** and select the **Insert Transformation** selection type from the process flow in the upper panel.
5. This takes you to the next step in transformation, that is the '**Insert Transformation – Input parameters**'.
6. Enter Parameters if any.

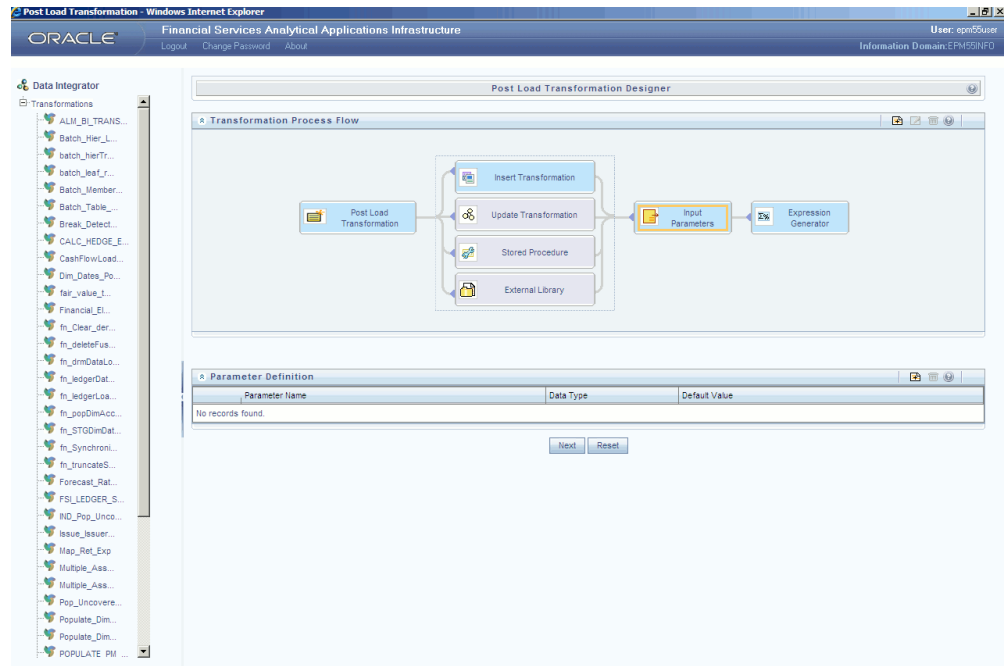
Note: One or more custom parameters can be defined by clicking on add button in the parameter Definition Panel (lower panel). The parameter name, data type and default value can be provided (optional). Parameter value list is a way to specify values at runtime.

Example

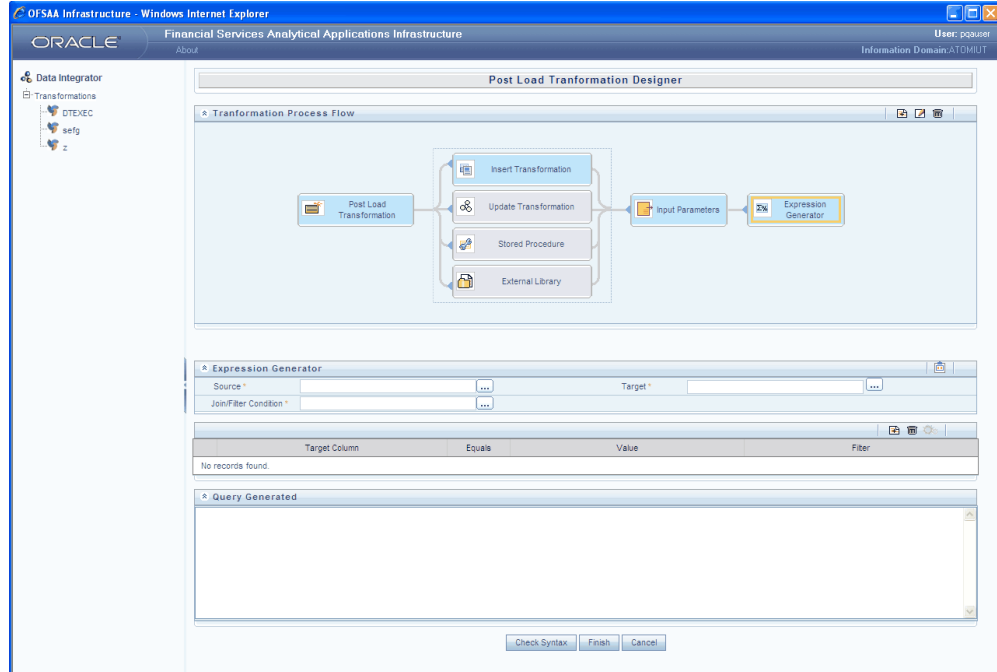
Parameter value for a custom variable defined as (p_custom varchar2) is 'SALES'. Multiple parameter values could be specified as comma separated list. For instance 'SALES',10000,'false'.

If no values are mentioned at runtime, then the default value assigned at the transformation definition will be considered. Default parameter (BATCHID, MISDATE) values will be provided by the Batch Definition and these parameters need not be specified as transformation input parameters.

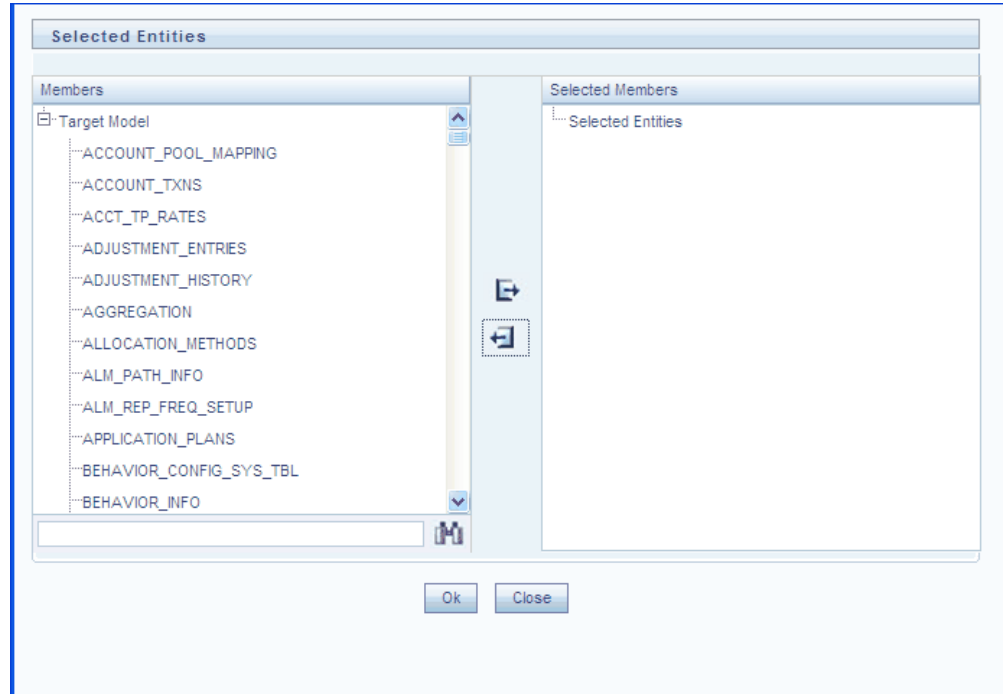
Click Next.



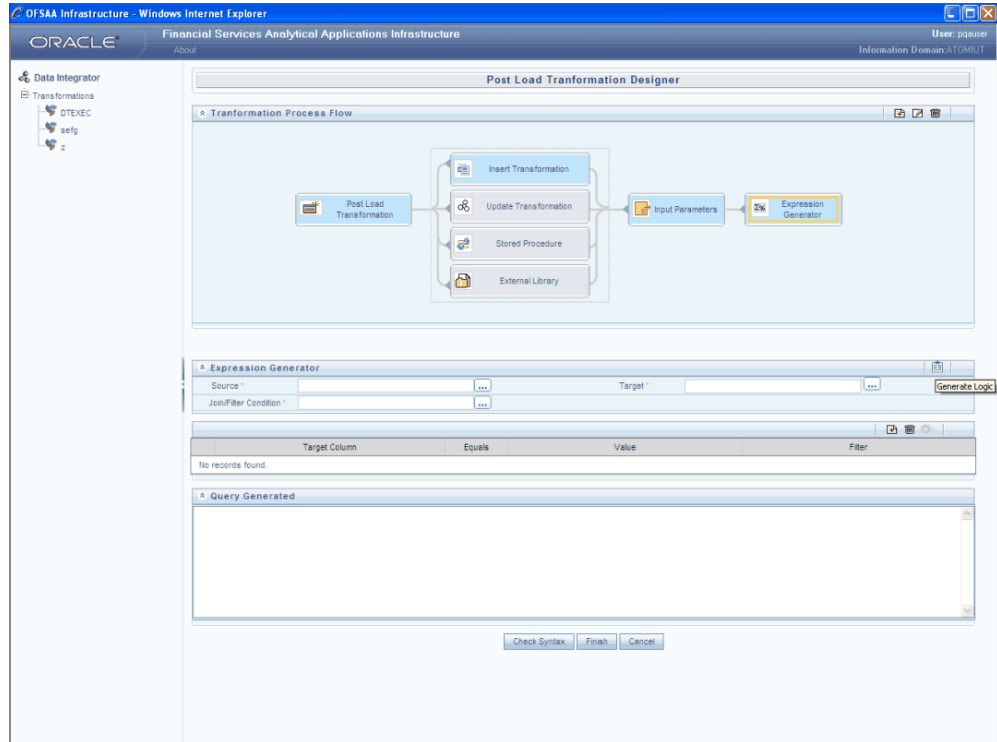
7. The next step in transformation is 'Expression Generator'.



8. Choose the **Source** entity and destination from the entities tree. Prepare the join / filter condition as needed for the rule with the entities tree.



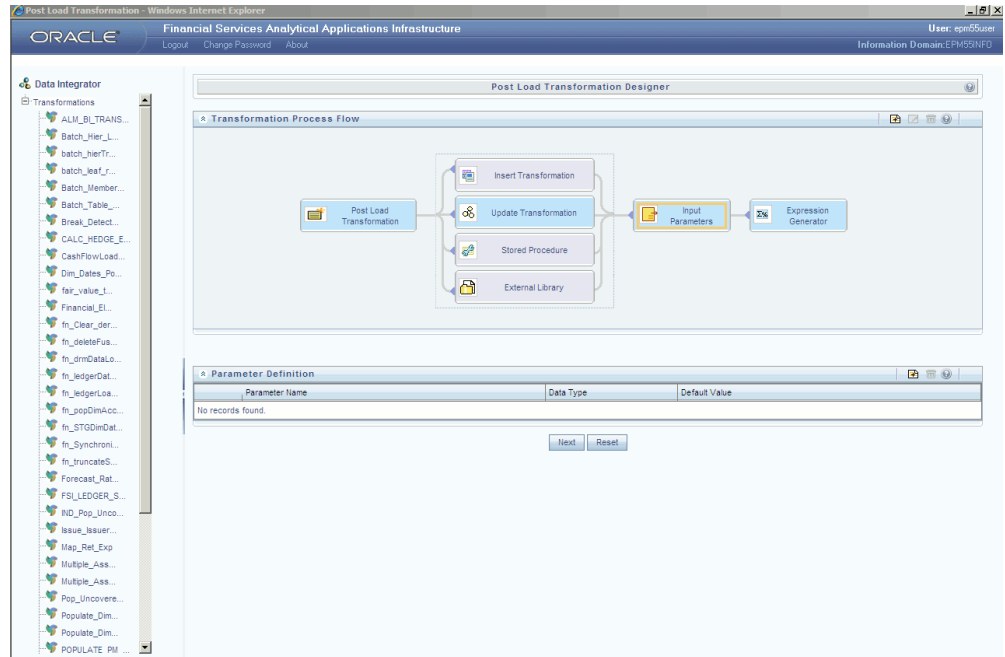
9. For the chosen entities in the entities tree, the attributes could be selected in the target column field in the lowest panel shown in the snapshot below. Select the Expression option in the lowest panel (right corner) in the screen below. This opens the expression generator window to associate a filter and a value to the attribute selected.
10. The **Generate Logic** option would show the SQL formed so far in the below panel, **Check Syntax** would check the syntax of the query generated. Click **Finish**.



11. The saved insert type transformation get reflected in the LHS browser. Double click on the listed transformation. This would load the transformation on the work area (right frame) for viewing
12. On choosing the edit option, the transformation definition would be available for edit.

Update Transformation

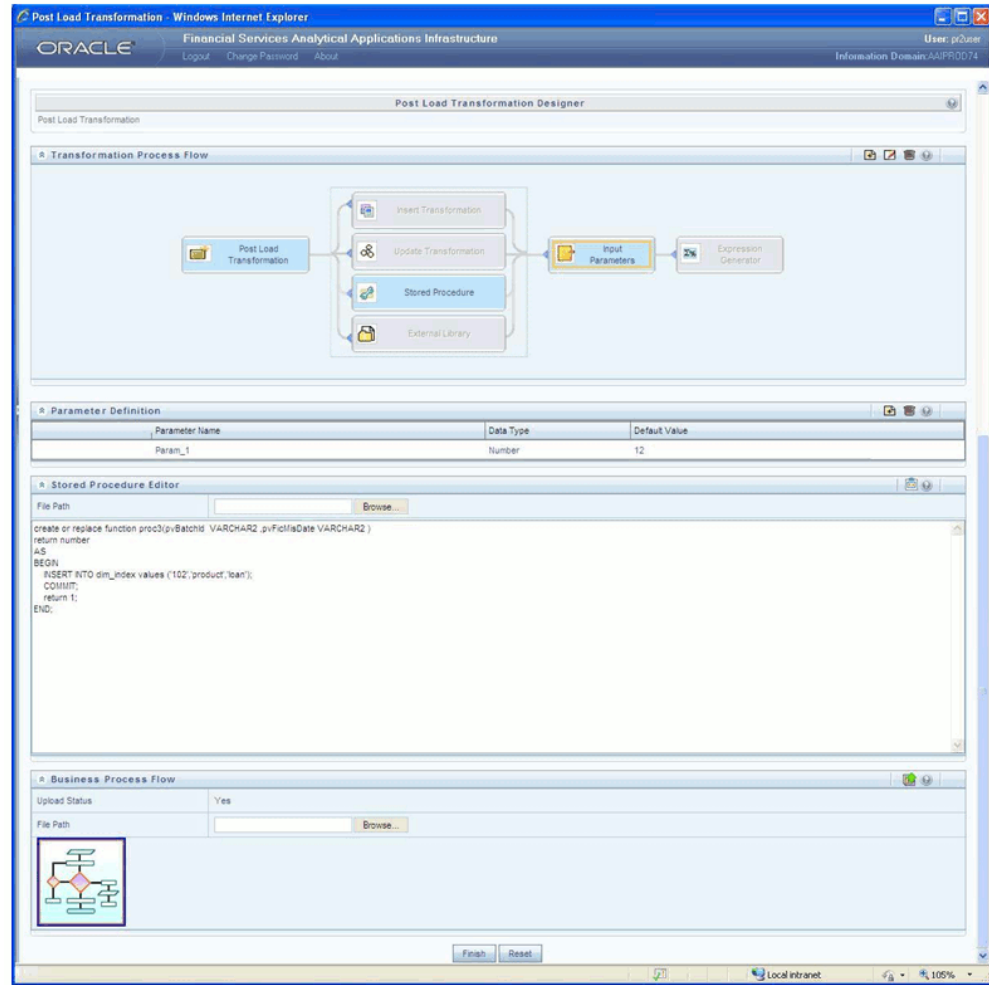
1. Click Add and Enter the Transformation name. Click **Next**. Choose the **Update Transformation** selection type from the process flow in the upper panel. This takes you to **Input Parameters** screen. Enter the Parameters if required by the rule. Click **Next**.



2. This takes you to **Expression Generator** screen. Prepare the join or filter condition from the entities tree and click **Check Syntax** to validate the query formed. **The Transformation Process Flow** is as shown in the above figure.
3. Click **Finish**.

Define a Stored Procedure Transformation

1. Enter the Transformation Name. Click **Next**. Choose the **Stored Procedure Transformation** selection type from the process flow in the upper panel.



2. This takes you to the **Input Parameters** screen along with the **Stored Procedure Editor Panel**. Fill in the parameters if needed by the rule. Fill the Stored Procedure Editor by clicking **Browse** to select the file. Click **Check Syntax** button to validate the defined function.
3. (Optional) You can upload a Business Process Flow diagram corresponding to the selected Stored Procedure Transformations in jpg, png, gif, or vsd format.

To perform the same:

- In the Business Process Flow grid, click **Browse** and locate the file path.
- Click the below button in the Business Process Flow tool bar to upload the file.



- Once uploaded, the Upload Status changes to "Yes" and a hyperlinked image

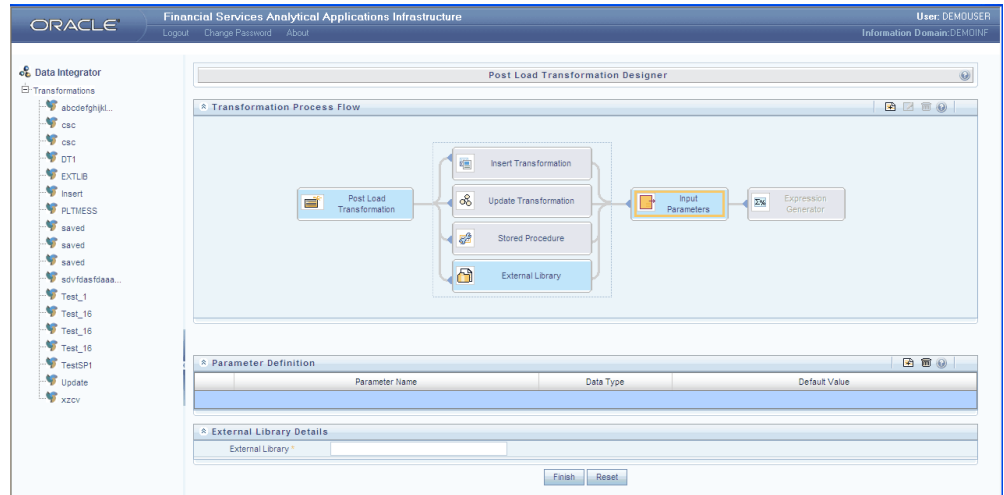
icon is displayed to view the Business Process Flow diagram in the **Post Load Transformation Designer** screen.

You can also view the uploaded Business Process Flow diagram from the Metadata Browser > Data Transformations screen.

4. Click **Finish** to save the transformation. The saved stored procedure transformation reflects on the LHS browser of the screen.

Define an External Library

1. Enter the **Transformation Name**. Click **Next**. Choose the **External Library** selection type from the process flow in the upper panel.
2. This takes you to the **Input Parameters** screen along with the **External Library** selection panel.



3. Click **Browse** adjacent to External Library to browse and select the file.
4. Click **Finish** in order to save the transformation. The saved external library transformation reflects on the LHS browser of the screen .

Note: Transformation rules will be executed as ICC/Operation Batches and the respective logs will be generated under \$FIC_DB/log/date folder.

Maintaining Warehouse Details

Configuring an Information Domain

An Information Domain is the area of analysis. It forms the backbone for all the analysis inside Infrastructure . It is the knowledge domain where information is stored, which consists of specific data models, Technical and Business definition of data to help in processing data for analysis.

This option helps the user to define an Information domain and related maintenance details.

Click the Information Domain sub-function within the System Configuration function menu to display the Information Domain Maintenance screen, which displays details of defined information domains.

Information Domain Maintenance

Information Domain Details

Name

Description

Is authorization required for Business Metadata?

Is this a Staging Information Domain ?

Created By : SYSADMIN	Date : July 8, 2009 11:44:10 AM
Last Saved By : DEMOUSER	Date : July 8, 2009 3:24:30 PM

This screen is displayed in two modes - Add and/or Edit.

- The Information Domain screen cannot be accessed until the Server details are complete and at least one database has been created.
- One information domain can be mapped to only one database and one database can have only one information domain mapped to it.
- When the user accesses the screen for the first time, the screen will open in the add mode.
- As the Information Domain Schema uses some of the tables from the config schema, ensure to execute the below file from the Infrastructure config database user before Information Domain is created. <Infrastructure Database Layer Install Directory >/config_table_privileges_for_atomic_user.sql

Adding Database Details

In the Database Details for DB Server screen, two sets of drop-down lists will be displayed. The first lists all the database servers configured for the application and the second will display the databases contained in the machine. The mapping between the databases and the information domain is created.

Selecting the Database Server

Select the name of the Database Server, from the drop-down list containing all the available database server names.

Example

10.80.50.226

Selecting the Database Name

Select the Database Name from the drop-down list that contains all the available databases defined under database details option.

Example

Base12

Selecting the OLAP Server, Type and Defining BI Hierarchy Details

There is no specific functionality attached for these features in the present release and it should be the same as default selection.

Click Next to display the next screen of the wizard. In the next screen, the user is required to define paths in the APP Server / DB Server

Configuring Database Server Details

Click Server Details to expand its sub-options, namely Database Server, Application Server and Web Server.

The database layer of Infrastructure can be represented by a single database server. This option helps the user to capture the database server(s) set-up details.

Click the Database Server option to open the Server Master screen.

Note: Several information domains can reside on the same database server; however one information domain can be mapped to only one database layer.



Using the Server Master wizard, you can specify details of the machines on which Infrastructure Database, Application, and Web components have been installed. You can use the Add and Edit modes in the Server Master screen.

Adding Database Server Details

The Add option in the Database Server Details screen enables the user to provide set-up details for a database server and add multiple servers. The IP addresses of all the three Infrastructure servers entered during setup cannot be modified.

The first screen accepts the Database server information like Database FTP/SFTP drive details, user Id and password. The user should create the FTP/SFTP information manually, prior to entering the details.

The application will check if the details provided are correct. Apart from the FTP information, the screen also considers the socket server port in the database machine by default.

The FTP/SFTP information is accepted based on the following details in the Database Server:

Technical Metadata: Information related to the Entities and Attributes are stored in this path.

Business Metadata: Business Logic XML's are stored in this path.

Staging Area: The raw data files are moved or transferred into this folder. The system also transfers the extracted data file into this folder.

- In UNIX, you will not require an FTP/SFTP share name. The drive name is captured as share name.

Validations:

Example

1. FTP/SFTP information cannot be blank.
2. The Host DB type cannot be blank.

Modifications:

The system allows modifications of the PATH and other related FTP/SFTP information. However the old files should be physically moved to the new path. The system ensures that all new files are generated / transferred into the new path. In the second screen the user is required to enter the security details for the server settings.

For each of the entries there will be single line help on the same screen.

The Information Command Center (ICC) will use this information for judiciously using the system resources. In the third and fourth screens the user is required to enter Web server and Application server details.

- This feature cannot be used as a migration tool. It is usable only in cases where the user has changed the IP address of the physical machine in use as the Database Server.
- Changing the IP address of the physical machine in use will have no impact on the activities being performed on that machine.
- However, if the user chooses to move the DB server from one machine to another machine, the IP address of the machine will definitely be different. In this case it is mandatory to setup/install the DB server on the new machine.

Note: The following example illustrates the point.

Web IP Address	App IP Address	DB IP Address
14.16.1.1	14.16.1.2	14.16.1.3
14.16.1.1	14.16.1.2	14.16.1.4

Scenario 1

The IP Address of the machine on which the DB server is installed is 14.16.1.3. For some reason you change this IP Address to 14.16.1. 4. The system will handle this scenario, by modifying the address in relevant places. Since there is no need for a migration in this case, the system will work with the changed IP address. This is possible because the activities being performed on the machine will continue on the same physical machine with the only change being that of the IP address.

Scenario 2

There is a change in the Physical DB Machine from 14.16.1.3 to 14.16.1.4. In this case, the User should run the DB Server setup utility and the Migration utility to change the Db server information.

Unlike scenario 1 where only the IP address of the physical DB machine had undergone a change, scenario 2 explains a situation where the DB server is moved to another physical machine, hence the system processes will not be able to function till the DB server is setup and configured on the new physical machine.

Defining Server Details

Click Server Details to expand the options within it, namely Database Server, Application Server and Web Server.

Select Database Server to view the Database Server Details screen.

The screenshot displays the Oracle Financial Services Analytical Applications Infrastructure (FAAI) Server Master interface. The user is logged in as 'gauser'. The interface is divided into a left-hand navigation pane and a main content area. The navigation pane shows a tree structure with 'Server Details' expanded, and 'Database Server' selected. The main content area is titled 'Server Master' and shows 'DataBase Server Details'. The details are as follows:

DataBase Server Details	
IP Address	172.20.81.114
Socket Server Port	10101
OS type	LINUX
FTP	<input type="checkbox"/>
SFTP	<input type="checkbox"/>

FTP Details	
Technical Metadata	
Drive	home/gauser/ftpshare/
Port Number	22
User Id	gauser
Password	

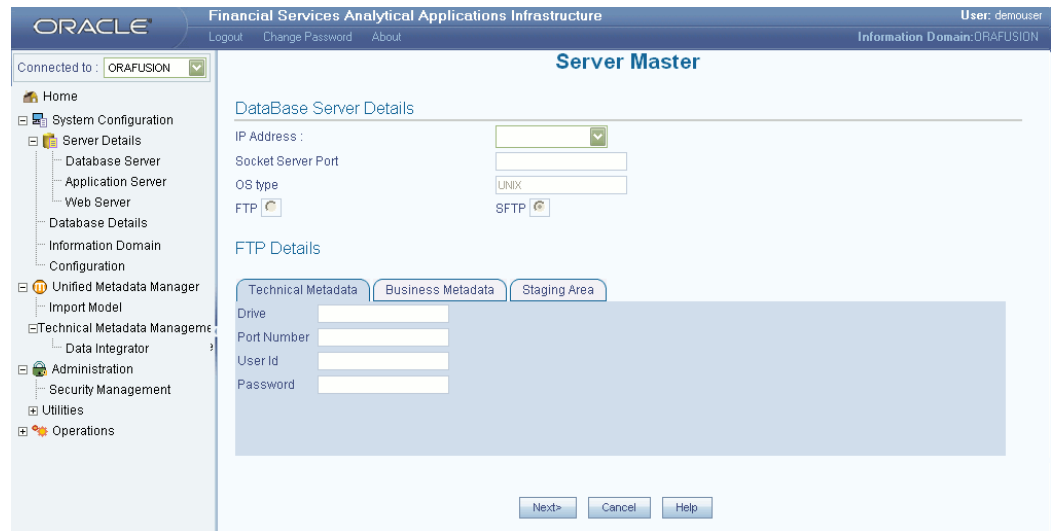
At the bottom of the form, there are buttons for 'Add', 'Modify', 'Next>', 'Cancel', and 'Help'.

- FTP/SFTP service should be installed on the Web/Application and DB Server.
- The FTP/SFTP ID for Web/App and DB server needs to be created through the Computer Management option under Administrative Tools for all the installations other than UNIX installations. This user should belong to the administrator group.
- The FTP/SFTP password for Web/App and DB server needs to be specified in the Computer Management option under Administrative Tools. Select the Password Never Expires option.

Entering Database Server Details

Click Database Server option to open the Database Server Details screen. In the first screen of the wizard, you are required to specify the database details.

To define database details, click Add, which will cause the screen to refresh and display blank fields.



Specifying the IP Address

The IP Address refers to the IP configuration of the machine where the database server is installed. This should be the same IP Address that the systems administrator had specified during the Infrastructure (Database Layer) Installation.

Specifying the Socket Server Port

As the Socket Server Port is already fetched by default, this field should be left with the default port number.

Specifying the OS Type

The OS type (Operating System) of the database is detected by the Infrastructure Application and cannot be edited.

Example

NT

- The current system supports only similar OS types in a single implementation, i.e. all database servers should be installed in machines with same OS types. In case of UNIX implementations, all the database servers can be of type UNIX (same version).
- Infrastructure does not support UNIX and NT combination.

Entering FTP/SFTP Details for the Database Server

FTP refers to the transfer of files from one server to another. Database servers, Application server and Web servers of Infrastructure need to transfer files such as metadata and staging files between each other. SFTP refers to secure FTP for transfer of files from one server to another database server.

For each database server, the FTP or SFTP path for receiving and sending files, user id / password details need to be defined for Technical Metadata, Business Metadata and Staging Area related files transfer. Select the FTP or SFTP option button based on your requirements.

Infrastructure allows users to maintain the paths on the servers where metadata is expected to reside based on their machine configuration. The paths include Scripts or Business Metadata, Log, ERwin or Technical Metadata and Stage.

Infrastructure creates files into these paths that include the following:

- ERwin Path, currently referred to as path for Technical Metadata, stores TFM and Database Model XML files
- Table Creation scriptsxd SCRIPTS Path, currently referred to as path for Business Metadata
- Log Path, stores the Log files for all the Backend and Front-end components.
- Stage that stores the FLAT file to be loaded through Data Integrator. This is the only path that is not tagged to any Information Domain.

Users can individually maintain the above-mentioned paths in different drives based on the machine configuration.

Example

ERwin Path (Technical Metadata) can be in (Windows) - c:\Infrastructure\erwin (or) (UNIX) - /usr/Infrastructure/erwin

Scripts Path (Business Metadata) can be in (Windows) - f:\Infrastructure\scripts (or) (UNIX) - /usr/Infrastructure /scripts

Log Path can be in (Windows) - d:\Infrastructure\Logs (or) UNIX - /usr/Infrastructure/logs

Infrastructure requires individual FTP/SFTP share information into all these folders. The users can choose to create all these folders in the same drive also.

Example

ERwin Path (Technical Metadata) can be in (Windows) - c:\Infrastructure\erwin (or) (UNIX) - /usr/Infrastructure/erwin

Scripts Path (Business Metadata) can be in (Windows) - c:\Infrastructure\scripts (or) (UNIX) - /usr/Infrastructure/scripts

Stage Path can be in (Windows) – c:\Infrastructure\Stage\ or (UNIX) -

/usr/Infrastructure/Stage/

Defining Technical Metadata

The Technical Metadata tab is selected by default.



Technical Metadata	Business Metadata	Staging Area
Drive	/home/gauser/ftpshare/	
Port Number	22	
User Id	gauser	
Password		

Infrastructure creates the following set of files under this category.

The ERwin path, currently referred to as the path for Technical Metadata, stores the following:

- TFM and Database Model XML files
- Table Creation scripts

The Information entered in this screen is automatically copied to Business metadata and staging area as default values.

Specifying Drive Information

Specify the physical path of the FTP/SFTP shared directory/drive of the database in the Drive field.

Example

e:\dbftp\

Specifying the Share Name

Enter the Share Name of the folder. The share name has to be created as a virtual directory under the 'FTP/SFTP default sites', and should point to the directory specified in the above step.

Example

Db ftp

Specifying the Port Number

The port number refers to the database FTP/SFTP port number.

Enter the Port Number.

Note: The default SFTP port number is 22. This can be changed by the user as required provided the port is enabled for the same.

Specifying the User Id

The User Id refers to the user Id that will be used to perform an FTP/SFTP in the machine where the database server is located. It is mandatory that you enter an FTP/SFTP User Id.

Note: The FTP/SFTP ID for Web, Application and Database server needs to be created through the Computer Management option under Administrative tools for all installations other than UNIX installations. This user should belong to the administrator group.

Specifying the Password

The FTP/SFTP Password is the password for the FTP/SFTP user Id that the administrator has specified. Enter the FTP/SFTP Password.

The password is represented by asterisk (*) to prevent others from knowing the password. While specifying the password certain characters are restricted. The only characters which are allowed are listed below.

"@", "-", "_", "\", "/", ":", "."

You can also see: Guidelines for Password Creation in Oracle Financial Services Analytical Applications Infrastructure Overview Manual

- The FTP/SFTP password for Web, Application and Database server must be specified in the Computer Management option under Administrative Tools. Select the Password Never Expires option.
- The accessibility to the Database, Application and Web servers using the Id / password will be confirmed before saving.

Defining Business Metadata

Select the Business Metadata tab.

Technical Metadata	Business Metadata	Staging Area
Drive	/home/gauser/ftpshare/	
Port Number	22	
User Id	gauser	
Password		

Infrastructure creates the following set of files under this category Scripts Path, currently referred to as path for Business Metadata. It stores basically the business logic XMLs.

- Cube Configuration files
- Hierarchy Parentage files

By default, it displays the details entered in the Technical Metadata screen and can be edited. The data input is similar to the Technical Metadata screen for data entry.

Specifying Staging Information

Select the Staging Area tab.

Technical Metadata	Business Metadata	Staging Area
Drive	/home/gauser/ftpshare/	
Port Number	22	
User Id	gauser	
Password		

The Infrastructure Stage area stores the FLAT files (data files) to be loaded through Data Integrator. This is the only path that is not tagged to any Information Domain. These flat files could be created or transferred by the user by some Infrastructure process.

By default, it displays the details entered in the Technical metadata screen and can be edited.

The data input is similar to the Technical Metadata tab. Click Next to go to the next screen. If you wish to clear the fields, click Cancel. Click Help to open help for the Server Master screen.

Adding Security Details

In the Security Details screen you are required to enter Security Details for the Database Server.

In this screen, the administrator can define the Security User Id, the Security Password and the Security Share Name.

Specifying the Security User Id

The Security User Id that is specified in this screen should be assigned the same rights as the user who installed Infrastructure. The Application server needs to pass the database user Id / Password to the database server(s) for connection purposes.

These details can be transferred using the same FTP share area / user id and password used for transferring the Technical / Business/Stage area related files. Alternatively for secure FTP, a different User Id and Password can also be used.

Example

secuser

Note: Ensure that the user using this user Id has been provided rights to perform an FTP/SFTP in the database server.

Specifying the Security Password

The Security Password is the password of the user who will be accessing the security share name. The password is represented by asterisk (*) to prevent others from knowing the password.

See Also: Password creation guidelines in the Oracle Financial Services Analytical Applications Infrastructure Overview Manual

Specifying the Security Share Name

During the Infrastructure Installation the user would have identified the path where DB components would be stored. The Security Share Name that the System Administrator provides in the Security Details screen should point to the DB components installation folder.

Example

D:\Infrastructure

See Also: Oracle Financial Services Analytical Applications Infrastructure Installation Manual

For the UNIX setup:

The security Id should be the Id of the user who has the same user right as the User

who installed Infrastructure. This user should have write permissions on the DB Components Installation folder like `/usr/users/user1/Infrastructure`

The security password is the user password of the user who will be accessing the security share name.

The security share name that you provide in the security details screen should point to the DB components installation folder. Enter the Security Share Name in the field provided for security share name.

Example

`/usr/users/user1/Infrastructure`

Click Back to go to the previous screen. Click Save to save the server details. Click Cancel to reset the definition and return to the first screen. Click Help to open help for the Security Details screen.

Defining Segment/Metadata Mapping

The user can map business metadata definitions like measures, hierarchies, cubes, RDM and attributes to the selected segment.

Based on this mapping users mapped to the segment can access the relevant metadata. This is basically to restrict the user with respect to the metadata they can view and edit for metadata maintenance and information security.

See Chapter 42: OFSAAI Unified Metadata Manager to know more about measures / hierarchies / cubes and so forth.

The Segment/Metadata Mapping screen allows the user to map measures and hierarchies to segments. Click the Segment/Metadata Mapping option to open the screen.

Pre-requisites:

- Information Domain Configuration.
- System Administration activities such as User / Profiles / Roles / Segments creation / User – Segment mapping / User – Role Mapping.
- Technical and Business Metadata definition.
 - In this screen, the administrator can map a segment to the metadata that is available for the Information Domain. On entry, by default the name of the Information Domain to which the administrator is connected is displayed.
 - Segment – Metadata mapping could be created / modified and removed using this option.

Maintaining Segment/Metadata Mapping Details

The Metadata Segment Mapping screen allows the user to map measures and hierarchies to segments.

Metadata Segment Mapping

Information Domain ROR72R2
User Segment RORSEGM

Measure Hierarchy Cube Attribute

AVAILABLE METADATA
VSM-VSM

SELECTED METADATA
BASHM001-AssPlanHM
BASHM002-AssPlanHM2
CTRLLIB-Number of Controls in Library
EF01-Effective
EFCTRL
INEFCTRL
LOSSMS01-Loss Gross Amount
M0005-Red
M0006-Green
M0007-Blue
M0008-Type Measure
M0009-Likelihood
M0010-Impact HM
M0011-Impact Measure
M0017

Save Help

Click Segment/Metadata Mapping in the function menu to open the Metadata Segment Mapping screen. In this screen, you can map a segment to the metadata that is available for the Information Domain. By default the name of the Information Domain to which you are connected will be displayed.

Specifying the User Segment

Select the Segment from the drop-down list box of the field provided for User Segment.

Example

DEMOSEG

Mapping Measures/Hierarchies

The user is required to map measures/hierarchies to the selected segment. Based on this mapping of measure/hierarchy to the segment, the users mapped to the segment can

access the relevant metadata.

The different options available are Measure, Hierarchy, Cube, RDM and Attribute. Choose the Hierarchy option if hierarchies are to be mapped to the selected segment or choose the Measures option to map measures to the selected segment.

To map a measure/s or hierarchy/hierarchies, the user has to select the same from the Available Metadata and move the same to the Selected Metadata pane.

Select the measure/s or hierarchy/hierarchies to be mapped to the segment, from the Available Metadata pane and click >. The selected measures/hierarchies are moved to the Selected Metadata pane.

To move all the measures to the Selected Metadata pane, click >>.

To remove measure/s or hierarchy/ hierarchies from the Selected Metadata pane, click <.

To move all the measures to the Available Metadata pane, click <<. You can follow the same steps for mapping Cubes, RDM and Attributes.

Click Save to save the segment-metadata mapping details. Click Show Details to view the details of the data saved. Click Hide Details to hide the information's displayed.

To return back to the Segment- Metadata Mapping screen, click the Back option. The user can modify the mapping at any point of time. The original mapping will be displayed as it was saved.

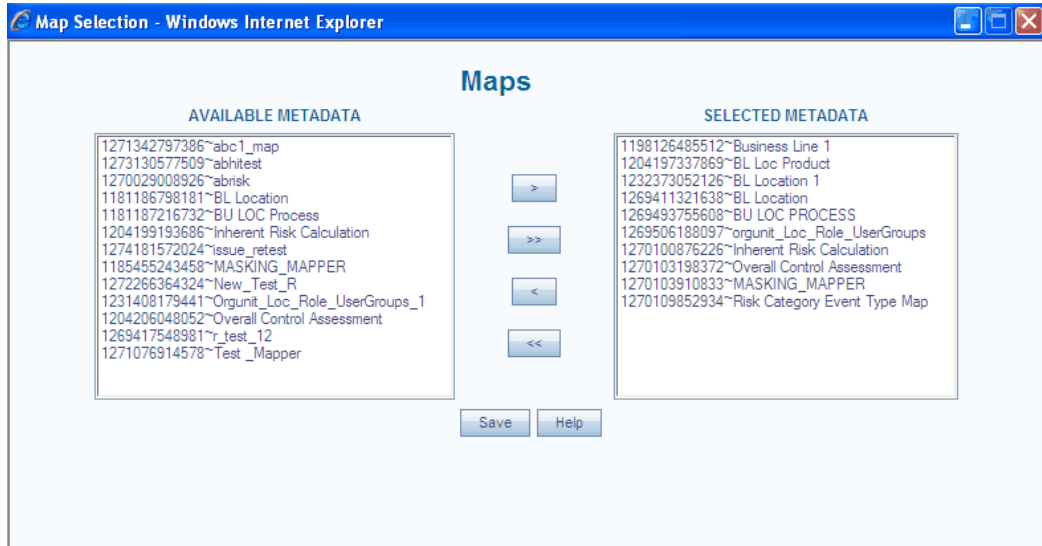
This information will be read from the above-mentioned table. Any number of changes will be permitted. On save, the new information will be modified in the table.

On deleting a measure or hierarchy from the Information domain, the same information will be removed from the table.

Segment Map Security

The user can map any Map definition in an Information Domain to any other segment in that Infodom using the Segment Map Security screen.

Click Segment Map Security in the LHS menu of Oracle Infrastructure main screen to display the Segment Map Security screen.



Select the Information Domain and the Segment to which the Map definition needs to be mapped. The screen will display two panes, Available Metadata and Selected Metadata. The Available Metadata list displays all the defined Map definition for that Infodom. Select the map definition to be mapped to the segment and click >. This will move the Map definition from the Available Metadata list to the Selected Metadata list. All the Map definitions that are mapped to the selected segment will be displayed in the right list under Selected Metadata.

Click >> to map all the available map definitions to the selected segment. To unmap a map definition, select it from the Selected Metadata list and click <. To unmap all the map definitions, click <<.

Click Save to save the mapping.

Applying Transformations

The Transformation Process

Once data is extracted into the business model, the data is ready to be transformed. The transformation process involves data cleansing that comprises of resolving domain conflicts, dealing with missing data elements and parsing into standard formats. The transformation process also provides for the building of aggregates that boost the performance of common queries.



Creates a New Quality Rule



Deletes the selected Quality Rule



Provides more information about the Data Quality Wizard

Applying Data Quality Rules

The Transformations menu has two options, namely, Data Quality Rules and Data Transformations. Click Data Quality Rules to open the Quality Rule Designer screen.

A Quality Rule is a set of operations applied to the source data before it is stored in the destination during the process of building a data warehouse. It enables the easy implementation of complex data and business rule validations.

The Data Quality Designer wizard takes you through the steps involved in defining a data quality rule. The rules that are defined are applied to the extracted data, which is loaded into the staging area.

Double-click to select the rule that you wish to modify from the pane presented on the left side of your screen.

Defining a New Rule

The Rule name is the name of the quality check rule to be created. Enter the rule name in the Rule Name field.

The Rule description is the description of the rule. The rule description could also be an elaboration of the rule name itself. Enter the rule description in the Rule Description field.

What are Quality Rule Procedures

The Quality Rule consists of four procedures: Rule Based Quality Definition, Stored Procedure Rule Definition, Referential Integrity and External Library Execution.

You could use any one of these procedure while defining the quality rule. A Rule Based Quality Definition is based on the condition that you specify.

A Stored Procedure Rule Definition can be defined by writing the SQL Code for the procedure (MSSQL)/function (ORACLE) or by copying it from a .sql File which has the predefined procedure/function. You can also execute an existing stored procedure by entering its name and mandatory parameters (if any) preceded by the Call keyword.

A Referential Integrity Definition is based on the columns you map against each destination column.

An External Library Execution refers to calling an executable file or batch file containing a data quality rule/s. You can also provide command line arguments, a return code and a timeout period.

The Data Set screen displays the Entity groups with table groups within it. The Entity refers to the entity to be applied to the rule.

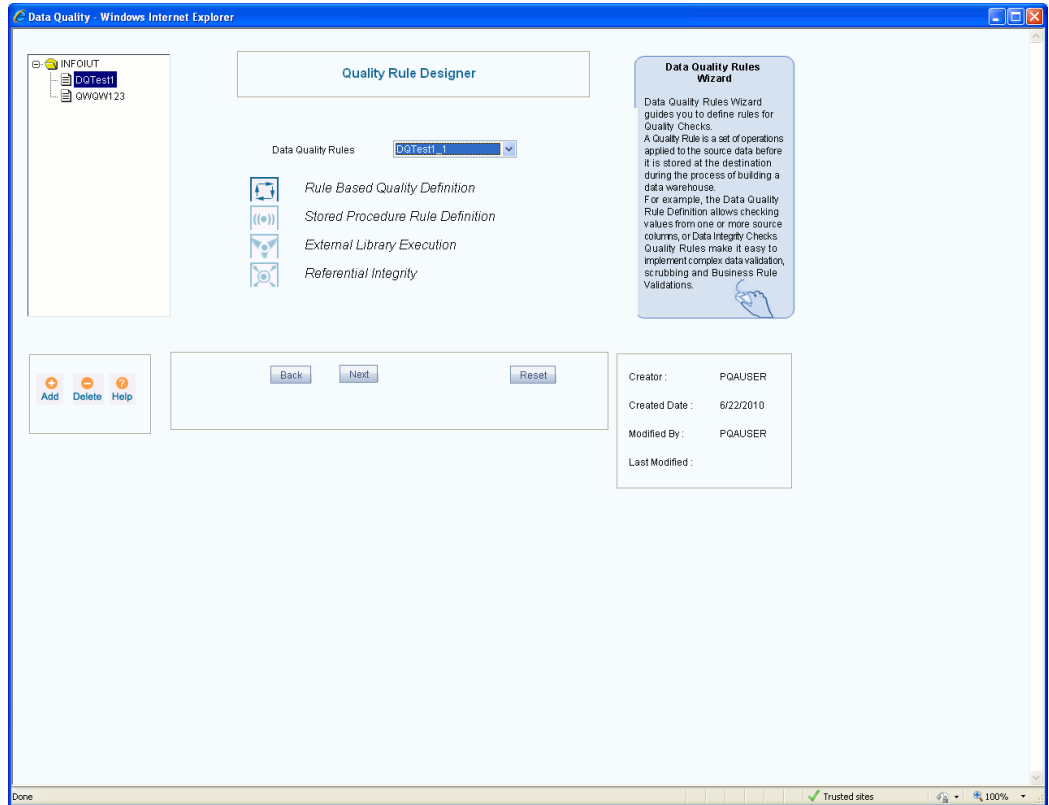
The Function category is based on the type of database in use is the Transact SQL. This is specific to Sybase/MS SQL server, which consists of Date & Time, Math and System functions.

The operator refers to the function keys used while defining a rule. You can choose from any six categories of Operators. To view operator definitions refer to the section on Selecting an operator in the Maintaining warehouse details chapter.

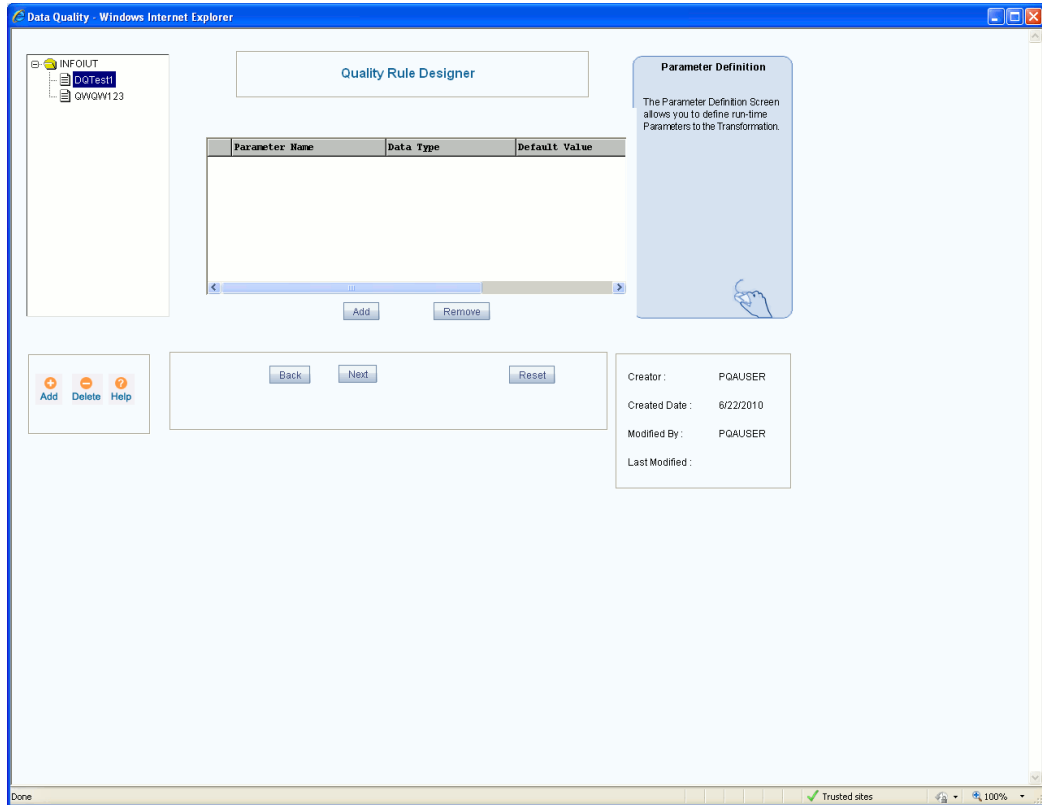
Click Cancel to reset the Rule Name and Rule Description fields. Click Next to go to the Quality Rule screen.

Defining a Rule

Select the Rule Based Quality Definition option.



Click Back to return to the previous screen. Click Cancel to reset the chosen rule definition option. Click Next to go to the Parameters Definition screen. In this screen, you can specify the parameters to be passed. The next screen of the wizard is displayed.



Click Add to specify a parameter. To add another row, click Add.

To remove a parameter that you have defined, select the entire row of the parameter, which you want to remove and click Remove. If you want to remove more than one row, select the rows to be removed by pressing CTRL button of your key board and click Remove.

Note: While entering parameter name, if we don't select a datatype and click next button it selects a varchar2 datatype by default.

Enter the parameter name in the Parameter Name column.

Example

Parameter1

Specify the data type of the parameter that you have specified by clicking the Data Type field. Once you click the data type field you will see a data type drop-down list which contains binary, bit, char, date time, decimal, float, image, int, money, nchar, ntext, numeric, nvarchar, real, smalldatetime, smallint, smallmoney, text, timestamp, timeint, uniqueidentifier, varbinary and varchar data types.

Example

Number

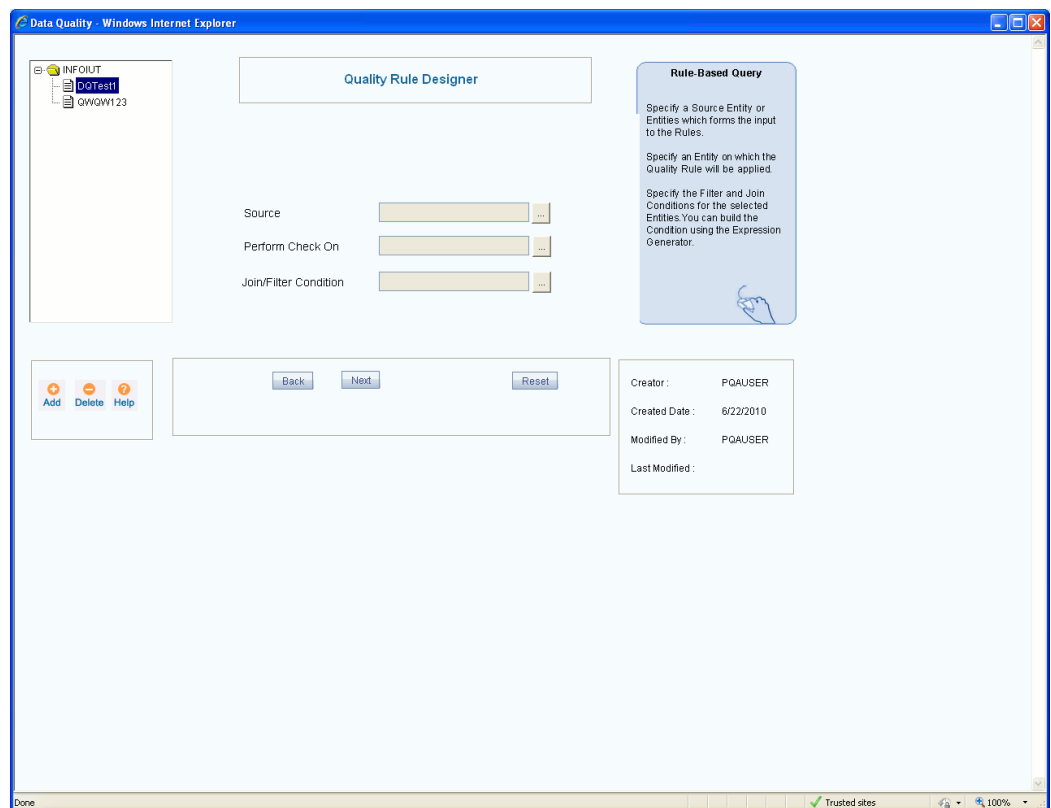
Specify the default value for the parameter in the Default Value field. Click Back to

return to the previous screen. Click Cancel to reset the parameters that you have specified.

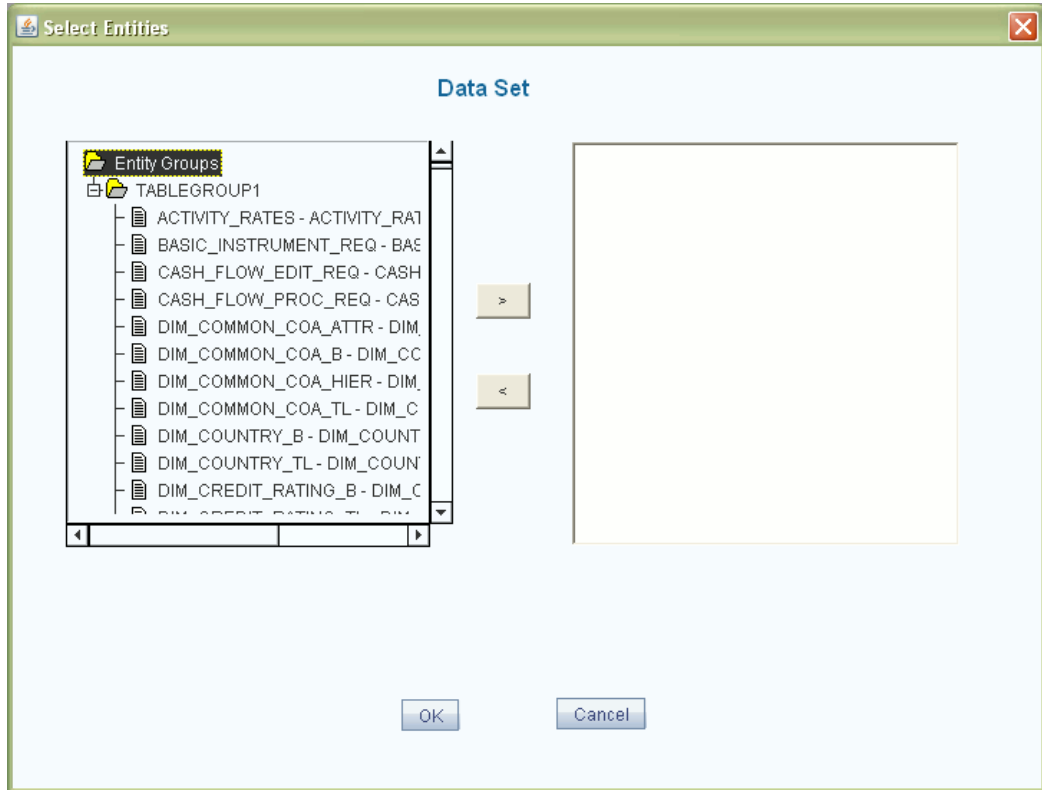
- Adding a parameter is not mandatory. All procedures/functions which get generated have 2 default parameters namely @BatchId(MSSQL)/BatchId(ORACLE) and @MisDate(MSSQL)/MisDate(ORACLE)

Click Next to go to the Target Source Entities screen. In this screen, you have to choose the tables that form the input to the transformation and the target entity on which the rule is to be applied.

The next screen of the wizard is displayed:



Click Browse button against the Source field to view the Data Set screen.



Click the table group to expand the entities within it. Select the source entity/entities that you want.

Example

DIM_CUSTOMER_DIM_CUSTOMER

The chosen entity/entities will be displayed in the list box on the right. Click Ok to save the chosen entity/entities.

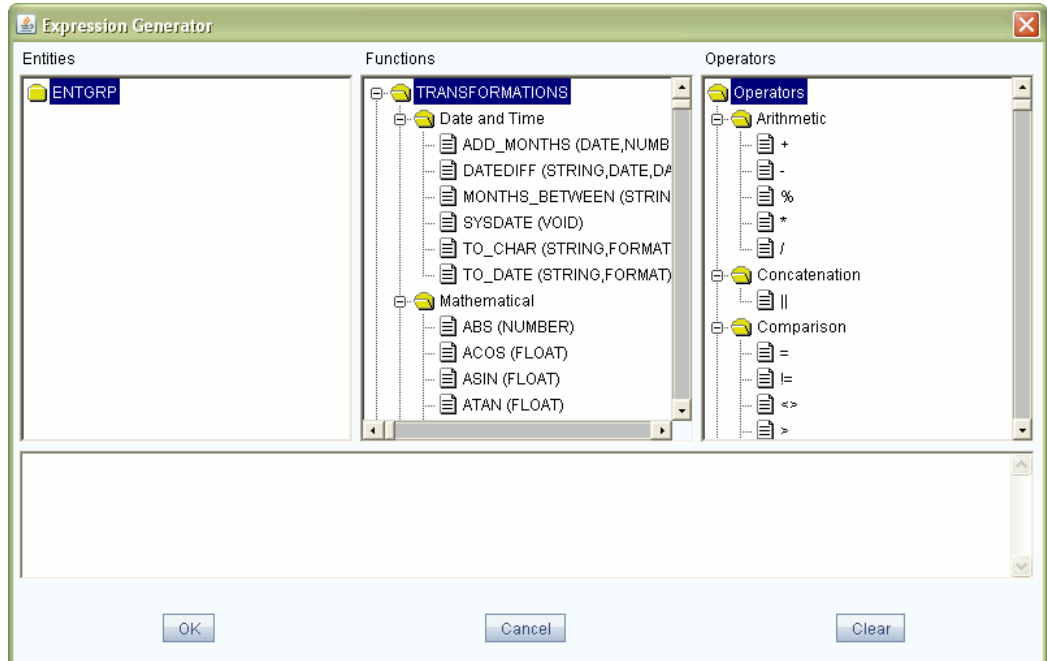
To close the window without saving the chosen entity/entities, click Cancel. To open help for the Data Set screen, click Help.

The selected entity/entities will be displayed in the Source field. Follow the same procedure to choose the entity (Destination Entity) on which you want to perform the check. The selected entity will be displayed in the Perform Check field.

Example

FCT_CUSTOMER

Specify the join and filter condition for the entities that you have chosen by clicking Browse button [...] against the Join/Filter Condition field to open the Expression Generator screen.



The Expression Generator screen has three windows and one field which are as follows:

- Entity window
- Function window
- Operator window
- Expression Field

Choose the entity/entities from the Entity window to which you want to apply the rule. Select a function before choosing the attribute to which it is to be applied.

Select the operator from the operator pane. To apply an operator, you will have to choose the file from the Entity list. The filter/Join Condition that you define will be displayed in the Expression field.

Example

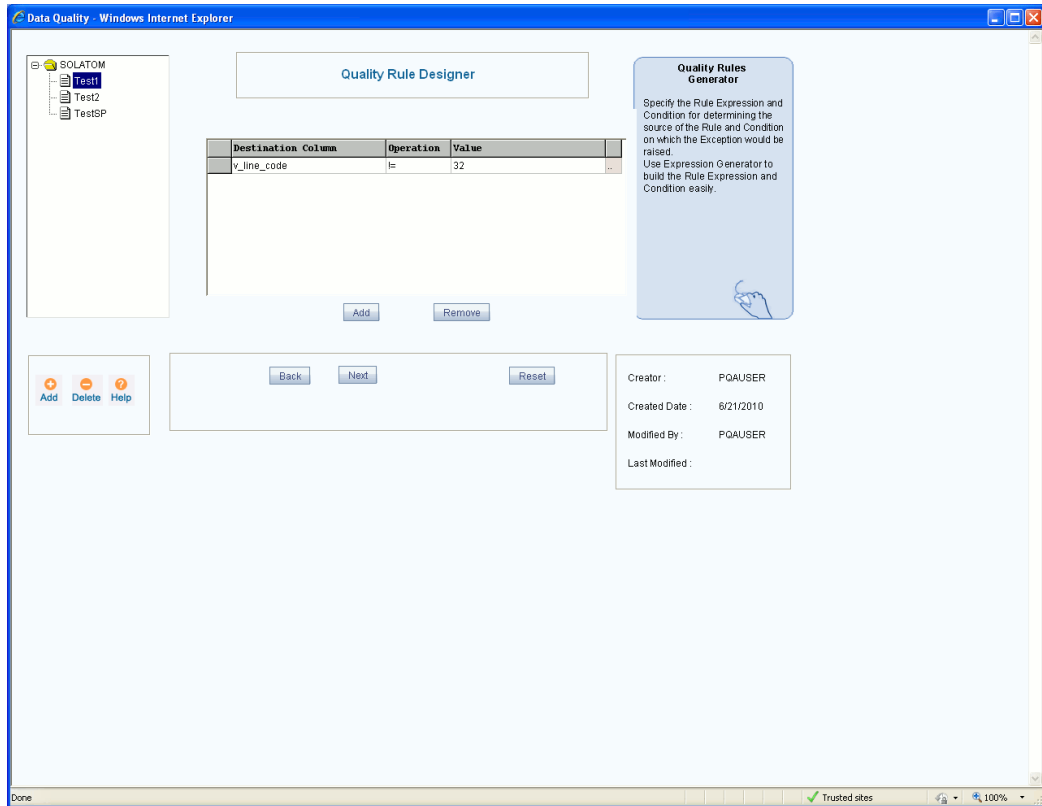
```
DIM_CUSTOMER.V_D_CUST_REF_CODE =
FCT_CUSTOMER.V_D_CUST_REF_CODE
```

After you have specified the join/filter condition, click Ok to save it. Click Clear if you want to clear the expression. This is applicable only when you are defining a new expression. While modifying an existing expression, click Clear to return to the existing expression. Click Cancel to exit the screen. The expression that you have specified will be displayed in the Join/Filter Condition field.

Click Back to return to the previous screen. Click Cancel to reset the chosen Source, Perform Check, and Join/Filter Condition fields. Click Next to go to the next screen. In this screen, you have to choose the destination column for which you want to define

your check.

The next screen of the wizard is displayed:



If the join/filter condition is satisfied, specify the value to be reflected in the destination column. Click the Destination Column field to open the drop-down list. Select the destination column.

Example

D_MIS_DATE

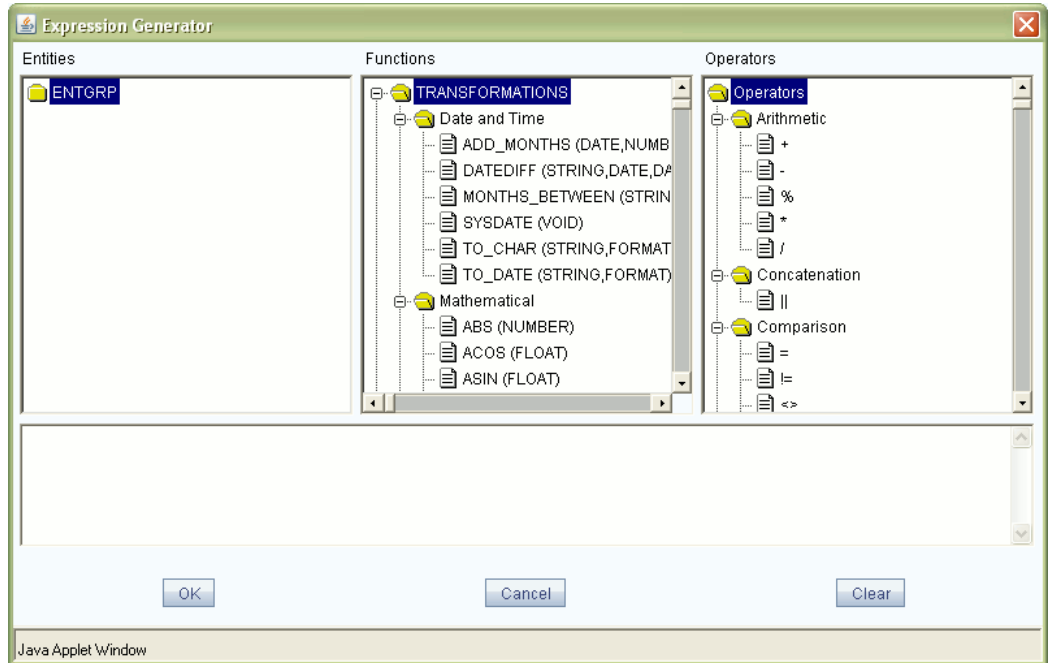
In the Operation column, specify the operator. Enter the value in the Value field or click Browse button to open the Expression Generator screen where you can specify the value.

Example

Operation: =

Value: @misdate

On clicking browse the expression generator screen is displayed where you can specify the join/filter condition.

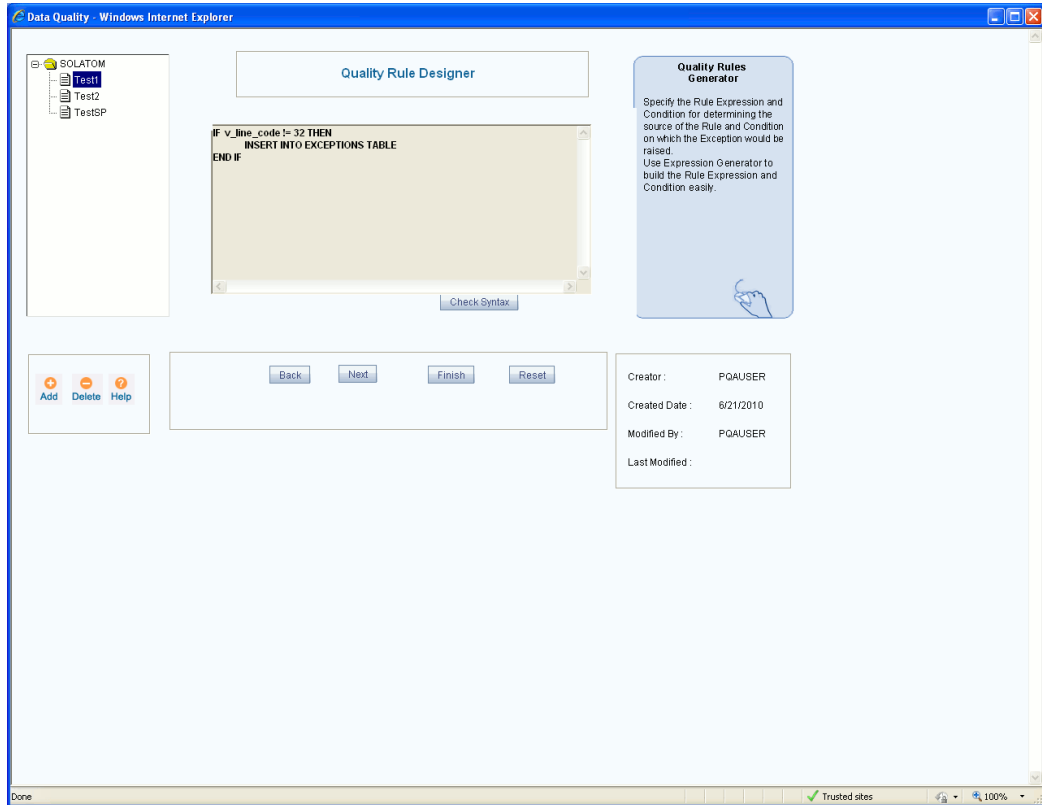


After you have specified the join/filter condition, click OK to save it. Click Clear if you want to clear the expression. This is applicable only when you are defining a new expression. While modifying an existing expression, click Clear to return to the existing expression. Click Cancel to exit the screen. The expression that you have specified will be displayed in the Join/Filter Condition field

Click Add to specify more destination columns. To remove a destination column that you have specified, select the destination column name and click Remove.

Click Back to return to the previous screen. Click Cancel to reset the Destination Column, Operation, and Value fields. Click Next to go to the Syntax definition screen. In this screen, you can see the SQL syntax for applying the rule.

The syntax definition screen is displayed:



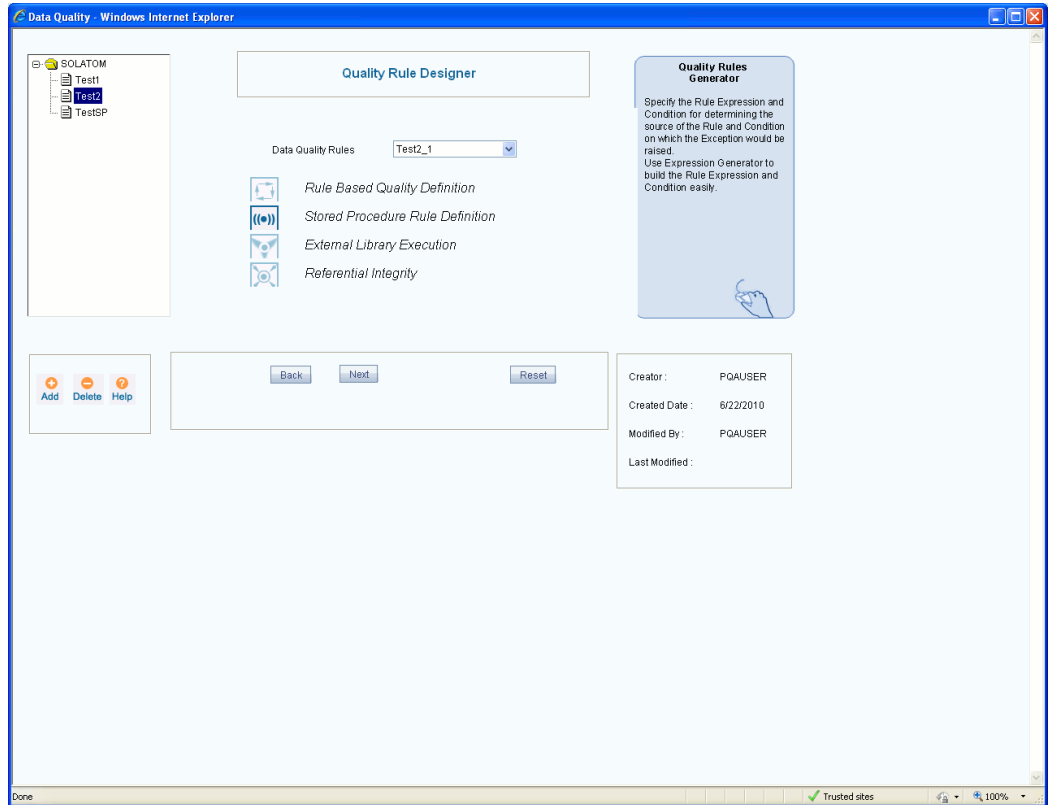
If the Sql Syntax, which appears on this screen is logically correct, click Check Syntax to validate the procedure.

If the syntax is right, a confirmation message is displayed saying 'Syntax Checking Successful'.

Click Back to return to the previous screen. Click Next to go to the first screen of the Quality Rule Designer wizard to define a new rule. If you have completed the rule definition, click Finish to save or Click Cancel to reset the rule definition that you have specified.

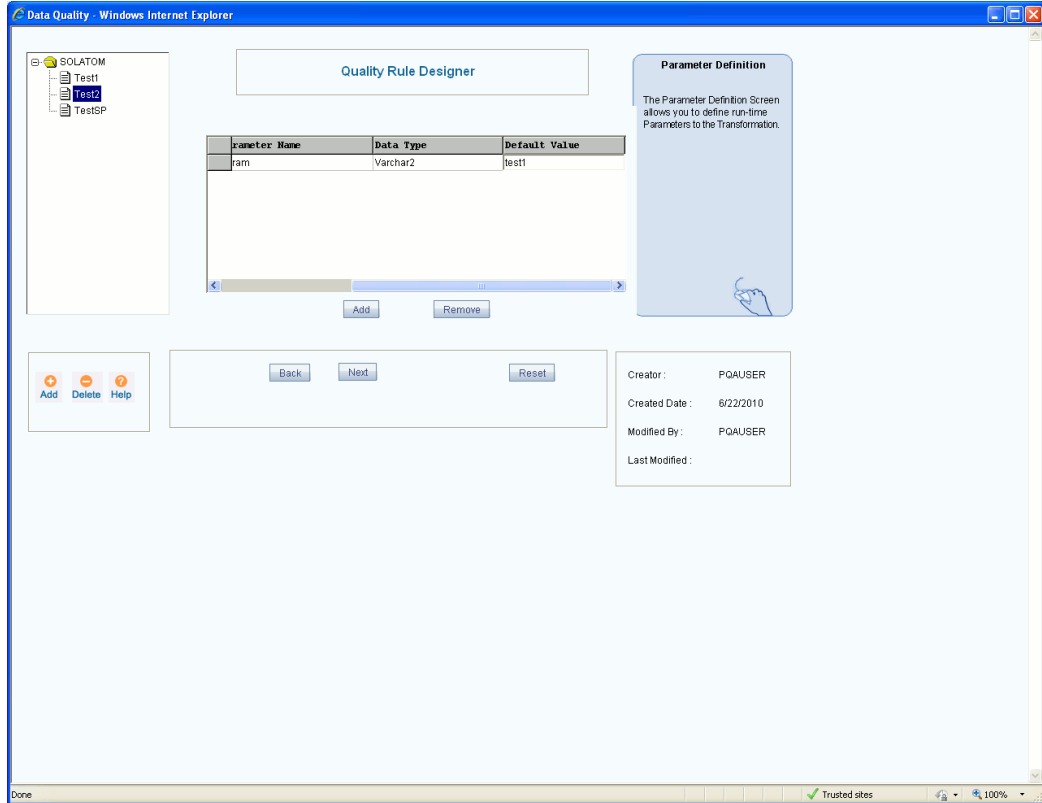
Applying a Stored Procedure Rule Definition

Select the Stored Procedure Rule Definition option in the quality rule designer screen.



Click Back to return to the previous screen or Click Cancel to reset the chosen rule definition option. Click Next to go to the Parameters Definition screen. In this screen, you can specify the parameters to be passed. Specifying a parameter is not mandatory when you are defining a stored procedure rule definition.

The next screen of the wizard is displayed:



Click Add to specify the parameter. To remove a parameter that you have defined, select the parameter and click Remove. If you want to remove more than one row, select the rows to be removed by pressing CTRL button of your key board and click Remove.

- While entering parameter name, if we don't select a datatype and click Next button it selects a varchar2 datatype by default.

Enter the parameter name in the Parameter Name column.

Example

Parameter1

Specify the data type of the parameter that you have specified by clicking the Data Type field. The data type drop-down list contains binary, bit, char, datetime, decimal, float, image, int, money, nchar, ntext, numeric, nvarchar, real, smalldatetime, smallint, smallmoney, text, timestamp, timeint, uniqueidentifier, varbinary and varchar data types.

Example

Number

Specify the default value for the parameter in the Default Value field. Click Back to return to the previous screen. Click Cancel to reset the parameters that you have specified.

- Every procedure/function for which you specify the SQL syntax should accept 2 default parameters, the first being the BatchId (varchar(50)) and the second being the MisDate(varchar(10)). These 2 parameters will be passed to the procedure automatically while running the Batch.

Click Next to go to the Syntax definition screen. In this screen, you can see the SQL syntax for applying the rule.

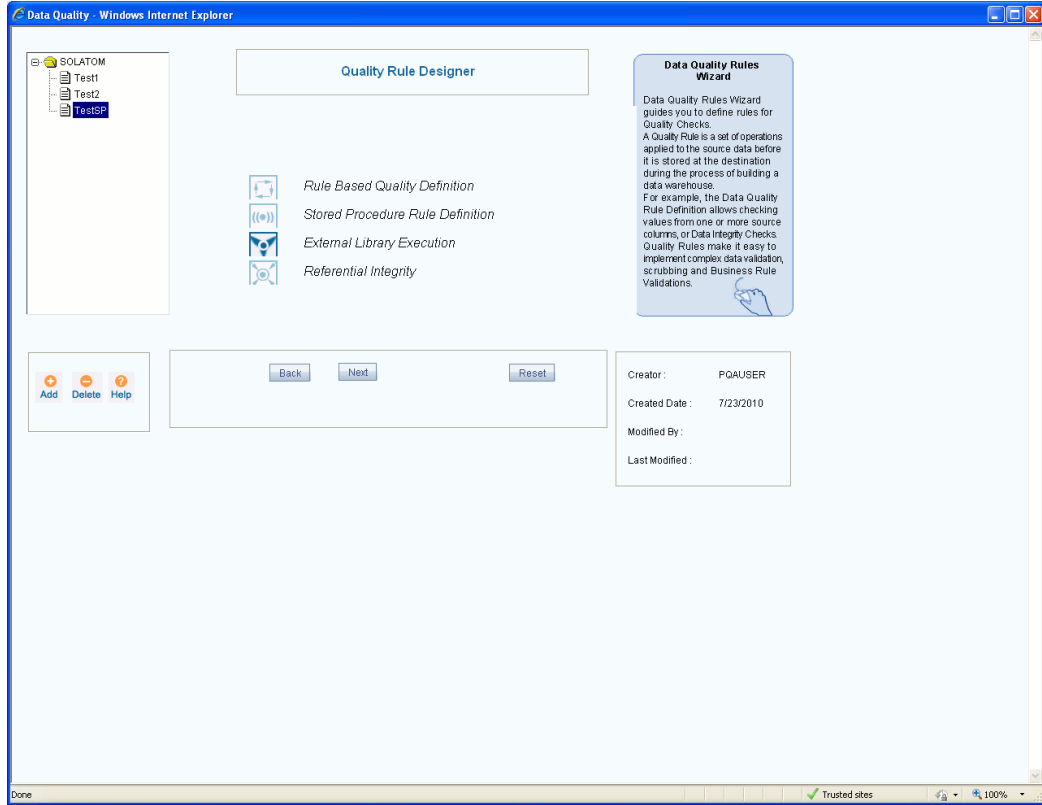
The syntax definition screen is displayed:



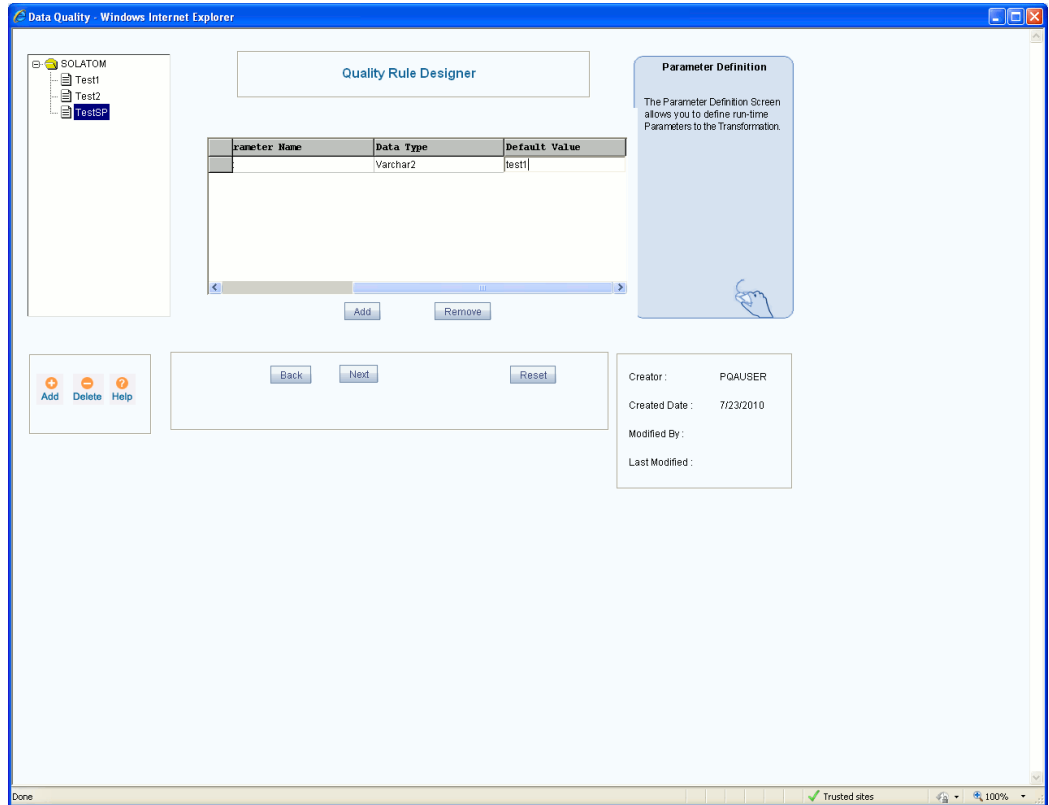
If the SqlSyntax, which appears on this screen, is logically correct, click Check Syntax to validate the procedure. If the syntax is right, a confirmation message is displayed, reading 'Syntax Checking Successful'.

Click Back to return to the previous screen. Click Next to go to the first screen of the Quality Rule Designer wizard to define a new rule. If you have completed the rule definition, click Finish to save or Click Cancel to reset the rule definition that you have specified. Applying an External Library Execution

Select the External Library Execution option.



Click Back to return to the previous screen. Click Cancel to reset the chosen rule definition option. Click Next to go to the Parameters Definition screen. In this screen, you can specify the parameters to be checked.



Click Add to specify the parameter. To remove a parameter that you have defined, select the parameter and click Remove.

- While entering parameter name, if we don't select a datatype and click Next button it selects a varchar2 datatype by default.

Enter the parameter name in the Parameter Name column.

Example

Parameter1

Specify the data type of the parameter that you have specified by clicking the Data Type field. The data type drop-down list contains binary, bit, char, datetime, decimal, float, image, int, money, nchar, ntext, numeric, nvarchar, real, smalldatetime, smallint, smallmoney, text, timestamp, timeint, uniqueidentifier, varbinary and varchar data types.

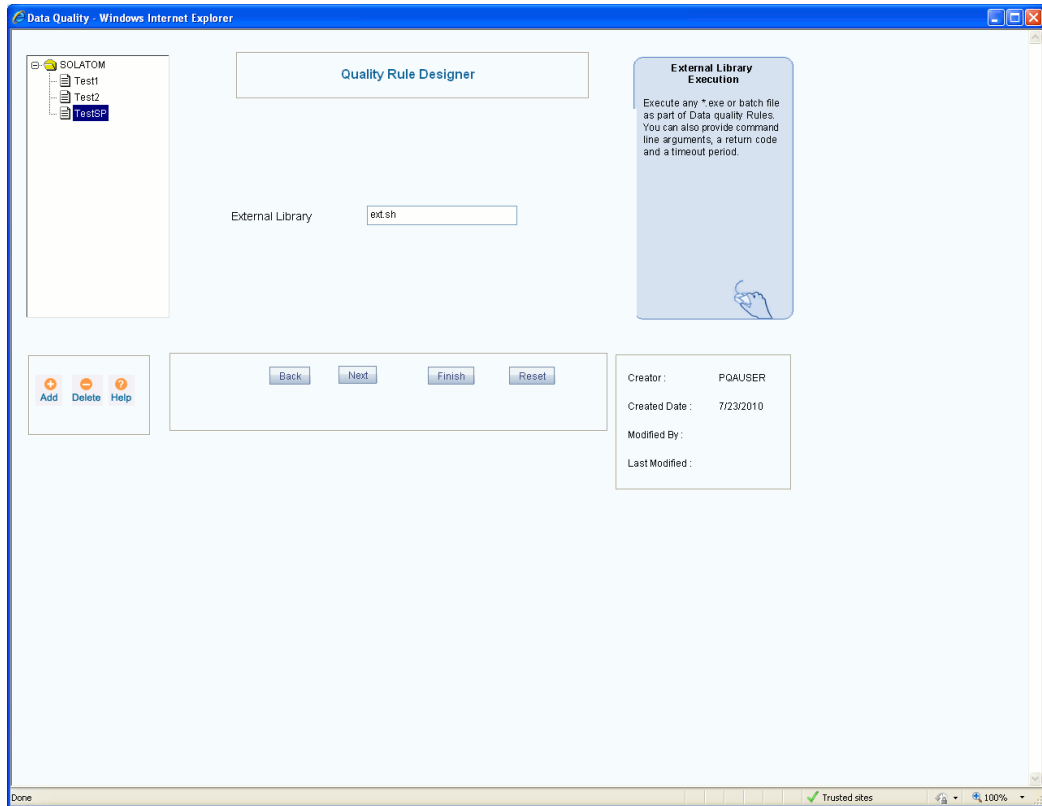
Example

number

Specify the default value for the parameter in the Default Value field. Click Back to return to the previous screen. Click Cancel to reset the parameters that you have specified.

- Every procedure/function for which you specify the SQL syntax should accept 2 default parameters, the first being the BatchId(varchar(50)) and the second being the MisDate(varchar(10)). These 2 parameters will be passed to the procedure automatically while running the Batch.

Click Next to go to the next screen. In this screen, you can execute an executable file. The next screen of the wizard is displayed:



In the External Library field, enter the name of the executable where the procedure is defined.

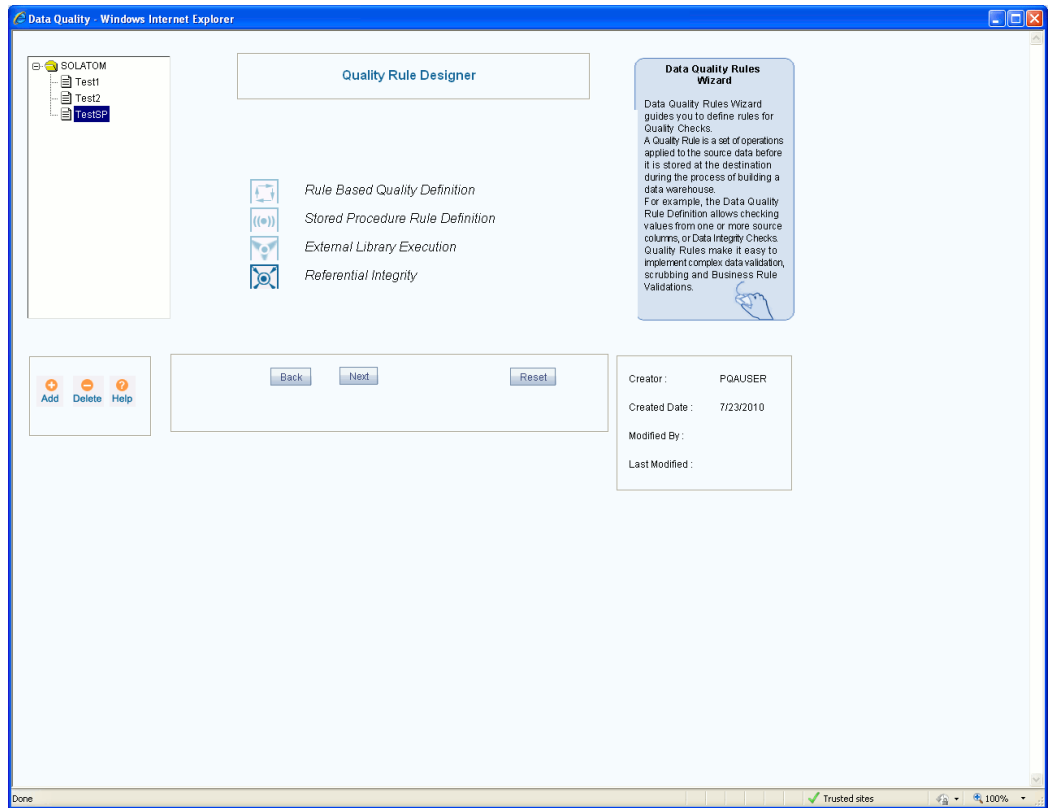
Example

Notepad.exe

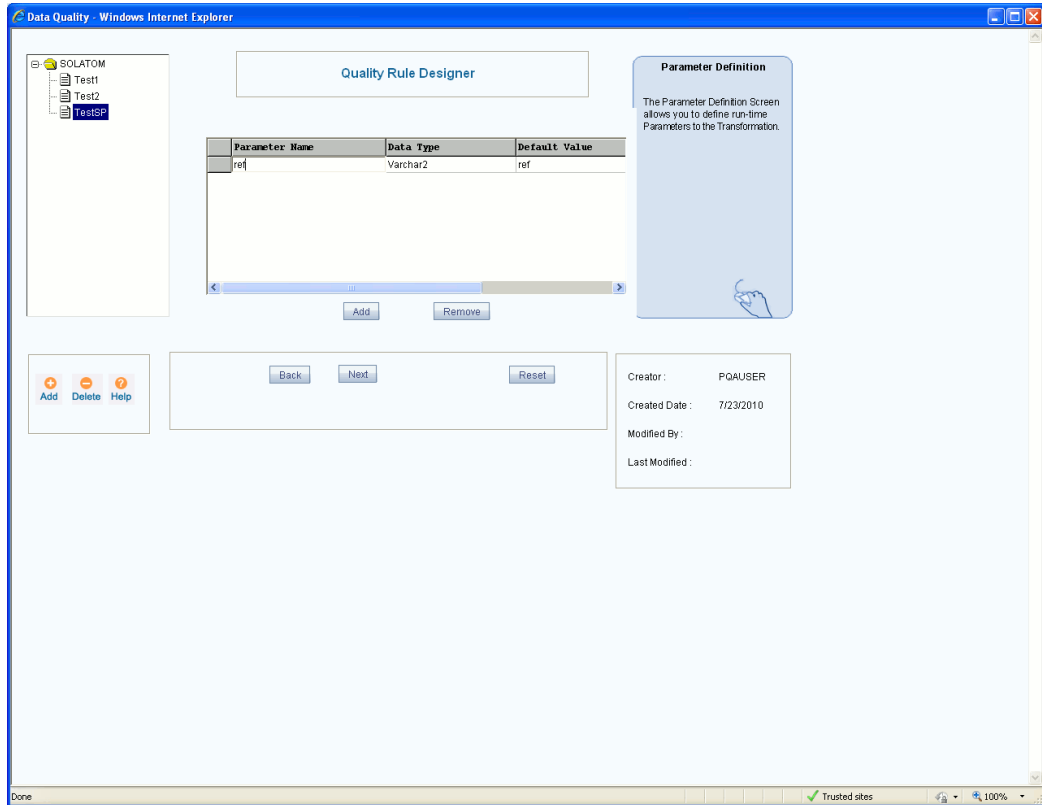
Click Back to return to the previous screen. Click Next to go to the first screen of the Quality Rule Designer wizard to define a new rule. If you have completed the rule definition, click Finish to save it. Click Cancel to reset the name of the executable, which you have specified.

Defining a Referential Integrity Rule

Select the Referential Integrity option.



Click Back to return to the previous screen or Click Cancel to reset the chosen rule definition option. Click Next to go to the Parameters Definition screen. In this screen, you can specify the parameters to be passed.



Click Add to specify a parameter. To remove a parameter that you have defined, select the entire row of the parameter which you want to remove and click Remove. To add another row, click Add.

Note: While entering parameter name, if we don't select a datatype and click Next button it selects a varchar2 datatype by default.

Enter the parameter name in the Parameter Name column.

Example

Parameter1

Specify the data type of the parameter that you have specified by clicking the Data Type field. Once you click the data type field you will see a data type drop-down list which contains binary, bit, char, date time, decimal, float, image, int, money, nchar, ntext, numeric, nvarchar, real, smalldatetime, smallint, smallmoney, text, timestamp, timeint, uniqueidentifier, varbinary and varchar data types.

Example

Number

Specify the default value for the parameter in the Default Value field. Click Back to return to the previous screen. Click Cancel to reset the parameters that you have specified.

- Adding a parameter is not mandatory. All procedures/functions which get generated have 2 default parameters namely @BatchId(MSSQL)/BatchId(ORACLE) and @MisDate(MSSQL)/MisDate(ORACLE) .

Click Next to go to the Target Source Entity screen. In this screen, you have to choose the table that forms the input to the transformation and the target entity on which the rule is to be applied.

The next screen of the wizard is displayed:

If the join/filter condition is satisfied, specify the value to be reflected in the destination column. Click the Destination Column field to open the drop-down list. Select the destination column.

Example

D_MIS_DATE

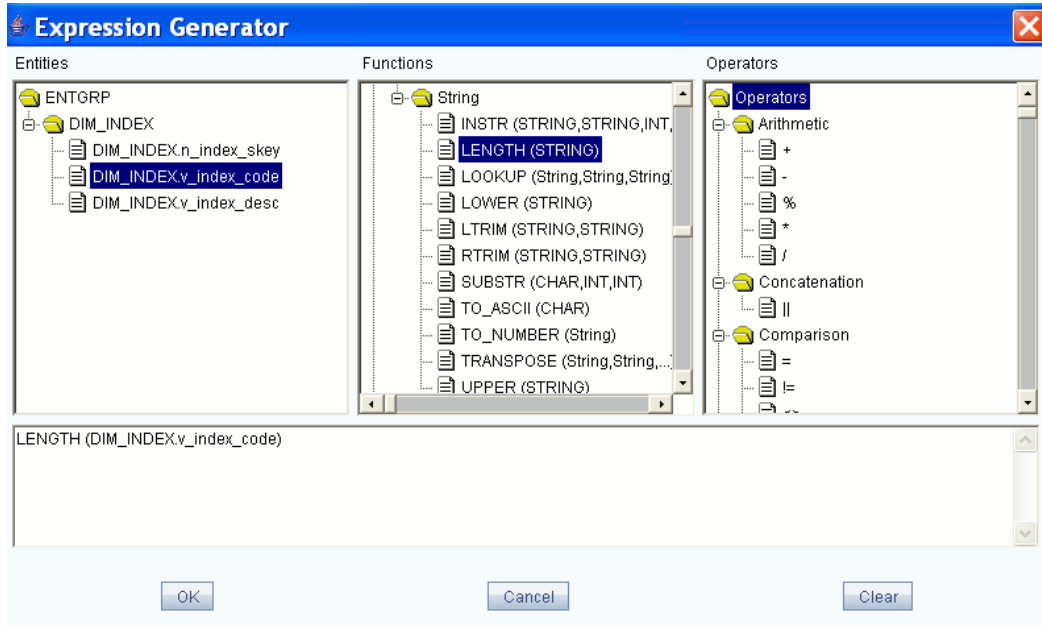
In the Operation column, specify the operator. Enter the value in the Value field or click Browse [...] to open the Expression Generator screen where you can specify the value.

Example

Operation: =

Value: @misdate

On clicking browse you the expression generator screen is displayed where you can specify the join/filter condition.

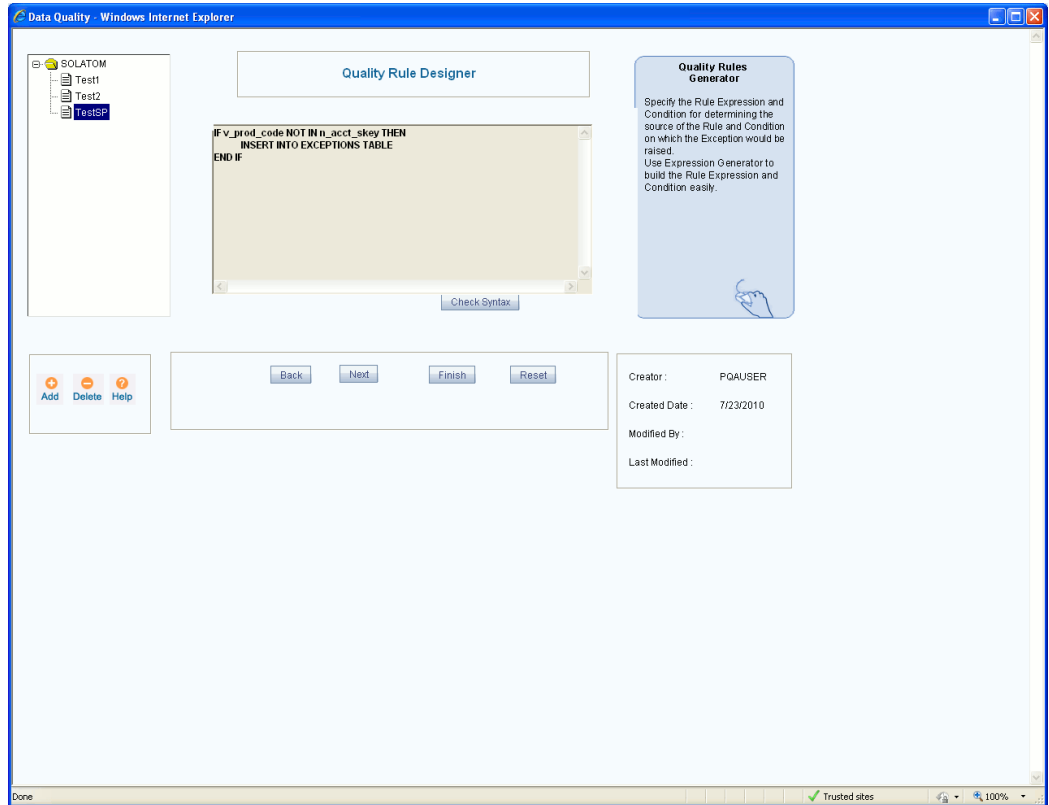


After you have specified the join/filter condition, click OK to save it. Click Clear if you want to clear the expression. This is applicable only when you are defining a new expression. While modifying an existing expression, click Clear to return to the existing expression. Click Cancel to exit the screen. The expression that you have specified will be displayed in the Join/Filter Condition field.

Click Add to specify more destination columns. To remove a destination column that you have specified, select the destination column name and click Remove.

Click Back to return to the previous screen. Click Cancel to reset the Destination Column, Operation, and Value fields. Click Next to go to the Syntax definition screen. In this screen, you can see the SQL syntax for applying the rule.

The syntax definition screen is displayed:



If the SqlSyntax, which appears on this screen, is logically correct, click Check Syntax to validate the procedure. If the syntax is right, a confirmation message is displayed, reading 'Syntax Checking Successful'.

Click Back to return to the previous screen. Click Next to go to the first screen of the Quality Rule Designer wizard to define a new rule. If you have completed the rule definition, click Finish to save or Click Cancel to reset the rule definition that you have specified.

Authorizing Deleted Records

Introduction

The Authorization of deleted records link will be displayed only if any Authorized records is deleted. A deleted record will be displayed with AuthFlag D. To authorize deletion of the deleted record, click the Authorization of deleted records link to open a new screen.

Auth	Rej	Hold	Extraction Date	Currency Code Surrogate Key	Currency Code	Record End Date	Record Start Date	Latest Record Indicator	Local Currency Indicator	Reporting Currency
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	07/09/2009 21:09:24	990	45		07/23/2009 14:22:25	U		Deleted

The deleted records that need re-authorization are displayed.

To authorize a deleted record, select the **Authorize Deletion** option and click **Save**. To reject deletion of a record, click **Reject Deletion** against the record and click **Save**.

To authorize deletion of all the records, select the **Select All for Authorization** and click **Save**.

To reject all records from being deleted, select the **Select all for rejection** and click **Save**.

To authorize deletion/rejection of the next set of deleted records, click **Next**.

To close the screen, click **Close**. Reset Button will reset the check-boxes to null.

The records that are authorized for deletion will be deleted from the database. A mail will be sent to the creator that the records are deleted, if the mailing option is enabled.

Exporting Records

You can export a specific record to a selected location in CSV format using the **Export** Option.

The record can be exported in any one of the pre-defined layouts for your form. You can choose a Single Record, Editable View, Grid, Multi Column or Wrapping Row layout.

Auth	Rej	Hold	Extraction Date	Currency Code	Surrogate Key	Currency Code	Record End Date	Record Start Date	Latest Record Indicator	Local Curren
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	07/13/2009 11:51:53		343	2321	07/23/2009 14:17:08	07/23/2009 14:17:16	U	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	07/09/2009 20:07:08		79	ra	07/13/2009 12:00:47		U	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	07/09/2009 20:09:41		98	1	07/09/2009 20:09:41	07/10/2009 17:23:27	U	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	07/13/2009 12:00:06		32321	1	07/13/2009 12:00:06			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	07/13/2009 12:21:01		777	34	07/13/2009 12:21:01			2

- Data can be exported only in View mode.
- The roll back option can be used only for authorized record to undo the modifications made to it.

Searching a Record

You can search for a specific record in the selected form.

Click **Search** option to search for a specific record.

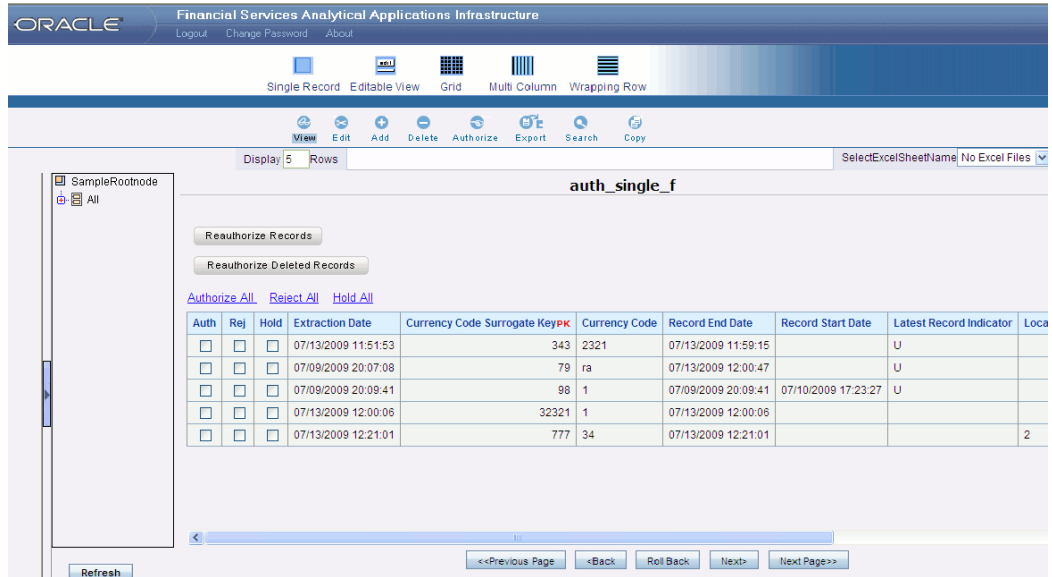
Select the field name that you want to search from the Field Name drop down list.

Enter the value/data query in the Search field and click Go.

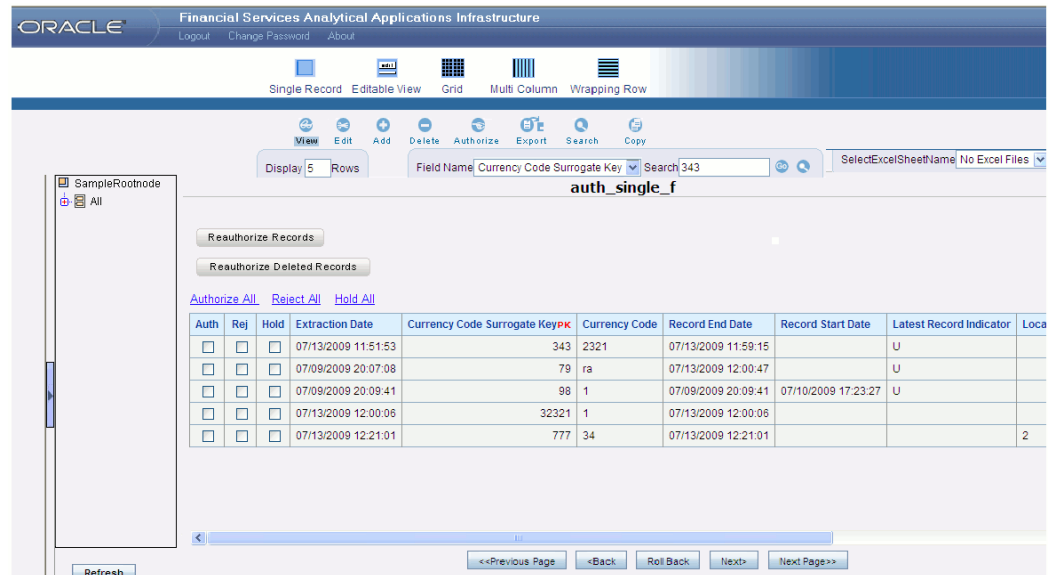
Example

Field Name: Currency Code Surrogate Key

Search: 343



The table will refresh displaying field names containing the data that you have searched for.



To do an advanced search, click Search icon which opens a pop-up screen.

You can select multiple field names and specify the query data. Click Go to conduct extensive search. Click Cancel to exit the window.

Advanced Search

Parentheses/ Join	Field	Operator	Value	Parentheses/ Join
(Currency Code Surrogate Key	=	343	and
	Record Start Date	=	07/23/2009)
and	Extraction Date	=		

The table will refresh displaying field names containing the data that you have searched for. Otherwise the user is intimated and all the records are displayed.

ORACLE Financial Services Analytical Applications Infrastructure

Logout Change Password About

Single Record Editable View Grid Multi Column Wrapping Row

View Edit Add Delete Authorize Export Search Copy

Display 5 Rows Field Name Currency Code Surrogate Key Search 343 SelectExcelSheetName No Excel Files

auth_single_f

[9983] Advanced Search Results For - '(Currency Code Surrogate Key = 343 and Record Start Date = '07/23/2009')

Extraction Date*	07/13/2009 11:51:53
Currency Code Surrogate Key*	343
Currency Code*	2321
Record End Date	07/23/2009 14:17:08
Record Start Date	07/23/2009 14:17:16
Latest Record Indicator	U
Local Currency Indicator	
Reporting Currency Indicator	Unauthorized
Residual Currency Indicator	
Currency Risk Factor	2
Currency Description	3
Currency Iso Code	2
Currency Short Description	DEMOUSER
Currency Type Description2	2
Currency Type	2

To open help for the Data Entry screen, click Help. To return to the DI splash screen, click home.

- Search option is available only for view, edit, and authorize modes.
- The roll back option can be used only for authorized record to undo the modifications made to it.

Uploading Data Excel Files

Introduction

In this screen you can upload excel data sheets to any specific destination table and map the table's columns to the excel sheet's columns.

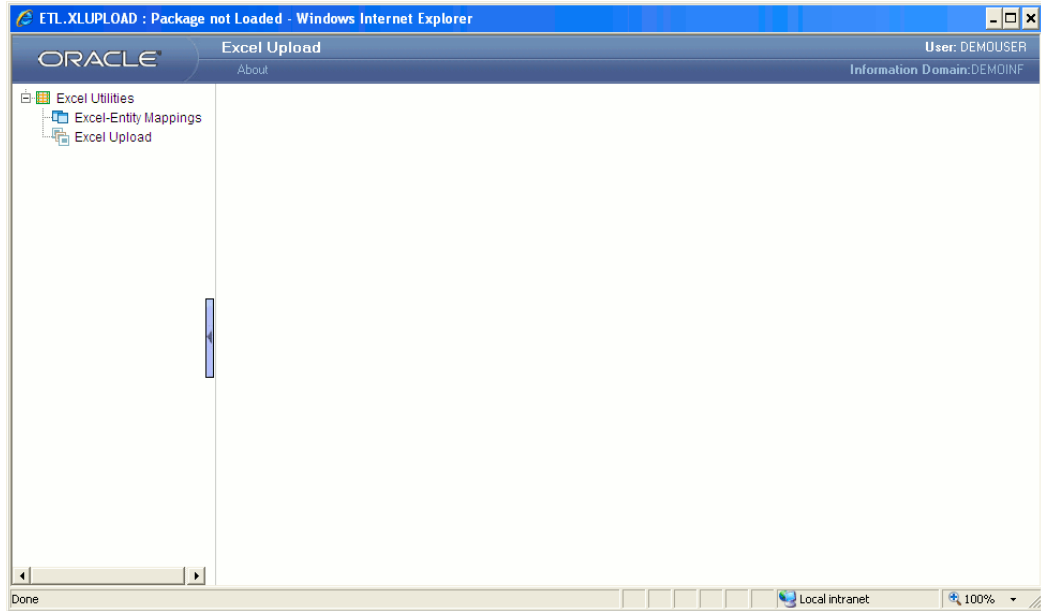
The upload and mapping rights have been restricted to authentic users to enhance the security and operability features.

User with XLADMIN function can only define a mapping and authorization requirement but the user can not upload the file. User with "XLUSER" function can only retrieve a mapping definition (already defined by XLADMIN user) and can upload the file based on retrieved mapping. A user can be allotted XLADMIN as well as XLUSER rights to perform both mapping and upload operations.

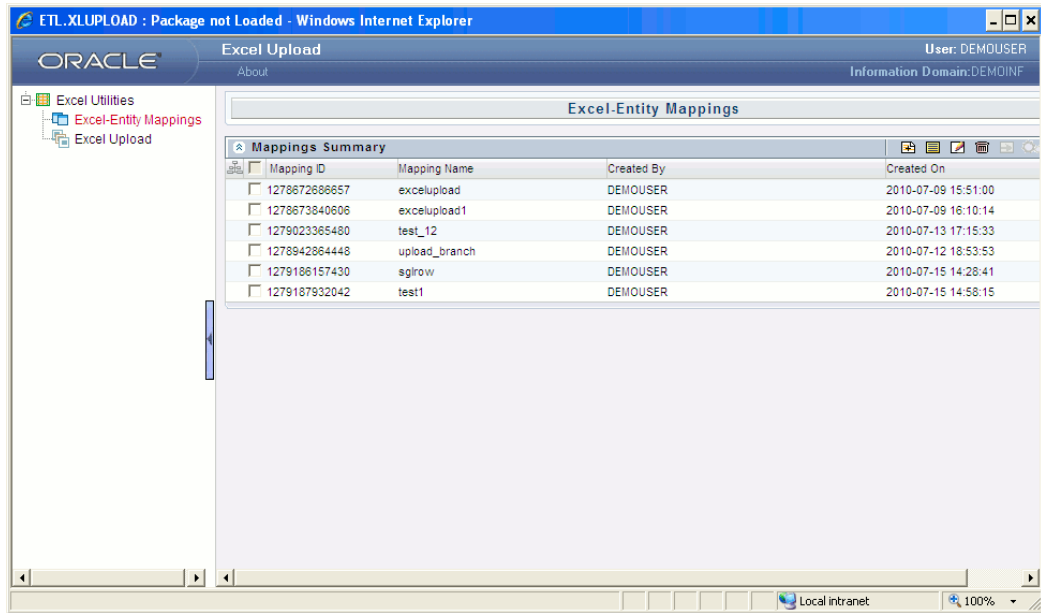
Mapping of Excel Data to Destination Table

You have to be XLADMIN user to define mapping.

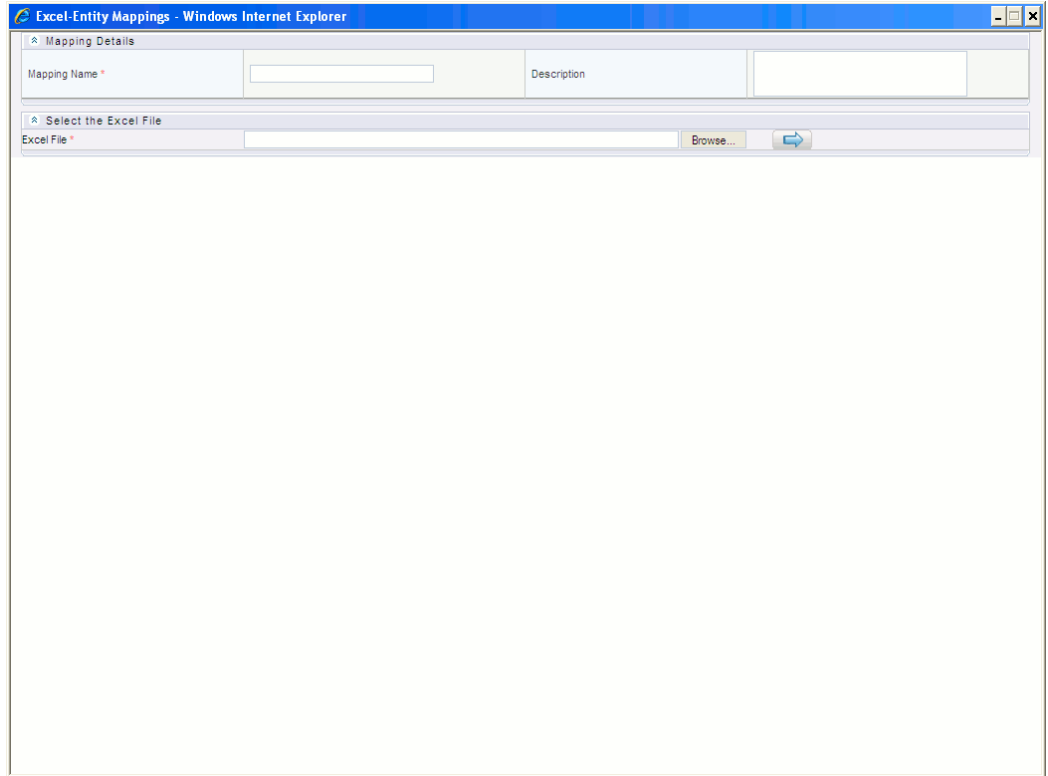
Click Excel Upload in the LHS pane of the Oracle screen. The Excel Upload screen is displayed.



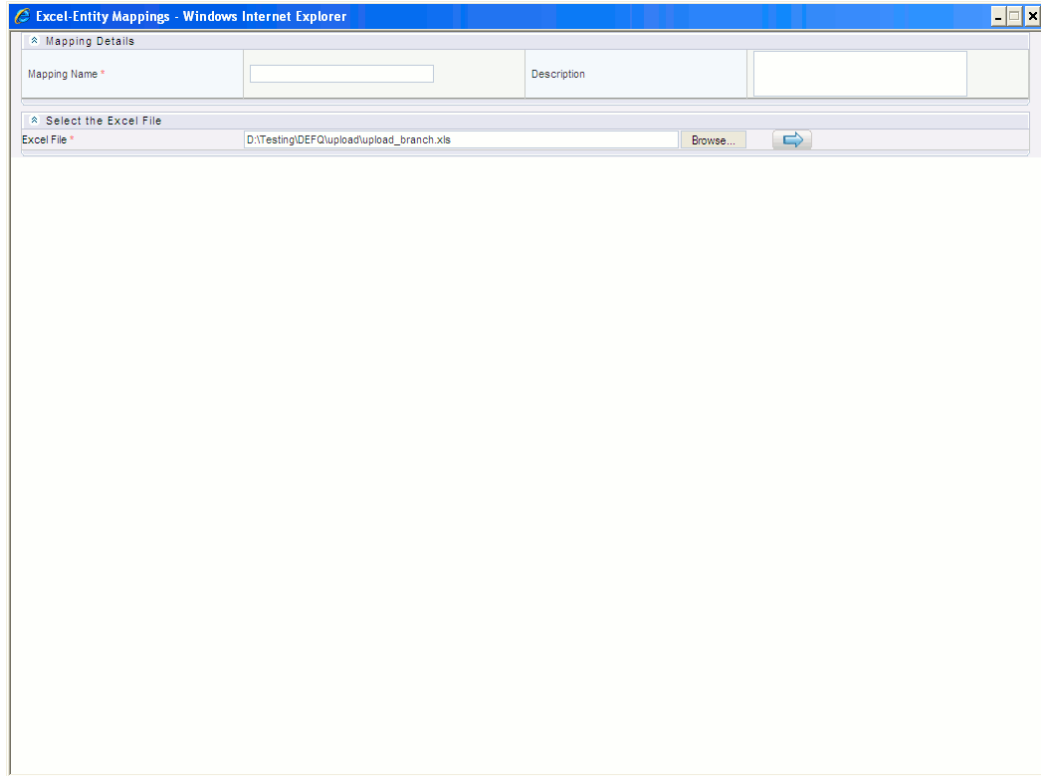
Click Excel-Entity Mapping option from the LHS.



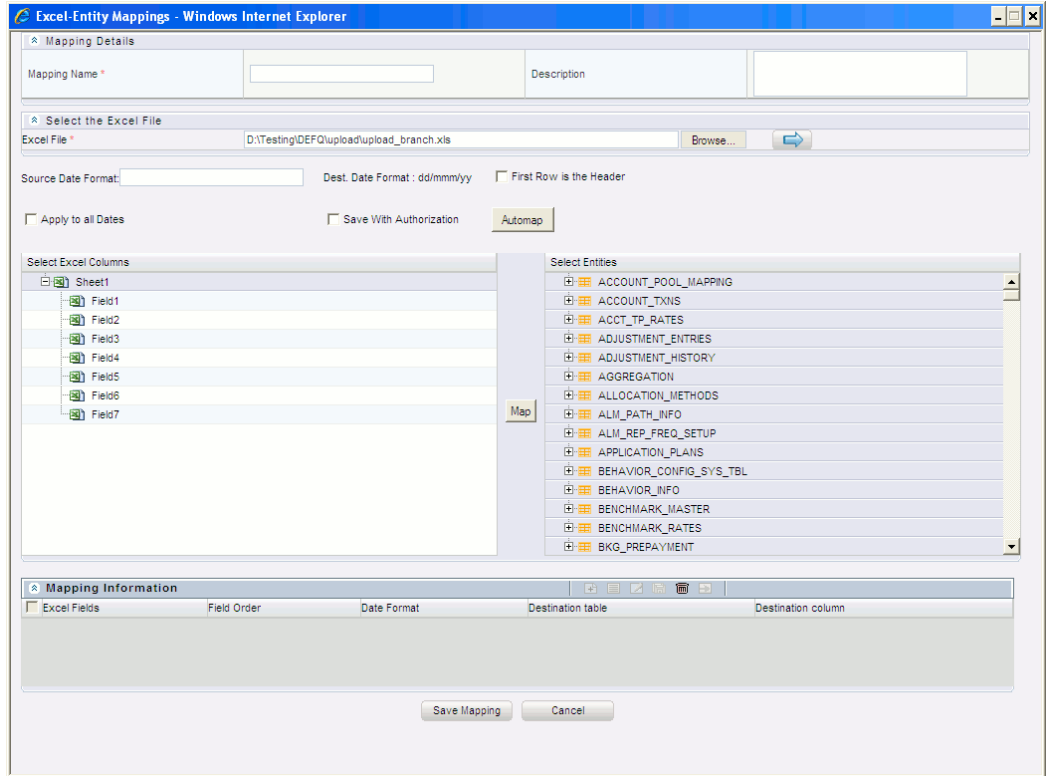
Click the New icon to create a new Mapping.



Enter an appropriate Mapping Name and Description and click Browse button to select the required Excel sheet and click the arrow icon that is Load Excel Metadata button.

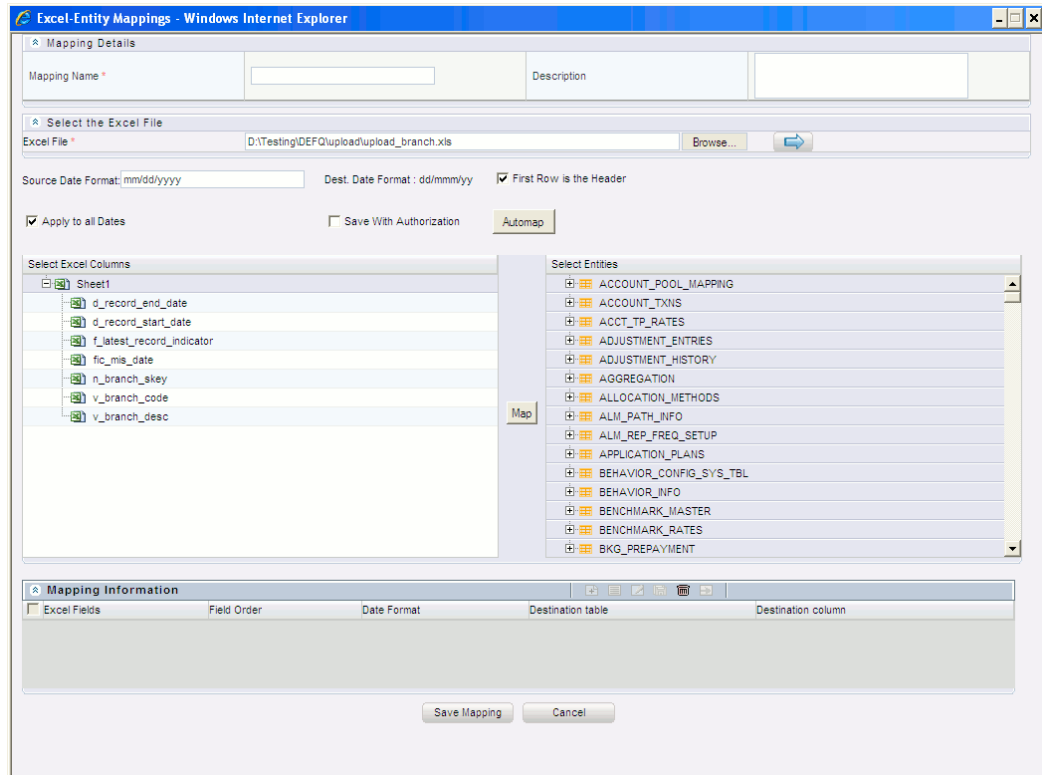


After loading the selected Excel sheet, the Excel columns will be displayed under the 'Select Excel Columns' grid and all database tables will be displayed under 'Select Entities' grid.



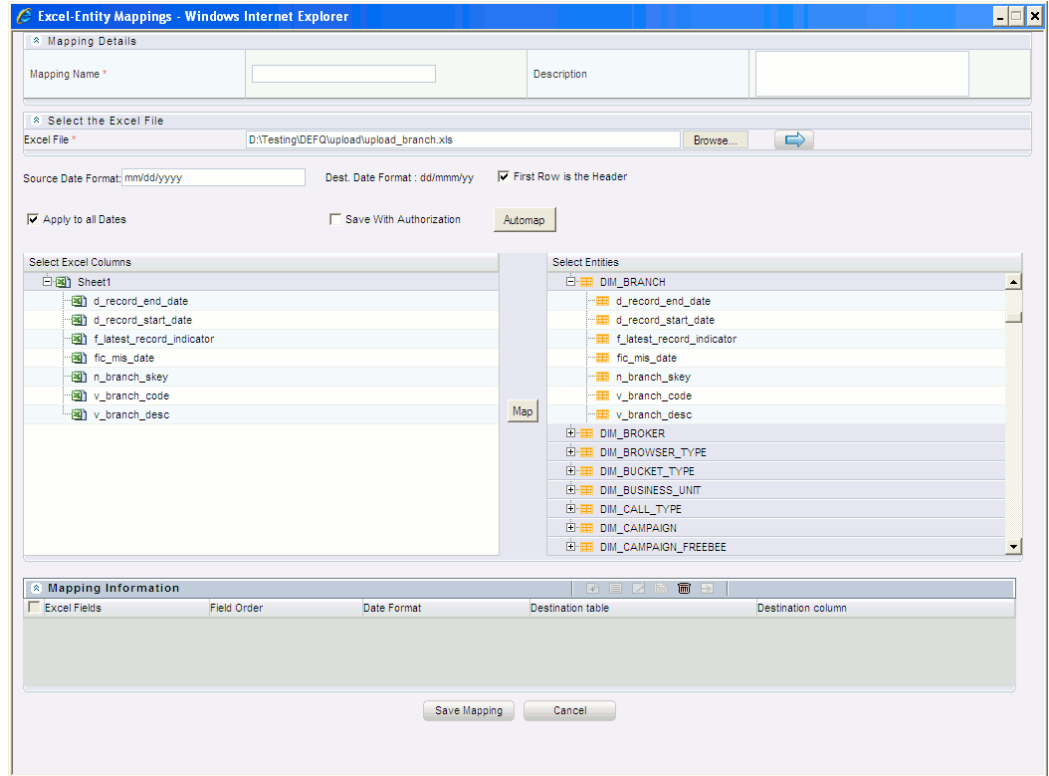
Enter the 'Source Date Format' and also check 'Apply to all Dates' checkbox if Excel sheet contains date field.

If the first row in the Excel sheet has headings, check the 'First Row is the Header' checkbox.

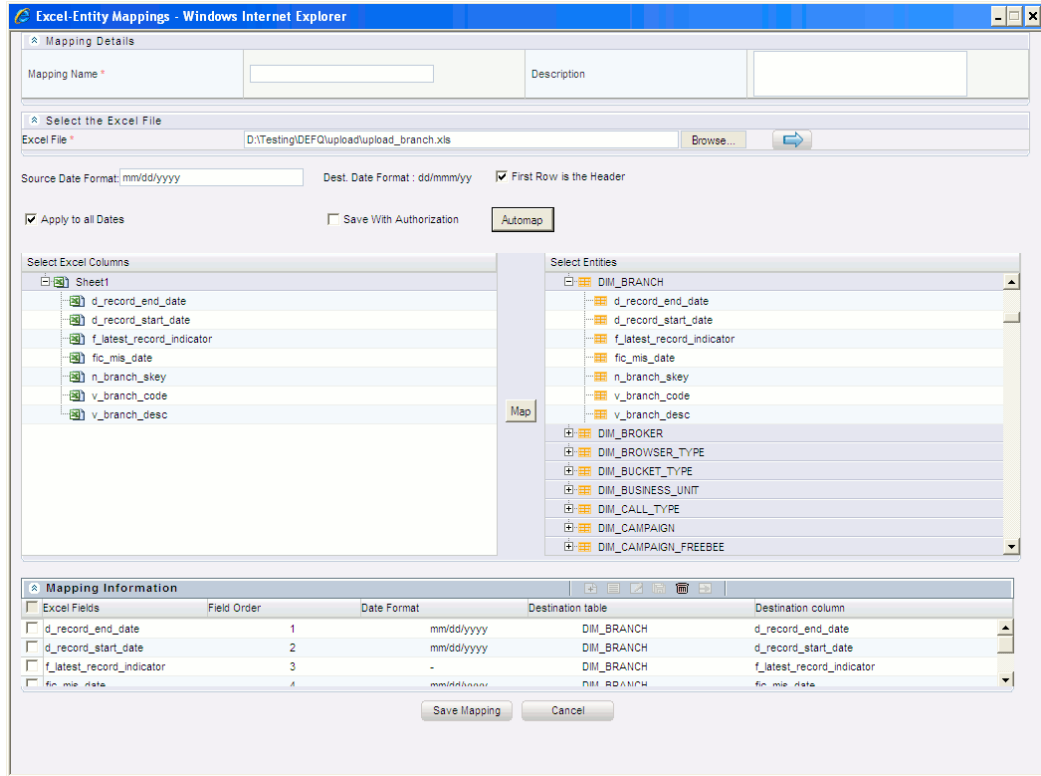


After checking the respective checkboxes, the headings will be displayed in the Select Excel Columns grid.

Select the corresponding Database table by clicking on the + symbol or table name.

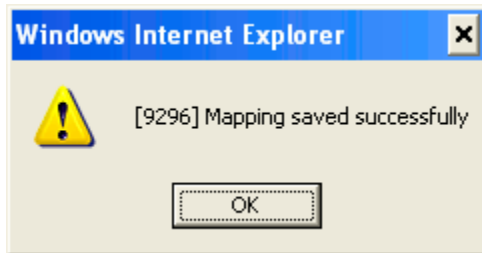


Click **Automap** button. The respective columns from both the sides having the same column name gets mapped automatically and rest of the excel columns should be mapped manually.

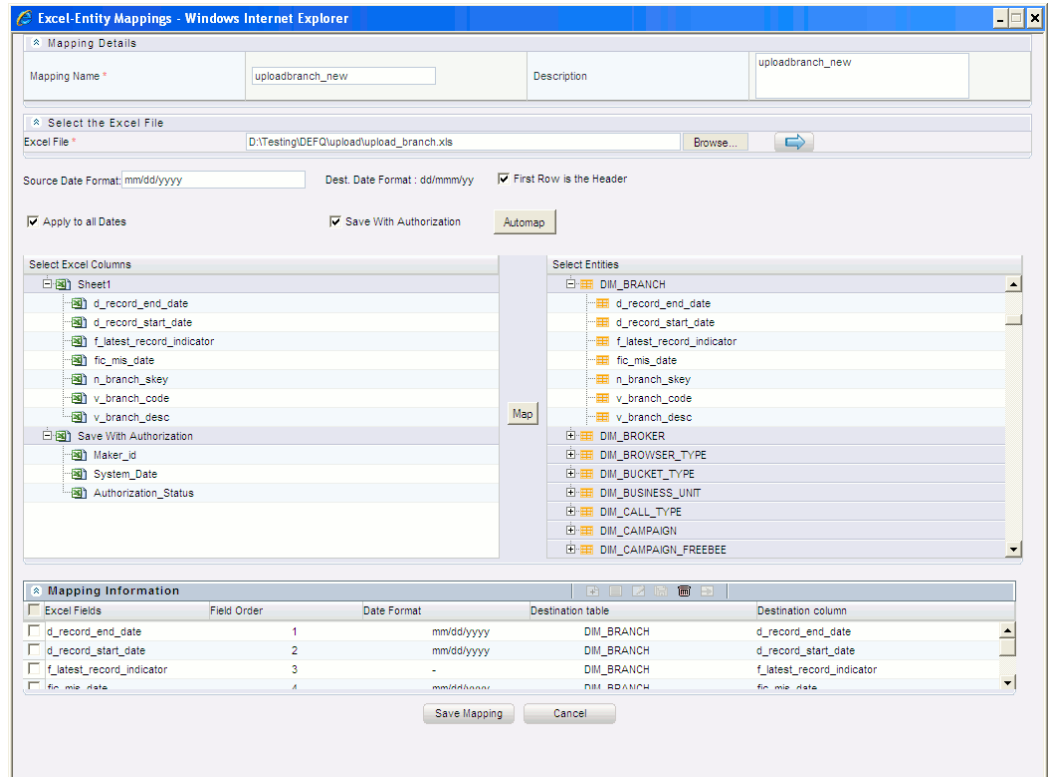


The mapping details will be displayed under the 'Mapping Information' grid.

To Delete a map, select it from the 'Mapping Information' grid and click Delete icon. Click on 'Save Mapping'. A confirmation message is displayed as shown below.



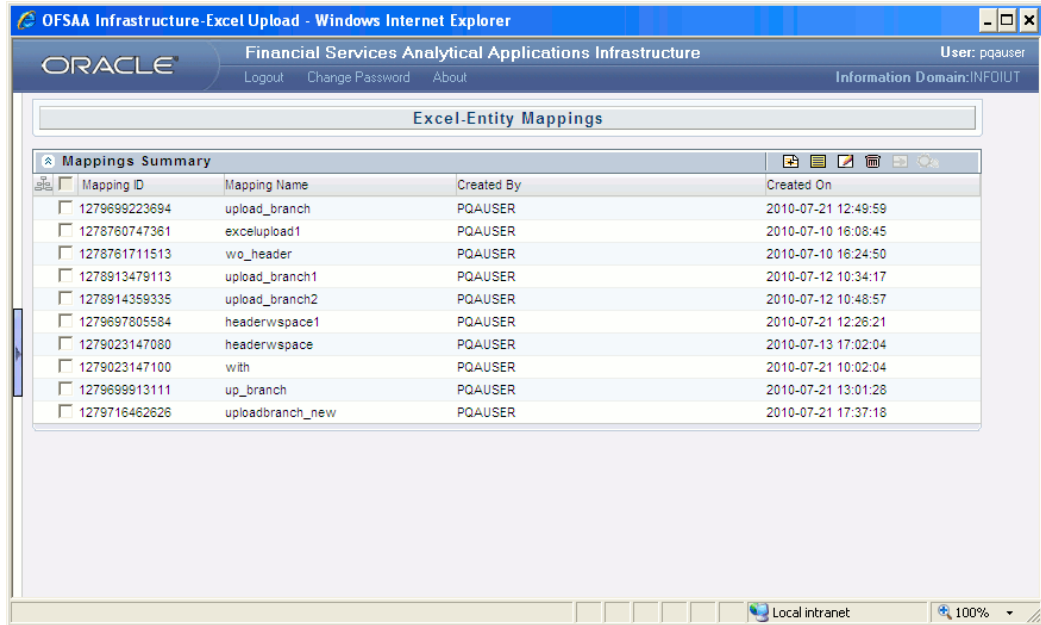
Save with Authorization



Select the 'Save with Authorization' checkbox to upload data with Authorization. The mandatory fields Maker_id, System_Date and Authorization_Status will be displayed under the Select Excel Columns grid.

These three fields should be mapped with the Database columns. Click 'Save Mapping' button.

The 'Excel-Entity Mappings' page gets refreshed and will also display the newly created mapping.

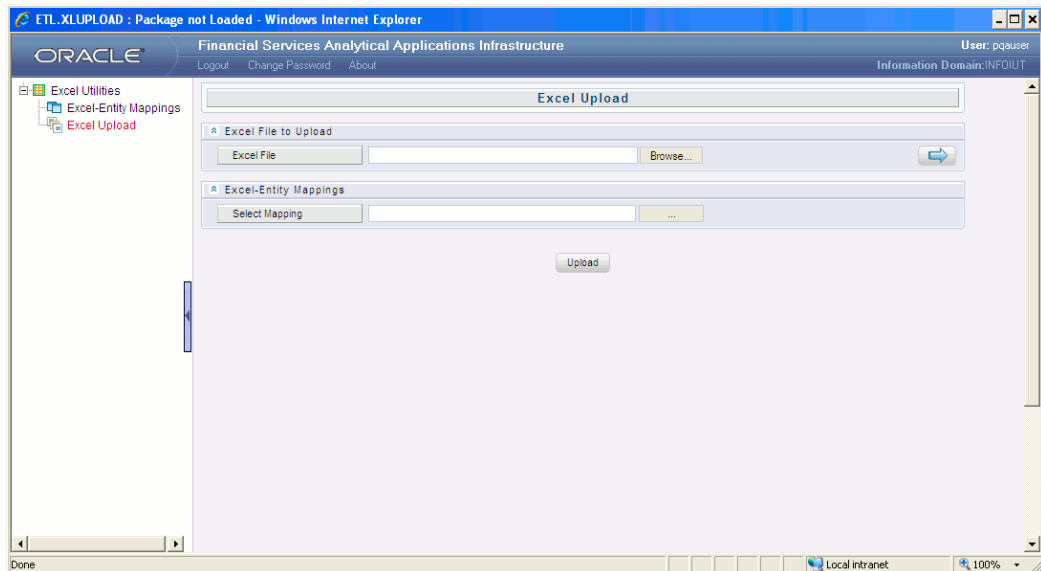


To view the screen, click View button. To edit any details, click Edit button.

To delete a map, select the map that needs to be deleted and click Delete button.

Excel Upload

Click Excel Upload option from the left hand screen. The Excel Upload screen appears.

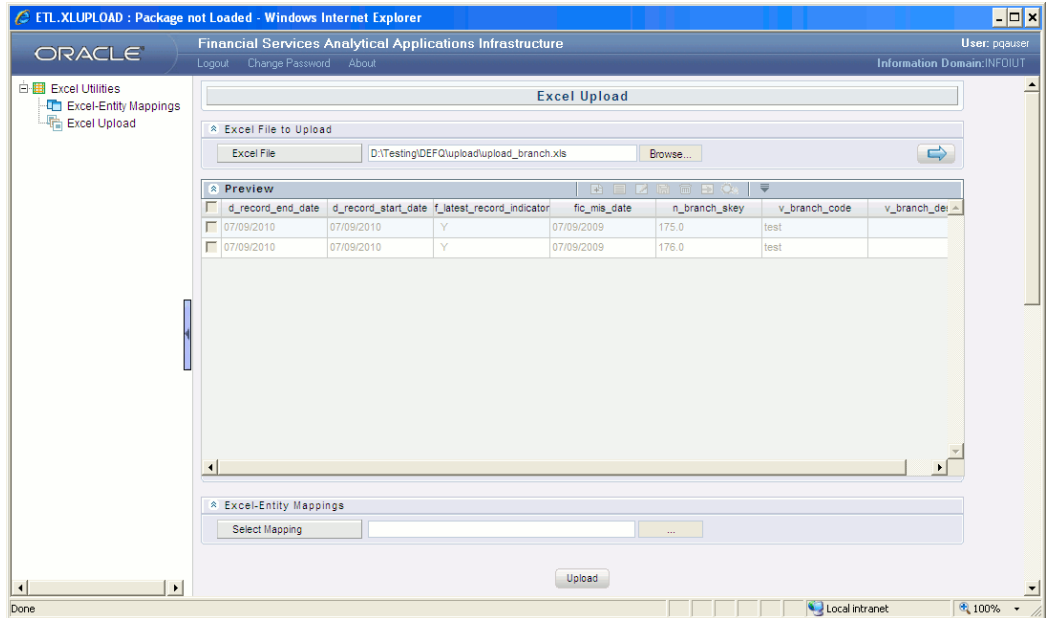


Note: For uploading data through the Excel Upload functionality

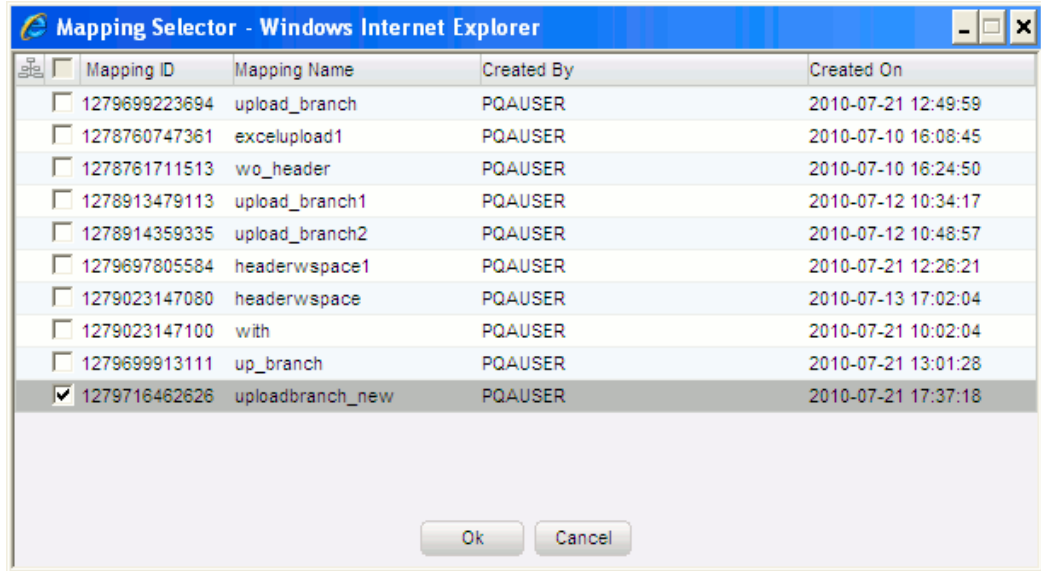
definition, if the data contains dates, the date format as displayed in the preview screen must be the same as the format specified in the field-map screen.

Click Browse button and select the required Excel sheet to be uploaded.

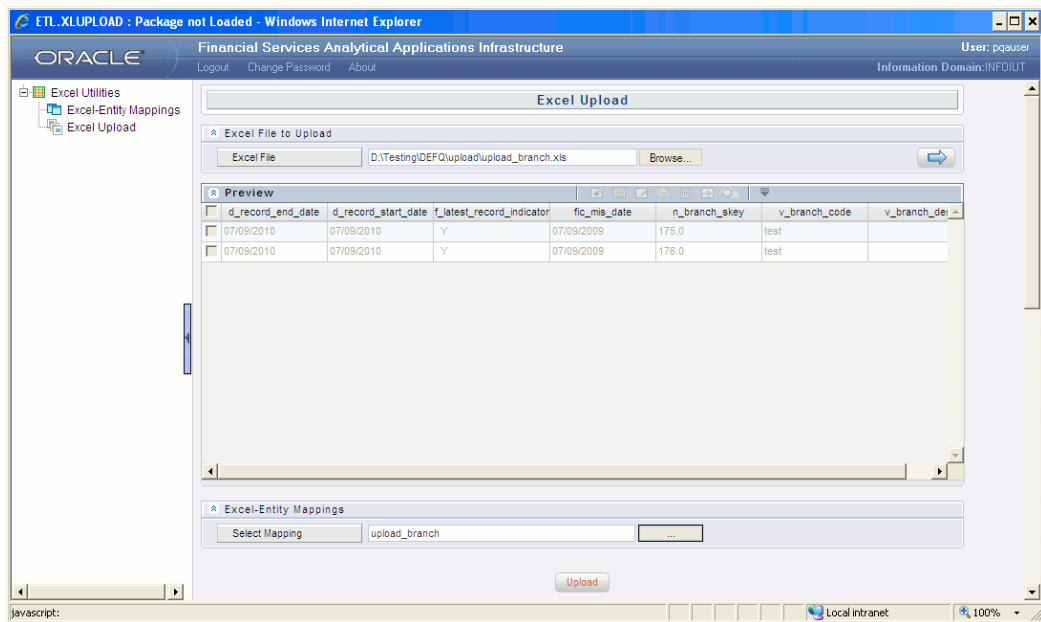
Click the blue arrow (Preview) icon to view the content of the Excel sheet.



Click the button adjacent to Select Mapping and select the mappings which were defined earlier.

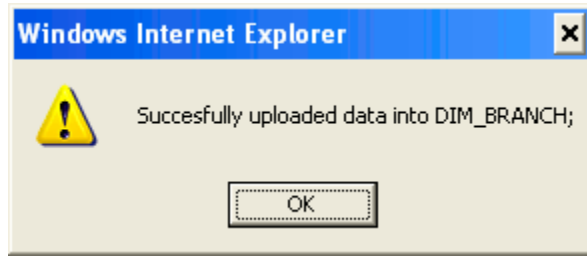


After selecting the Map, the same is displayed in the Select Mapping text field.



Click Upload button to upload the data of the Excel sheet to the database table.

A confirmation message is displayed after the Excel sheet is successfully uploaded.



Click Home to return to the OFSAAI splash screen

Maintaining the Operator Console

Infrastructure

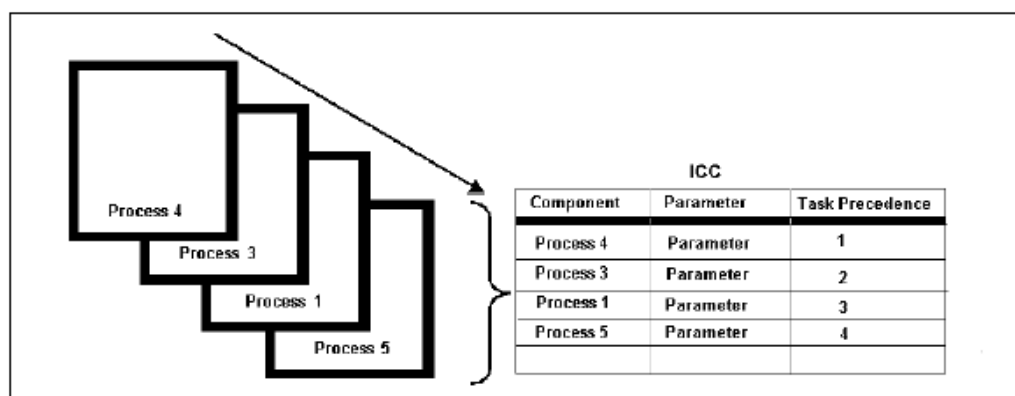
Infrastructure is a product suite that encapsulates a range of components with varied functionalities, all part of a process flow that unifies the metadata management. The **Information Command Center** is one such component that helps you to decide the order and the time at which you would like to run/schedule the process/the batch.

For users who are mapped to Data Centre Manager role can perform functions in Operations.

Operations Process Flow

The data warehouse components (Load data, Create Cube) of the system can be configured and executed using the Information Command Center.

The illustration below displays an overview of how OPERATIONS works:



Each component in a data warehouse executes a certain processes. The OPERATIONS component of Infrastructure identifies these processes and the corresponding

components, allows configuration of component parameters and setting precedence for the processes.

A process is represented as a task in the purview of the Information Command Center. A collection of one or more tasks (referred to as a batch) is the executable format recognized by the OPERATIONS. Precedence refers to setting the task order. Once the batch is defined, the task parameters are configured and the task precedence is set, the batch is ready to be scheduled for future or run immediately. The component processes are carried out in the data warehouse as per the parametric values and schedule, if defined in the OPERATIONS component.

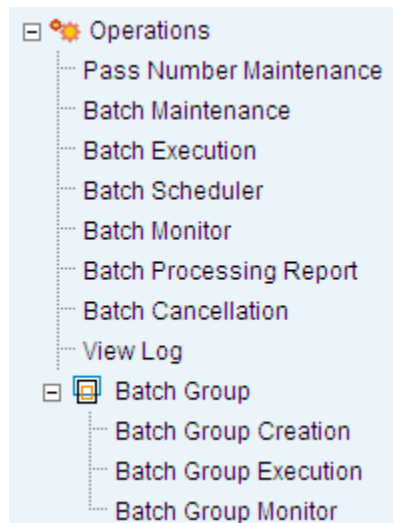
Through the Batch Monitor Screen, OPERATIONS allows for real time monitoring of batches that have been run or are being run. The Batch Monitor screen allows viewing of the individual task status and the messages that have been logged against them.

The Operations Menu

Click + for **Operations** in the function menu to view its sub-menu.

The operations available in the sub-menu are:

Pass Number maintenance, Batch Maintenance, Batch Execution, Batch Scheduler, Batch Monitor, Batch Processing Report, Batch Cancellation, and Batch Group (Batch Group Creation, Batch Group Execution and Batch Group Monitor).



Pass Number Maintenance

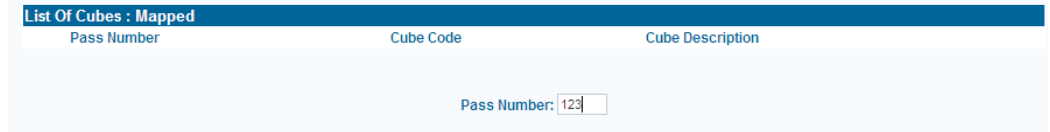
Click on **Pass Number Maintenance** option on the left hand side to view the screen.



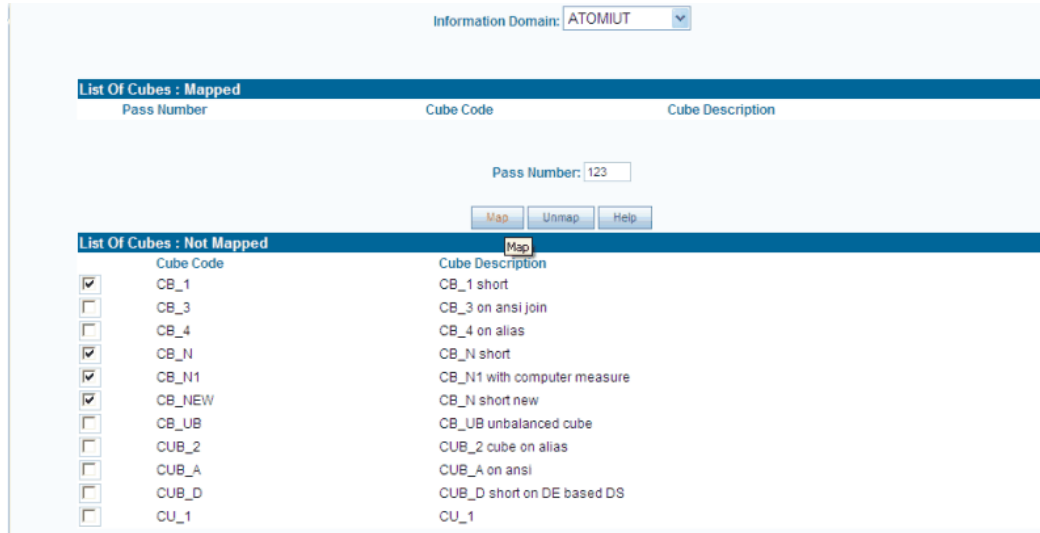
Enter the **Pass number** against the Pass Number field. The Pass number should be a numeric value.

Example

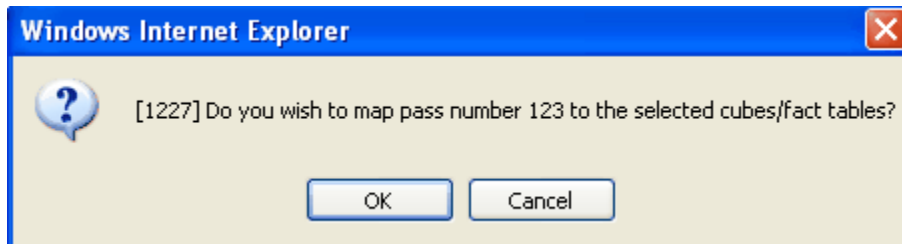
123



Select the Cube Code that needs to be mapped. Click **Map** button to map the codes.



A pop up confirmation message comes up. Click **OK** to continue mapping.



The next screen provides a list of all the Mapped and Not mapped cubes. A message comes up stating that the changes have been saved successfully. Click **OK**.

Information Domain: ATOMIUT

List Of Cubes : Mapped

	Pass Number	Cube Code	Cube Description
<input type="checkbox"/>	123	CB_4	CB_4 on alias
<input type="checkbox"/>	123	CB_1	CB_1 short
<input type="checkbox"/>	123	CB_N1	CB_N1 with computer measure
<input type="checkbox"/>	123	CB_3	CB_3 on ansi join
<input type="checkbox"/>	123	CB_N	CB_N short

Pass Number:

List Of Cubes : Not Mapped

	Cube Code	Cube Description
<input type="checkbox"/>	CB_NEW	CB_N short new
<input type="checkbox"/>	CB_UB	CB_UB unbalanced cube
<input type="checkbox"/>	CUB_2	CUB_2 cube on alias
<input type="checkbox"/>	CUB_A	CUB_A on ansi
<input type="checkbox"/>	CUB_D	CUB_D short on DE based DS
<input type="checkbox"/>	CU_1	CU_1

Select **Unmap** button to un-map any of the mapped cubes. You can also map the unmapped cubes by entering a new Pass Number. Click on the Help button for more information.

Batch Maintenance

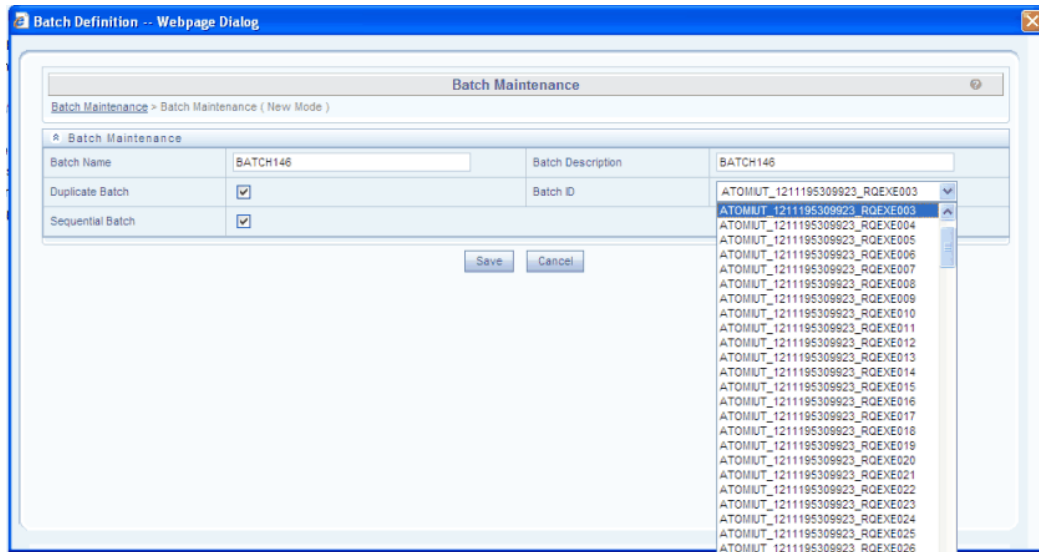
Batches are generated in Infrastructure through Batch Maintenance framework. In this screen, you can search for batches based on the modules: Batch Maintenance, Advanced Analytics Infrastructure or Run Rules Framework. It is also possible to search for a batch by specifying a last modified date range or a search filter of the Batch ID.

The screenshot shows the Oracle Financial Services Analytical Applications Infrastructure Batch Maintenance screen. The top navigation bar includes 'ORACLE', 'Financial Services Analytical Applications Infrastructure', and 'User: pauser'. The main content area is titled 'Batch Maintenance' and features a search bar with a dropdown menu and a 'Batch Id Like' field. Below the search bar is a table with columns for 'Batch ID', 'Batch Description', and 'Batch Edit/NonEdit'. The table contains two rows: 'HPATOM_BATCH1' with description 'BATCH1' and 'HPATOM_OASHP' with description 'OASHP'. Below the table is a 'Task Details' section with columns for 'Task ID', 'Task Description', 'Metadata Value', 'Component ID', and 'Precedence', which currently shows 'No Data Found'.

Click **Add** button in the **Batch Name** section to define a new batch. A new window opens

You can either define an empty batch or select existing batch details that you would like

to duplicate. The **Batch Name** that is displayed in the **New Batch** window is automatically generated by the system. Batch Identification number refers to the identification number allotted to the batch. You cannot edit the batch ID.



- The Batch ID should be unique across an information domain.
- It must be alpha-numeric and should not start with a number.
- The maximum length allowed for a Batch ID is 41 characters.

To give the batch a description, click the field provided for **Batch Description** and enter the batch description.

Example

BATCH146

The Batch Name and Description that you specify will be displayed in the Batch Id and Batch Description field of the **Batch Maintenance** screen.

An empty batch refers to a new batch without any associated tasks or details. Selecting the empty batch option will mean that you are to define a new batch with a new set of tasks. Duplicate Batch refers to the duplication of an existing batch. To carry out the duplication process it is mandatory for you to select the Batch Id from which you can create duplicate information. Click the drop-down list box of the field provided for Batch Id to select the Batch Id/information that you wish to duplicate.

Batch Sequence is an option where the Batch will be created sequentially i.e. if there are three tasks in the batch, Task 3 should have precedence as Task 2 and Task 2 should have precedence as Task 1.

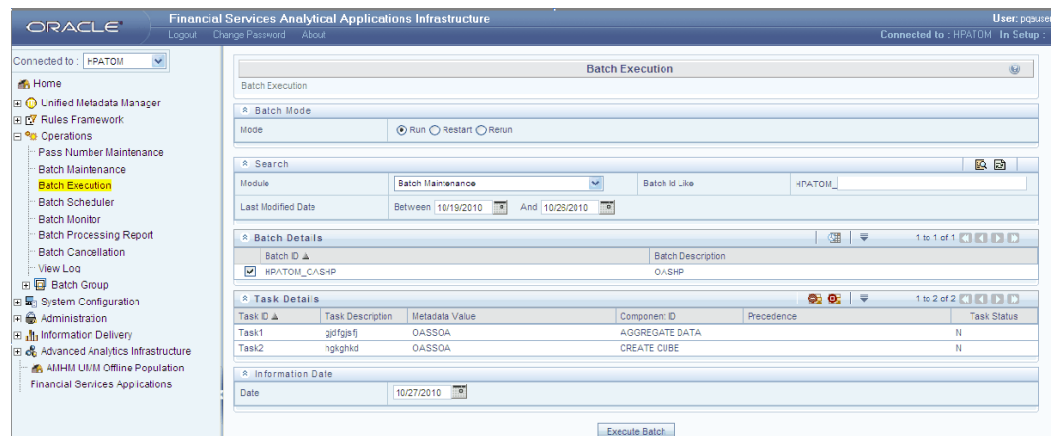
Click **Save** to complete the new batch definition or click **Cancel** to close the pop-up without saving.

On clicking Save, the new Batch ID will be displayed in the **Batch Name** panel. The Task Details panel will be displayed. You can assign new tasks for the batch and specify the Component, Description and Task Precedence for each Task in the new Batch in the Task Definition display grid. You can also specify the parameters for each task based on the selected component.

Click **Edit** button to make the batch definition non-editable.

Batch Execution/Scheduling

Click Batch Execution to display the Batch Execution screen as shown below:



Batches are generated in Infrastructure through the Batch Maintenance framework.

A search feature is provided in the Batch Execution screen for quick retrieval of batches depending on the framework on which the batches have been defined. This search function is available on the Run, Rerun and Restart screens.

In this screen, you can search for batches based on the Modules, by specifying a Last Modified Date range, and Batch ID.

You will be able to define batches, tasks, assign parameters and precedence to the tasks. This screen contains fields that enable the identification of tasks, their sequence and their properties.

Batch Modes

There are 3 modes:

Run

Once the batch definition is complete, you can move on to running the batch. You have the option of either executing the batch immediately or providing a schedule for the batch to be run.

Restart

While running the batch, there is a possibility that some of the tasks in that batch might fail. In this circumstance you can rerun the failed tasks in the batch.

Rerun

With this option you will be able to Re-run a complete batch.

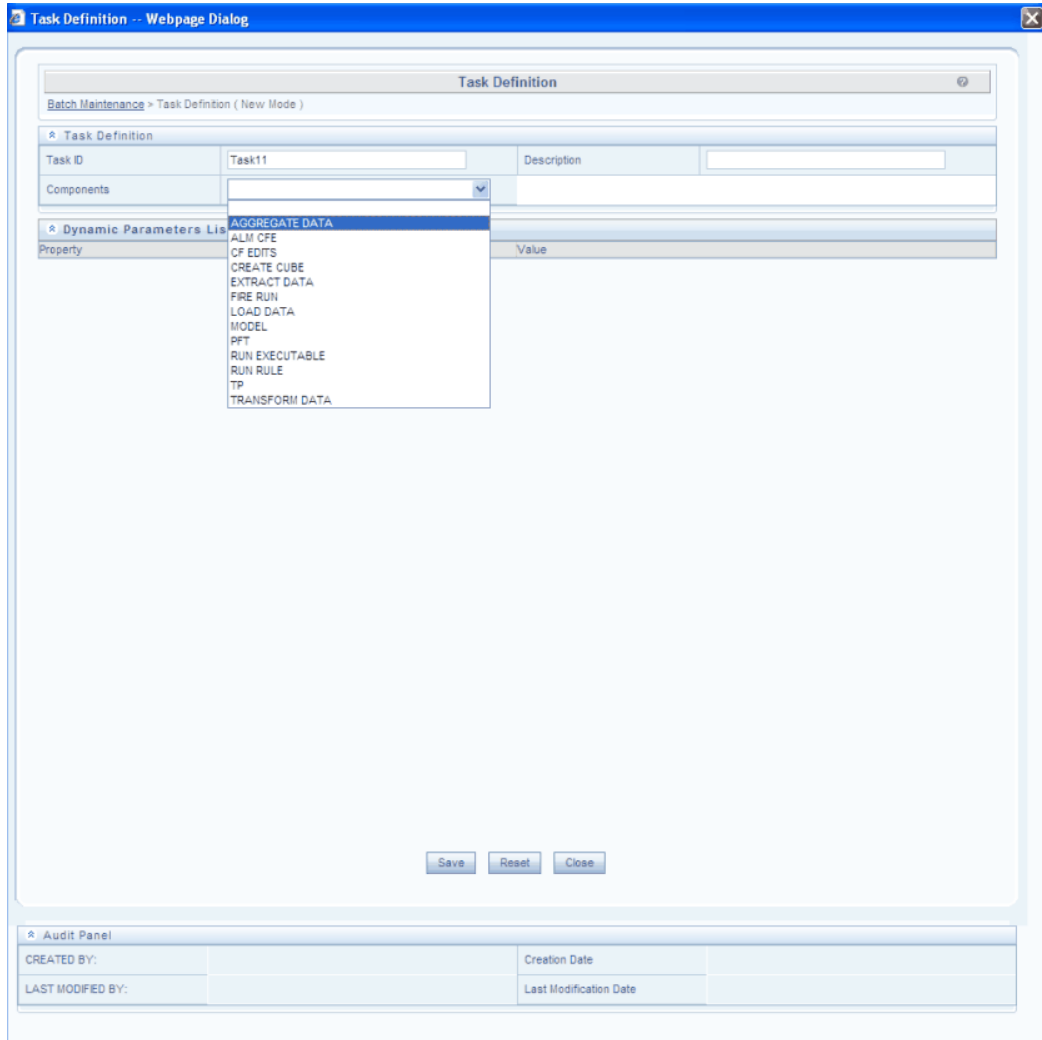
Batch Tasks

Batch Defining

Specifying the Tasks for the Batch

You can specify the Component ID, Description, Metadata Value and Precedence for the newly created batch.

Click Add button in the Task Details section in the Batch Maintenance screen to define a new task. The Task Definition window opens. For every new task, a new row is generated in the table. Each task has to be associated with a component that can be chosen from the Component drop down list.



Components for Back-end Processes

Components are individual functional units that are put together to form a process.

The available components are:

- AGGREGATE DATA
- ALM CFE
- CF EDITS
- CREATE CUBE
- EXTRACT DATA

- FIRE RUN
- LOADDATA
- MODEL
- PFT
- RUN EXECUTABLE
- RUN RULE
- TP
- TRANSFORM DATA

Each component triggers its own set of processes in the back-end to achieve the final output.

Click the **Component** drop-down list and select the component.

Specifying the Task Id and Description

Task Id refers to the identification name you are giving the task. The Task ID is auto-generated and not configurable.

Example

Task 1

A Description for the task being defined can be given in the Task Description column.

Example

Load Data

Specifying the Metadata Value

The change that is made to the metadata when the task is run is reflected as a **metadata value** in the metadata value column. The metadata value is dependent on the parametric value assigned to the specific component Id. The metadata value for each component Id differs.

The list below contains the specific parameter that is associated with the metadata value for each component Id:

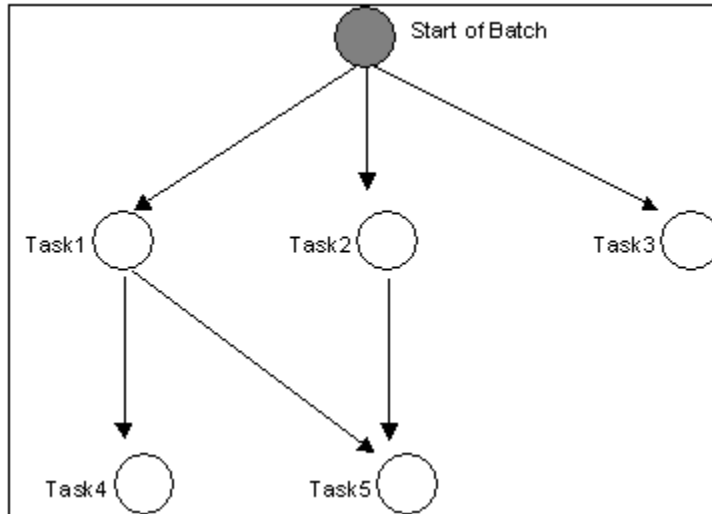
Component ID	Parameter associated with the Metadata Value
Extract Data	Source name

Component ID	Parameter associated with the Metadata Value
Transform Data	Rule name
Load Data	File name
Run Executable	Parameters specific to the executable
ALM CFE	Process Id and User Id
CF EDITS	Process Id and User Id
TP	Process Id and User Id
PFT	Allocation ID and As of date
Create Cube	Cube Parameter
FIRE RUN	Run Code
MODEL	Model Code
Run Rule	Rule Code
AGGREGATE DATA	Cube Parameter

The Task Precedence

Task precedence is a way to determine the execution-flow of a batch. This feature of OPERATIONS allows you to determine the order in which the tasks of a batch are executed.

Consider the following figure:



In the above Figure, the "Start of batch" represents a logical starting point to the batch. Task1, Task2 and Task3 will be executed simultaneously as soon as the batch starts. From the figure, it can be seen that Task4 follows Task1. The follow relation is represented in OPERATIONS as task precedence. In the above Figure, Task1 precedes Task4. This means that Task4 is executed only after Task1 completes execution. The precedence parameter of Task4 will contain Task1. Similarly, Task5 is preceded by multiple tasks viz. Task1 and Task2. Hence, Task5 will be executed only after the completion of Task1 and Task2. The precedence parameter of Task4 will contain Task1.

The Task Precedence screen shows the Task Precedence task number and the batch to which the component belongs. You can set the task precedence between tasks.

The tasks being defined can be scheduled to run any other task that has been defined. If the precedence for a task is not set, it is executed as soon as the batch starts execution. A task can also be defined to run after a number of other tasks.

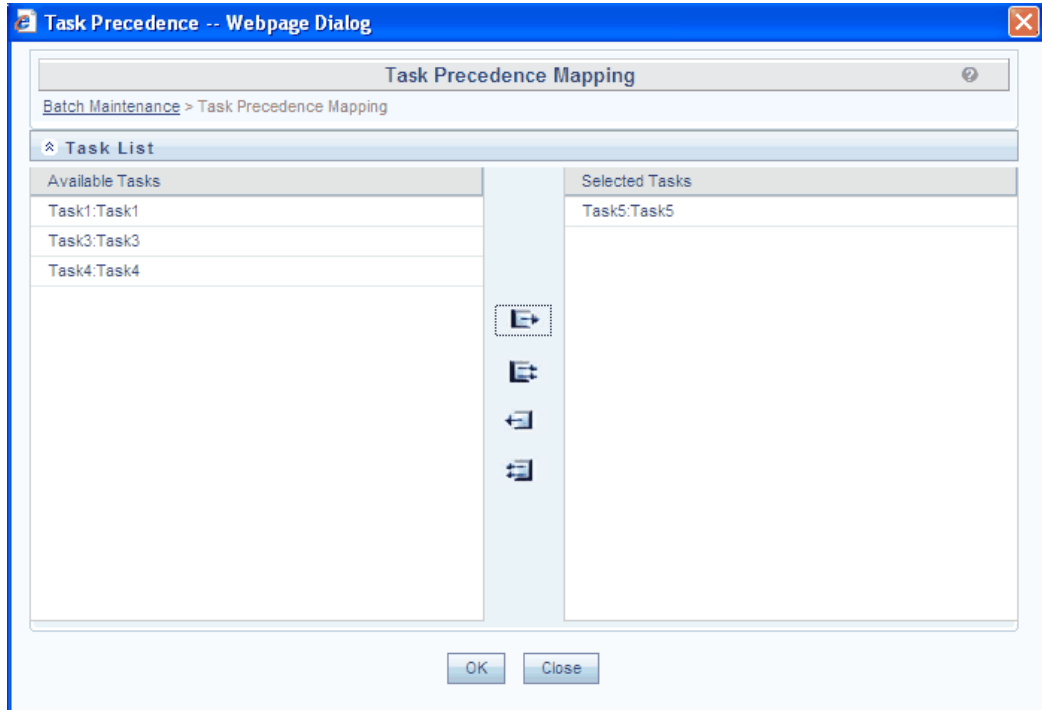
Note: Cyclical running of tasks is not allowed. However, you can run multiple tasks simultaneously.

Defining the Task Precedence

To define the task precedence, click the Precedence cell corresponding to the component Id for which you wish to define task precedence.

Task ID	Task Description	Metadata Value	Component ID	Precedence
<input type="checkbox"/>	Task1	a.sh	RUN EXECUTABLE	
<input type="checkbox"/>	Task2	b.sh	RUN EXECUTABLE	Task1
<input type="checkbox"/>	Task3	c.sh	RUN EXECUTABLE	Task2
<input type="checkbox"/>	Task4	d.sh	RUN EXECUTABLE	Task3

The Task Precedence screen is displayed as shown below:



Select the Task from the list in the Available Tasks pane, select single or multiple tasks and click >. The selected tasks will be displayed in the Selected Tasks pane. Set the task precedence to reflect the order in which you would like the tasks to be run. To select all the tasks in the Available Tasks pane, click >>.

To deselect a Task, select single or multiple tasks from the Selected Tasks pane and click <. To deselect all the tasks in the Selected Tasks pane, click <<.

Click OK to complete the Task Precedence definition. Click Close to discard changes and close the Task Precedence screen.

Deleting the Task

To delete a task, select the task and click Delete button.

When a task is deleted, its dependence is removed from its children tasks. After deletion of a task or a number of tasks, if any task is left without a parent, it is executed as soon as the batch starts execution. Multiple deletion is possible by using 'Select All' checkbox.

Specifying Task Parameters

Task Parameters

Task Parameters reflect the parameters that are being applied to the selected task. Parameters are not constant across components. Parametric values are supplied to the OPERATIONS module by Individual Components.

Click View in the Batch Maintenance screen to view the parameters for the selected component. The Task Definition screen is displayed.

All components have the first three parameters: Datastore Type, Datastore Name, and IPAddress.

The parameters required for each of the component ID's are described below.

Component: AGGREGATE DATA

Property	Value
Datastore Type	EDW
Datastore Name	ATOMIUT
IP Address	10.184.74.53
Cube Parameter	CUB_2
Operation	ALL

The Parameters for AGGREGATE DATA are:

Datastore Type refers to the type of data store such as:

Enterprise Data Warehouse (EDW) – Refers to the Multi-dimensional Database/Cubes

Datastore Name refers to the name of the Information Domain. Click the drop-down list provided for Datastore Name in the Value column to select the Information Domain.

The unique combination of the Datastore Name and Datastore Type determine the physical machine on which the task will be executed. It is assumed that the user gives the correct information else task invocations may fail at runtime.

IP Address refers to the IP Address of the machine on which Infrastructure Database Components have been installed. Click the drop-down list box provided for IP Address in the Value column to select the desired IP address.

Cube Parameter refers to the cube identifier as defined through the Business Metadata (Cube) menu option. Click the field provided for Cube Parameter in the Value column to select the cube code.

Operation refers to the operation to be performed. Click the drop-down list provided for Operation in the Value field to select the Operation. The available options are ALL, GENDATAFILES and GENPRNFILES.

Click Save to proceed with the defined parametric values or click Close to close the parameter screen without saving. Click Reset in order to select new values.

Component: Cash Flow Engine

Property	Value
Datastore Type	EDW
Datastore Name	SOL56QAINFO
IP Address	10.184.134.20
Folder	
Process Type	
Process Name	
Optional Parameters	

The Parameters for Cash Flow Engine are:

Datastore Type refers to the type of data store. **Enterprise Data Warehouse (EDW)** – Refers to the Multi-dimensional Database/Cubes. Click the drop-down list provided for Datastore Type in the Value column to select the data store name.

Datastore Name refers to the name of the Information Domain. Click the drop-down list provided for Datastore Name in the Value column to select the Information Domain.

The unique combination of the Datastore Name and Datastore Type determine the physical machine on which the task will be executed. It is assumed that the user gives the correct information else task invocations may fail at runtime.

IP Address refers to the IP Address of the machine on which Infrastructure Database Components have been installed. Click the drop-down list box provided for IP Address

in the Value column to select the desired IP address.

Folder refers to a logical holder of objects which are mapped to each Information Domain in the Infrastructure system. Select the required folder from the drop-down list.

Process Type refers to the type of process. There are 4 types of processes: Static Deterministic ALM Process, Static Stochastic ALM Process, Dynamic Deterministic ALM Process and Dynamic Stochastic ALM Process. Select the required process type from the drop-down list.

Process Name refers to the name of the process, filtered based on the process type selected. On Mouseover, the following message is displayed: *Type the required process name. It will list top 50 matching records.* As you enter the process name, the drop-down list shows a filtered list matching the process name you have entered. Select the required process name from the filtered drop-down list.

Optional Parameters refers to Process ID and the User ID. Click the text box adjacent to the Optional Parameters field and enter the Process ID and User ID.

Click **Save** to proceed with the defined parametric values or click **Close** to close the parameter screen without saving. Click **Reset** in order to select new values.

Example

ProcessID=100786; UserId=ALMUSER

For Execution from command line:

<BATCH_RUN_ID><COMPONENT><Task_ID><Misdate><PROCESS_SYS_ID><USER_NAME>

Example

./ofsrn ALM60DEV_40008575 OFSRM TASK1 20101031 40008575 ALMUSER1

Component: Cash Flow Edits

Task Definition

Batch Maintenance > Task Definition (Add)

Task Definition

Task ID: Task1 Description: Components: Cash Flow Edits

Dynamic Parameters List

Property	Value
Datastore Type	EDW
Datastore Name	SOL56QAINFO
IP Address	10.184.134.20
Folder	EPMISSEG
Process Type	CashFlowEdit
Process Name	ca
Optional Parameters	CASHFLOW CASHFLOWEDIT Cash_Flow

Save Reset Close

Audit Panel

CREATED BY:	Creation Date
LAST MODIFIED BY:	Last Modification Date

Datastore Type refers to the type of data store **Enterprise Data Warehouse (EDW)** – Refers to the Multi-dimensional Database/Cubes. Click the drop-down list provided for Datastore Type in the Value column to select the data store name.

Datastore Name refers to the name of the Information Domain. Click the drop-down list provided for Datastore Name in the Value column to select the Information Domain.

The unique combination of the Datastore Name and Datastore Type determine the physical machine on which the task will be executed. It is assumed that the user gives the correct information else task invocations may fail at runtime.

IP Address refers to the IP Address of the machine on which Infrastructure Database Components have been installed. Click the drop-down list box provided for IP Address in the Value column to select the desired IP address.

Folder refers to a logical holder of objects which are mapped to each Information Domain in the Infrastructure system. Select the required folder from the drop-down list.

Process Type refers to the type of process. CashFlowEdit is the process type available for selection from the drop-down list.

Process Name refers to the name of the process, filtered based on the process type selected. On Mouseover, the following message is displayed: *Type the required process name. It will list top 50 matching records.* As you enter the process name, the drop-down list shows a filtered list matching the process name you have entered. Select the required process name from the filtered drop-down list.

Optional Parameters refers to the set of parameters specific to the rule that has to be processed. This set of parameters is automatically generated by the system at the time of run definition.

Component: CREATE CUBE

The screenshot shows a web browser window titled "Task Definition -- Webpage Dialog". The main content area is titled "Task Definition" and contains the following fields and sections:

- Task ID:** Task0
- Description:** Test
- Components:** CREATE CUBE (dropdown menu)
- Dynamic Parameters List:** A table with two columns: Property and Value.

Property	Value
Datastore Type	EDW
Datastore Name	ATOMIUT
IP Address	10.184.74.53
Cube Parameter	CUBE29
Operation	ROLLUP

At the bottom of the main area are three buttons: Save, Reset, and Close.

Below the main area is an **Audit Panel** with the following fields:

CREATED BY:		Creation Date	
LAST MODIFIED BY:		Last Modification Date	

The Parameters for Create Cube are:

Datastore Type refers to the type of data store. Click the drop-down list provided for Datastore Type in the Value column to select the data store name.

Enterprise Data Warehouse (EDW) – Refers to the Multi-dimensional Database/Cubes.

Datastore Name refers to the name of the Information Domain. Click the drop-down list provided for Datastore Name in the Value column to select the Information Domain.

The unique combination of the Datastore Name and the Datastore Type determine the physical machine on which the task will be executed. It is assumed that the user gives the correct information else task invocations may fail at runtime.

IP Address refers to the IP Address of the machine on which OFSAAI Database Components have been installed. Click the drop-down list box provided for IP Address

in the Value column to select the desired IP address.

Cube Parameter refers to the cube identifier as defined through the Business Metadata (Cube) menu option. Click the field provided for Cube Parameter in the Value column to select the cube code.

Operation refers to the operation to be performed. Click the drop-down list provided for Operation in the Value field to select the Operation.

Click **Save** to proceed with the defined parametric values or click **Close** to close the parameter screen without saving. Click **Reset** in order to select new values.

Component: EXTRACT DATA

Property	Value
Datastore Type	EDW
Datastore Name	ATOMIUT
IP Address	10.184.74.53
Source Name	KYCsource
Extract Name	CreateIndAck_DR

The Parameters for EXTRACT DATA are:

Datastore Type refers to the type of data store. **Enterprise Data Warehouse (EDW)** – Refers to the Multi-dimensional Database/Cubes. Enterprise Data Warehouse (EDW) is available for selection. Click the drop-down list provided for Datastore Type in the Value column to select the data store name.

Datastore Name refers to the name of the Information Domain. Click the drop-down list provided for Datastore Name in the Value column to select the Information Domain.

The unique combination of the Datastore Name and the Datastore Type determine the physical machine on which the task will be executed. It is assumed that the user gives the correct information else task invocations may fail at runtime.

IP Address refers to the IP Address of the machine on which OFSAAI Database

Components have been installed. Click the drop-down list box provided for IP Address in the Value column to select the desired IP address.

Source Name – identifies the Source from which the Extract is derived. This is defined in the Define Source Screen of Data Integrator. Click the drop-down list box of the field provided for Source Name in the value column, to select the source name.

Example

TableLoad / Flat-file

Extract Name - identifies the extract definition file for the given source. This is defined in the Define Extract screen of Data Integrator. Click the field provided for extract name in the Value column, to enter the extract name.

Click **Save** to proceed with the defined parametric values or click **Close** to close the parameter screen without saving. Click **Reset** in order to select new values.

Component: FIRE RUN

Task Definition -- Webpage Dialog

Batch Maintenance > Task Definition (New Mode)

Task Definition

Task ID: Task6 Description: Test

Components: FIRE RUN

Dynamic Parameters List

Property	Value
Datastore Type	EDW
Datastore Name	ATOMIUT
IP Address	10.184.74.53
Run Code	Immediate
Optional Parameters	

Save Reset Close

Audit Panel

CREATED BY:		Creation Date	
LAST MODIFIED BY:		Last Modification Date	

The Parameters for FIRE RUN are:

Datastore Type refers to the type of data store. **Enterprise Data Warehouse (EDW)** – Refers to the Multi-dimensional Database/Cubes. Enterprise Data Warehouse (EDW) is available for selection. Click the drop-down list provided for Data Store type in the Value column to select the data store name.

Datastore Name refers to the name of the Information Domain. Click the drop-down list provided for Datastore Name in the Value column to select the Information Domain.

The unique combination of the Datastore Name and the Datastore Type determine the physical machine on which the task will be executed. It is assumed that the user gives the correct information else task invocations may fail at runtime.

IP Address refers to the IP Address of the machine on which OFSAAI Database

Components have been installed. Click the drop-down list box provided for IP Address in the Value column to select the desired IP address.

Run Code refers to the rule that has to be processed. This is a system generated code that is assigned at the time of rule definition.

Optional Parameters refers to the set of parameters specific to the rule that has to be processed. This set of parameters is automatically generated by the system at the time of run definition.

Click **Save** to proceed with the defined parametric values or click **Close** to close the parameter screen without saving. Click **Reset** in order to select new values.

Component: HM VALUATION PROCESS

Property	Value
Datastore Type	EDW
Datastore Name	SOL56QAINFO
IP Address	10.184.134.20
Folder	EPM55SEG
Process Name	v
Optional Parameters	Val Proce output_fairvalue

The Parameters for HM VALUATION PROCESS are:

Datastore Type refers to the type of data store. **Enterprise Data Warehouse (EDW)** – Refers to the Multi-dimensional Database/Cubes. Click the drop-down list provided for Datastore Type in the Value column to select the data store name.

Datastore Name refers to the name of the Information Domain. Click the drop-down list provided for Datastore Name in the Value column to select the Information Domain.

The unique combination of the Datastore Name and the Datastore Type determine the physical machine on which the task will be executed. It is assumed that the user gives the correct information else task invocations may fail at runtime.

IP Address refers to the IP Address of the machine on which OFSAAI Database Components have been installed. Click the drop-down list box provided for IP Address

in the Value column to select the desired IP address.

Folder refers to a logical holder of objects which are mapped to each Information Domain in the Infrastructure system. Select the required folder from the drop-down list.

Process Name refers to the name of the process, based on the process type selected. On Mouseover, the following message is displayed: *Type the required process name. It will list top 50 matching records.* As you enter the process name, the drop-down list shows a filtered list matching the process name you have entered. Select the required process name from the filtered drop-down list.

Optional Parameters refers to the Process ID, User ID and App ID. Click the text box adjacent to the Optional Parameters field and enter the Process ID, User ID and App ID.

Click **Save** to proceed with the defined parametric values or click **Close** to close the parameter screen without saving. Click **Reset** in order to select new values.

For Execution from command line:

```
<BATCH_RUN_ID><COMPONENT><Task_ID><Misdate><PROCESS_SYS_ID><USER_
NAME><APP_NAME>
```

APP_NAME must be "HM"

Example

```
./ofsrn IFRSTST_40008576 OFSRM TASK1 20101031 40008576 HMJOB1 HM
```

Component: LOAD DATA

Property	Value
Datastore Type	EDW
Datastore Name	ATOMIUT
IP Address	10.184.74.53
Load Mode	File To Table
Source Name	TableLoad/Flat-file
File Name	TableLoad/Flat-file
Data File Name	
Default Value	

The Parameters for Load Data are:

Datastore Type refers to the type of data store. **Enterprise Data Warehouse (EDW)** – Refers to the Multi-dimensional Database/Cubes. Enterprise Data Warehouse (EDW) is available for selection. Click the drop-down list provided for Datastore Type in the Value column to select the data store name.

Datastore Name refers to the name of the Information Domain. Click the drop-down list provided for Datastore Name in the Value column to select the Information Domain.

The unique combination of the Datastore Name and the Datastore Type determine the physical machine on which the task will be executed. It is assumed that the user gives the correct information else task invocations may fail at runtime.

IP Address refers to the IP Address of the machine on which OFSAAI Database

Components have been installed. Click the drop-down list box provided for IP Address in the Value column to select the desired IP address.

Load Mode refers to the mode which user wants to work, which means the user, can transfer data from Table to File or File to Table.

Source Name – identifies the Source from which the Extract is derived. This is defined in the Define Source Screen of Data Integrator. Click the drop-down list box of the field provided for Source Name in the value column, to select the source name.

Example

TableLoad / Flat-file

File Name – identifies the flat file name as defined for the given source. This can be different from the data file. File Name is defined in the Define Flat File screen of Data Integrator. Click the drop-down list box of the field provided for file Name in the Value column to select the file name.

Example

Tableload/Flat-file

The data filename refers to the .dat file that exists in the database. Click the field provided for Data file name in the Value column to enter the Data file name.

Note: It is not mandatory to enter the data file name. If the file name or the .Dat file name is incorrect, the task will fail during execution.

Click **Save** to proceed with the defined parametric values or click **Close** to close the parameter screen without saving. Click **Reset** in order to select new values.

For Execution from command line:

T2T:

```
RevLoader ATOMSTSOL_BATCH2T2T_20120509_2 "LOAD DATA" Task1 20120509  
"10.184.134.151,EDW,ATOMSTSOL,Table To Table,DISRC,T2T,NULL,NULL"
```

F2T:

```
RevLoader ATOMSTSOL_BATCH2_20120509_1 "LOAD DATA" Task1 20120509  
"10.184.134.151,EDW,ATOMSTSOL,File To Table,flat,pr2_f2t,test1.dat,NULL"
```

Component: MODEL

Property	Value
Datastore Type	EDW
Datastore Name	ATOMIUT
IP Address	10.184.74.53
Model Code	null
Operation	ALL
Optional Parameters	

The Parameters for MODEL are:

Datastore Type refers to the type of data store. **Enterprise Data Warehouse (EDW)** – Refers to the Multi-dimensional Database/Cubes. Enterprise Data Warehouse (EDW) is available for selection. Click the drop-down list provided for Datastore Type in the Value column to select the data store name.

Datastore Name refers to the name of the Information Domain. Click the drop-down list provided for Datastore Name in the Value column to select the Information Domain.

The unique combination of the Datastore Name and the Datastore Type determine the physical machine on which the task will be executed. It is assumed that the user gives the correct information else task invocations may fail at runtime.

IP Address refers to the IP Address of the machine on which OFSAAI Database

Components have been installed. Click the drop-down list box provided for IP Address in the Value column to select the desired IP address.

Model Code refers to the model that has to be processed. This is a system generated code that is assigned at the time of model definition.

The **All** definition for the **Operation** field conveys the process of extracting the data from the flat files and applying the run regression on the data extracted. For batches that are being built for the first time the data will be extracted from the flat files and the run regression will be applied on it.

Optional Parameters refers to the set of parameters specific to the model that has to be processed. This set of parameters is automatically generated by the system at the time of definition.

Click **Save** to proceed with the defined parametric values or click **Close** to close the parameter screen without saving. Click **Reset** in order to select new values.

Note: You must **NOT** define a Model using the Define mode under Batch Scheduling. You must define all models using the Modeling Framework menu

Component Id – ALLOCATION ENGINE

The screenshot shows a web-based dialog for adding a task definition. The main section is titled 'Task Definition' and includes a breadcrumb 'Batch Maintenance > Task Definition (Add)'. Below this, there are fields for 'Task ID' (containing 'Task1') and 'Description'. A 'Components' dropdown menu is set to 'Allocation Engine'. A 'Dynamic Parameters List' table is displayed with the following data:

Property	Value
Datastore Type	EDW
Datastore Name	SOL56QAINFO
IP Address	10.184.134.20
Folder	
Process Type	
Process Name	
Optional Parameters	

At the bottom of the dialog are three buttons: 'Save', 'Reset', and 'Close'. Below the main form is an 'Audit Panel' with fields for 'CREATED BY:', 'LAST MODIFIED BY:', 'Creation Date', and 'Last Modification Date'.

The Parameters for Allocation Engine are:

Datastore Type refers to the type of data store. **Enterprise Data Warehouse (EDW)** – Refers to the Multi-dimensional Database/Cubes. Click the drop-down list provided for Datastore Type in the Value column to select the data store name.

Datastore Name refers to the name of the Information Domain. Click the drop-down list provided for Datastore Name in the Value column to select the Information Domain.

The unique combination of the Datastore Name and the Datastore Type determine the physical machine on which the task will be executed. It is assumed that the user gives the correct information else task invocations may fail at runtime.

IP Address refers to the IP Address of the machine on which OFSAAI Database Components have been installed. Click the drop-down list box provided for IP Address

in the Value column to select the desired IP address.

Folder refers to a logical holder of objects which are mapped to each Information Domain in the Infrastructure system. Select the required folder from the drop-down list.

Process Type refers to the type of process. **Allocation Engine** is the process available for selection from the drop-down list.

Process Name refers to the name of the process, based on the process type selected. On Mouseover, the following message is displayed: *Type the required process name. It will list top 50 matching records.* As you enter the process name, the drop-down list shows a filtered list matching the process name you have entered. Select the required process name from the filtered drop-down list.

Optional Parameters refers to the AsOfDate. Click the text box adjacent to the Optional Parameters field and enter the AsOfDate.

Click **Save** to proceed with the defined parametric values or click **Close** to close the parameter screen without saving. Click **Reset** in order to select new values.

Allocation rule from command line:<BATCH_RUN_ID><Component ID><Task ID><Misdate><Alloc sys id><AppUserID><Optional parameters>

where the only <Optional parameters>is AsOfDate in MM/DD/YYYY format, for example, AsOfDate=03/31/2012

Full example with AsofDate: ofspa PFTINFODOM_BATCH001_03312003_0 Allocation Task1 03312003 101310 RTUSER AsOfDate=03/31/2012

Allocation rule as a task in an ICC Batch: The only optional parameter is AsOfDate in MM/DD/YYYY format, for example, AsOfDate=03/31/2012

Allocation rule as a task in a Simplified Batch: Simplified Batches were first available in release 5.5. The only optional parameter is AsOfDate in MM/DD/YYYY format, for example, AsOfDate=03/31/2012

Component Id – RUN EXECUTABLE

Property	Value
Datastore Type	EDW
Datastore Name	ATOMIUT
IP Address	10.184.74.53
Executable	C:\winflexecute.exe "c:\readme.txt"
Wait	Y
Batch Parameter	Y

The Parameters for RUN EXECUTABLE are:

Datastore Type refers to the type of data store. **Enterprise Data Warehouse (EDW)** – Refers to the Multi-dimensional Database/Cubes. Enterprise Data Warehouse (EDW) is available for selection. Click the drop-down list provided for Datastore Type in the Value column to select the data store name.

Datastore Name refers to the name of the Information Domain. Click the drop-down list provided for Datastore Name in the Value column to select the Information Domain.

The unique combination of the Datastore Name and the Datastore Type determine the physical machine on which the task will be executed. It is assumed that the user gives the correct information else task invocations may fail at runtime.

IP Address refers to the IP Address of the machine on which OFSAAI Database

Components have been installed. Click the drop-down list box provided for IP Address in the Value column to select the desired IP address.

Executable refers to the executable path on the Db Server. Click the field provided for Executable in the Value column to enter the DB server path where you can locate the Executable file.

The Executable parameter contains the executable name as well as the parameters to the executable. These executable parameters have to be specified as they are specified at a command line. In other words, the Executable parameter is the exact command line required to execute the executable file. The fully qualified path name of the executable should be required to spawn the executable. In some cases, the executable won't be present in the path variable of the physical machine on which, the executable needs to be spawned. For example, if the executable is Notepad. In such cases, the parameter value can be given as follows:

Example

C:\winnt\execute.exe , "c:\readme.txt"

Note: The path to the exe has been entered and in quotes. Quotes have to be used if the exe name has a space included in it. In other words, the details entered here should look exactly as you would enter it in the command window while calling your executable. The parameter value is case-sensitive. So, ensure that you take care of the spaces, quotes and case. Also, commas are not allowed while defining the parameter value for Executable.

While creating Task with RUNEXECUTABLE component, if you are placing the executable in some other location (other than FIC_DB_HOME/BIN) you need to mention the full path with executable. In addition, proper permissions should be provided to the executable.

Example

If executable is a.sh, which is placed in folder V under FICDB, then Executable parameter should be /home/db73/ofsdb/ficdb/v/a.sh

If you want to pass parameters to the executable to be executed, parameters need to pass after giving full path with executable name separated by comma(,) as follows.

Example

/home/db73/ofsdb/ficdb/v/a.sh,a,b

Here a, b are the parameters, passing to a.sh, executable.

Wait - When the file is being executed you have the choice to either wait till the execution is complete or proceed with the next task. Click the drop-down list box of the field provided for Wait in the Value field to select 'Yes' or 'No'. Click Yes to confirm that you wish to wait for the execution to be complete or Click No if you wish to proceed.

Batch Parameters - There are four **Batch Parameters** in the screen: Batch Id, BatchRun Id, Infodate and Infodom.

Click the drop-down list box of the Parameter field to select 'Yes' or 'No'.

Click Yes indicates that the batch parameters are also passed to the executable being started, No indicates that the batch parameters will not be passed to the executable.

Component: RUN RULE

Task Definition -- Webpage Dialog

Batch Maintenance > Task Definition (new Mode)

Task Definition

Task ID: Task6 Description: Components: RUN RULE

Property	Value
Datastore Type	EDW
Datastore Name	ATOMIUT
IP Address	10.184.74.53
Rule Code	
Optional Parameters	

Save Reset Close

Audit Panel

CREATED BY:		Creation Date	
LAST MODIFIED BY:		Last Modification Date	

The Parameters for RUN RULE are:

Datastore Type refers to the type of data store. **Enterprise Data Warehouse (EDW)** – Refers to the Multi-dimensional Database/Cubes. Enterprise Data Warehouse (EDW) is available for selection. Click the drop-down list provided for Datastore Type in the Value column to select the data store name.

Datastore Name refers to the name of the Information Domain. Click the drop-down list provided for Datastore Name in the Value column to select the Information Domain.

The unique combination of the Datastore Name and Datastore Type determine the

physical machine on which the task will be executed. It is assumed that the user gives the correct information else task invocations may fail at runtime.

IP Address refers to the IP Address of the machine on which OFSAAI Database Components have been installed. Click the drop-down list box provided for IP Address in the Value column to select the desired IP address.

Rule Code refers to the rule that has to be processed. This is a system generated code that is assigned at the time of rule definition.

Optional Parameters refers to the set of parameters specific to the rule that has to be processed. This set of parameters is automatically generated by the system at the time of run definition. You can view existing run definitions through the **Define** Mode in batch Scheduling.

Click **Save** to proceed with the defined parametric values or click **Close** to close the parameter screen without saving. Click **Reset** in order to select new values.

Component Id – Transfer Pricing Engine

Task Definition

Batch Maintenance > Task Definition (Add)

Task ID: Task1

Description: [Empty]

Components: Transfer Pricing Engine

Property	Value
Datastore Type	EDW
Datastore Name	SOL56QAINFO
IP Address	10.184.134.20
Folder	EPM55SEG
Process Type	FTP Standard Process
Process Name	te

Optional Parameters:

- Test
- Test_13
- test proc
- testunkwvs
- testven
- testvenk
- ventest

Buttons: Save, Reset, Close

Audit Panel

CREATED BY:		Creation Date	
LAST MODIFIED BY:		Last Modification Date	

The Parameters for Transfer Pricing Engine are:

Datastore Type refers to the type of data store. **Enterprise Data Warehouse (EDW)** – Refers to the Multi-dimensional Database/Cubes. Presently, the Enterprise Data Warehouse (EDW) is the only available option. Click the drop-down list provided for Datastore Type in the Value column to select the data store name.

Datastore Name refers to the name of the Information Domain. Click the drop-down list provided for Datastore Name in the Value column to select the Information Domain.

The unique combination of the Datastore Name and Datastore Type determine the physical machine on which the task will be executed. It is assumed that the user gives the correct information else task invocations may fail at runtime.

IP Address refers to the IP Address of the machine on which OFSAAI Database

Components have been installed. Click the drop-down list box provided for IP Address in the Value column to select the desired IP address.

Folder refers to a logical holder of objects which are mapped to each Information Domain in the Infrastructure system. Select the required folder from the drop-down list.

Process Type refers to the type of process. There are 2 types of processes: FTP Standard Process and FTP Stochastic Process. Select the required process type from the drop-down list.

Process Name refers to the name of the process, filtered based on the process type selected. On Mouseover, the following message is displayed: *Type the required process name. It will list top 50 matching records.* As you enter the process name, the drop-down list shows a filtered list matching the process name you have entered. Select the required process name from the filtered drop-down list.

Optional Parameters refers to Process ID and the User ID. Click the text box adjacent to the Optional Parameters field and enter the Process ID and User ID

Example

ProcessID=100786; UserId=ALMUSER

Click **Save** to proceed with the defined parametric values or click **Close** to close the parameter screen without saving. Click **Reset** in order to select new values.

For Execution from command line:

<BATCH_RUN_ID><COMPONENT><Task_ID><Misdate><PROCESS_SYS_ID><USER_NAME>

Example

./ofstp INFO_40008425 OFSTP TASK1 20101031 40008425 FTPUSER

Component Id – TRANSFORM DATA

Property	Value
Datastore Type	EDW
Datastore Name	ATOMIUT
IP Address	10.184.74.53
Rule Name	DTEXEC
Parameter List	

The Parameters for TRANSFORM DATA are:

Datastore Type refers to the type of data store. **Enterprise Data Warehouse (EDW)** – Refers to the Multi-dimensional Database/Cubes. Enterprise Data Warehouse (EDW) is available for selection. Click the drop-down list provided for Datastore Type in the Value column to select the data store name.

Datastore Name refers to the name of the Information Domain. Click the drop-down list provided for Datastore Name in the Value column to select the Information Domain.

The unique combination of the Datastore Name and Datastore Type determine the physical machine on which the task will be executed. It is assumed that the user gives the correct information else task invocations may fail at runtime.

IP Address refers to the IP Address of the machine on which OFSAAI Database

Components have been installed. Click the drop-down list box provided for IP Address in the Value column to select the desired IP address.

Rule Name refers to the Data transformation name that was defined in the data integrator transformation wizard. Click the drop-down list box of the field provided for Rule Name in the value column, to select the rule name.

Example

Supporttest

Parameter List is the list of parameters defined in Data Transformation or Data Quality check. The parameters must be in the same order as in the definition and must be separated by a comma.

Irrespective of the data type of the parameter defined in the procedure, the parameter specified through the front-end does not require to be specified within quotes (' ').

Example

Date, Time

Click **Save** to proceed with the defined parametric values or click **Close** to close the parameter screen without saving. Click **Reset** in order to select new values.

For Execution from command line:

```
DateServer ATOMSTSOL_BATCH6_20120509_2 "TRANSFORM DATA" Task1  
20120509 "10.184.134.151,EDW,ATOMSTSOL,insert1,NULL"
```

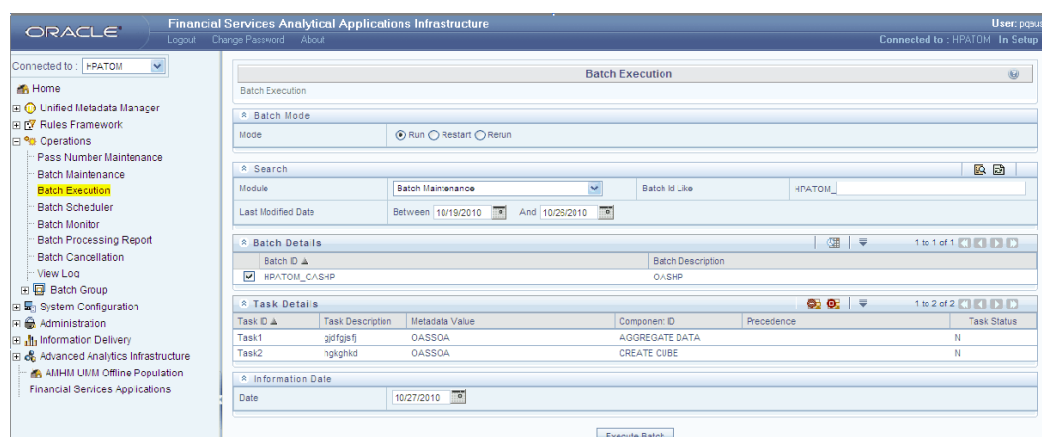
This command returns 0 on success and a non zero number on failure.

Searching for Batches

Searching for Batches

A search feature is provided in the Batch Execution screen for quick retrieval of batches depending on the framework on which the batches have been defined.

This search function is available on the Run, Rerun and Restart screens.



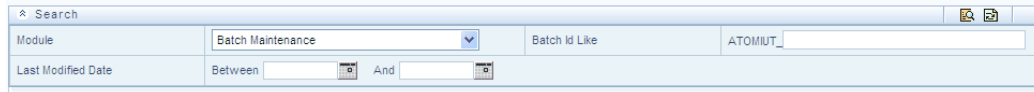
It is possible to search for a batch based on:

- Module
- Last modified date
- Batch ID

Searching by Modules

Batches are generated in Infrastructure through the Batch Maintenance framework as explained in Defining a Batch section. Select Batch Maintenance if the batch you wish to search for is a Batch Maintenance batch.

Select Advanced Analytics Infrastructure or Run Rules Framework if the batch you are searching for does not fall under Batch Maintenance.



The screenshot shows a search window with the following fields:

Module	Batch Maintenance	Batch Id Like	ATOMIUT
Last Modified Date	Between	And	

Click Search button. All the batches of the selected module will be available in the batch ID drop-down list.

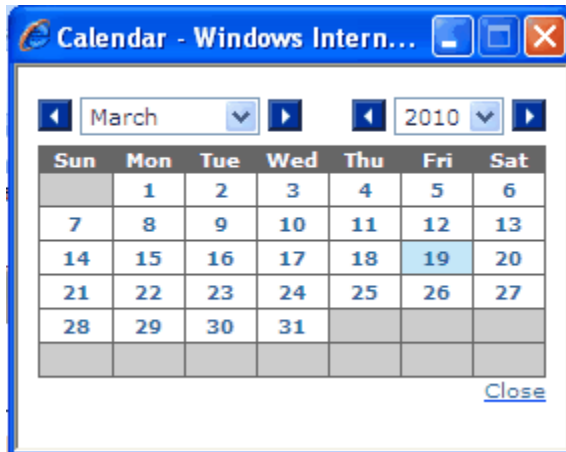
Click the Reset button to clear the selections made and reset the fields.

Note: If no search criterion is specified, the default module filter - 'All' is applied to retrieve the batches.

Searching by the Last Modified Date

You can search for a batch that has been modified during a period of time.

Click Open Calendar button adjacent to the Last modified date between - Between fields. The Select Date window is displayed.



Select the starting date of the date range. Similarly, click Open Calendar button adjacent to the and field. Select the end date of the date range in the calendar.

Searching by the Batch ID

You can also search for batches based on a search string of the Batch ID. Enter a search string that could be a part or whole of the Batch ID in the Batch ID like field.

The selected information domain in which the search is to be made is displayed adjacent to the Batch ID like field.

Click Search. All the batches corresponding to the search string entered, having Batch ID containing the search string specified will be displayed in the Batch ID field.

The screenshot shows a search interface with two main sections: 'Search' and 'Batch Details'.

Search Section:

- Module: Batch Maintenance (dropdown)
- Batch Id Like: ATOMIUT_ (text input)
- Last Modified Date: Between [] And [] (date pickers)

Batch Details Section:

Batch ID	Batch Description
<input type="checkbox"/> ATOMIUT_AAAI2t	AAAI2t
<input checked="" type="checkbox"/> ATOMIUT_BATCH100	BATCH100
<input type="checkbox"/> ATOMIUT_BATCH100	BATCH100
<input type="checkbox"/> ATOMIUT_BATCH101	BATCH101
<input type="checkbox"/> ATOMIUT_BATCH102	BATCH102
<input type="checkbox"/> ATOMIUT_BATCH103	BATCH103
<input type="checkbox"/> ATOMIUT_BATCH106	BATCH106
<input type="checkbox"/> ATOMIUT_BATCH107	BATCH107
<input type="checkbox"/> ATOMIUT_BATCH108	BATCH108
<input type="checkbox"/> ATOMIUT_BATCH109	BATCH109

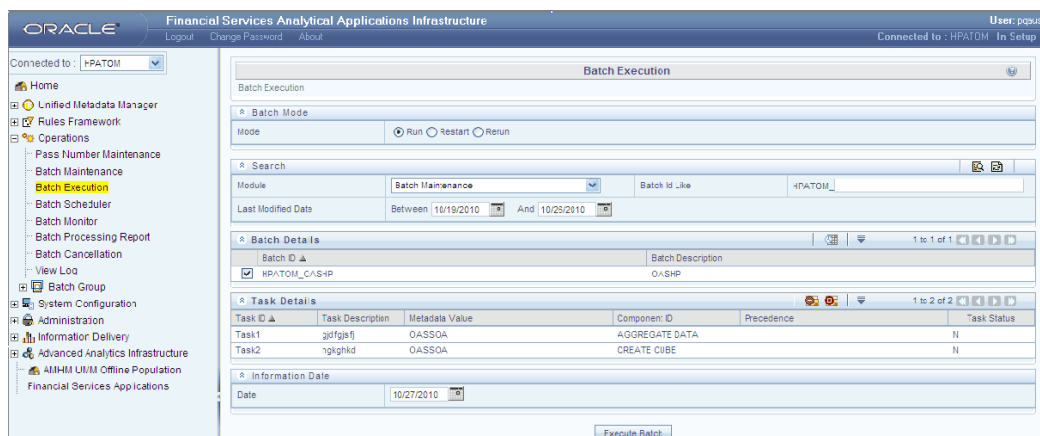
Click the Reset button to clear the selections made and reset the fields.

Note: The Modified Date Range and Batch ID Like searches are applied over and above the Module filter that is the user can view only batches of one module type at a time.

Running and Executing the Batch

Running the Batch

When the batch definition is complete, you can run/execute the batch in the Batch Execution screen. The list of batches that have been defined will be displayed in the Batch Details panel.



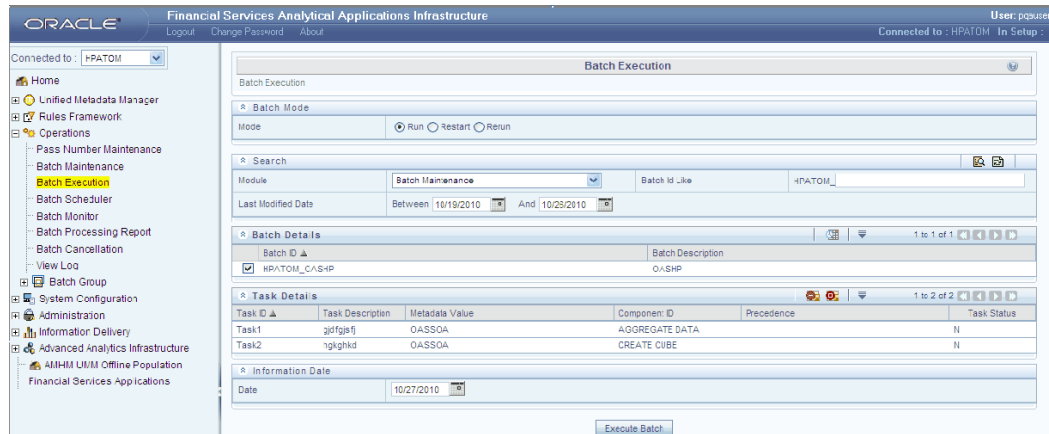
Search for the required batch id to be run as explained in Searching for Batches section. Select the Batch from the Batch ID list to be run.

All the batches that are marked for immediate execution while defining a run, the modeling framework batches as well as the successful batches executed from batch group execution screen will be listed in the Batch ID list depending on the module you are filtering.

Note: • Successfully completed non-immediate batches will not be displayed in the Batch ID drop down list of Define and Run screens.

• The failed batches will be available in the Rerun and Restart screens only.

On selecting a Batch ID in the Batch ID field, the Task Details panel gets populated with the task details of the selected Batch ID.



Click Schedule Batch button to schedule a Batch. The Batch Scheduler screen appears.

Including/Excluding Tasks

Tasks can be included or excluded from a run of a batch. The children of an excluded task will be executed according to the normal flow assuming the excluded task has completed execution.

To exclude a particular task from the batch, click to select the task and click Exclude/Include button. The excluded task will be highlighted in Gray within the batch definition table in the screen.

You can include or exclude tasks before running the batch.

To include tasks, select the task in the batch definition table and click Exclude/Include button that is the included tasks will be displayed like the other tasks in the batch. Excluded tasks is highlighted in grey.

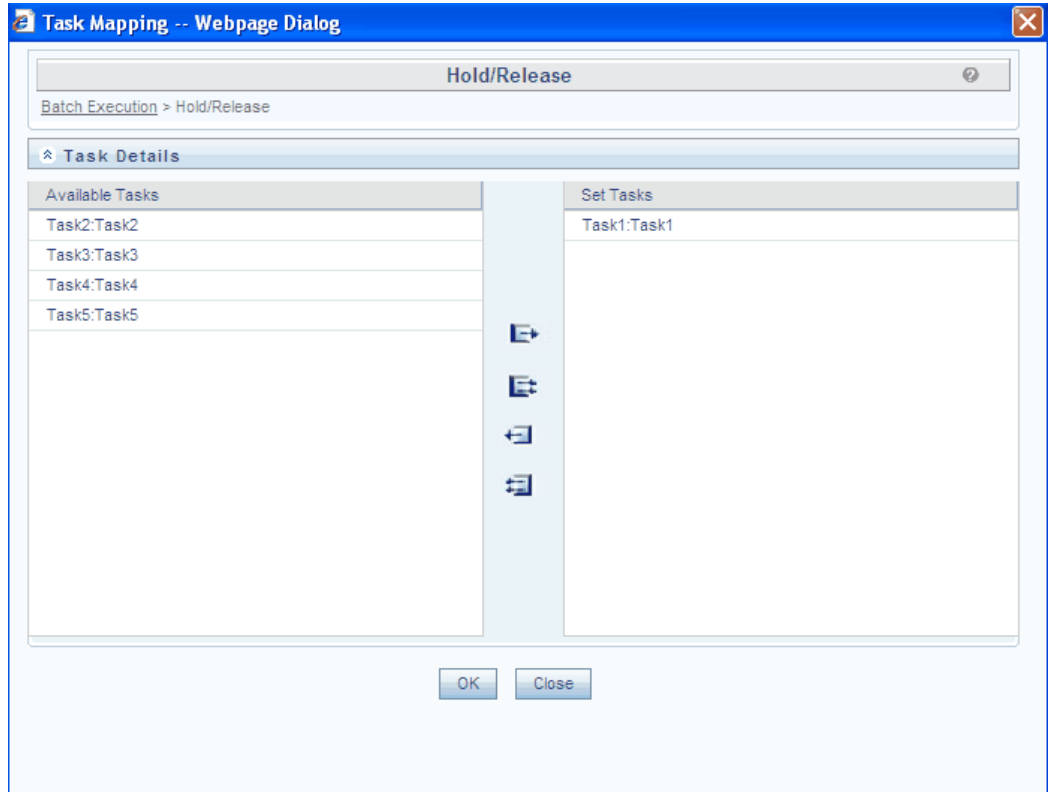
Holding/Releasing Tasks

You can Hold or Release tasks while running a Batch. When you hold a task in the batch run process the execution skips the held task and proceeds with the next task in the batch.

Note: The children of the Held task will not be executed.

To hold tasks, click Hold/Release button.

The Task Mapping screen appears from which you can select the task that needs to be on Hold.



The held tasks will be highlighted in Red. Similarly Excluded Tasks is highlighted in grey.

Task ID	Task Description	Metadata Value	Component ID	Precedence	Task Status
Task1	Task1	a.sh	RUN EXECUTABLE		H
Task2	Task2	b.sh	RUN EXECUTABLE	Task1	N
Task3	Task3	c.sh	RUN EXECUTABLE	Task2	N
Task4	Task4	d.sh	RUN EXECUTABLE	Task3	N
Task5	Task5	e.sh	RUN EXECUTABLE		N

To Release the held task, click Hold/Release button. The Task Mapping screen appears. The held Task will be displayed in the Set Tasks panel as shown above.

Select the task from Set Tasks panel to Available Tasks panel to Release the selected task.

Information Date

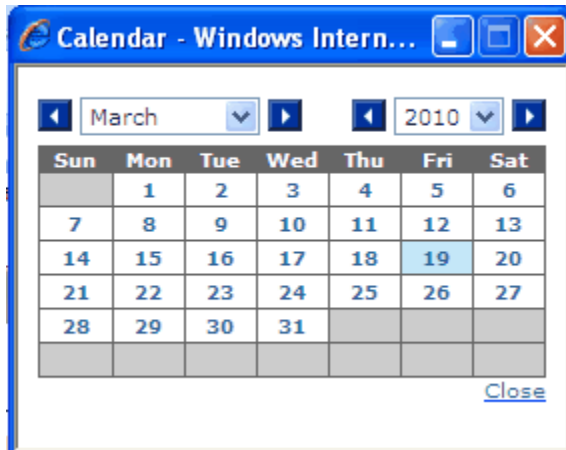
Click on Open Calendar button to Select the date.

Executing the Batch

After selecting the batch that needs to be executed, it is mandatory to specify the Information Date.

To do the same, click the Open Calendar button The calendar pop-up is displayed.

Select the desired date from the calendar.



Click **Execute Batch** button to execute/run the batch. On clicking on Execute Batch, a message is displayed. Confirm the message by clicking OK.

Another message comes up informing of the Batch has been triggered successfully or not. Click OK to continue.

You can also run/execute a batch using the External Scheduler (ES) that is integrated with Infrastructure. This integration is achieved by the Run Executable component.

The External Scheduler works by executing a component, named "External Scheduler Interface Component" (ESIC) that interacts with Infrastructure to run a batch. ES invokes ESIC as a command line executable for each task to be executed.

The **External Scheduler (ES)** can do operations such as:

- Execute a task of a Batch
- Obtain the Task status of a Batch Run
- Export a Batch Definition from Infrastructure to a specified location in the Infrastructure standard XML format
- Alter the status of a Batch run
- Restart batches on failure of particular tasks within a batch

The ESIC commands can be invoked from anywhere in the machine where Infrastructure installation is done if \$FIC_APP_HOME/icc/bin is added to \$PATH variable. Alternatively, the user can go to that directory where ESIC component is installed (\$FIC_APP_HOME/icc/bin) and execute it. The log files will be generated in \$FIC_APP_HOME/icc/log.

ESIC handles all exceptions generated during its execution. In case of an exception, ESIC logs appropriately and exits with an appropriate exit status that can be used by the ES.

Scheduling the Batch

Defining a New Schedule

New Schedule with this option you will be able to define a new schedule.

You are provided five schedules that comprise of:

Once - refers to a one time scheduling of the selected batch.

Daily - refers to the schedule of a batch on a daily basis.

Weekly - refers to the scheduling of a batch on a weekly basis.

Monthly - refers to the scheduling of a batch on a monthly basis.

Adhoc - using this option you will be able to schedule a batch as an Adhoc schedule.

Scheduled Task Name - refers to the name of the task that helps identify the schedule to be defined.

Start Date - refers to date from or the date on which you would like to schedule the selected Batch.

End Date - refers to the date to which the batch schedule can be conducted

Run Time - refers to the time at which the Batch Scheduling should be run. The run time can be specified in terms of hours and minutes.

Lag - involves scheduling a batch with a known lag that is if the batch is run today, the lag signifies that the misdate /infodate are n days behind today. This kind of scheduling can also be done for a period. If the type is Daily, Weekly or Monthly, the start date and end date refer to the period during which it will be run. But if the type is Once, the schedule is run only once on the date specified in Start Date.

Current Server Time field displays the current server time.

Click to select the New Schedule option in the Batch Scheduler screen.

Click to select the required schedule period.

Scheduling the Batch Execution Once

Select the option button provided for Once in the batch scheduler screen, if you wish to schedule the batch just once. Refer to Scheduling the Batch Execution Once, page 30-3 for more information.

Scheduling the Batch for a Daily Run

Click to select the Daily option in the batch scheduler screen, if you wish to schedule the batch on a daily basis.

Refer to Scheduling the Batch for a Daily Run, page 30-5 for more information.

Scheduling the Batch on a Weekly Basis

Click to select the Weekly option in the batch scheduler screen, if you wish to schedule the batch on a weekly basis.

Refer to Scheduling the Batch on a Weekly Basis , page 30-6for more information.

Scheduling the Batch on a Monthly Basis

Click to select the Monthly option in the batch scheduler screen, if you wish to schedule the batch on a Monthly basis.

Refer to Scheduling the Batch on a Monthly Basis, page 30-7 for more information.

Scheduling the Batch on an Adhoc Basis

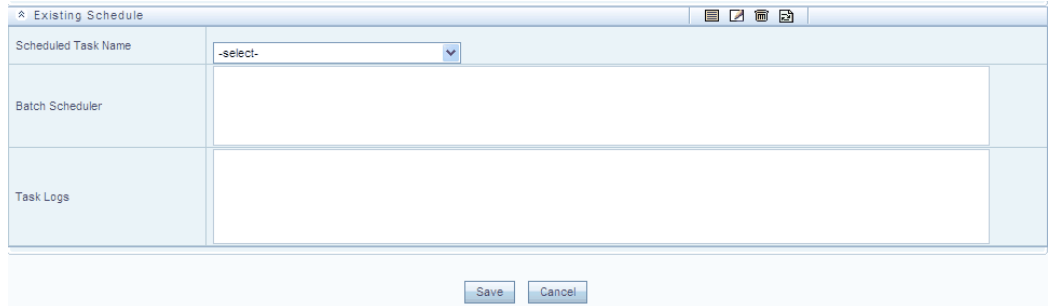
Click to select the Adhoc option in the batch scheduler screen on an adhoc basis.

Refer to Scheduling the Batch on an Adhoc Basis , page 30-9for more information.

Modifying the Batch Schedule

With this option you will be able to View, Update or Delete a task for a previously defined schedule. You will also be able to View the latest Log or view all Logs appropriately.

You can also modify an existing Schedule. Select the Existing Schedule option in the Batch Schedule section.

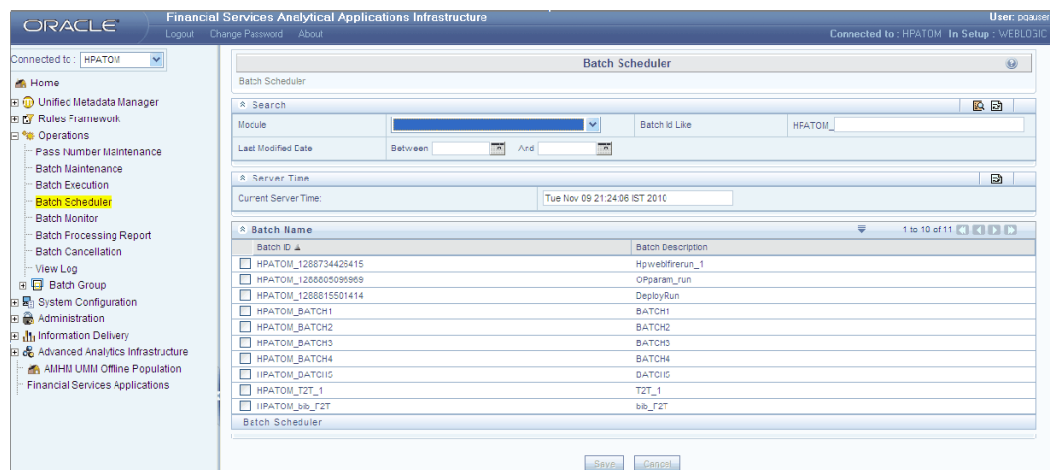


Click to select the existing Schedule option in this screen.

Click the drop down list box of the Scheduled Task Name field to select the task name. The task name drop down list displays all the tasks scheduled for execution for the selected batch.

To view the tasks that have been defined for the selected batch, click the view option.

To update a specific schedule click the update task option. On clicking update task, the following screen is displayed:



You will be able to modify the run time, the number of lag days and period between which the schedule can be carried out.

Once you have entered the appropriate modifications in this screen, click Save to save the changes in the database or click Cancel to exit the screen and return to the main screen.

You can delete a task by selecting the specific task and click Delete, a pop-up screen is displayed in which you can either confirm the deletion by selecting Yes or stop the deletion process by selecting No.

You can view the Log by clicking the View Log option in the screen. The logs that have been entered will be displayed in the grid provided for the same.

Click the View All Logs option to view all the logs that are present for the selected

batch. The logs that have been entered will be displayed in the grid provided for the same.

Click Refresh to refresh the set of tasks that have been defined for the selected batch.

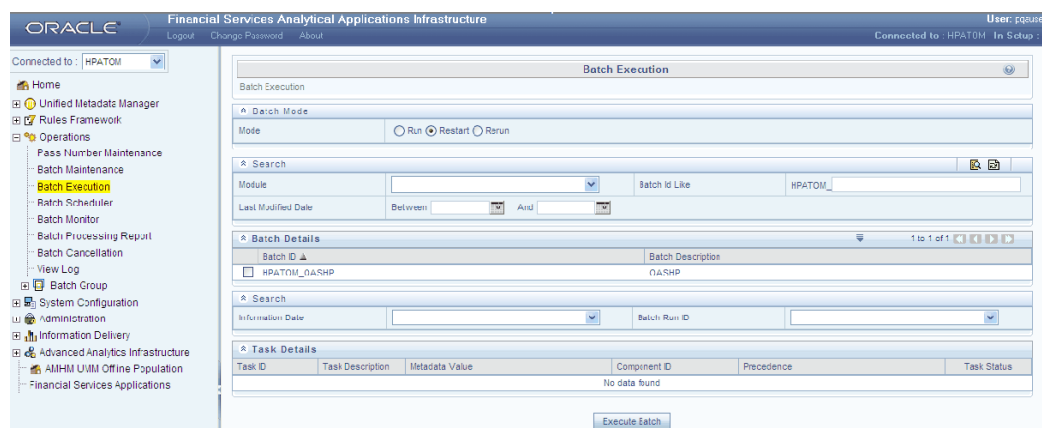
Click Save within the Batch Scheduler screen to ensure that the details have been saved or click Cancel to exit the screen and return to the main screen.

Batch Execution/Scheduling

Restarting the Batch

While running a particular batch it is possible for a particular task to fail or be put on "hold" explicitly by the user, Cancelled or Interrupted. In this circumstance, you would normally have to restart the batch schedule. The Restart mode provided in this module enables you to restart the batch only from the point of failure in functionality.

Click the Restart option in the Batch Execution screen to view the batch definition status.



Search for the required Batch ID as explained in Searching for Batches section.

Select a Batch from the Batch Details panel to be restarted.

This list will contain all the failed, held, cancelled and interrupted batches that were marked for immediate execution. Please refer to the Infrastructure Rules, Process and Run User Manual for more information on immediate batches.

On selecting a batch from the Batch Details panel, the screen displays additional fields: Information Date, Batch Run ID and the Task details panel.

The screenshot shows the 'Batch Execution' interface with the following sections:

- Batch Mode:** Radio buttons for Run, Restart (selected), and Rerun.
- Search:** Fields for Module, Batch Id Like (ICCDOM_), and Last Modified Date (Between/And).
- Batch Details Table:**

Batch ID	Batch Description
<input type="checkbox"/> ICCDOM_200017	PFT
<input checked="" type="checkbox"/> ICCDOM_BATCH10	BATCH10
<input checked="" type="checkbox"/> ICCDOM_BATCH10	ICCDOM_BATCH10
<input type="checkbox"/> ICCDOM_BATCH12	BATCH12
<input type="checkbox"/> ICCDOM_BATCH13	BATCH13
- Search:** Fields for Information Date (20100322) and Batch Run ID (ICCDOM_BATCH10_20100322_1).
- Task Details Table:**

Task ID	Task Description	Metadata Value	Component ID	Precedence	Task Status
Task1	TAsk1	dddddd	PFT		I
Task2	dsgfdsgf	ukjhukjuki	CF EDTS		F
Task3	hgfhgfh	gfhgfhgf	ALM CFE		I
Task4	gfhgfhgfh	hgfhgfhgfhggf	ALM CFE		I
Task5	3r4rf	fdee	ALM CFE		I

An 'Execute Batch' button is located at the bottom center.

Select the Information Date from the Information Date drop-down list.

Select the Batch Run Id from the Batch Run ID drop-down list.

Note: • Failed tasks are highlighted in red. Failed batches can be excluded or held before "restarting" the batch run.

• The parameters for the failed tasks can also be modified. Please refer to Specifying Task Parameters section for details on specifying task parameters. However, batches that have succeeded cannot be held or excluded from the run, as this will not affect the batch restarting.

Executing/Scheduling the Batch to be Restarted

Click exclude/include button to execute the batch again. The Information Date cannot be modified in this case. The batch will be restarted under the same batch run ID.

Refer to the section on Executing the Batch for details on how to execute a batch.

Click Schedule Batch button to schedule a Batch. The Batch Scheduler screen appears.

Note: This feature exists in Run mode as well.

The New Schedule option will be displayed.

Scheduled Task Name – refers to the name of the task that helps identify the schedule to be defined.

You are provided five schedules that comprise of:

- **Once** - refers to a one time scheduling of the selected batch.
- **Daily** - refers to the schedule of a batch on a daily basis.
- **Weekly** - refers to the scheduling of a batch on a weekly basis.
- **Monthly** - refers to the scheduling of a batch on a monthly basis.
- **Adhoc** - using this option you will be able to schedule a batch as an Adhoc schedule.

In **Schedule Task** panel:

- **Start Date** – refers to date from or the date on which you would like to schedule the selected Batch.
- **End Date** – refers to the date to which the batch schedule can be conducted.
- **Run Time** – refers to the time at which the Batch Scheduling should be run. The run time can be specified in terms of hours and minutes.
- **Lag** – involves scheduling a batch with a known lag. That is, if the batch is run today, the lag signifies that the misdate /infodate are n days behind today. This kind of scheduling can also be done for a period. If the type is Daily, Weekly or Monthly, the start date and end date refer to the period during which it will be run. But if the type is Once, the schedule is run only once on the date specified in Start Date.

Scheduling the Batch Execution Once

Select the option button provided for Once in the batch scheduler screen, if you wish to schedule the batch just once.

Enter the Task Name in the field provided for Scheduled Task Name.

Current Server Time field displays the current server time. Click the Calendar option to view the Calendar.

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Select the required date from the calendar for Start Date. End Date need not be mentioned for scheduling the Batch Once.

Enter the Run time in the field provided. Click within the field provided for hour to enter the hour specification.

Click within the field provided for minute to specify the absolute minutes.

Example

Runtime: hour – 16, Minute - 30

Click the field provided for Lag and enter the number of Lag days.

Example

Lag days - 2

Click Save button within the Batch Scheduler screen to ensure that the details have been saved or click Cancel to close the batch scheduler screen and return to the main screen.

Scheduling the Batch for a Daily Run

Click to select the Daily option in the batch scheduler screen, if you wish to schedule the batch on a daily basis.

Batch Scheduler -- Webpage Dialog

Batch Scheduler

Batch Execution -> Batch Scheduler

Batch Scheduler

Domain : DEMOINF Batch : DEMOINF_1279788080274

Schedule New Schedule Existing Schedule

Current Server Time: Fri Jul 23 17:07:39 IST 2010

New Schedule

Scheduled Task Name

Once Daily Weekly Monthly Adhoc

Schedule Task

Dates Start Date End Date

Run Time 00 Hours 00 Minutes Lag 0 Days

Every Day(s)

Save Cancel

Enter the Task Name in the field provided for Task Name.

Current Server Time field displays the current server time. Click the Calendar option to view the Calendar.

Calendar - Windows Intern...

March 2010

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

Close

Select the date from the calendar. Repeat the same process to specify the end date.

Enter the Run time in the field provided. Click within the field provided for hour to enter the hour specification.

Click within the field provided for minute to specify the absolute minutes.

Example

Runtime: hour – 16, Minute - 30

Click the field provided for Lag and enter the number of Lag days.

Example

Lag days - 2

Click the field provided for every to enter the number of days.

Example

Every – 4 days

Click Save button within the Batch Scheduler screen to ensure that the details have been saved or click Cancel to close the batch scheduler screen and return to the main screen.

Scheduling the Batch on a Weekly Basis

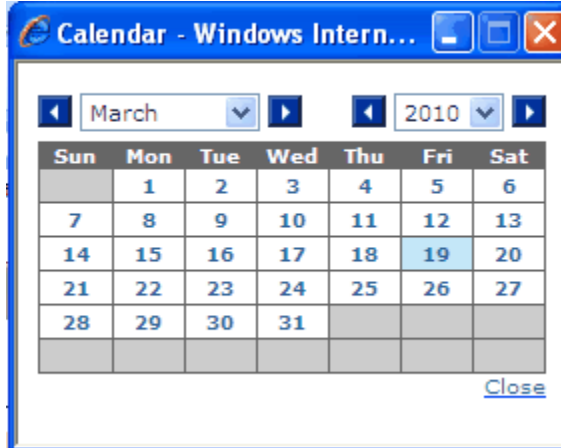
Click to select the Weekly option in the batch scheduler screen, if you wish to schedule the batch on a Weekly basis.

The screenshot shows a 'Batch Scheduler' dialog box with the following details:

- Batch Scheduler** (Title)
- Batch Execution -> Batch Scheduler** (Breadcrumb)
- Batch Scheduler** (Section Header)
- Domain:** DEMOINF
- Batch:** DEMOINF_1279788080274
- Schedule:** New Schedule Existing Schedule
- Current Server Time:** Fri Jul 23 17:07:39 IST 2010
- New Schedule** (Section Header)
- Scheduled Task Name:** [Empty field]
- Frequency:** Once Daily Weekly Monthly Adhoc
- Schedule Task** (Section Header)
- Dates:** Start Date [Calendar icon] End Date [Calendar icon]
- Run Time:** [00] Hours [00] Minutes
- Lag:** [0] Days
- Every:** [0] Week(s)
- Days of the week:** Sunday Monday Tuesday Wednesday Thursday Friday Saturday
- Buttons:** Save, Cancel

Enter the Task Name in the field provided for Task Name.

Current Server Time field displays the current server time. Click the Calendar option to view the Calendar.



Select the required date from the Calendar for Start Date.

Example

Month – April, Year – 2010, Date 24

Repeat the same process to specify the end date. Enter the Run time in the field provided. Click within the field provided for hour to enter the hour specification. Click within the field provided for minute to specify the absolute minutes.

Example

Runtime: Hour -16, Minute - 30

Click the field provided for Lag and enter the number of Lag days.

Example

Lag days - 2

Click the Every field to enter the period (in weeks) after which you would like to run the particular batch schedule.

Example

2 Weeks

Check the check box of the Day of the week field to specify the days of the week on which you would like to run the batch schedule.

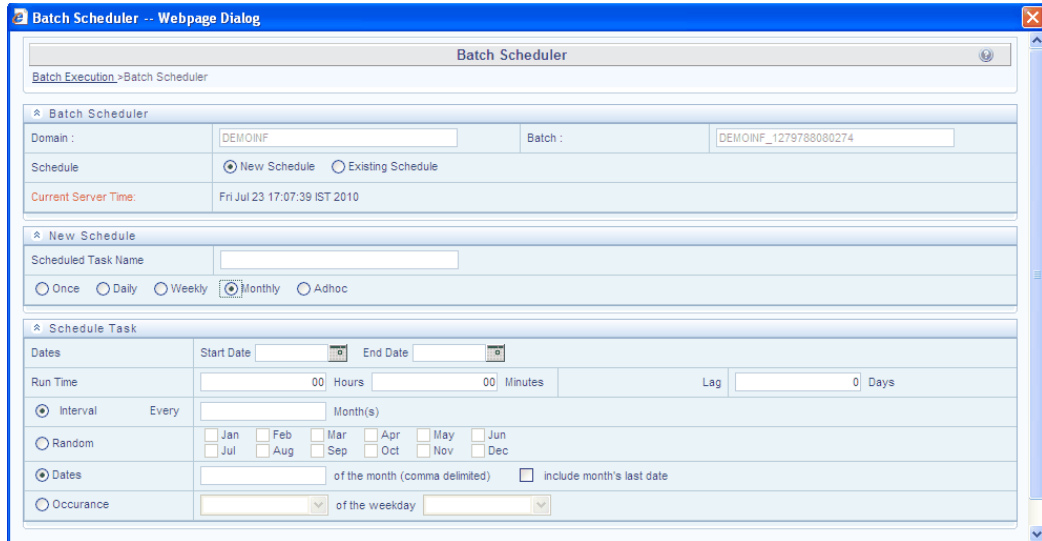
Example

Sunday, Wednesday, Saturday

Click Save within the Batch Scheduler screen to ensure that the details have been saved or click Cancel to exit the screen and return to the main screen.

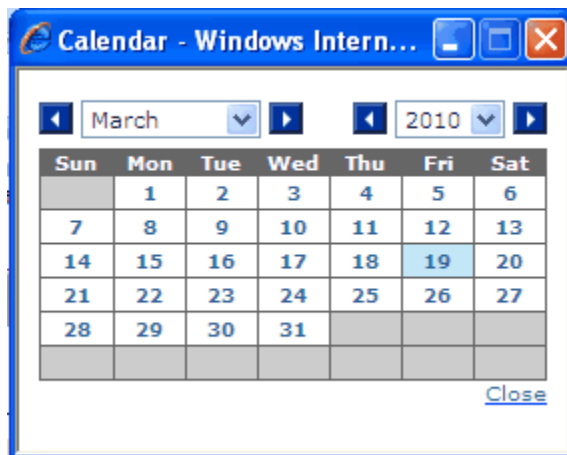
Scheduling the Batch on a Monthly Basis

Select the Monthly option in the batch scheduler screen, if you wish to schedule the batch on a Monthly basis.



Enter the Task Name in the field provided for Task Name.

Current Server Time field displays the current server time. Click the Calendar option to view the Calendar.



Select the desired date from the Calendar for start date.

Example

Month – April, Year – 2010, Date 28

Repeat the same process to specify the end date. Enter the Run time in the field provided. Click within the field provided for hour to enter the hour specification. Click within the field provided for minute to specify the absolute minutes.

Example

Runtime: Hour -16, Minute - 30

Click the field provided for Lag and enter the number of Lag days.

You are provided two schedule options in this screen. If you select the **Interval** option,

you can enter the period after which you would like to run the batch to recur.

The screenshot shows the 'Batch Scheduler' dialog box. The 'Batch Scheduler' section is expanded, showing 'Domain' as 'DEMOINF' and 'Batch' as 'DEMOINF_1279788080274'. The 'Schedule' section has 'New Schedule' selected. The 'Current Server Time' is 'Fri Jul 23 17:07:39 IST 2010'. The 'New Schedule' section is expanded, showing 'Scheduled Task Name' as an empty field and frequency options: 'Once', 'Daily', 'Weekly', 'Monthly' (selected), and 'Adhoc'. The 'Schedule Task' section is expanded, showing 'Start Date' and 'End Date' as empty fields, 'Run Time' as '00 Hours 00 Minutes' and 'Lag' as '0 Days'. The 'Interval' section is selected, showing 'Every 2 Month(s)'. The 'Random' section has checkboxes for months: Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec. The 'Dates' section has a field for 'of the month (comma delimited)' and an 'include month's last date' checkbox. The 'Occurrence' section has a dropdown for 'of the weekday'.

If you select the Random option, you will be able to check the check boxes of the months during which you would like to run the schedule.

The screenshot shows the 'Batch Scheduler' dialog box with the 'Schedule Task' section expanded. The 'Random' section is selected, showing checkboxes for months: Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec. The 'Dates' section has a field for 'of the month (comma delimited)' and an 'include month's last date' checkbox. The 'Occurrence' section has a dropdown for 'of the weekday'. The 'Run Time' section shows '12 Hours 34 Minutes' and 'Lag' as '2 Days'.

For both the Interval and Random level you can enter the dates of the month on which you wish to run the batch schedule.

Check the check box of the include month's last date field to specify that you wish to run, keeping in mind the number count of the number of days that are present in a month or select the Occurrence option to set the occurrence .

Click the drop-down list box of the field provided for occurrence to select the occurrence and select the specific weekday.

Click Save within the Batch Scheduler screen to ensure that the details have been saved or click Cancel to close the screen without saving.

Scheduling the Batch on an Adhoc Basis

Click to select the Adhoc option in the batch scheduler screen on an adhoc basis.

The screenshot shows a web-based interface for scheduling batch jobs. It is organized into three main sections:

- Batch Scheduler:** Contains 'Domain' (DEMOINF), 'Batch' (DEMOINF_1279788080274), 'Schedule' type (New Schedule selected), and 'Current Server Time' (Fri Jul 23 17:07:39 IST 2010).
- New Schedule:** Includes a 'Scheduled Task Name' input field and frequency options (Once, Daily, Weekly, Monthly, Adhoc selected).
- Schedule Task:** A table with columns for 'Information Date', 'Run Date', and 'Run Time'. The 'Run Time' column has one row with '00:00'.

Buttons for 'Save' and 'Cancel' are located at the bottom center of the dialog.

Enter the Task Name in the field provided for Task Name.

Current Server Time field displays the current server time. Click the Add Row button to add a row.

Click the Calendar button to view the calendar to select the Information Date and Run Date in their respective fields.

Click the row provided within the Run Time column to enter the specific hour and minutes at which you would like the Batch schedule to be run.

To delete an added schedule, click to select the row and click Delete row.

Click Save within the Batch Scheduler screen to ensure that the details have been saved or click Cancel to close the screen without saving.

Monitoring Batches

The Batch Monitor

The batch monitor option helps you to monitor the batches that have been executed. This feature enables the smooth execution of batches through timely error tracking.

Click the + icon adjacent to the Operations in the LHS menu of the Infrastructure splash screen to view its sub-menu. Select the Batch Monitor from sub-menu to view the above Batch Monitor screen.

Monitoring the Batch

The tasks that have been executed can be monitored using the Batch Monitor. The Batch monitor screen allows you to monitor the task status; the event logs provides you the real time status of the batches executed.

You can also receive email and mobile alerts on batch failure or batch completion.

In the Search section, select the Search date and End date by clicking on . Select the Module and Status from the drop down menu. You can also describe the batch against the Batch Description Like field and search.

The Batch Name drop-down list contains batch names and batch description of recently executed batches. Click the drop-down list box and select the required Batch name for monitoring.

Search			
Start Date	04/29/2010	End Date	04/30/2010
Module	Batch Maintenance	Status	Successful
Batch Description Like			

The Batch ID under Batch Details appears.

Batch Details	
Batch ID	Batch Name
<input checked="" type="checkbox"/> ATOMIUT_BATCH2	BATCH2

Select the required Batch ID. In the Batch Run Details section, select the Information Date and Batch Run ID from the drop down menu. Enter the Monitor Refresh rate and click on Start Monitoring.

Batch Run Details		
Information Date	20100318	Monitor Refresh Rate (seconds)
Batch Run ID	ATOMIUT_BATCH2_20100318_1	20

The Task details and Event log option comes up.

Task Details		
Component ID	Task ID	Task Status
<input type="checkbox"/> Task1	RUN EXECUTABLE	Successful

Event Log			
Message ID	Description	Severity	Time
56	[1707] Batch started by PQAUSER	INFORM	2010-03-18 11:42:35
61	[1708] Batch Complete	INFORM	2010-03-18 11:42:35

Select the required Component ID to view its Event Log.

The Information Date field comprises of a drop-down list containing recently executed batch Information dates. Select the information date from the Information Date drop-down list.

Example

20020922

The Batch Run Id refers to the Batch run Id on which batch was run. Select the batch run Id from the Batch Run ID drop-down list.

Example

NEWDOMAIN_BATCH11_20020922_1

The Monitor refresh rate option lets you specify after how many seconds you would like the batch status to be refreshed.

Example

If you specify 10 seconds to be the refresh rate, the status of the batch you are monitoring will be refreshed every 10 seconds.

Enter the monitor refresh rate in the field provided for monitor refresh rate.

Note: The refresh rate should be specified in terms of seconds.

The Event Log Window

The Event Log displays the list of errors and events of the batch being executed. These events are displayed in descending order of time which means that the latest record will be the first record in window.

In the events log window you can view the Message ID, Description, Severity and Time when the event was logged. The Message ID is automatically generated based on the type of error. The error is displayed in the field provided for Description.

The severity of the error is displayed under Severity. The severity can be Fatal, Inform or Successful. Time of the event is displayed under Time.

To hide the Event Log window, click Collapse button which is the toggle switch to view or exit the Event Log window.

Click the Export button to export all the Event Log data on to an excel sheet.

Task Details			
Component ID	Task ID	Task Status	
<input type="checkbox"/> Task1	RUN EXECUTABLE	Successful	

Event Log			
Message ID	Description	Severity	Time
56	[1707] Batch started by PQAUSER	INFORM	2010-03-18 11:42:35
61	[1708] Batch Complete	INFORM	2010-03-18 11:42:35

Refreshing the batch monitor screen will clear all fields in the batch monitor screen to display an empty screen.

Click the reset button in the batch monitor screen to refresh.

To stop monitoring the batch, click Stop Monitoring button in the Batch Monitor screen.

Batch Cancellation

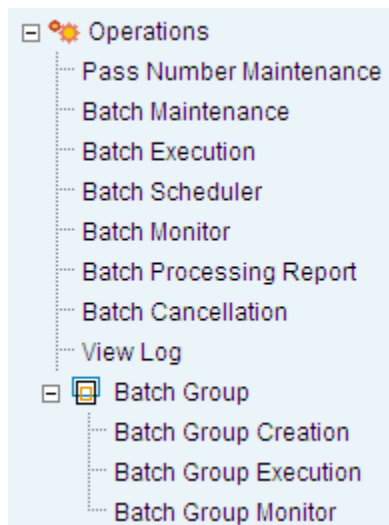
Canceling the Batch

The Batch Cancellation can be used to cancel / abort an ongoing batch/task or a task which is not started. When a batch is aborted, the task which is ongoing will be killed and the tasks which are not started will be considered as cancelled, but in case of cancel, the ongoing tasks will continue execution and the tasks which are not started will be considered as cancelled

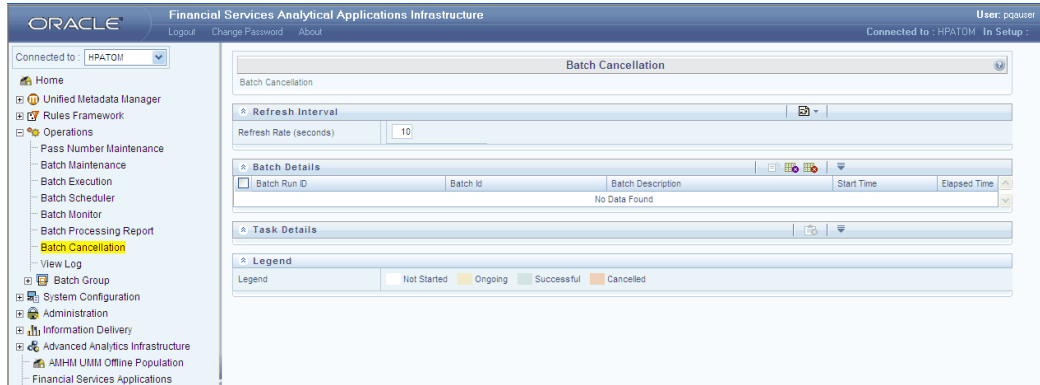
In case a task is cancelled, all the dependent tasks will get cancelled automatically.

Click on the Batch Cancellation from the left hand side Operations menu.

The Batch Cancellation Window is open in the right side of the window.



The Batch Cancellation Window is open in the right side of the window.



The Batch Cancellation window consists of four panels namely Refresh Interval, Batch Details, Task Details and Legend.

Refreshing Interval

Click on the Go button after selecting the refresh interval from the drop down list. The options like 5, 10, 15 and blank space has been provided. You can enter the required number (seconds) and click Go.

The page will be refreshed as per the number mentioned in the Refresh rate field. The number that is mentioned in the Refresh Rate (seconds) field will be available in the Refresh interval list.

Batch Details

This panel displays the ongoing batches with details like Batch Run ID, Batch ID, Batch Description, Start time and Elapsed Time.

Batch Run ID	Batch Id	Batch Description	Start Time	Elapsed Time	
<input checked="" type="checkbox"/>	BASELII_CBATCHT2T_20090320_1	BASELII_CBATCHT2T	CBATCHT2T	20/03/2009 12:59:54 PM	429:50:30

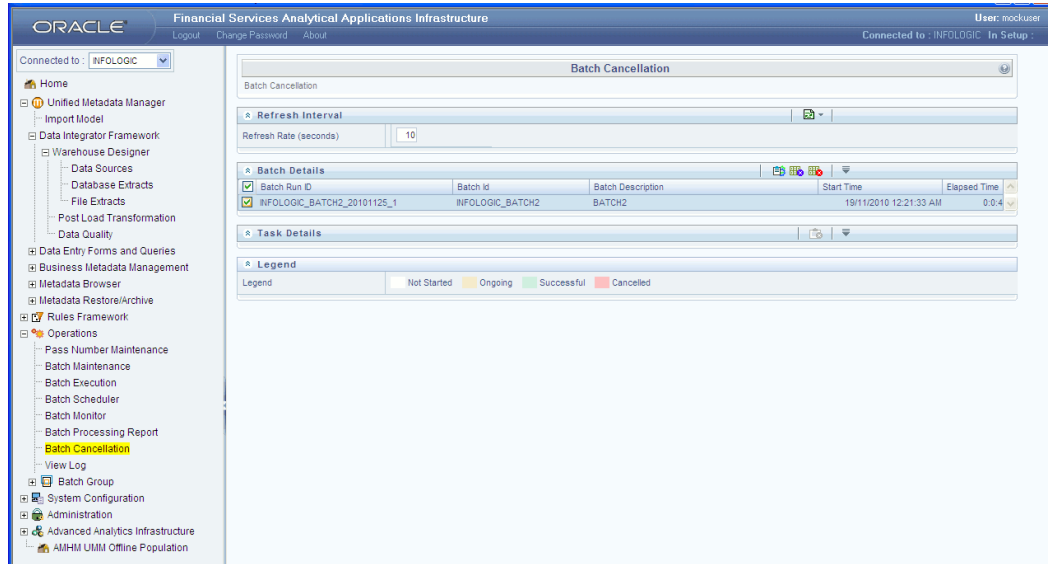
Select a required ongoing batch and click Fetch Task Details button to fetch the task details. All the tasks associated with the batch are displayed in the Task Details pane as shown below.

Component ID	Task ID	Precedent Task	Dependent Task	Start Time	End Time
<input type="checkbox"/>	LOAD DATA	Task1	Task2, Task3	20/03/2009 12:59:55 PM	20/03/2009 01:00:09 PM
<input type="checkbox"/>	LOAD DATA	Task2	Task3	NA	NA
<input type="checkbox"/>	LOAD DATA	Task3	Task1, Task2	Task6	NA
<input type="checkbox"/>	LOAD DATA	Task4	Task5	20/03/2009 12:59:55 PM	NA
<input type="checkbox"/>	LOAD DATA	Task5	Task4	Task8	NA

Canceling Batch

Select the Batch and click Cancel Batch to cancel the Batch. All the tasks associated with the batch will be cancelled excluding the ongoing tasks. The ongoing task will be complete and if the tasks which are already completed will remain the same.

The Batch which is cancelled will be displayed in yellow in the Restart and Rerun screen.



Aborting Batch

Select a Batch and click Abort Batch button to abort the Batch. All the tasks associated with the Batch will be cancelled including the ongoing tasks. The ongoing task will get cancelled and if the tasks which are already completed will remain the same.

Task Details

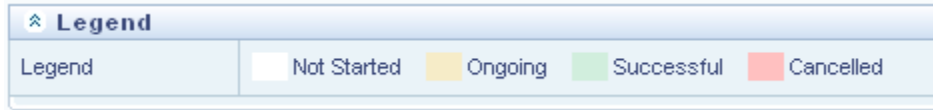
The Task Details pane consist of details like Component ID, Task ID, Precedent Task ID, Dependent task ID, Start time, and End time.

Component ID	Task ID	Precedent Task	Dependent Task	Start Time	End Time
AGGREGATE DATA	Task1	NA	Task2	30/04/2010 04:34:57 PM	30/04/2010 04:34:58 PM
CREATE CUBE	Task2	Task1		30/04/2010 04:34:58 PM	NA

Select the required Task and click Cancel Task button in the Task Details pane to cancel the Task. The selected task along with the dependents and also the ongoing tasks will be cancelled.

Legend

This pane displays the associated colors for the status.

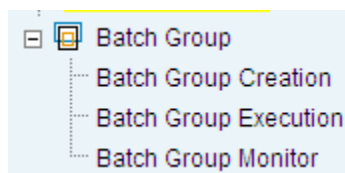


Batch Group

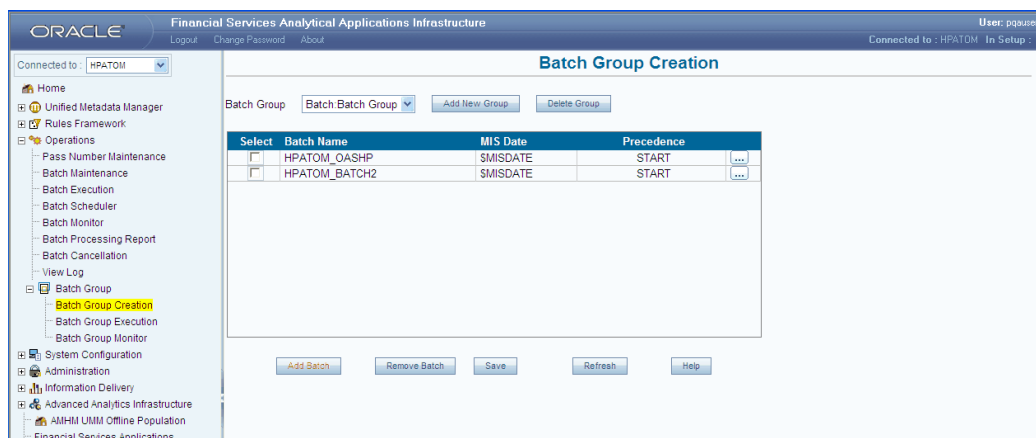
Batch Group Creation

If you wish to create more batch groups, the Batch Group Creation option is to be used. These batches can then be scheduled for execution.

Click the + sign next to Operations in the LHS Menu. Click the '+' sign next to the Batch Group function menu in the LHS pane to expand the same.



Click the Batch Group Creation sub menu to open the Batch Group Creation screen.

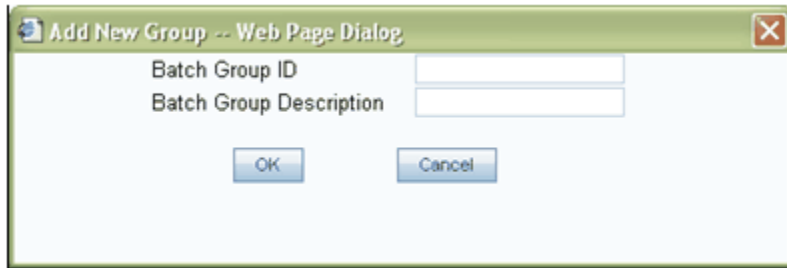


The Batch Group Creation screen displays all the batch groups created earlier and the respective batches associated to it.

Note: Only those batches which are defined by the user and those batches mapped to him will be displayed in the Batch Group drop-down list.

Details such as the Batch Name, MIS Date and Precedence, along with a check box against each batch are displayed.

Click Add New Group to create a new Batch Group. The Add New Group window is displayed.



Enter an ID for the batch group in the Batch Group ID box.

Enter a description for the batch group in the Batch Group Description box.

Click OK to save the new batch group. The new batch group will be displayed in the Batch Group list. Click Cancel to close the window without saving.

The newly created batch group will have no batches associated to it and the display grid will be empty.

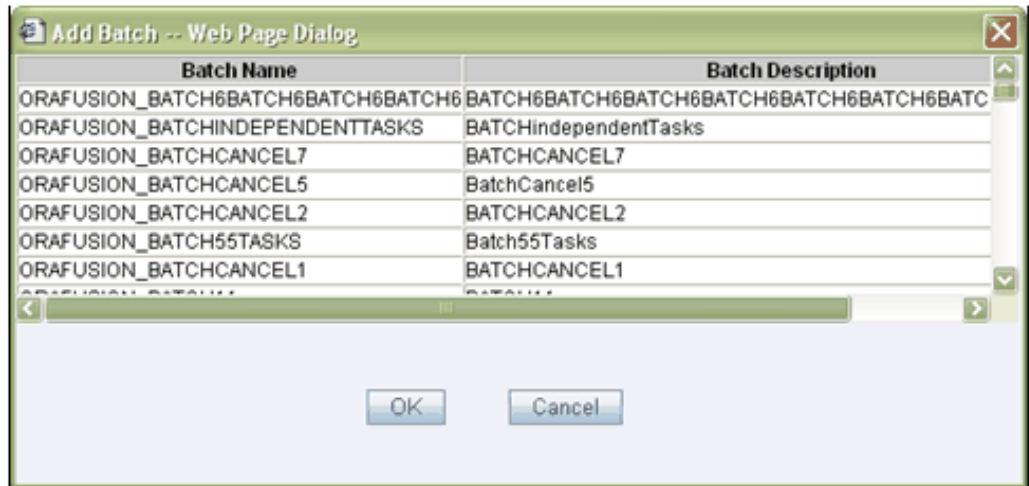
Deleting a Batch Group

To delete a batch group, select the batch group in the click the Delete Group button in the Batch Group Creation screen. A confirmation window is displayed stating, "Do you want to delete the Batch Group?" Click OK to delete the batch group. Click Cancel to cancel the deletion process.

Note: If a batch that is deleted has precedence defined, the precedence will be no longer valid.

Adding Batches to a Batch Group

Click the Add Batch button in the Batch Group Creation screen. The Add Batch screen is displayed.



This screen displays all the available batches. The Batch Name and Batch Description is displayed.

Select the batch that is to be added to the batch group and click OK. The selected batch is displayed in the grid in the Batch Group Creation screen. Details such as Batch Name, MIS Date and Precedence, along with a check box against each batch are displayed.



Click the above button against a batch to set the batch precedence. The Batch Precedence window is displayed.



Select the batch from the list in the Available Batches pane. You can select single or multiple batches and click >. The selected batches will be displayed in the Selected Batches pane.

Click >> to move all the batches from the Available batches pane to the selected batches pane.

Use the < and << buttons to move the batches from the Selected Batches pane back to the Available Batches pane.

Set the batch precedence to reflect the order in which you would like the batches to be run.

Click OK to complete the Batch Precedence definition. Click Cancel to discard changes and close the Batch Precedence screen.

Select a batch by clicking on the check box and click Remove Batch to remove a batch from the associated batch group.

Click Save to save the changes and to save the new batch group.

Click Refresh to refresh the screen as and when required.

Click Help to access the help page for the Batch Group Creation screen.

Batch Group Execution

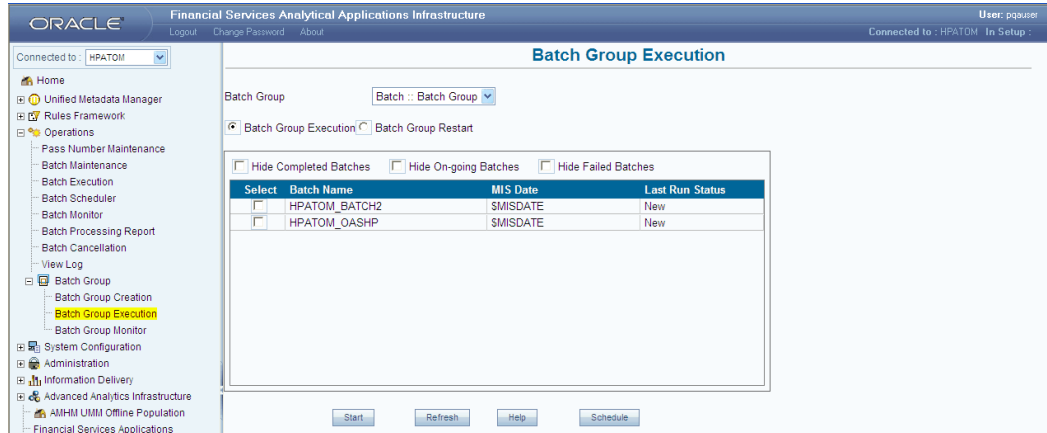
The Batch Group Execution screen displays all the batch groups and batches with its details which are ready for execution.

Multiple batches of a batch group can be selected and executed in a same time. Batch Group Execution screen displays all the batch groups and respective batches. User should be able to select multiple batches of a batch group and execute them in parallel using options provided in this screen.

Note: The user should be mapped to the Batch Group Execution function to access the Batch Group Execution screen.

Click the + sign next to Operations in the LHS Menu. Click the '+' sign next to the Batch Group function menu in the LHS pane to expand the same.

Click the Batch Group Execution sub menu to open the Batch Group Execution screen.



The Batch Group screen displays details such as the Batch Name, MIS Date and Last Run Status along with a check box against each batch, to select it for execution. It is possible to execute the batch groups as well as restart batch groups from this screen.

Select the Batch Group Execution option button. This option is selected by default.

Select the Batch Group from the Batch Group drop down list. The grid displays all the batches listed under the selected batch group. By default, the grid displays all batches related to the first batch group in the drop down list.

The MISDATE specified while defining the Run definition, will appear along with the batch name in the MIS Date column in the grid. Also the User can select one/all of the checkboxes provided against each batch and request to execute the batch group.

The Last Run Status column in the grid displays the batch execution details for the specific batch. The status Completed confirms that the particular batch has been executed successfully.

The status Failed indicates that the particular batch execution has failed.

The status New indicates that the particular batch is a new batch and is ready for execution.

Note: • The batch-group execution screen will list all the available (and mapped) batches along with the last run-status.

- The Batch Group Execution screen will display all the batch-groups. But only the batches that are assigned to the user will be displayed/allowed for execution.
- The Check box provided against each batch will be disabled for the batches that are already executed or execution ongoing.
- Only batches with status "new" can be selected for execution.

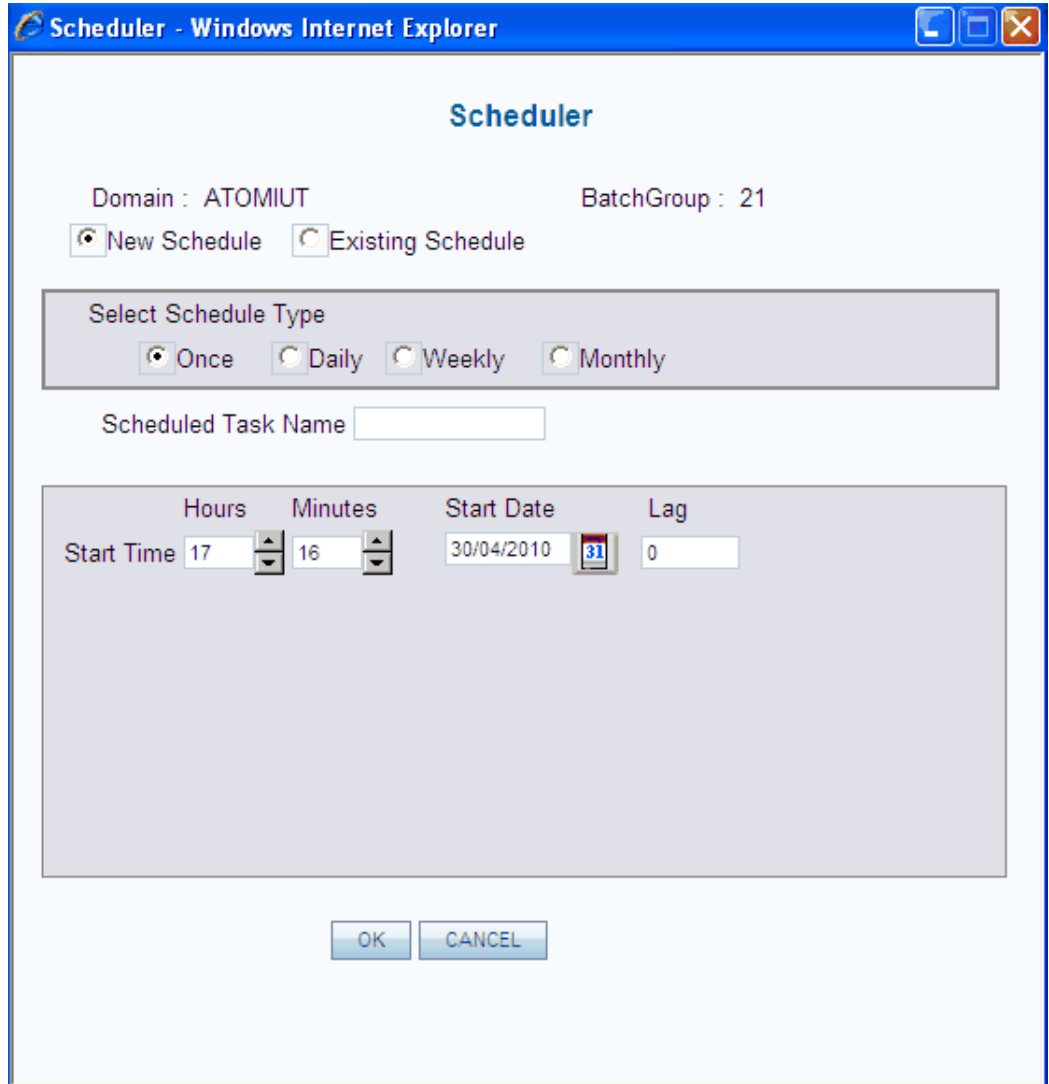
Selecting the Hide Completed Batches option will not display the batches with "completed" status in the grid.

Selecting the Hide On-going Batches option will not display the batches with "on-going" status in the grid.

Selecting the Hide Failed Batches option will not display the batches with "failed" status in the grid.

Scheduling the Batch

Click the Schedule button to open the Scheduler window.



This window is similar to the Batch Scheduler window discussed earlier in the Batch scheduling section, except that you will have a scroll up and down option to select for Start Time (hours and minutes) instead of a blank field..

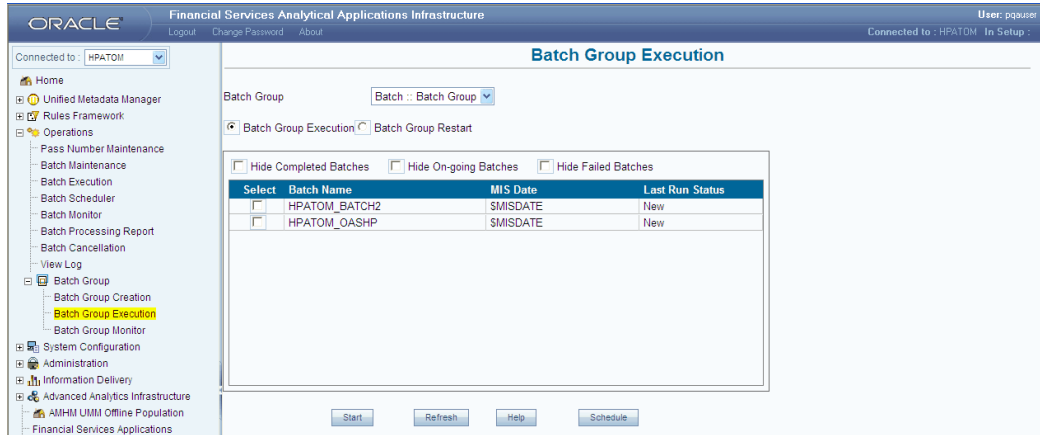
The Start Date can be selected from the Calendar

Example

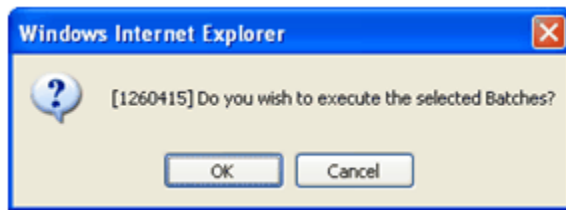
- Only OPERATIONS batches can be scheduled for execution.

Executing the Batch

Select the Batch Group from the Batch Group drop down list, which displays all the batches listed under the selected batch group. Select the batch/batches to be executed by enabling the check box provided against each batch.



Click Start to execute the selected batches for the selected Batch Group. This displays a confirmation message before executing the selected batch.



Click OK to proceed with the execution of the selected batches. Click Cancel to discard the operation.

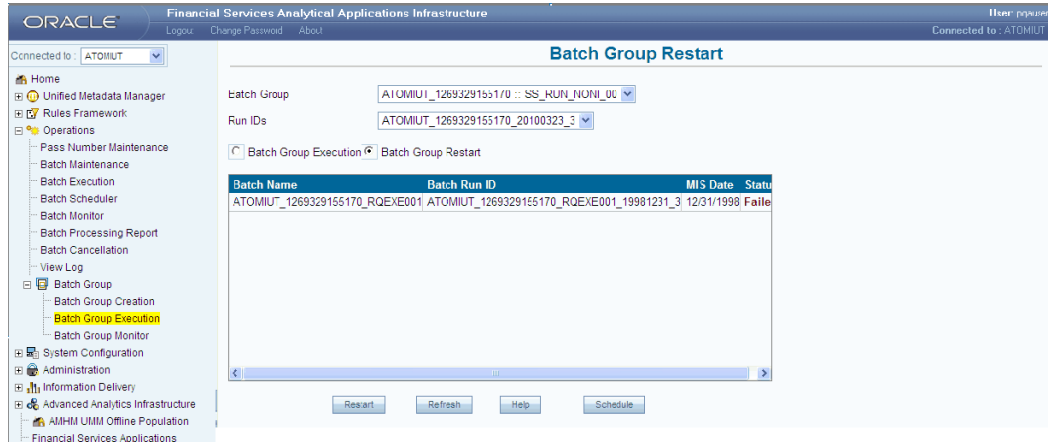
Click Refresh to refresh the screen as and when required.

Click Help to access the help page for the Batch Group Execution Screen.

Batch Group Restart

The Batch Group Restart screen helps you to restart the batches that failed while executed and batches that are not yet executed. The Restart mode enables you to restart the batch group execution only from the point of failure and not from the beginning.

Select the Batch Group Restart option button in the Batch Group Execution screen to view the Batch Group Restart screen.



The Batch Group Restart screen displays the list of batches that were run in the selected batch group. Details such as the Batch Name, Batch Run ID, MIS Date and Status are displayed. By default, the grid displays all batches related to the first batch group in the drop down list.

Select the required Batch Group from the Batch Group drop down list.

The Run IDs drop down list will display the list of Run IDs specific to the selected Batch Group. Select a run id from the Run IDs list.

The grid displays all the batches listed under the selected batch group.

The MISDATE specified while defining the Run definition, will appear along with the batch name in the MIS Date column in the grid.

The Status column displays the status of the batch execution process carried out for the specific batch.

The status Completed confirms that the particular batch has been executed successfully. The status Failed indicates that the particular batch execution has failed.

The status New indicates that the particular batch is a new batch and is ready for execution.

Note: • The Batch-Group Restart screen will list all the available (and mapped) batches that were not successfully executed along with the last run-status.

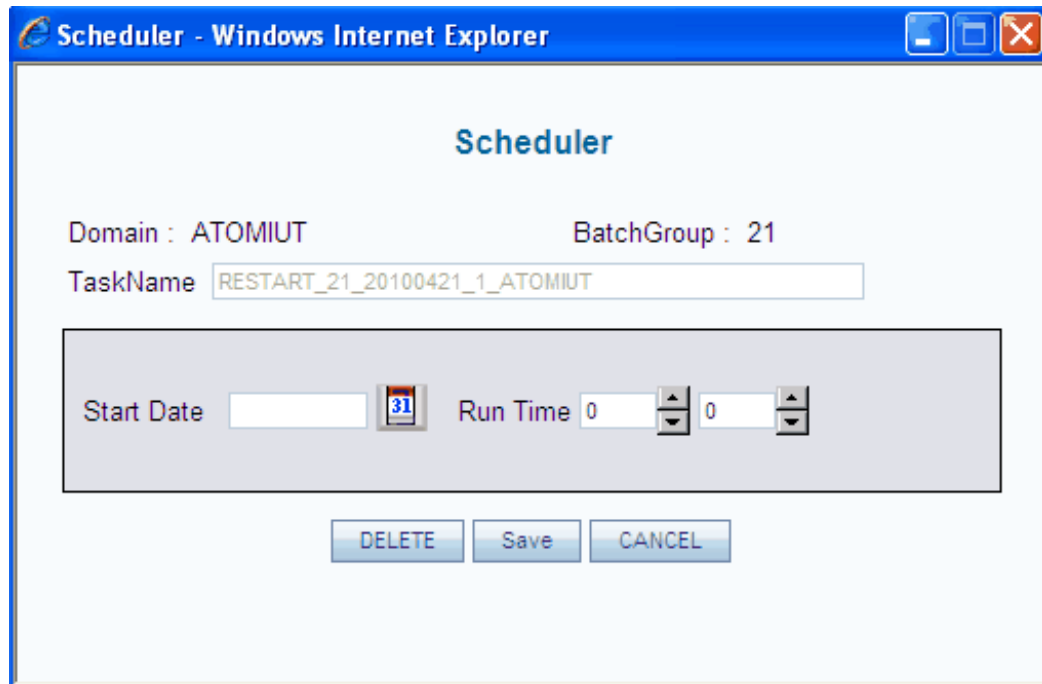
- The user is given rights to restart only the batches that are assigned to him.
- Only batches with status "New" or "Failed" can be selected for restart.
- The batches selected for restart will be executed based on the precedence, if defined.

Click Restart to execute the failed and new batches for the selected Batch Group. This displays a confirmation message saying "Batch group re-started successfully".

If the batch group is not restarted, a message will be displayed saying "Batch group Re-starting failed." And the errors encountered while restarting the batch group will be displayed.

Click Refresh to refresh the screen as and when required.

Click the Schedule button. The Scheduler window is displayed.



Details such as Domain and Batch Group are displayed.

The Task Name in the Scheduler screen refers to the operation of scheduling the batch that contains failed tasks. This Name is auto generated and cannot be edited.

Click the Calendar button next to the Start Date field to view the Calendar window. Select the Month, Year and date and click OK to save the selection. Click Cancel to close the pop-up without saving.

Enter the Run time in the field provided or use the scroll options provided for the run time to select the run time.

Click within the field provided for hour to enter the hour specification. Click within the field provided for minute to specify the absolute minutes.

If you have defined a schedule that you no longer require, select the Batch Group and Run ID for the same in the Batch Group Restart screen. Click Schedule and click Delete button in the Scheduler pop-up.

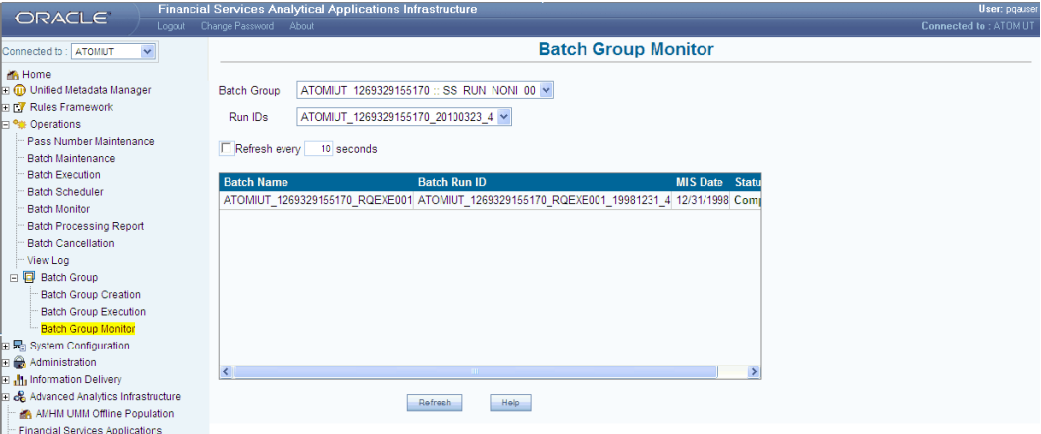
Click Save in the Scheduler screen to ensure that the details have been saved or click Cancel to close the Scheduler screen and return to the Batch Group Restart screen. Click Help to access the help page for the Batch Group Restart screen.

Batch Group Monitor

The Batch Group Monitor screen helps you to monitor the batch execution details. This feature enables the smooth execution of batches through timely error tracking.

Click the + tab in the Batch Group function menu in the LHS pane to view the Batch Group Monitor sub- menu. Click Batch Group Monitor sub menu option to view the Batch Group Monitor screen.

Note: The user should be mapped to the Batch Group Monitor function to access the Batch Group Monitor screen.



The screenshot shows the Oracle Financial Services Analytical Applications Infrastructure (FSAAI) Batch Group Monitor screen. The interface includes a navigation pane on the left with the following menu items: Home, Unified Metadata Manager, Rules Framework, Operations (Pass Number Maintenance, Batch Maintenance, Batch Execution, Batch Scheduler, Batch Monitor, Batch Processing Report, Batch Cancellation, View Log), Batch Group (Batch Group Creation, Batch Group Execution, Batch Group Monitor), System Configuration, Administration, Information Delivery, Advanced Analytics Infrastructure, and Financial Services Applications. The main area displays the Batch Group Monitor screen with the following details:

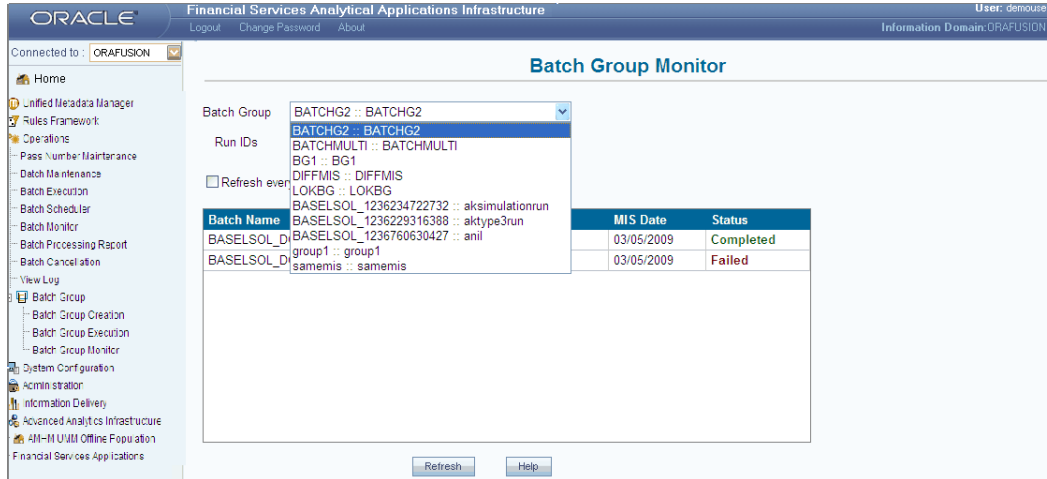
- Batch Group: ATOMIUT_1269329155170 :: SS RUN NONII 00
- Run IDs: ATOMIUT_1269329155170_20130323_4
- Refresh every: 10 seconds
- Table with columns: Batch Name, Batch Run ID, MIS Date, Status
- Table content: ATOMIUT_1269329155170_RQEXE001, ATOMIUT_1269329155170_RQEXE001_19981231_4, 12/31/1998, Com
- Buttons: Refresh, Help

Batch Group Monitor screen displays all the batch groups and batches based on run ids those are executed or currently executing along with run details and status. This screen displays the status of each batch group execution and its respective batches.

Select the Batch Group from the Batch Group drop down list. The grid displays all the batches listed under the selected batch group. By default, the grid displays all batches related to the first batch group in the drop down list.

The grid displays the Batch Name, Batch Run ID, MIS Date and the Status for all the batches listed under the selected batch group.

The Run ID drop down list displays the run id for all the respective batches defined under the selected batch group.



Select the Run ID from Run ID drop down list to view the batch execution details for the selected batch.

Example

BG1_20060208_5

Note: Each RUN definition will have a unique ID (timestamp) and a Short description.

Enter the duration to refresh the Batch Group Monitor Screen in the [] Refresh every Seconds box provided and enable the check box provided along with it.

The batch execution details for the selected batch will be displayed in the grid. The Status for the selected batch indicates the execution status of the selected batch.

Also the user can click the Refresh button to refresh the screen as and when required.

Click Help to access the help page for the Batch Group Monitor Screen.

View Log

Introduction

View Log enables you to view the process logs for different types of components. The process (Task ID) can be searched based on the selected component type.

Accessing View Log

1. Log on to OFSAAI application.
2. Click, Operations > View Log.

View Log panels

The View Log window has two panels – Search panel and Task ID Information panel. The Search panel enables you to search for the Task ID based on the Component Type, As of Date, Folder, and Task Name. To search, enter the required search values and click search button.



Search			
Component Type	Asset Liability Management	As of date	MM/DD/YYYY
Folder		Task Name	

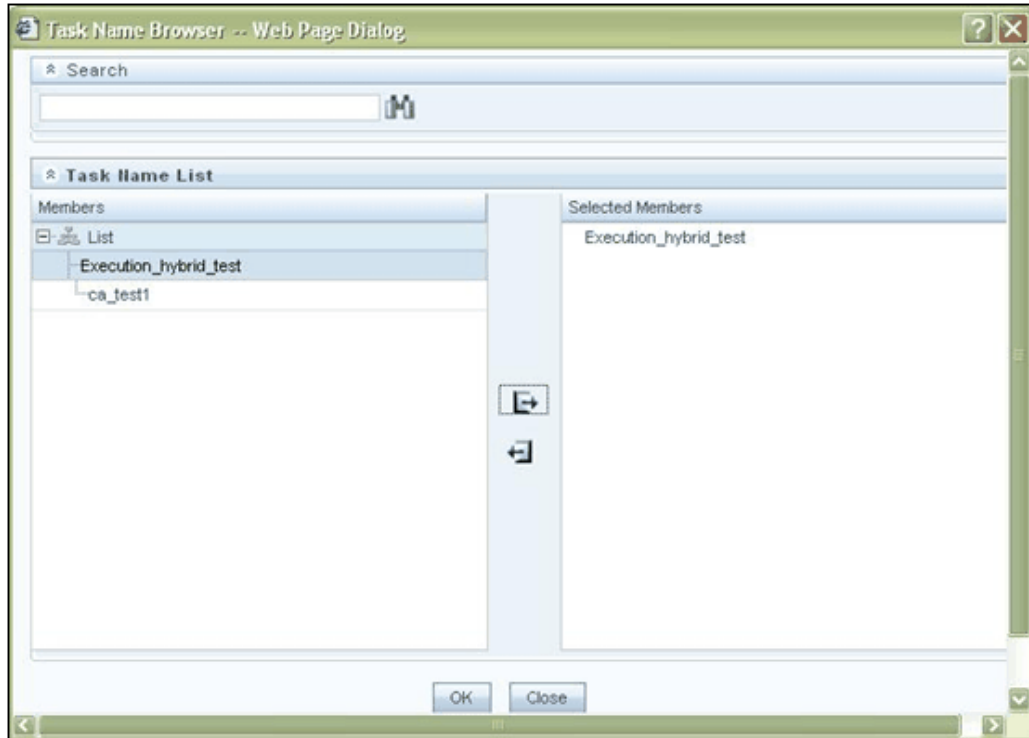
The Task ID Information panel displays the search results according to the search criteria. The fields (columns), present in the result differs according to the Component Type that is selected.

Searching using Task Name criteria

The search panel in the View Log screen contains a text field as Task Name with browse option. On click of this browse button, the Task Name Browser window appears. This

lists all the Task Names. The Task Name Browser window contains a search panel and a list panel.

The search panel has a Text Field (to enter the search criteria) and a Search Button. If the search condition matches the corresponding value, in the Members list, the value gets highlighted.



The list panel contains a list by the name **Members** on the left side and a list called Selected Members on the right side. > is used to select and < is used to clear the selection. Once you select a Task Name and click **OK**, it is displayed in the text field.

If an item is already selected and present in the right list and the list allows only single value, then a message box appears that asks whether you want to replace the current with the selected member.

Searching using Component Types criteria

All the available component types are listed in the Component Type drop down box of the Search panel.

View Log					
View Log					
Search					
Component Type	Asset Liability Management			As of date	
Folder	Asset Liability Management			Task Name	
Task ID Information (Click on					
As of date	Date	Folder	User		Status
			No Data Found		

The Task ID Information panel that displays the search results can contain different fields based on the component type you had selected for the search.

Following are the fields for component types like Asset Liability Management, Cash Flow Edits, Funds Transfer Pricing, and Profitability Management.

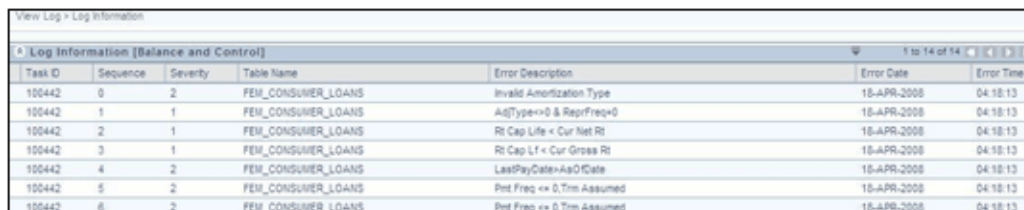
1. As of date
2. Date
3. Folder
4. Component
5. Task name
6. User
7. Status
8. Batch Run Id
9. Task Id

Following are the fields for component types like Data transformation and Object Validation.

1. Date
2. Component
3. Batch Run Id
4. Task Id

Viewing the Task ID log information

1. To view the log information of a Task ID, click the Task ID.
2. The View Log Details window appears and it lists more details about the selected Task ID.



The screenshot shows a window titled "View Log - Log Information". Below the title bar is a header for the table: "Log Information [Balance and Control]". The table has 7 columns: Task ID, Sequence, Severity, Table Name, Error Description, Error Date, and Error Time. There are 7 rows of data, all for Task ID 100442. The error descriptions include "Invalid Amortization Type", "AdjType=0 & ReprFreq=0", "Rt Cap Life < Cur Net Rt", "Rt Cap Lt < Cur Gross Rt", "LastPayDate>AsoDate", and "Pmt Freq <= 0, Tim Assumed".

Task ID	Sequence	Severity	Table Name	Error Description	Error Date	Error Time
100442	0	2	FEH_CONSUMER_LOANS	Invalid Amortization Type	18-APR-2008	04:18:13
100442	1	1	FEH_CONSUMER_LOANS	AdjType=0 & ReprFreq=0	18-APR-2008	04:18:13
100442	2	1	FEH_CONSUMER_LOANS	Rt Cap Life < Cur Net Rt	18-APR-2008	04:18:13
100442	3	1	FEH_CONSUMER_LOANS	Rt Cap Lt < Cur Gross Rt	18-APR-2008	04:18:13
100442	4	2	FEH_CONSUMER_LOANS	LastPayDate>AsoDate	18-APR-2008	04:18:13
100442	5	2	FEH_CONSUMER_LOANS	Pmt Freq <= 0, Tim Assumed	18-APR-2008	04:18:13
100442	6	2	FEH_CONSUMER_LOANS	Pmt Freq <= 0, Tim Assumed	18-APR-2008	04:18:13

Maintaining Configuration Details

Introduction

The Configuration screen accepts passwords. To define configuration information, click the Configuration option to open the screen. The Configuration screen contains 2 tabs for each of the information that is accepted.

They are:

- General Details
- Guest Login

The General Details Tab

By default the General Details tab will be displayed. Here, you can enter general details such as frequency of password change, maximum invalid passwords a user can be allowed before disabling the user, and the authentication type and details.

Enter a valid name in the Environment Details tab and save. The same will be reflected in the top banner as **In Setup**

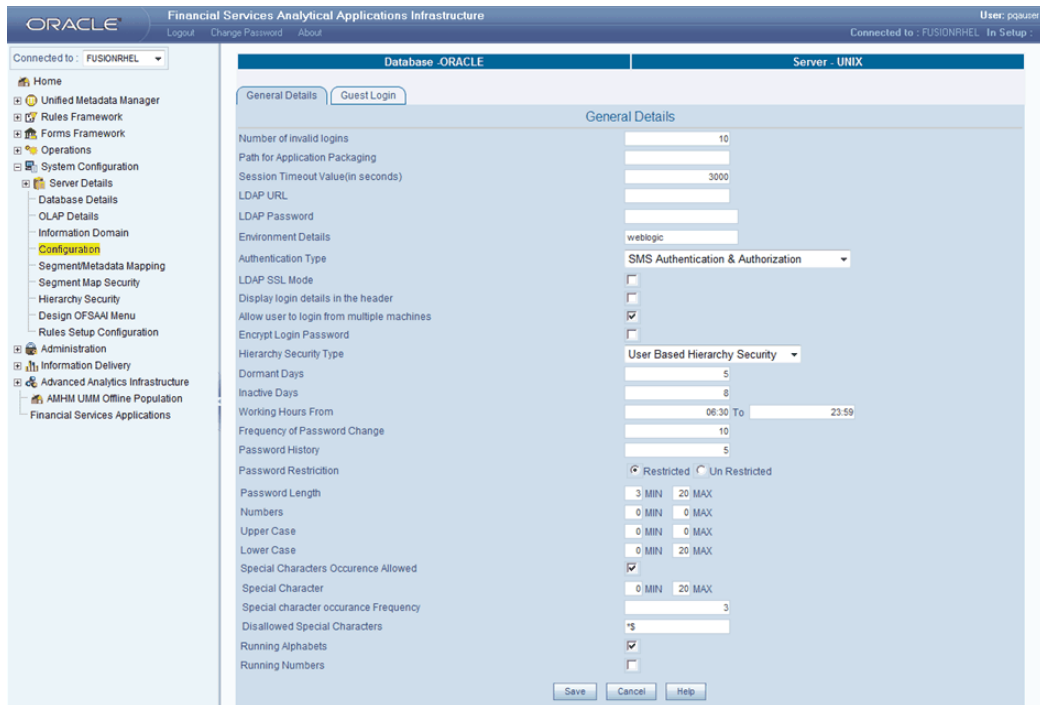
: <name of the Environment Details provided>.

Password Restriction are of two types: **Restricted** and **Unrestricted**

On selecting **Restricted** option, the user can configure password details such as the maximum and minimum Numbers, Upper case, Lower case and Special characters that can be used in the password.

On selecting **Unrestricted** option, the user can not configure password details such as the maximum and minimum Numbers, Upper case and Lower case used in the password. The password must be alphanumeric. Alphabets used in the password can either be in upper case or lower case. Special characters cannot be a part of the password.

Note: The password length should be a minimum of 6 and maximum up to 20 for both Restricted and Unrestricted.



Note: By default, the Server and Database you are working on is displayed in the screen.

Specifying the Number of Invalid Logins

This represents the number of attempts of entering the wrong password. If the wrong password is entered more than the specified login attempts, the user will be disabled.

Example

3

After 3 consecutive attempts at entering the wrong password, the user id will be disabled until the system administrator enables it.

Specifying the Application Packaging Path

Specify the Application Packaging path where jsp's generated through DefQ will be saved.

Example

C:\appl\pak

Specifying the Session Timeout Value

Specify the Session Timeout Value (in seconds). Infrastructure allows the SA to specify the Session Time out for an installation. This is applicable to all the Users logging into the System. The Session Time should be specified in seconds. After the specified time limit, the User Session will be automatically timed out. It depends on the specified Session Timeout Value and web server internal session maintenance. So it may vary for different web servers. The User would be requested to login to the System again.

Example

300000

Selecting the LDAP URL

You can use either the Oracle Financial Services Analytical Applications Infrastructure SMS authentication and authorization or the Lightweight Directory Access Protocol (LDAP) authentication for Oracle Financial Services Analytical Applications Infrastructure login. LDAP is a standalone access directory that provides for a logon that requires only one user name and password, while accessing different Software.

During the Oracle Financial Services Analytical Applications Infrastructure installation you will be provided the options of selecting the authentication type required for Oracle Financial Services Analytical Applications Infrastructure Users. You can select either LDAP users or SMS users option. If you select the LDAP Users option in the Oracle Financial Services Analytical Applications Infrastructure User Configuration screen during Oracle Financial Services Analytical Applications Infrastructure installation, Oracle Financial Services Analytical Applications Infrastructure will be configured for using LDAP authentication.

If you are using LDAP authentication for logging on to Oracle Financial Services Analytical Applications Infrastructure, specify the LDAP Server URL in the LDAP Url field. Oracle Financial Services Analytical Applications Infrastructure will check for LDAP authentication for users who would require an LDAP authentication from this specified URL.

Example

ldap://iflexop-241:389

Please refer to the Oracle Financial Services Analytical Applications Infrastructure Installation Manual for information regarding the prerequisites for using LDAP authentication and the configurations required.

Specifying the LDAP Password

Enter the root password of the LDAP server in the LDAP Password field.

While specifying the password certain characters are restricted. The only characters which are allowed are listed below.

"@", "-", "_", "\", "/", ":", "."

Environment Details

Represents the environment details such as operating system version, Database version etc. The System administrator should enter the required value in this field, so that the same will be displayed in the top banner as 'In Setup'

Selecting the Authentication Type

The Authentication Type list has the following options:

- **SMS Authentication & Authorization:** The authentication as well as authorization details for Infrastructure login are taken from the SMS module of Infrastructure, which is defined through the Security Management screens.
- **LDAP Authentication & Authorization:** The authentication and authorization details for Infrastructure login are taken from the LDAP server.
- **LDAP Authentication & SMS Authorization:** The user information authentication for logging on to Infrastructure is taken from LDAP server and the authorization details such as the profiles, roles, user group mappings and so on are taken from the SMS module.

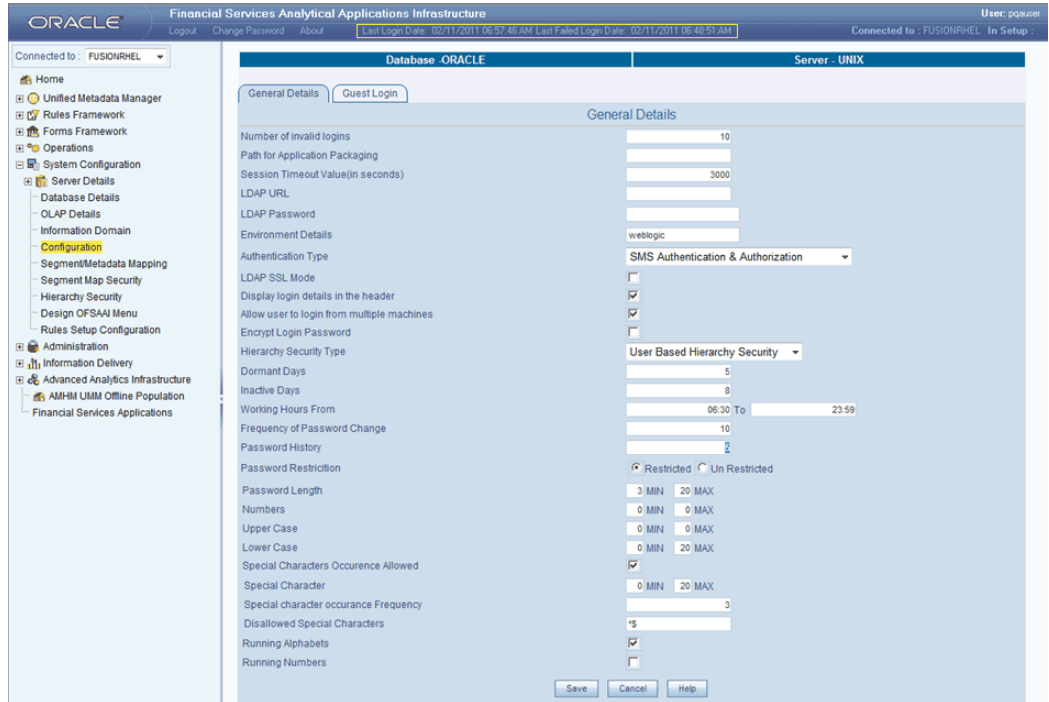
Select the type of authentication you require from the Authentication Type list.

Note: If you wish to select the LDAP Authentication & Authorization or LDAP Authentication & SMS Authorization options, make sure the LDAP servers are up and running.

If you wish to change from SMS authentication to LDAP authentication or vice versa, make sure that the related entities are migrated to the corresponding servers. Refer to the *Migration of Data* section in the *Infrastructure Installation Manual – OFSAAI Post Installation Steps* for more information.

Display Login Details in the Header

If this checkbox is selected, details such as the last login date, last failed login date will be displayed in the header from the next login.



Logging in from Multiple Machines

Select the Allow user to login from multiple machines check box if you wish to allow a user to login from different machines.

This feature will permit user login from different machines.

Encrypt Login Password

This represents whether the login password needs to be encrypted or not for security reasons.

Hierarchy Security Type

This represents the security of hierarchy Nodes, that is, the hierarchy Nodes needs to be displayed either based on user group or user based.

Dormant Days

This represents the number of inactive days after which the user will be disabled.

Example

Dormant days = 3

This means that if the user does not login for 3 consecutive days from the last logout date, the user will be disabled.

Inactive Days

This represents the number of inactive days after which the user will be deleted. The user details will be there in the database with the delete flag as Y. That is, the user will not be permanently deleted.

Example

Inactive days = 4

This means that if the user doesnot login within 4 days, the user will be deleted.

Note: Inactive days should always be greater than or equal to Dormant days.

Working Hours From

This represents the working hours of the users i.e. the time between which the user is allowed to login in a day.

Example

Working Hours from 9.00 to 18.00

This means that a user can login only between 9.00 to 18.00 hours. User will not be able to login before or after the mentioned time.

Note: The time will be in 24 hours format.

Specifying the Frequency of Password Change

This prompts the user to change the password after the mentioned number of days.

Example

50

The user will be prompted to change the password from the 45th day. On the 45th day, a pop up message will appear stating "The password will expire in 5 days".

Note: If the user does not change the password after 50 days, the system will take the user directly to 'Change Password' page when user tries to login.

Password History

This represents the number of old passwords that needs to be maintained and the same should not be allowed to use.

The maximum password history maintained is 10.

Password Restriction

This represent whether the organization requires password restrictions like maximum and minimum length of password and so on.

Password Length

This represents the maximum and minimum number of characters that needs to be allowed as part of the password provided by the user.

Example

Minimum = 6, maximum = 20

This shows that the password length should be a minimum of 6 and maximum of 20.

- The minimum Password length should be 6.
- If the password 'Unrestricted' option is selected, minimum and maximum length will be 6 and 20 respectively.
- The sum of maximum Numbers, Lower Case and Upper Case should be greater than or equal to minimum password length.
- The minimum sum of Numbers, Lower case, Upper Case and Special character (if enabled) should be less than or equal to the minimum Password Length.

Example

Name	Minimum	Maximum
Password Length	10	20
Numbers	3	6
Lower Case	2	10
Upper Case	3	10
Special Character	2	14

The minimum sum of Numbers (3), Lower Case (2), Upper case (3) and Special character (2) is less than or equal to the minimum Password length (10).

Numbers

This represents the maximum and minimum number of numeric values that needs to be allowed as part of the password provided by the user.

Example

Minimum = 2, maximum = 3

This shows that the minimum number of numbers used in the password should be 2 and maximum can be 3.

Note: The maximum number should not exceed the maximum Password Length.

Upper Case

This represents the maximum and minimum number of upper case characters that needs to be allowed as part of the password provided by the user.

Example

Minimum = 2, maximum = 3

This shows that the minimum number of upper case characters should be 2 and maximum can be 3..

Note: The maximum number of upper case characters should not exceed the maximum Password Length

Lower Case

This represents the maximum and minimum number of lower case characters that needs to be allowed as part of the password provided by the user.

Example

Minimum = 1, maximum = 3

This shows that the minimum number of lower case characters should be 1 and maximum can be 3.

Note: The maximum number of lower case characters should not exceed the maximum Password Length.

Special Occurrence Allowed

This option shows if special characters need to be allowed to be a part of the Password or not.

Special Character

This represents the maximum and minimum number of special characters that needs to be allowed as part of the password provided by the user.

Example

Minimum = 2, maximum = 2

This shows that a minimum of 2 and maximum of 2 special characters can be used in the password.

Note: The maximum number of special characters should not exceed the maximum Password Length.

Special character occurrence Frequency

This represents how many times a special characters can be allowed as a part of password.

Example

2

This shows that a special character can be used twice in the password.

Disallowed Characters

This represents which are the special characters that should not be allowed as part of password. Enter the password without any spaces.

Example

\$#*

This means that the special characters \$,# and * cannot be used in the password.

Running Alphabets

This represents whether the running sequence of alphabets need to be allowed or not as part of password.

Sequence of Running Alphabets

This represents how many running sequence of alphabets need to be allowed as part of password. This option comes up only if the 'Running Alphabets' checkbox is selected.

Example

Sequence of Running Alphabets = 3

This means that a sequence of less than or equal to 3 running alphabets can be used. Such as aBc, bcd, XYZ and so on.

Running Numbers

This represents whether the running sequence of numbers need to be allowed or not as part of password.

Sequence of Running Numbers

This represents how many running sequence of numbers need to be allowed as part of password. This option comes up only if the 'Running Numbers' checkbox is selected.

Example

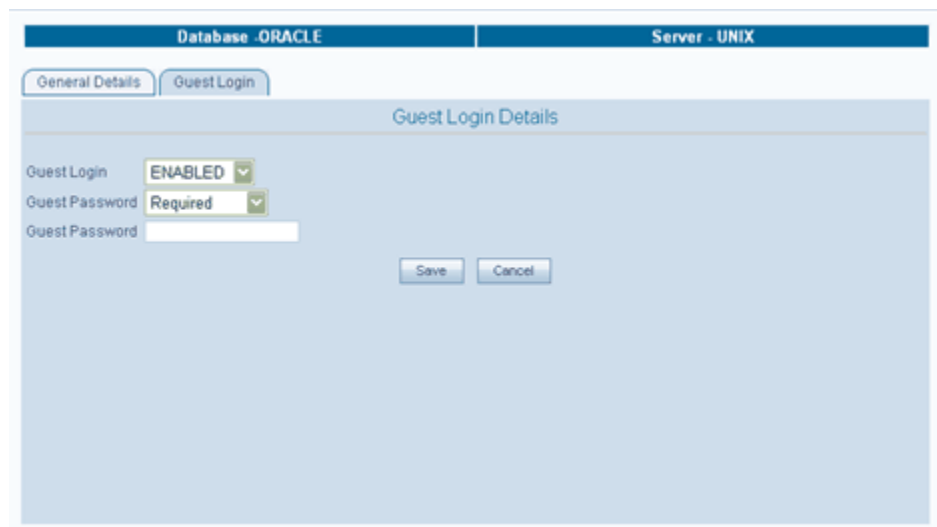
Sequence of Running Numbers = 4

This means that a sequence of less than or equal to 4 running numbers can be used. Such as 1234, 567, 789 and so on.

Click Save to save the general details that have been defined. Click Cancel to clear the general details that you have defined. If you are modifying the details, click Cancel to change the settings back to its original details.

Enabling the Guest Login Option

Click the **Guest Login** tab to enable a guest user.



The screenshot shows a web interface for configuring the Guest Login option. At the top, there are two tabs: 'General Details' and 'Guest Login', with 'Guest Login' being the active tab. Below the tabs, the page title is 'Guest Login Details'. There are three configuration items: 'Guest Login' with a dropdown menu set to 'ENABLED', 'Guest Password' with a dropdown menu set to 'Required', and an empty text input field for 'Guest Password'. At the bottom of the form, there are two buttons: 'Save' and 'Cancel'.

Guest users will be allowed to login only after enabling the User. You can choose the **Guest Login** as Enabled or Disabled.

Specifying the Guest Password

The System Administrator will have to specify whether a Guest user will have to enter a Password or not. Depending on the option selected, the system will prompt the Guest

user to enter the Password. Select Guest Password option.

The Password provided should follow the Password restrictions set by the Administrator for the System. Enter the Guest Password.

Note: The Guest password will have to follow the password policy. If "password1" is a restricted password, a Guest user cannot have "password1" as a password.

Click Save to save Guest Login details or click Cancel to clear the fields.

A Guest user is however not bound to the following:

- Invalid Logins: A Guest user will not be disabled due to Invalid Logins provided.
- Change Password: A Guest user need not change the password based on a fixed period, which is however enforced on other users.
- Login from Multiple Work Stations: A Guest user can login from multiple workstations. The users will not be restricted from using the Guest Login.
- Password Change: A Guest user cannot change password by clicking on the Change Password.

The access to Infrastructure using the Guest login can be multiple.

Users can login to Infrastructure from the Login screen by providing Guest and Password (if required). This would take the user to the appropriate page depending on the Roles and Functions mapped to the Guest user.

- The Infrastructure Administrator should be careful while mapping Functions and Roles to a Guest user. For example, in case a Guest user is provided with Modifying Metadata, maintaining the changes made to a Metadata object will be difficult, as the system will track all the metadata objects with the Guest as the Modifier. Tracking and tracing changes will then become impossible. A user can have a link from an external system by having a Link to any Infrastructure site. However this is controlled by the allowable pages list, given to a GUEST user. This is maintained in urllist.cfg in ficweb/conf folder.

If the urllist.cfg contains the following

```
ficportal/Testing.jsp
```

```
fiv/OpenView.jsp
```

Any Guest user will be allowed to view/execute Testing.jsp and OpenView.jsp from ficportal and fiv contexts. The additions into

the CFG file will be done manually. The Infrastructure Administrator can add as many pages as required for a Guest user to access. The Administrator can also specify access based on wild card entries like ficportal/testing/*, in which case all pages under ficportal/testing folder will be accessible from Guest login. The wildcard character can be applied to complete folders only and not to a subset of files within a folder.

- Only the links specified in the urllist.cfg file can be accessed through the guest login.

Infrastructure Administration

Maintaining Security Management Details

Upon configuring the system, the next mandatory task you will have to perform is to create users and user groups, map user to the user groups, authorize users, specify the profiles of the users who will be accessing the system, map user groups to domains and roles, specify their functions, roles and domains they will be accessing and specify the holidays and restricted passwords. To fulfill this purpose, you are provided the **Administration** option.

Users who are mapped to System Administrator and System Authorizer roles can perform System Administration and Configuration functions.

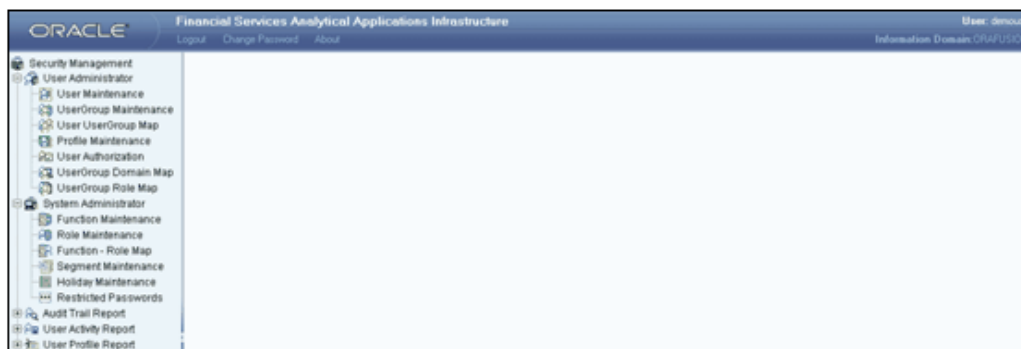
Pre-requisites

- Successful Completion of Infrastructure and related Software.
- Successful Completion of Infrastructure System Configuration Activities such as Server Details / Database Details / Information Domain / Configuration of Miscellaneous items.
- Infrastructure Administrator and Authorizer Id and Password.

Maintaining User Administrator Details

Introduction

The Administration option in the LHS menu of the Infrastructure main screen contains the Security Management option. Expand the Administration option and select Security Management in the LHS menu of the Infrastructure main screen. The Security Management screen is displayed.



The following options are available under Security Management in the LHS menu of the Security Management screen:

- User Administrator
- User Maintenance
- User Group Maintenance
- User Group User Map
- Profile Maintenance
- User Authorization

- User Group Domain Map
- User Group Role Map
- Infrastructure Administrator
- Function Maintenance
- Role Maintenance
- Function Role Map
- Segment Maintenance
- Holiday Maintenance
- Restricted Passwords
- Audit Trail Report
- User Activity Report
- User Profile Report

Administering Users

Using the User Administrator under Security Management, the Infrastructure Administrator can create new users and user groups, maintain profiles, authorize users, and map user groups to domains and roles.

The options available under User Administrator are:

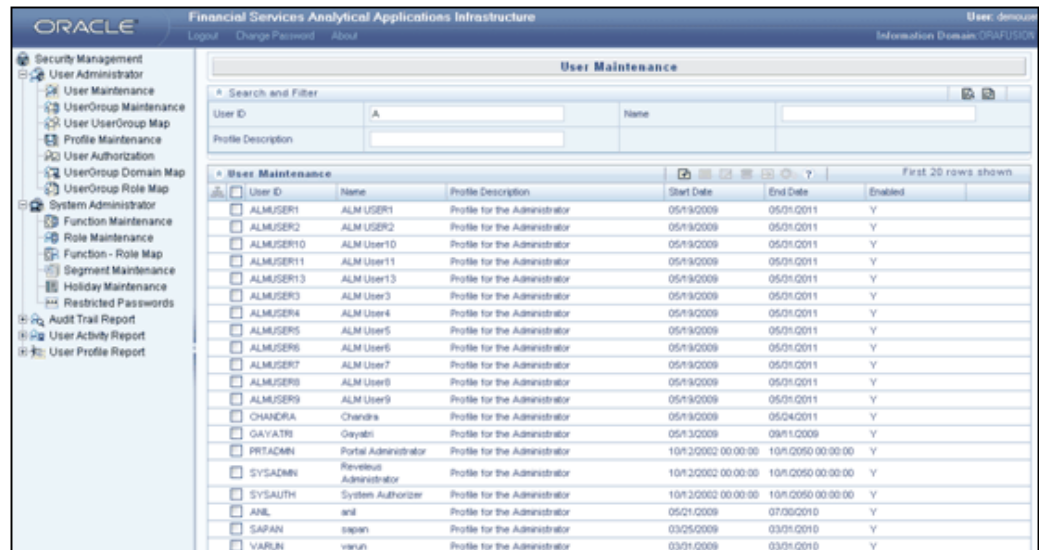
- User Maintenance
- UserGroup Maintenance
- User UserGroup Map
- Profile Maintenance
- User Authorization
- UserGroup Domain Map
- UserGroup RoleMap

Defining User Maintenance Details

The **User Maintenance** screen enables you to create, manage and modify user information.

Expand the Administration option and select **Security Management** in the LHS menu of the Infrastructure main screen. The Security Management screen is displayed.

Select the **User Maintenance** option under User Administrator. The User Maintenance screen is displayed. In this screen, you can create, modify or delete users.



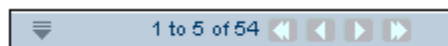
User ID	Name	Profile Description	Start Date	End Date	Enabled
ALMUSER1	ALM User1	Profile for the Administrator	05/19/2009	05/01/2011	Y
ALMUSER2	ALM User2	Profile for the Administrator	05/19/2009	05/01/2011	Y
ALMUSER10	ALM User10	Profile for the Administrator	05/19/2009	05/01/2011	Y
ALMUSER11	ALM User11	Profile for the Administrator	05/19/2009	05/01/2011	Y
ALMUSER13	ALM User13	Profile for the Administrator	05/19/2009	05/01/2011	Y
ALMUSER3	ALM User3	Profile for the Administrator	05/19/2009	05/01/2011	Y
ALMUSER4	ALM User4	Profile for the Administrator	05/19/2009	05/01/2011	Y
ALMUSER5	ALM User5	Profile for the Administrator	05/19/2009	05/01/2011	Y
ALMUSER6	ALM User6	Profile for the Administrator	05/19/2009	05/01/2011	Y
ALMUSER7	ALM User7	Profile for the Administrator	05/19/2009	05/01/2011	Y
ALMUSER8	ALM User8	Profile for the Administrator	05/19/2009	05/01/2011	Y
ALMUSER9	ALM User9	Profile for the Administrator	05/19/2009	05/01/2011	Y
CHANDRA	Chandra	Profile for the Administrator	05/19/2009	05/04/2011	Y
GAYATHRI	Gayatri	Profile for the Administrator	05/13/2009	09/11/2009	Y
PRTACMN	Portal Administrator	Profile for the Administrator	10/12/2002 00:00:00	10/10/2050 00:00:00	Y
SYSADMIN	Revelent Administrator	Profile for the Administrator	10/12/2002 00:00:00	10/10/2050 00:00:00	Y
SYSAUTH	System Authorizer	Profile for the Administrator	10/12/2002 00:00:00	10/10/2050 00:00:00	Y
ANL	anl	Profile for the Administrator	05/01/2009	07/06/2010	Y
SAPAN	sapan	Profile for the Administrator	03/05/2009	03/01/2010	Y
VARUN	varun	Profile for the Administrator	03/01/2009	03/01/2010	Y

The User Maintenance display grid will display the User IDs, Name, Profile Description, Start and End dates and whether the user is enabled, if there are any users already defined.

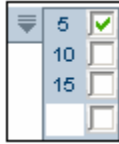
The Search and Filter panel helps you to search for an existing profile. You can search either by User ID, Profile Description or name. This is not a mandatory field.

Pagination Options

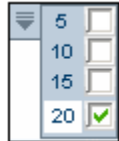
The Pagination toolbar above the display grid provides the various Pagination and Viewing options available.



The number of rows to be displayed at a time can be set by clicking the pagination option button in the toolbar. The Pagination Options dropdown will be displayed.



The option '5' will be selected by default. The other available options are 10 and 15 rows. You can also enter the required number of rows in the empty field and selecting the checkbox adjacent to it as shown below.



The toolbar also displays the number of total users available and the count of users that are displayed in the current view.

The navigation buttons are also available. Click > to go to the next page of users based on the number of rows that you have chosen to be viewed per page. Click >> to go to the last page. Click < to go to the previous page and << to go to the first page.

Hiding/Unhiding the Security Management Menu

The Left Hand Side and Right Hand Side screens are adjustable. The user can drag the screen as per their requirement.

There are 3 users that are created in platform during installation.

They are:

- SYSAUTH
- SYSADMN
- GUEST

USER ID	USER NAME
SYSAUTH	System Authorizer
SYSADMN	System Administrator
GUEST	Guest Login

Adding New User

Click the 'add' symbol button in the toolbar above the User Maintenance display grid to add a new user. The Create New User screen is displayed.

The screenshot shows a web browser window titled "Create New User - Microsoft Internet Explorer". The main content area is a form titled "User Maintenance". The form is divided into several sections:

- User Maintenance:** This section contains the following fields:
 - User ID * (text input)
 - User Name * (text input)
 - Address (text input with a dropdown arrow)
 - Date of Birth (calendar icon)
 - Designation (text input)
 - Profile Description * (dropdown menu, currently set to "Profile for the Administrator")
 - Start Date * (calendar icon)
 - End Date * (calendar icon)
 - Password * (password input)
- Notification Time:** This section contains the following fields:
 - Start (HHMM) (time input)
 - End (HHMM) (time input)
 - Email ID (text input)
 - Mobile No (text input)
 - Pager No (text input)
- Enable User:** This section contains two checkboxes:
 - Enable User (checkbox, currently unchecked)
 - Login on Holidays (checkbox, currently unchecked)
- User Info:** This section contains the following fields:
 - Created By (text input)
 - Created Date (text input)
 - Last Modified By (text input)
 - Last Modified Date (text input)

At the bottom of the form, there are two buttons: "Save" and "Cancel".

Specifying the User ID

Enter a **User ID** for the user you are creating.

Specifying the User Name

Enter the **User Name**. The User name defined in this screen will be displayed on the Infrastructure splash screen.

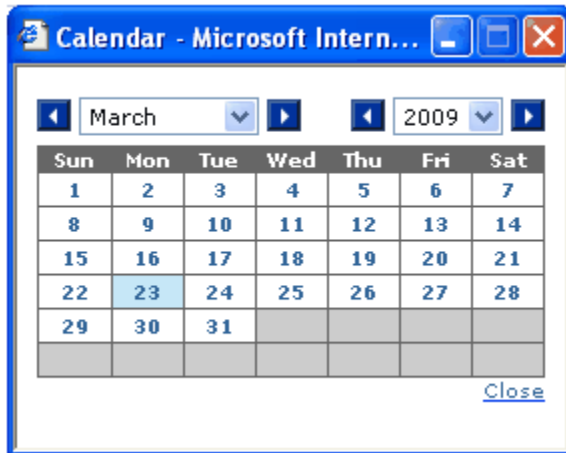
Specifying Contact Address

Enter the **Address** of the user. It could be the physical location from where the user is accessing the system.

Specifying Date Of Birth

Specify the Date of Birth of the user. Click the calendar symbol to open the pop-up

calendar.



Choose the birth date, month and year of the user. Click Close to close the calendar without saving the date/month/year selection.

Specifying Designation

Enter the **Designation** of the User in the field provided for Designation. If you do not want to enter the designation, retain the field as null.

Specifying Profile Description

Select the **Profile Description** for the user from the list of profiles in the drop-down list. The profile code is based on the time and day slot the user is enabled to access the system.

Specifying the User Start Date

Click the calendar symbol to open the pop-up calendar to specify the User Start Date. Choose the start date, month and year from when the user can access the system. Click Close to close the calendar without saving the date/month/year selection.

Specifying the User End Date

Click the calendar symbol to open the pop-up calendar to specify the User End Date. Choose the end date, month and year when the user Id expires. Click Close to close the calendar without saving the date/month/year selection.

Specifying Password

Enter the default **Password** that the user will use during the initial login. If a user has forgotten the password or enters the wrong password for the specified number of

attempts defined in the Configuration screen, the user is denied access. To enable access, enter a fresh password. The password that you specify will be displayed as asterisk.

Specifying Notification Time

Specify the **Notification Start Time** and End time in the fields provided for Notification time to specify the start and end time when the user can be sent alerts.

Specifying E-mail Id

Enter the e-mail Id of the User in the field provided for e-mail Id. It is not mandatory to enter an email id.

Specifying Mobile Number

Enter the Mobile Number of the User in the field provided for Mobile No. It is not mandatory to enter the mobile number.

Specifying Pager Number

Enter the Pager Number of the User in the field provided for Pager No. It is not mandatory to enter the pager number.

Enabling Users

Select the **Enable User** checkbox to activate the user's access to the system. A deselected box denies access to the user.

Enabling Login on Holidays

Select the Login on Holidays checkbox to allow users to access the system on holidays.

Viewing the User Information

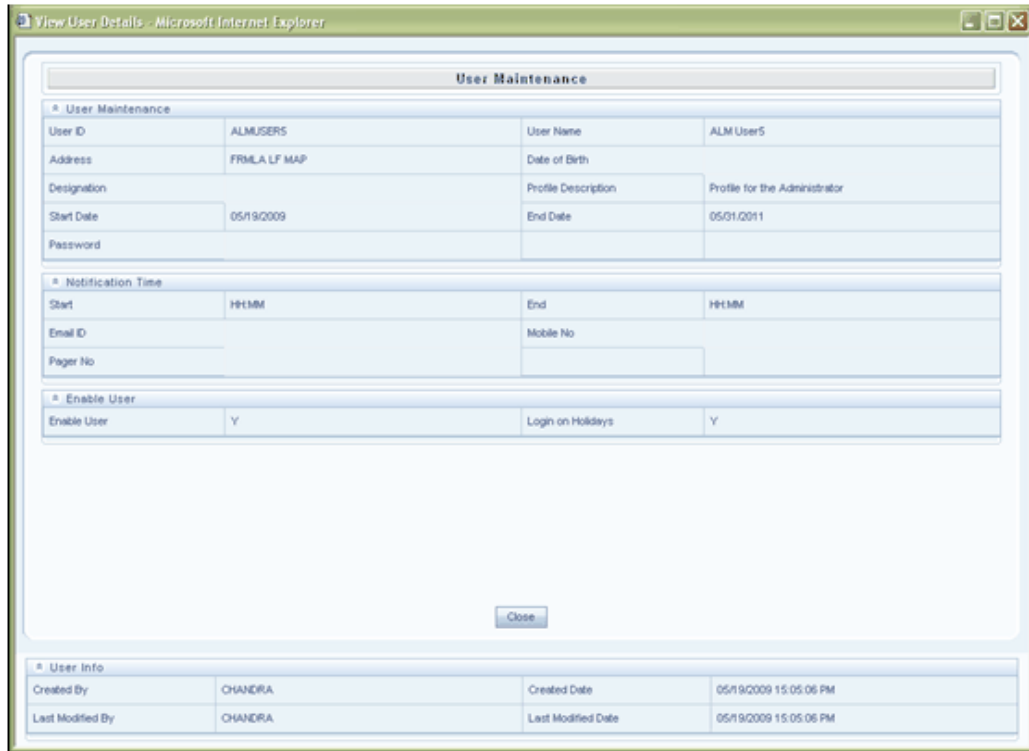
The User Info display grid at the bottom of the screen displays the Creation and modification details.

Click **Save** to save the new user that you have created.

Click **Cancel** to discard the user details that you have defined and close the window.

Viewing User Details

Select the checkbox adjacent to the user whose details you want to view and click the view button in the User Maintenance tool bar. The View User Details screen is displayed.



This screen displays details such as User ID, User Name, Address, Date of Birth, Designation, Profile Description, Start and End Date in which the user can access Infrastructure and the password for the selected user.

This screen also displays Notifications details, whether the user is Enabled and whether the user can log in on holidays

Click **Close** to close the window.

Modifying User Details

Select the checkbox adjacent to the user whose details you want to edit and click the Edit button in the User Maintenance tool bar. The Edit User Details screen is displayed.

You can edit all the details of the chosen user from this screen.

Note: You cannot edit the User ID. If you edit an authorized user's details, the user id gets unauthorized.

Click **Save** to save the user details that you have modified.

Click **Cancel** to discard the user details that you have modified.

Adding User Attributes

Select the checkbox adjacent to the user for whom you want to add additional attributes and click the Attributes button to open the User Attributes screen. This screen allows you to enter additional attributes for a user.

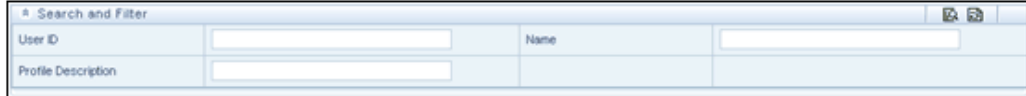
The User Name will be displayed. Enter the required details in the fields available in the window.

The attribute fields that are displayed in this window can be configured depending on your requirements. Please refer to the Infrastructure Installation Manual - Configuration for User Attributes Screen section for more details.

Click **Save** to save the user attributes. Click **Close** to close the window without adding any user attributes

Searching a User

Click the drop down button adjacent to Search and Filter to expand the Search and Filter display grid



Search and Filter	
User ID	<input type="text"/>
Name	<input type="text"/>
Profile Description	<input type="text"/>

If you want to search for a User ID, enter the search string in the User ID field and click the Search button in the top right corner of the display grid. All the users corresponding to the Search will get displayed on the screen.

If you want to search for a User Name, enter the search string in Name field. All the users corresponding to the Search will get displayed on the screen.

It is also possible to search by Profile Description. Enter the search string in the Profile Description field. All the users corresponding to the Search will get displayed on the screen.

Click Reset to reset the fields and collapse the Search and Filter display grid.

Deleting User Details

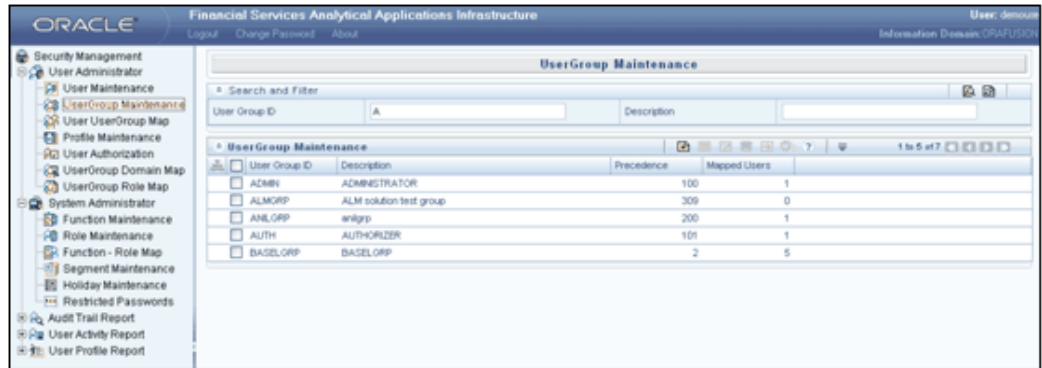
Select the checkbox adjacent to the user you want to delete in the User Maintenance display grid and click the Delete button.

A confirmation message is displayed. Click OK to confirm deletion or Cancel to close the message without deleting the user.

Defining User Group Maintenance Details

The **User Group Maintenance** screen enables you to manage, maintain and modify user group information. User Groups are created using this screen and users are mapped to this user group in the User Group User Map screen

In the Administration screen, select **User Group Maintenance** from the LHS menu to open the User Group Maintenance screen. In this screen, you can create, modify or delete user groups.



The User Group Maintenance display grid will display the User Group IDs, Description, Precedence and mapped Users, if there are any user groups already defined.

The Pagination toolbar above the display grid provides the various Pagination and Viewing options available which are the same as in the User Maintenance screen.

The navigation buttons are also available. Click > to go to the next page of user groups based on the number of rows that you have chosen to be viewed per page. Click >> to go to the last page. Click < to go to the previous page and << to go to the first page.

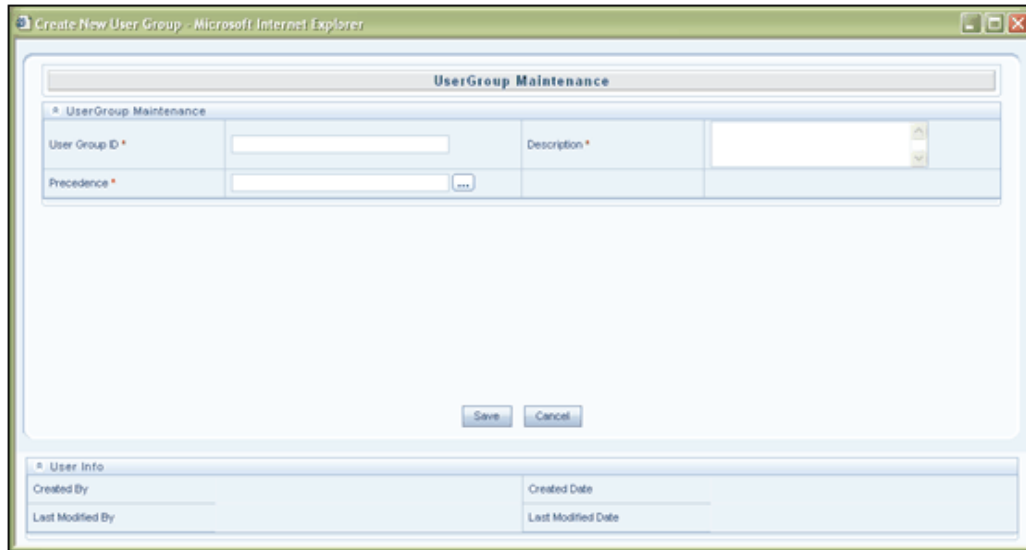
Three User Groups are created during installation. They are:

- ADMIN
- AUTH
- CWSADM

GROUP CODE	GROUP NAME
ADMIN	ADMIN
AUTH	AUTH
CWSADM	CWSADM

Adding New User Group Details

Click Add button to add a new User Group. The Create New User Group window is displayed. The User Group ID, Description and Precedence fields are displayed.



Specifying the User Group ID

Enter an ID for the User Group you are creating in the User Group ID field.

Specifying the Description

Enter a description for the User Group you are creating in the Description field.

Specifying the Precedence

Enter the Precedence value in the **Precedence** field.

A user may be mapped to multiple user groups. This precedence value mentioned here is required if Group Based Hierarchy Security setting is chosen in the Configuration screen. The Hierarchy Security definition applied in this case will be of the user group with the maximum precedence. The lower the value in the precedence column, the higher will be the precedence.

Refer to the Maintaining Configuration Details section for information on selecting the Hierarchy Security Type.

Click the Browse button adjacent to the Precedence field to view the existing precedence values applied to the various user groups. The Precedence LookUp window is displayed. The User Group Name and Precedence is displayed. Close the window after viewing the precedence details.

User Group Name	Precedence
BASELGRP	2
FUSIONGRP	3
VIURG	32
ADMIN	100
AUTH	101
DEMOGRP	103
PRTADMIN	105
GRP7	187
ANILGRP	200
JKGRP	222
CWSADM	300
ALMGRP	309
FSGROUP	310
GUIGRP	311
RTGRP	312

Click Save in the Create New User Group screen to save the new user group that you have created.

Click Cancel to clear/discard the user group details that you have defined.

Modifying User Group Details

Select the check box against the User Group name which you wish to modify and click Edit button in the User Group Maintenance toolbar. You can edit the User Group Description and Precedence of the chosen user group from this window.

(See Also: Adding User Group Details section above for the procedure on how to specify User Group details)

Click **Save** to save the User Group details that you have modified.

Click **Cancel** to discard the changes you have made to the User Group details.

Deleting a User Group

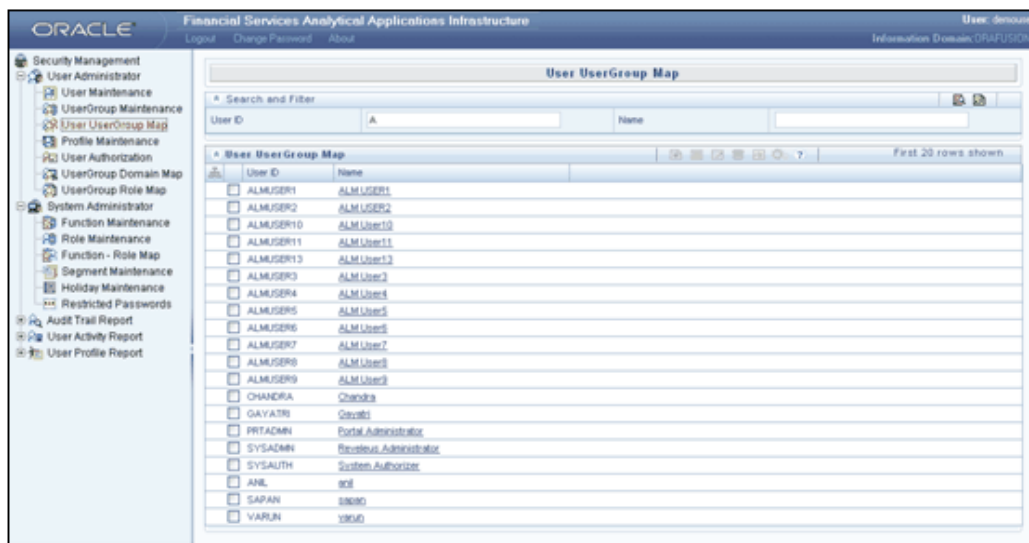
Select the check box against the User Group name which you wish to modify and click Delete button in the User Group Maintenance toolbar. A warning message notifies you

that you are about to delete a User Group. Click OK to confirm deletion or Cancel to close the message without deleting the User Group.

Note: You can delete only those User Group where no users are mapped to that group.

Mapping Users to User Group

The **User Group User Map** screen enables you to map users to user group. Select User Group User Map option in the LHS menu of the Security Management screen. The User UserGroup Map screen is displayed. In this screen, you can map users to user groups.



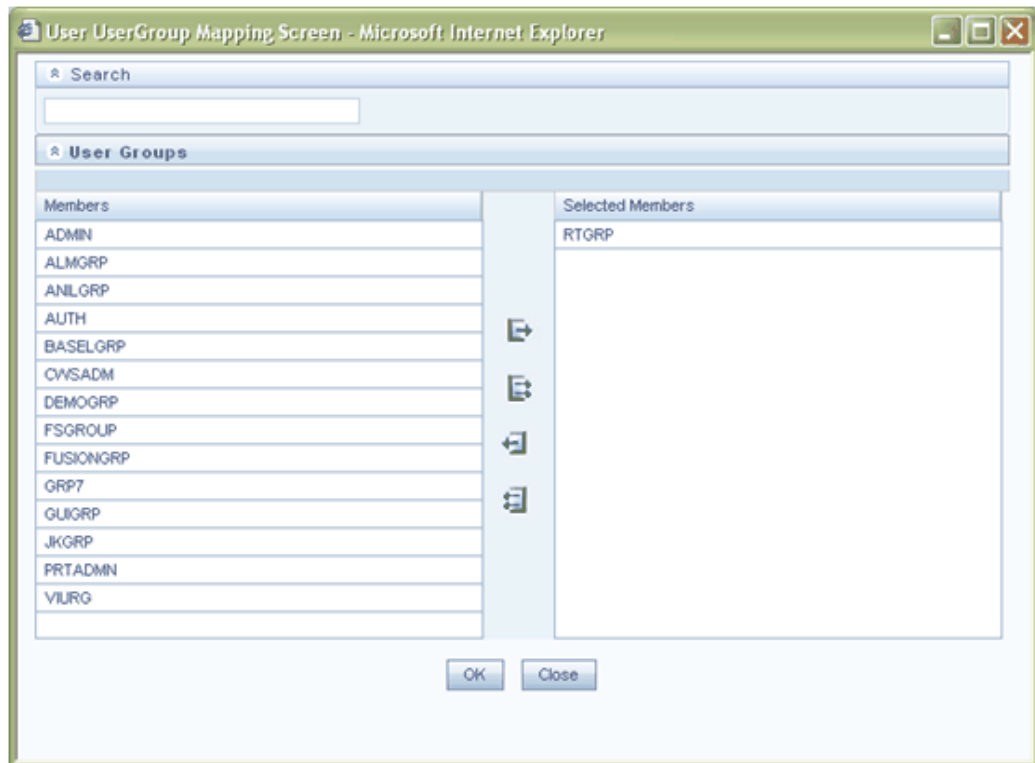
All the users created are listed in the User UserGroup Map display grid. The Pagination toolbar above the display grid provides the various Pagination and Viewing options available which are the same as in the User Maintenance screen.

The navigation buttons are also available. Click > to go to the next page of user groups based on the number of rows that you have chosen to be viewed per page. Click >> to go to the last page. Click < to go to the previous page and << to go to the first page.

Select the checkbox adjacent to the user who you wish to map to a User Group. The mapped Groups display grid is displayed.

Search and Filter	
User UserGroup Map	
User ID	Name
<input type="checkbox"/> ALMUSER1	ALM User1
<input type="checkbox"/> ALMUSER2	ALM User2
<input type="checkbox"/> ALMUSER10	ALM User10
<input type="checkbox"/> ALMUSER11	ALM User11
<input type="checkbox"/> ALMUSER13	ALM User13
<input type="checkbox"/> ALMUSER3	ALM User3
<input type="checkbox"/> ALMUSER4	ALM User4
<input type="checkbox"/> ALMUSER5	ALM User5
<input type="checkbox"/> ALMUSER6	ALM User6

Click the Map button to open the User Groups browser.

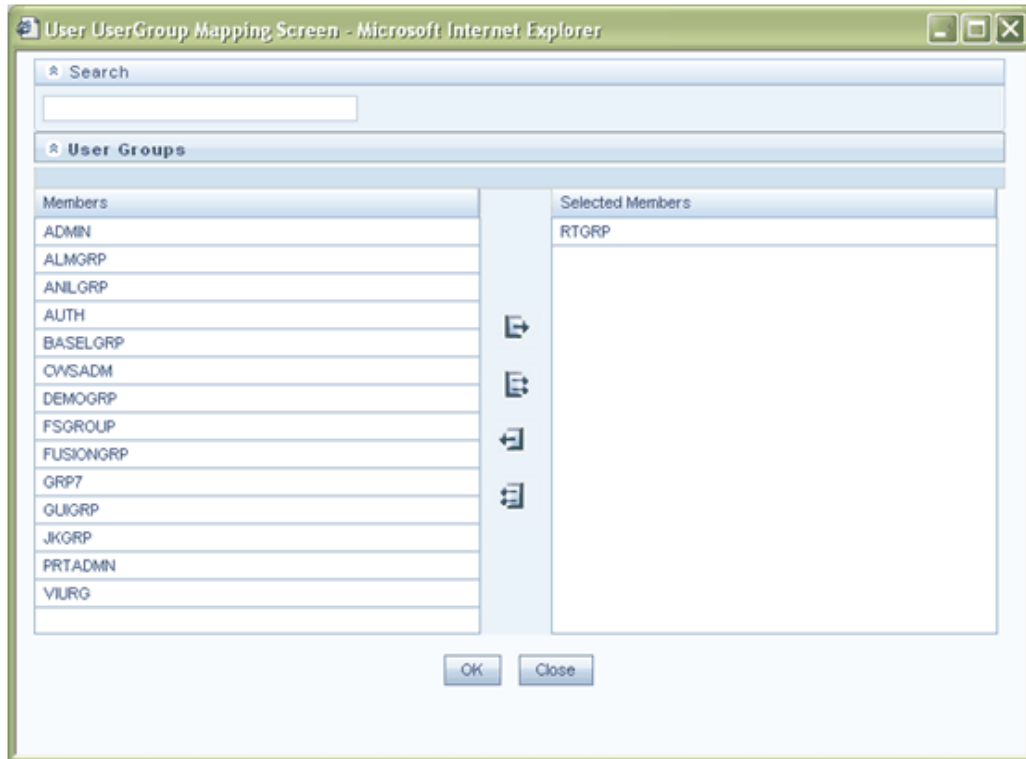


All the User Groups that are already mapped to an information domain and a role are listed under User Groups. Select the User Group to which the user is to be mapped and click > . The selected user group moves to the Selected Members pane. Click >> to map the user to all the user groups displayed.

Click < to move the mapped user group back to the User Groups pane. Click << to move all the mapped user groups back to the User Groups pane.

Click OK to save the mappings and return to the User UserGroup Map screen. Click Cancel to discard the mappings.

You can also search for a user group in the User Group browser by entering a search string in the Search field. The user groups that contain the search string will be highlighted.



The Users created during installation are mapped to User Groups as shown below.

USER NAME	GROUP NAME
SYSADMN	ADMIN
SYSADMN	CWSADM
SYSAUTH	AUTH

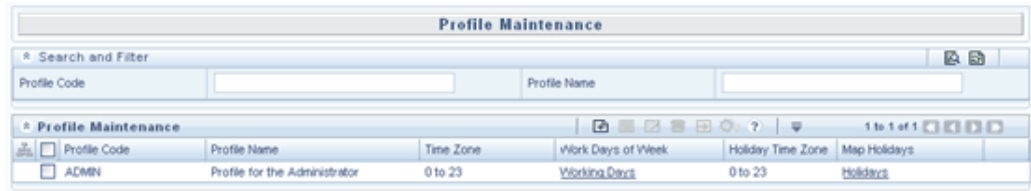
Note: A User can be mapped to one or more User Groups.

Defining Profile Maintenance Details

The Profile Maintenance function enables you to create profiles, specify the time zones, specify the working days of the week and map holidays to profiles.

From the LHS menu in the Security Management screen, click Profile Maintenance. The Profile Maintenance screen is displayed. In this screen, you can edit profiles; enter/change the time zone and day slots for users accessing the system. The screen

displays existing profiles with details such as the Profile Code and Name, Working and Holiday Time Zones and Work days and Holidays. Click the Working Days hyperlink to view the working days for the selected Profile. Click the Holidays hyperlink to view the holidays mapped to the selected Profile.



- On choosing the profile maintenance option, the screen will be shown in the view mode displaying the list of profiles and its related information.
- Infrastructure Administrator can add a new profile definition, view available profiles and edit/change the profile definitions from this screen.

The Pagination toolbar above the display grid provides the various Pagination and Viewing options available which are the same as in the User Maintenance screen.

The navigation buttons are also available. Click > to go to the next page of user groups based on the number of rows that you have chosen to be viewed per page. Click >> to go to the last page. Click < to go to the previous page and << to go to the first page.

Creating a New Profile

Click the 'Add' symbol button in the Profile Maintenance screen to create a new profile. The Add Profile window is displayed.

The screenshot shows a web browser window titled "Add Profile - Microsoft Internet Explorer". The main content area is a form titled "Profile Maintenance".

Profile Maintenance Section:

- Profile Code * (text input)
- Profile Name * (text input)
- Time Zone (dropdown menu, currently showing "0 To 0")
- Holiday Time Zone (dropdown menu, currently showing "0 To 0")

Work Days of Week Section:

Sunday	<input type="checkbox"/>	Monday	<input type="checkbox"/>
Tuesday	<input type="checkbox"/>	Wednesday	<input type="checkbox"/>
Thursday	<input type="checkbox"/>	Friday	<input type="checkbox"/>
Saturday	<input type="checkbox"/>		

Add Holidays Section:

Holidays (table with 0 to 0 of 0 items)

User Info Section:

Created By	Created Date
Last Modified By	Last Modified Date

Buttons: Save, Cancel

Specifying the Profile Code

Enter a code for the Profile you are creating in the Profile Code field. For easier maintenance, enter the profile code based on the functions that the user executes in the Profile Code field.

Example

ADMIN

Specifying Profile Name

Enter a name for the Profile you are creating in the **Profile Name field**.

Example

Profile for the Administrator

Specifying Time Zone

Select the Time Zone from the drop-down lists of time zones based on an hourly basis. This is the application server time. Choose the start and end time at which the user can access the system. The Time Zone could be based on the official or unofficial working hours. This will be applicable to all the days that are checked under Work Days of Week.

Specifying Holiday Time Zone

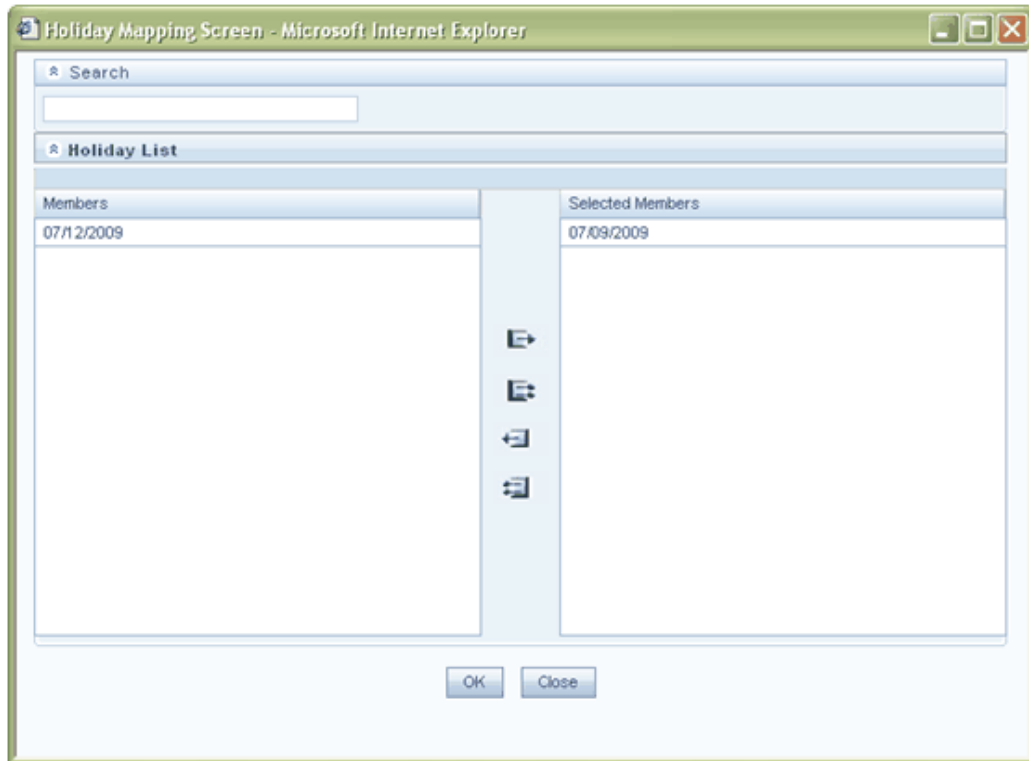
Select the **Holiday Time Zone** from the drop-down list box of time zones to choose the start and end time at which the user can access the system on holidays. You can use this to specify holiday and non-working time slots. This will be applicable only to weekly and general holidays.

Specifying the Working Days of the Week

Select the Working days of the Week by selecting the checkboxes for the required days. The time zone that you have specified in the earlier field will be applicable to the days that you select. You can specify a different time zone for days, which are not selected, which is effected by the selection of the Holiday Time Zone field.

Mapping Holidays

Click the Edit button in the Add Holidays display grid toolbar to open the Holiday List screen. You are required to enable the user to access the Infrastructure system during the holidays by mapping the profile to the holidays in this screen. Adding a holiday to the list Holidays is done from the Holiday Maintenance screen. Please refer to the Holiday Maintenance section for more information.



Select the holiday from the Members pane and click > to map it to the new profile. The selected holiday moves to the Selected Members pane. Click >> to map all the listed holidays to the new profile.

To unmap a holiday, select it in the Selected Members pane and click <. To unmap all the selected holidays, click <<. The user can access the Infrastructure application on the holidays mapped to his profile.

Click OK to save the mapping. Click Close to exit the window.

Note: You cannot map holidays to a profile before saving the profile.

Click Save in the Profile Maintenance screen to save the profile that you have created.

Modifying and Deleting Profile Details

To modify a profile, select the checkbox adjacent to the profile to be modified and click the edit button. The Modify Profile window is displayed which is similar to the Add Profile window. You can edit the Time Zone, Holiday Time Zone, Working days of the Week and the mapped holidays. Make the necessary modifications and click Save.

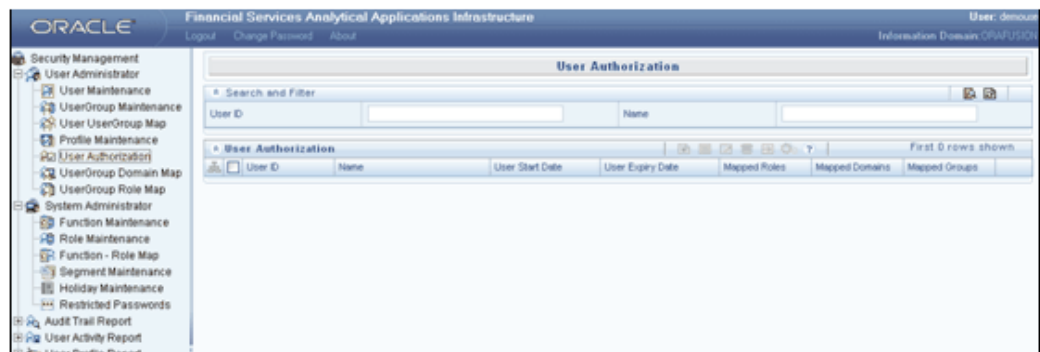
To delete a profile, select the checkbox adjacent to the profile to be deleted and click the Delete button. A warning message informs you that you are about to delete a profile. Click OK to confirm deletion or Cancel to close the message. On clicking OK, a confirmation message will be displayed stating "The Profile has been deleted".

Authorizing a User

The User Authorization function enables you to authorize a user before he is allowed to access Infrastructure. This function restricts unauthorized access.

The System Authorizer can authorize users to access the system through this screen. The System Authorizer has to authorize the user id(s) created by the Systems Administrator for the user to access the system.

In the Security management LHS menu, click User Authorization. The User Authorization screen is displayed. As a System Authorizer, you can authorize users to access the system through this screen.



- No users can login unless authorized by the Systems Authorizer.
- A user cannot be authorized if no role or domain is mapped to the user.
- The user will be listed in the User Authorization screen only if the user is mapped to a user group.
- The User Administrator option screen will show list of available Users for Authorization. By default, the users will be displayed in Alphabetical order and the user name, start date, end date, mapped roles and mapped domains will be listed.
- System Authorizer can view the available user ids which are not authorized.

The Pagination toolbar above the display grid provides the various Pagination and Viewing options available which are the same as in the User Maintenance screen.

The navigation buttons are also available. Click > to go to the next page of user groups based on the number of rows that you have chosen to be viewed per page. Click >> to go to the last page. Click < to go to the previous page and << to go to the first page.

Details of the unauthorized user such as the User ID, Name, User Start Date and User Expiry Date are displayed. You can also view details such as the Mapped Roles, Domains and Groups. The System Authorizer cannot edit any of these details.

Click the Mapped Roles link to view the roles mapped to the selected user.

User Authorization							
User ID	Name	User Start Date	User Expiry Date	Mapped Roles	Mapped Domains	Mapped Groups	First 1 rows shown
<input checked="" type="checkbox"/>	LOKESH	LOKESH	07/09/2009	07/19/2011	Mapped Roles	Mapped Domains	Mapped Groups
LOKESH							
Mapped Roles							
Sr Compliance Officer							
System Authorizer							
Data Centre Manager							
KRI Approver							
KRI Coordinator							

Click the Mapped Domains link to view the domains mapped to the user.

User Authorization							
User ID	Name	User Start Date	User Expiry Date	Mapped Roles	Mapped Domains	Mapped Groups	First 1 rows shown
<input checked="" type="checkbox"/>	LOKESH	LOKESH	07/09/2009	07/19/2011	Mapped Roles	Mapped Domains	Mapped Groups
LOKESH							
Mapped Domains							
FUSIONUT-FUSIONUT							
FUSION-RTSEG							
FUSION-GLISEG							
ORAFUSION-ora2							
ORAFUSION-orafusion							

Click the Mapped Groups link to view the user groups to which the user is mapped.

User Authorization							
User ID	Name	User Start Date	User Expiry Date	Mapped Roles	Mapped Domains	Mapped Groups	First 1 rows shown
<input checked="" type="checkbox"/>	LOKESH	LOKESH	07/09/2009	07/19/2011	Mapped Roles	Mapped Domains	Mapped Groups
LOKESH							
Mapped Groups							
DEMOGRP							



to authorize the user. On authorizing a user, a system message will be displayed saying that the **User has been Authorized**.

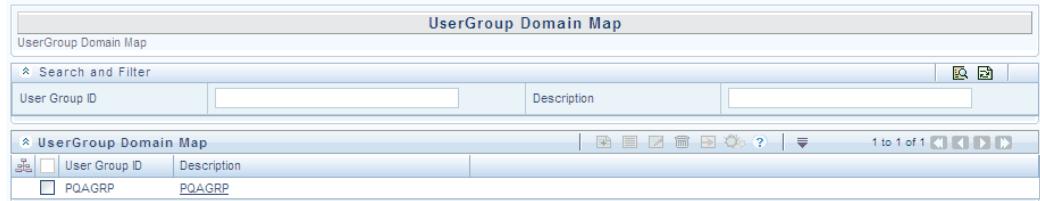
You can also search for a user. Click the expand button adjacent to Search and Filter. The grid expands to display the User ID and Name fields. Enter a search string in any of these fields and click Search. The users that contain the search string will be highlighted. Click the Reset button to reset the fields.

Search and Filter	
User ID	<input type="text"/>
Name	<input type="text"/>

Mapping User Group/s to Domain/s

The User Group Domain Map screen allows you to map user groups to selected domains, thereby ensuring confidentiality of restricted information domains.

In the Security Management screen LHS menu, click UserGroup DomainMap. The User Group Domain Map screen is displayed. You can map user groups to different domains in this screen. This mapping depends on the domains that the user group is authorized to access.



Note: On choosing the User Group- Domain Mapping option, the screen will show list of available User Groups. By default, the user groups will be displayed in Alphabetical order and on selecting a user group, the list of available mapped domain-segments (if any) will be showed.

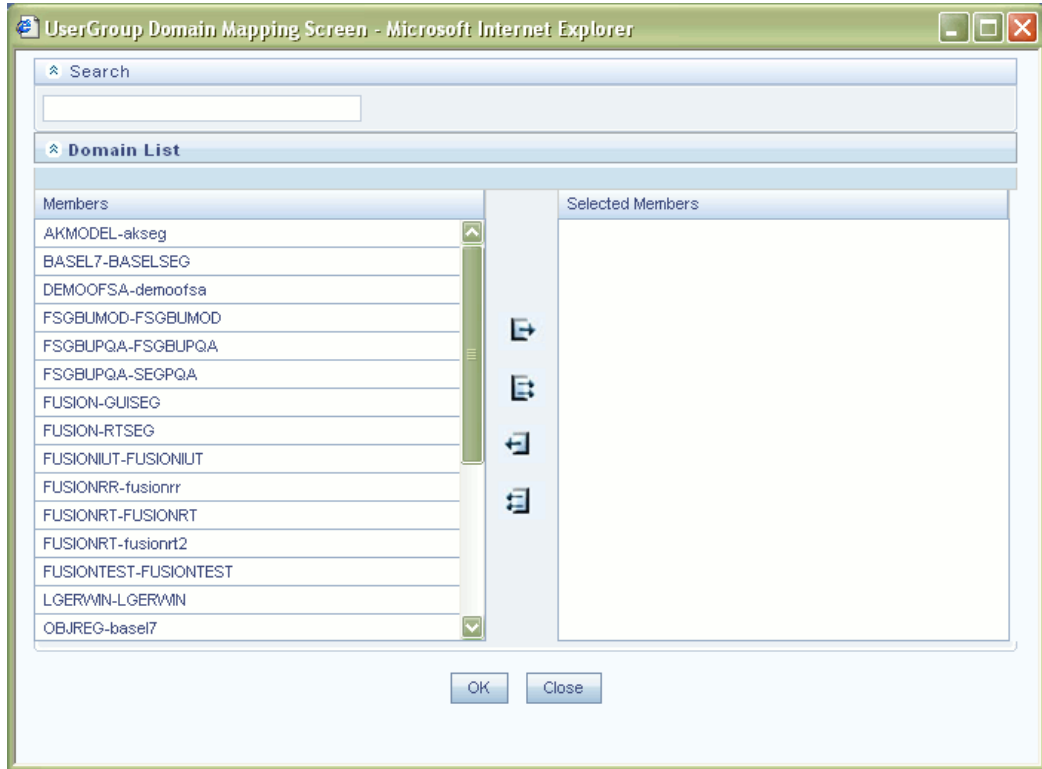
Infrastructure Administrator can view the available User Group - Domain mapping, Un-map user group(s) from a specific domain-segment and Map additional domain-segment to a specific user group using this option.

The Pagination toolbar above the display grid provides the various Pagination and Viewing options available which are the same as in the User Maintenance screen.

The navigation buttons are also available. Click > to go to the next page of user groups based on the number of rows that you have chosen to be viewed per page. Click >> to go to the last page. Click < to go to the previous page and << to go to the first page.

Select the check box adjacent to the User Group that you wish to map to a domain. The Mapped Domains display grid is displayed with the mapped domains if any.

Click the map button in the Mapped Domains toolbar. The Domain browser displays all the available domains.



Select the domain group you want to map to the User Group from the Members pane and click >. The selected domain will move to the Selected Members pane. You can select more than one domain group per User Group. Click >> to map all the listed domains to the selected user group. You can unmap a domain from the User Group by highlighting the domain in the Selected Members pane and clicking <. To unmap all the selected domains, click <<.

Click Save to save the User Group - Domain Mapping.

You can also search for a User Group using the Search and Filter option available.

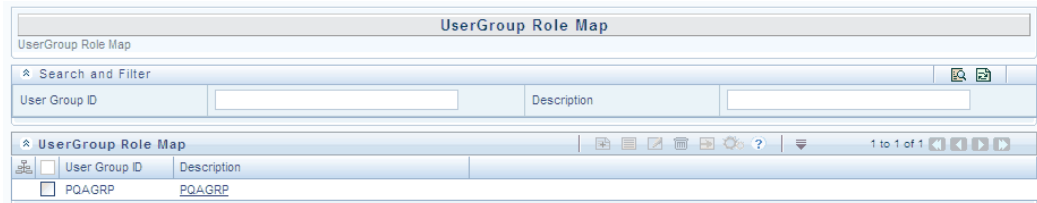
Mapping User Group/s to Role/s

The **User Group Role Map** screen allows you to map User Groups to assigned roles. Each of the roles defined has specific functions attached to them. A user in a User Group mapped to a role can perform only those functions that the User Group is mapped to.

The Groups are mapped to Roles as shown below.

GROUP CODE	ROLE CODE
ADMIN	SYSADM
AUTH	SYSATH
CWSADM	CWSADMIN

In the LHS menu of the Security Management screen, click User Group Role Map. The User Group Role Map screen is displayed. You can map User Groups to different roles in this screen. These roles will be based on the functions that a User Group is required to perform.



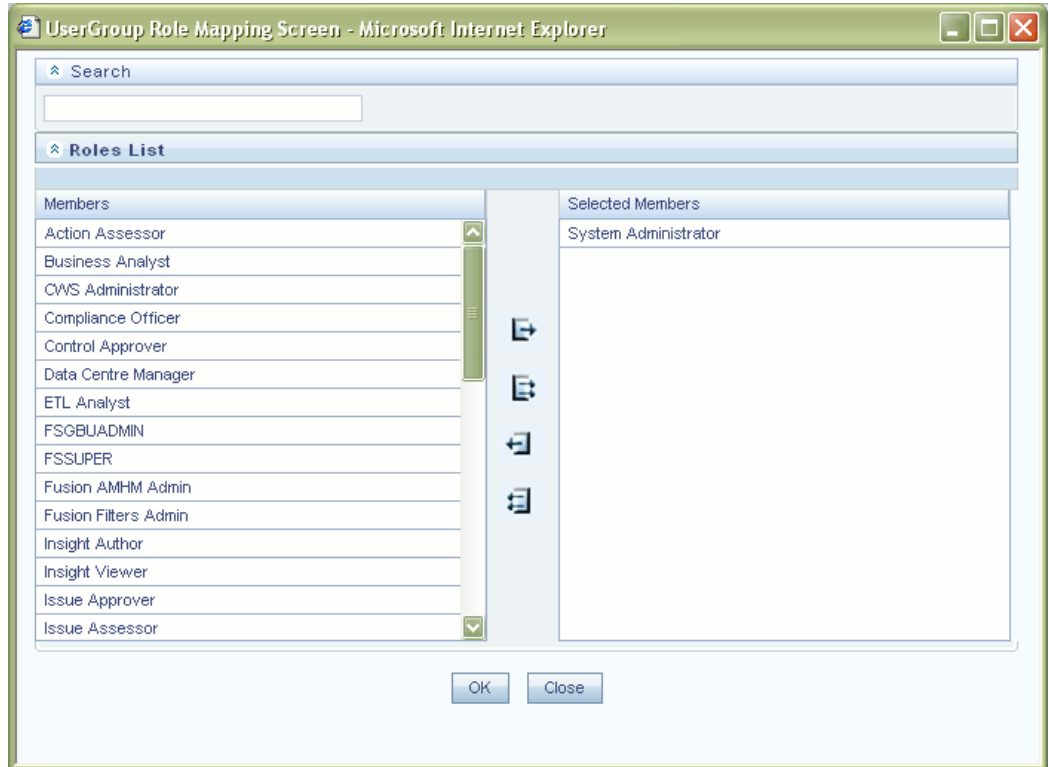
- Only roles to which functions are mapped will be displayed.
- On choosing the User Group Role Map option, the screen will show the list of available Users Groups in Alphabetical order.
- Infrastructure Administrator can view the available User Group Role Mapping, Un-map User Group(s) and Roles, Map additional role(s) to a specific User Group using this option.

The Pagination toolbar above the display grid provides the various Pagination and Viewing options available which are the same as in the User Maintenance screen.

The navigation buttons are also available. Click > to go to the next page of user groups based on the number of rows that you have chosen to be viewed per page. Click >> to go to the last page. Click < to go to the previous page and << to go to the first page.

Select the checkbox adjacent to the User Group ID to which you want to map a role. You can also search for a User Group using the Search and Filter option available.

If any roles are already mapped, they will be displayed below the User Groups Role Map display grid.



Select the role/s you want to map to the User Group from the Members pane and click the > button. The selected role will move to the Selected Members pane. You can select more than one role per User Group. To map all the available roles to a user group, click >> . You can unmap a role from a user group by highlighting the role in the Selected Members pane and clicking < . To unmap all the roles from a user group, click << .

Click OK to save the User Group Role mapping. A confirmation message will be displayed.

Click OK. Click Close to close the Roles Browser window. The mapped role(s) will be listed in the mapped Roles display grid.

System Administration

Introduction

Through the Infrastructure Administrator menu, the Administrator can create new functions, roles, map functions to roles and maintain group information, list of holidays and restricted passwords. The infrastructure administrator can access the Function Maintenance, Role Maintenance, Function Role Map, Segment Maintenance, Holiday Maintenance and Restricted Password List options by clicking on them to open the relevant screens.

Pre-requisites

- Successful Installation of Infrastructure and related Software.
- Successful Completion of Infrastructure System Configuration Activities such as Server Details / Database Details / Information Domain and Configuration of Miscellaneous items.
- Infrastructure Administrator and Authorizer User Id and Password.

Note: The Information domain name and JNDI name should be same.

Accessing the Infrastructure Administrator menu

The Administration option in the LHS menu of the Infrastructure main screen contains the Security Management option. Expand the Administration option and select Security Management in the LHS menu of the Infrastructure main screen. The Security Management screen is displayed.

The following options are available under Security Management in the LHS menu of the Security Management screen under Infrastructure Administrator option:

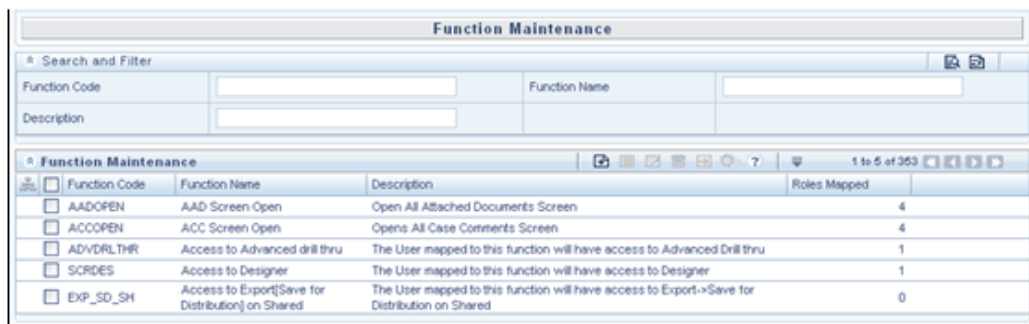
Infrastructure Administrator

- Function Maintenance
- Role Maintenance
- Function Role Map
- Segment Maintenance
- Holiday Maintenance
- Restricted Passwords

Defining Function Maintenance Details

A function is a privilege or rights to access a module/component in the system modify/define metadata. Function Maintenance allows you to create functions, which assign the privilege/right to define/modify metadata. This ensures that the user can execute only those functions that are specific to the user's role.

In the Security Management screen LHS menu, select the Function Maintenance option. The Function Maintenance screen is displayed. You can view the available functions and edit/change the Function Name and Function Description in this screen. This screen also displays the number of Roles mapped to each function. The mapping of roles to functions is done from the Function Role Map screen.



Function Code	Function Name	Description	Roles Mapped
<input type="checkbox"/> AADOPEN	AAD Screen Open	Open All Attached Documents Screen	4
<input type="checkbox"/> ACCOPEN	ACC Screen Open	Opens All Case Comments Screen	4
<input type="checkbox"/> ADV/DRLTHR	Access to Advanced drill thru	The User mapped to this function will have access to Advanced Drill thru	1
<input type="checkbox"/> SCRDES	Access to Designer	The User mapped to this function will have access to Designer	1
<input type="checkbox"/> EXP_SD_SH	Access to Export(Save for Distribution) on Shared	The User mapped to this function will have access to Export->Save for Distribution on Shared	0

Example

The function AADOPEN lets you Open All Attached Documents

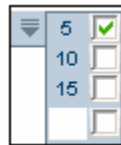
Note: On choosing the Function Maintenance option, the Function Maintenance screen will be shown in the view mode displaying the first 5 functions with Function Code / Function Name / Function Description / Number of roles mapped.

Pagination Options

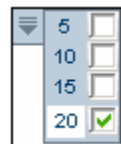
The Pagination toolbar above the display grid provides the various Pagination and Viewing options available.



The number of rows to be displayed at a time can be set by clicking the Pagination Options button in the toolbar. The Pagination Options dropdown will be displayed.



The option '5' will be selected by default. The other available options are 10 and 15 rows. You can also enter the required number of rows in the empty field and selecting the checkbox adjacent to it as shown below.



The toolbar also displays the total number of functions available and the count of functions that are displayed in the current view.

The navigation buttons are also available. Click > to go to the next page of functions based on the number of rows that you have chosen to be viewed per page. Click >> to go to the last page. Click < to go to the previous page and << to go to the first page.

Hiding/Unhiding the Security Management Menu

The Left Hand Side and Right Hand Side screens are adjustable. The user can drag the screen as per their requirement.

Searching for a Function

You can also search for a Function. Click the expand button adjacent to Search and Filter. The grid expands to display the Function Code, Name and Description fields. Enter a search string in any of these fields and click Search . The Functions that contain the search string will be displayed. Click the Reset button to reset the search fields.

Function Maintenance			
Search and Filter			
Function Code	<input type="text" value="c"/>	Function Name	<input type="text"/>
Description	<input type="text"/>		
Function Maintenance			
<input type="checkbox"/>	Function Code	Function Name	Description
<input type="checkbox"/>	AOCOPEN	AOC Screen Open	Opens All Case Comments Screen
<input type="checkbox"/>	SCRDES	Access to Designer	The User mapped to this function will have access to Designer
<input type="checkbox"/>	SCRRLN	Access to Runner	The User mapped to this function will have access to Runner
<input type="checkbox"/>	SCH_SH	Access to Schedule on Shared	The User mapped to this function will have access to Schedule on Shared
<input type="checkbox"/>	SCRVIEW	Access to Viewer	The User mapped to this function will have access to Viewer
			Roles Mapped
			4
			1
			1
			0
			1

Adding a New Function

In the Function Maintenance toolbar, click the Add button to create a new function. The Add Function screen is displayed.

Specifying a Function Code

Enter a Function Code for the function you are creating.

Example

DEFUSR

Specifying a Function Name

Enter the Function Name.

Example

Defi User

Note: While entering the function name, the permissible special characters are hyphen and space.

Specifying the Function Description

Enter the Function Description.

Example

The user mapped to this function will have Defi User rights

Click 'Save' to save the new function that you have created.

Click 'Cancel' to discard the function details that you have defined.

Modifying/Deleting Function Details

Select the check box adjacent to the Function to be modified and click the Edit button. The Edit Function window is displayed. You can edit the name and description of the chosen function.

Note: You cannot edit the Function Code.

Click Save to save the function details that you have modified.

Click Cancel to discard the function details that you have modified.

To delete a function, select the check box adjacent to the Function to be deleted and click Delete button. A warning message notifies you that you are about to delete a function. Click OK to confirm deletion or Cancel to close the message without deleting the function.

Note: You can delete only those functions that you have created for which the Delete button is enabled.

Following are the Functions that are created during installation along with their description.

FUNCTION CODE	FUNCTION NAME	FUNCTION DESCRIPTION
ADAPTERS	Run Adapters	The user mapped to this function will have rights to run infrastructure adapters
ADDPROCESS	Add Process tree	The user mapped to this function can add the process tree

FUNCTION CODE	FUNCTION NAME	FUNCTION DESCRIPTION
ADDRULE	Add Rule	The user mapped to this function can add the rules
ADDRUN	Add Run	The user mapped to this function can add the run
ADMINSR	Administration Screen	The user mapped to this function can access the Administration Screen
ADVDRLTR	Access to Advanced drill thru	The User mapped to this function will have access to Advanced Drill thru
ALDADD	Add Cube	The user mapped to this function can add cubes
ALDATH	Authorize Cube	The user mapped to this function can authorize cubes
ALDDEL	Delete Cube	The user mapped to this function will have rights to delete cubes
ALDMOD	Modify Cube	The user mapped to this function can modify cubes
ALDVIW	View Cube	The user mapped to this function can view cubes
ALSADD	Add Alias	The user mapped to this function can add Alias
ALSATH	Authorize Alias	The user mapped to this function can authorize Alias
ALSDEL	Delete Alias	The user mapped to this function will have rights to delete Alias
ALSMOD	Modify Alias	The user mapped to this function can modify Alias
ALSVIW	View Alias	The user mapped to this function can view Alias

FUNCTION CODE	FUNCTION NAME	FUNCTION DESCRIPTION
APPSRVR	Application Server Screen	The user mapped to this function can access the Application Server Screen
ATHPROCESS	Authorize Process Tree	The user mapped to this function can authorize Process Tree
ATHRDM	Authorize RDM	The user mapped to this function can authorize RDM
ATHRULE	Authorize Rule	The user mapped to this function can authorize the rule
ATHRUN	Authorize Run	The user mapped to this function can authorize run
ATTADD	Add Attributes	The user mapped to this function can add Hierarchy Attributes
ATTATH	Authorize Attributes	The user mapped to this function can authorize Hierarchy Attributes
ATTDEL	Delete Attributes	The user mapped to this function can delete Hierarchy Attributes
ATTMOD	Modify Attributes	The user mapped to this function can add Hierarchy Attributes
ATTVIW	View Attributes	The user mapped to this function can view Hierarchy Attributes
AUD_TRL	Audit Trail Report Screen	The user mapped to this function can access the Audit Trail Report Screen
AUTH_MAP	Authorize Map(s)	The user mapped to this function can AUTHORIZE Map definitions
AUTH_SCR	Metadata Authorize Screen	The user mapped to this function can see Authorization Screen
BATPRO	Batch Processing	The user mapped to this function will have rights to process batch

FUNCTION CODE	FUNCTION NAME	FUNCTION DESCRIPTION
BBATH	Authorize BBs	The user mapped to this function can authorize BBs
BGCREATION	Batch Group Creation	The user mapped to this function will have rights to Creating Batch Group
BGEXEC	Batch Group Execution	The user mapped to this function will have rights to Execute Batch Group
BGMONITOR	Batch Group Monitor	The user mapped to this function will have rights to Monitor Batch Group Execution
BGRESTART	Batch Group Restart	The user mapped to this function will have rights to Restart Batch Group Execution
BPROCADD	Add Business Processor	The user mapped to this function can add business processors
BPROCATH	Authorize Business Processor	The user mapped to this function can authorize business processors
BPROCDEL	Delete Business Processor	The user mapped to this function can delete business processors
BPROCMOD	Modify Business Processor	The user mapped to this function can modify business processors
BPROCVIW	View Business Processor	The user mapped to this function can view business processors
CFEDEF	Cash Flow Equation Definition	The user mapped to this function can view/add the Cash Flow Equation definitions
CFG	Configuration	The user mapped to this function will have access to configuration details
COMADD	Add Computed Measure	The user mapped to this function can add computed measures

FUNCTION CODE	FUNCTION NAME	FUNCTION DESCRIPTION
COMADV	Computed Measure Advanced	The user mapped to this function will have rights to the advanced options of computed measure
COMATH	Authorize Computed Measure	The user mapped to this function can authorize computed measures
COMDEL	Delete Computed Measure	The user mapped to this function will have rights to delete computed measures
COMMODO	Modify Computed Measure	The user mapped to this function can modify computed measures
COMVIW	View Computed Measures	The user mapped to this function can view computed measures
CRTRDM	Add RDM	The user mapped to this function can Add RDM
CRT_MAP	Create Map	The user mapped to this function can CREATE/SAVEAS Map definitions
CWSDOCMGMT	Document Management Access	The user mapped to this function can use Document Management APIS via Callable Services Framework
CWSEXTWSAS	Call Remote Web Services	The user mapped to this function can call web services configured in the Callable Services Framework
CWSHIERRFR	Refresh Hierarchies	The user mapped to this function can refresh hierarchies through the Callable Services Framework
CWSPR2ACCS	Execute Runs - Rules	The user mapped to this function can execute runs and rules through the Callable Services Framework
CWSSMSACCS	Remote SMS Access	The user mapped to this function can access SMS apis through the Callable Services Framework

FUNCTION CODE	FUNCTION NAME	FUNCTION DESCRIPTION
CWSUMMACCS	Remote UMM Access	The user mapped to this function can access UMM apis through the Callable Services Framework
CWS_STATUS	Result of request - Status of all	The user mapped to this function can access requests status through the Callable Services Framework
CWS_TRAN	Result of own request only	The user mapped to the function can access own requests status using Callable Services Framework
DATADD	Add Dataset	The user mapped to this function can add datasets
DATATH	Authorize Dataset	The user mapped to this function can authorize datasets
DATDEL	Delete Dataset	The user mapped to this function will have rights to delete datasets
DATMOD	Modify Dataset	The user mapped to this function can modify datasets
DATVIW	View Dataset	The user mapped to this function can view datasets
DBATH	Authorize DBs	The user mapped to this function can authorize DBs
DBD	Database Details	The user mapped to this function will have access to database details
DBS	Database Server	The user mapped to this function will have access to Database Server details
DEEADD	Add Derived Entities	The user mapped to this function can add derived entities
DEEATH	Authorize Derived Entities	The user mapped to this function can authorize derived entities

FUNCTION CODE	FUNCTION NAME	FUNCTION DESCRIPTION
DEEDEL	Delete Derived Entities	The user mapped to this function can delete derived entities
DEEMOD	Modify Derived Entities	The user mapped to this function can modify derived entities
DEEVIW	View Derived Entities	The user mapped to this function can view derived entities
DEFADM	Defi Administrator	The user mapped to this function will have Defi Administration rights
DEFQADM	Defq Administrator	The user mapped to this function will have Defi Administration rights
DEFQUSR	Defq User	The user mapped to this function will have Defi user rights
DEFUSR	Defi User	The user mapped to this function will have Defi user rights
DELPROCESS	Delete Process	The user mapped to this function can delete the process
DELRDM	Delete RDM	The user mapped to this function can delete RDM
DELRULE	Delete Rule	The user mapped to this function can delete the rules
DELRUN	Delete Run	The user mapped to this function can delete the run
DEL_MAP	Delete Map	The user mapped to this function can DELETE Map definitions
DESRDM	Design RDM	The user mapped to this function can design RDM
DESREV	Design Infrastructure Menu Screen	The user mapped to this function can access the Design Infrastructure Menu Screen

FUNCTION CODE	FUNCTION NAME	FUNCTION DESCRIPTION
DIMADD	Add Dimension	The user mapped to this function can add dimensions
DIMATH	Authorize Dimension	The user mapped to this function can authorize dimensions
DIMDEL	Delete Dimension	The user mapped to this function will have rights to delete dimensions
DIMMOD	Modify Dimension	The user mapped to this function can modify dimensions
DIMVIW	View Dimension	The user mapped to this function can view dimensions
DQLADD	Data Quality Add	This function is for Data Quality Map applet
ENABLEUSR	Enable User Screen	The user mapped to this function can access the Enable User Screen
ETLDEF	DI Designer	Defining Application, Extract, Flat-File, Mapping
ETLDTQ	DTDQ	Data Quality Rules and Data Transformation
ETLUSR	DI User	The user mapped to this function will be a Data Integrator user
EXPMO	Export Metadata	The user mapped to this function can Export Metadata
FUNCMAINT	Function Maintenance Screen	The user mapped to this function can access the Function Maintenance Screen
FUNCROLE	Function Role Map Screen	The user mapped to this function can access the Function Role Map Screen
FU_ATR_ADD	Fusion Add Attributes	The user mapped to this function can Create New Attributes

FUNCTION CODE	FUNCTION NAME	FUNCTION DESCRIPTION
FU_ATR_CPY	Fusion Copy Attributes	The user mapped to this function can Copy Attributes
FU_ATR_DD	Fusion Attributes - View Dependent Data	The user mapped to this function can View Dependent Data for Attributes
FU_ATR_DEL	Fusion Delete Attributes	The user mapped to this function can Delete Attributes
FU_ATR_EDT	Fusion Edit Attributes	The user mapped to this function can Edit Attributes
FU_ATR_HP	Fusion Attribute Home Page	The user mapped to this function can view Attribute Home Page
FU_ATR_VIW	Fusion View Attributes	The user mapped to this function can View Attributes
FU_EXP_ADD	Fusion Add Expressions	The user mapped to this function can Create New Expressions
FU_EXP_CPY	Fusion Copy Expressions	The user mapped to this function can Copy Expressions
FU_EXP_DD	Fusion View Dependency Expressions	The user mapped to this function can View Dependent Data for Expressions
FU_EXP_DEL	Fusion Delete Expressions	The user mapped to this function can Delete Expressions
FU_EXP_EDT	Fusion Edit Expressions	The user mapped to this function can Edit Expressions
FU_EXP_HP	Fusion Expns Home Page	The user mapped to this function can view Expressions Home Page
FU_EXP_VIW	Fusion View Expressions	The user mapped to this function can View Expressions
FU_FIL_ADD	Fusion Add Filters	The user mapped to this function can Create New Filters

FUNCTION CODE	FUNCTION NAME	FUNCTION DESCRIPTION
FU_FIL_CPY	Fusion Copy Filters	The user mapped to this function can Copy Filters
FU_FIL_DD	Fusion Filters - View Dependent Data	The user mapped to this function can View Dependent Data for Filters
FU_FIL_DEL	Fusion Delete Filters	The user mapped to this function can Delete Filters
FU_FIL_EDT	Fusion Edit Filters	The user mapped to this function can Edit Filters
FU_FIL_HP	Fusion Filters Home Page	The user mapped to this function can view Filters Home Page
FU_FIL_SQL	Fusion Filters - View SQL	The user mapped to this function can view SQL for Filters
FU_FIL_VIW	Fusion View Filters	The user mapped to this function can View Filters
FU_HIE_ADD	Fusion Add Hierarchies	The user mapped to this function can Create New Hierarchies
FU_HIE_CPY	Fusion Copy Hierarchies	The user mapped to this function can Copy Hierarchies
FU_HIE_DD	Fusion Hierarchies - View Dependent Data	The user mapped to this function can View Dependent Data for Hierarchies
FU_HIE_DEL	Fusion Delete Hierarchies	The user mapped to this function can Delete Hierarchies
FU_HIE_EDT	Fusion Edit Hierarchies	The user mapped to this function can Edit Hierarchies
FU_HIE_HP	Fusion Hierarchy Home Page	The user mapped to this function can view Hierarchy Home Page
FU_HIE_UMM	Fusion Hierarchies to UMM Mapping	The user mapped to this function can Map Fusion Hierarchies to UMM Hierarchies

FUNCTION CODE	FUNCTION NAME	FUNCTION DESCRIPTION
FU_HIE_VIW	Fusion View Hierarchies	The user mapped to this function can View Hierarchies
FU_MEM_ADD	Fusion Add Members	The user mapped to this function can Create New Members
FU_MEM_CPY	Fusion Copy Members	The user mapped to this function can Copy Members
FU_MEM_DD	Fusion Members - View Dependent Data	The user mapped to this function can View Dependent Data for Members
FU_MEM_DEL	Fusion Delete Members	The user mapped to this function can Delete Members
FU_MEM_EDT	Fusion Edit Members	The user mapped to this function can Edit Members
FU_MEM_HP	Fusion Member Home Page	The user mapped to this function can view Member Home Page
FU_MEM_VIW	Fusion View Members	The user mapped to this function can View Members
GMVDEF	GMV Definition	The user mapped to this function can view/add the General Market Variable definitions
HCYADD	Add Hierarchy	The user mapped to this function can add hierarchies
HCYATH	Authorize Hierarchy	The user mapped to this function can authorize hierarchies
HCYDEL	Delete Hierarchy	The user mapped to this function will have rights to delete hierarchies
HCYMOD	Modify Hierarchy	The user mapped to this function can modify hierarchies
HCYVIW	View Hierarchy	The user mapped to this function can view hierarchies

FUNCTION CODE	FUNCTION NAME	FUNCTION DESCRIPTION
HOLMAINT	Holiday Maintenance Screen	The user mapped to this function can access the Holiday Maintenance Screen
HSEC	Hierarchy Security	The user mapped to this function will have access to hierarchy security settings
IBMADD	Import Business Model	The user mapped to this function can import business models
IMPMD	Import Metadata	The user mapped to this function can Import Metadata
IND	Information Domain	The user mapped to this function will have access to information domain details
KPIATH	Authorize KPIs	The user mapped to this function can authorize KPIs
LOCDESC	Locale Desc Upload Screen	The user mapped to this function can access the Locale Desc Upload Screen
MDDIFF	Metadata Difference Screen	The user mapped to this function can access the Metadata Difference Screen
MDLAUTH	Model Authorize	The user mapped to this function can Authorize Model Maintenance
MDLCALIB	Model Calibration	The user mapped to this function can view/add the Model Calibration screen
MDLCHAMP	Model Make Champion	The user mapped to this function can view the Champion Challenger screen
MDLDEF	Model Definition	The user mapped to this function can view/add the Model definitions
MDLDEPLOY	Model Deployment	The user mapped to this function can access the Model Deployment screen

FUNCTION CODE	FUNCTION NAME	FUNCTION DESCRIPTION
MDLEXEC	Model Execution	The user mapped to this function can access the Model Execution screen
MDLOUTPUT	Model Outputs	The user mapped to this function can view the Model Outputs
MDMP	Metadata Segment Map	The user mapped to this function will have rights to perform metadata segment mapping
METVIW	View Metadata	The user mapped to this function can access metadata browser
MODPROCESS	Modify Process Tree	The user mapped to this function can modify Process Tree
MODRDM	Modify RDM	The user mapped to this function can Modify RDM
MODRULE	Modify Rule	The user mapped to this function can modify the rules
MODRUN	Modify Run	The user mapped to this function can modify run
MOD_MAP	Modify Map	The user mapped to this function can SAVE Map definitions
MSRADD	Add Measure	The user mapped to this function can add measures
MSRATH	Authorize Measure	The user mapped to this function can authorize measures
MSRDEL	Delete Measure	The user mapped to this function will have rights to delete measures
MSRMOD	Modify Measure	The user mapped to this function can modify measures
MSRVIW	View Measure	The user mapped to this function can view measures

FUNCTION CODE	FUNCTION NAME	FUNCTION DESCRIPTION
NVATH	Authorize Nested Views	The user mapped to this function can authorize Nested Views
OLAPDETS	OLAP Details Screen	The user mapped to this function can access the OLAP Details Screen
OPRADD	Create Batch	The user mapped to this function will have rights to define batches
OPRDEL	Delete Batch	The user mapped to this function will have rights to delete batches
OPREXEC	Execute Batch	The user mapped to this function will have rights to run, restart and rerun batches
OPRMON	Batch Monitor	The user mapped to this function will have rights to monitor batches
OPTDEF	Optimizer Add	The user mapped to this function can view/add the Optimizer definitions
OPTDEL	Optimizer Delete	The user mapped to this function can delete the Optimizer definitions
PASSNUM	PassNumber Maintenance	The user mapped to this function will have rights to passnumber maintenance
PGATH	Authorize Pages	The user mapped to this function can authorize Pages
POOLDEF	Pooling Add	The user mapped to this function can view/add the Pooling definitions
POOLDEL	Pooling Delete	The user mapped to this function can delete the Pooling definitions
PR2SCREEN	PR2 Screens	The user mapped to this function can access PR2 screens
PROFMAINT	Profile Maintenance Screen	The user mapped to this function can access the Profile Maintenance Screen

FUNCTION CODE	FUNCTION NAME	FUNCTION DESCRIPTION
REPATH	Authorize Reports	The user mapped to this function can authorize Reports
RESTPASS	Restricted Passwords Screen	The user mapped to this function can access the Restricted Passwords Screen
RLSETCFG	Rules Setup Configuration Screen	The user mapped to this function can access the Rules Setup Configuration Screen
ROLEMAINT	Role Maintenance Screen	The user mapped to this function can access the Role Maintenance Screen
RULESHKDEF	Rule Shock Definition	The user mapped to this function can define the rule shocks
SANDBXAUTH	Sandbox Authorize	The user mapped to this function can Authorize a Sandbox Maintenance
SANDBXCR	Sandbox Creation	The user mapped to this function can view/add the Sandbox definitions
SANDBXMOD	Sandbox Maintenance	The user mapped to this function can view the Sandbox Maintenance
SAVEMD	Save Metadata Screen	The user mapped to this function can access the Save Metadata Screen
SCNDEF	Scenario Definition	The user mapped to this function can define the scenarios
SCRBAU	Business Analyst User Screen	The user mapped to this function can access the business analyst user screen
SCROPC	Operator Console	The user mapped to this function will have access to the operator console
SCRSAU	System Administrator Screen	The user mapped to this function can access system administrator screens
SEGMAINT	Segment Maintenance Screen	The user mapped to this function can access the Segment Maintenance Screen

FUNCTION CODE	FUNCTION NAME	FUNCTION DESCRIPTION
STRESSDEF	Stress Definition	The user mapped to this function can define the stress
SYSADM	System Administrator	The user mapped to this function will be a system administrator
SYSATH	System Authorizer	The user mapped to this function will be a system authorizer
TEMPATH	Authorize Templates	The user mapped to this function can authorize Templates
UGDOMMAP	User Group Domain Map Screen	The user mapped to this function can access the User Group Domain Map Screen
UGMAINT	User Group Maintenance Screen	The user mapped to this function can access the User Group Maintenance Screen
UGMAP	User Group User Map Screen	The user mapped to this function can access the User Group User Map Screen
UGROLMAP	User Group Role Map Screen	The user mapped to this function can access the User Group Role Map Screen
USRACTREP	User Activity Reports Screen	The user mapped to this function can access the User Activity Reports Screen
USRATH	User Authorization Screen	The user mapped to this function can access the User Authorization Screen
USRATTUP	User Attribute Upload Screen	The user mapped to this function can access the User Attribute Upload Screen
USRBATMAP	User-Batch Execution Mapping Screen	The user mapped to this function can access the User-Batch Execution Mapping Screen
USRMAINT	User Maintenance Screen	The user mapped to this function can access the User Maintenance Screen

FUNCTION CODE	FUNCTION NAME	FUNCTION DESCRIPTION
USRPROFREP	User Profile Report Screen	The user mapped to this function can access the User Profile Report Screen
VARDEF	Variable Definition	The user mapped to this function can view/add the Variable definitions.
VARSHKDEF	Variable Shock Definition	The user mapped to this function can define the variable shocks
VIEWLOG	View log	The user mapped to this function will have rights to view log
VIEWPROC	View Process	The user mapped to this function can view the process tree definitions
VIEWRULE	View Rule	The user mapped to this function can view the rules definitions
VIEWRUN	View Run	The user mapped to this function can view the run definitions
VIEW_HOME	View Infrastructure LHS Menu	The user mapped to this function can view main LHS menu
VIWATH	Authorize Views	The user mapped to this function can authorize Views
VIWRDM	View RDM	The user mapped to this function can view RDM
WEBSRVR	Web Server Screen	The user mapped to this function can access the Web Server Screen
WRTPR_BAT	Write-Protected Batch Screen	The user mapped to this function can access the Write-Protected Batch Screen
XLADMIN	Excel Admin	The user mapped to this function can define Excel Mapping
XLUSER	Excel User	The user mapped to this function can Upload Excel Data

Defining Role Maintenance Details

A role is a collection of functions defined within the system. The Role Maintenance function allows you to create roles based on the group of functions to which they are to be mapped.

In the Security Management screen LHS menu, select the Role Maintenance option. The Role Maintenance screen is displayed. You can view available roles and edit/change the Role Name and Role Description in this screen.



The screenshot shows the 'Role Maintenance' interface. At the top, there is a 'Search and Filter' section with input fields for 'Role Code', 'Role Name', and 'Role Description'. Below this is a table with the following data:

<input type="checkbox"/>	Role Code	Role Name	Role Description	Users Mapped
<input type="checkbox"/>	ACTASR	Action Assessor	Assessor for Actions	53
<input type="checkbox"/>	SYSBAU	Business Analyst	Business Analyst Role	53
<input type="checkbox"/>	AMLCO	Compliance Officer	AML Compliance Officer	53
<input type="checkbox"/>	OCOAPR	Control Approver	Approver for CI	53
<input type="checkbox"/>	OVSADMIN	OVS Administrator	OVS Administrator Role	54

The Pagination Options toolbar above the display grid provides the various Pagination and Viewing options available which are the same as in the Function Maintenance screen.

The navigation buttons are also available. Click > to go to the next page of Role details based on the number of rows that you have chosen to be viewed per page. Click >> to go to the last page. Click < to go to the previous page and << to go to the first page.

You can also search for a Role using the Search and Filter option available.

By default Infrastructure application comes with default roles. List of default roles are:-

- Business Analyst
- Data Centre Manager
- ETL Analyst
- Portal Administrator
- Infrastructure Administrator
- System Authorizer
- All Roles

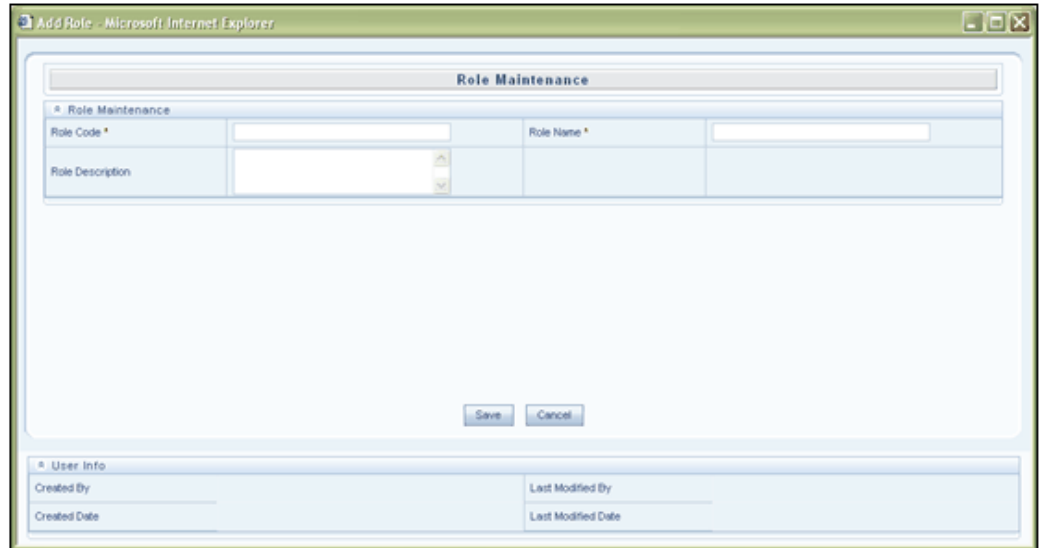
Example

The role ALLROLE describes the user is mapped to all the functions mapped to it.

Note: Infrastructure Administrator can add a Role definition, view available Roles and edit the Role Name and Description using this option.

Creating a New Role

In the Role Maintenance toolbar, click the 'Add' button to create a new Role. The Create New Role window is displayed.



The screenshot shows a web browser window titled "Add Role - Microsoft Internet Explorer". The main content area is titled "Role Maintenance" and contains a form with the following fields: "Role Code *" (text input), "Role Name *" (text input), and "Role Description" (text area). Below the form are "Save" and "Cancel" buttons. At the bottom of the window, there is a "User Info" section with fields for "Created By", "Created Date", "Last Modified By", and "Last Modified Date".

Specifying a Role Code

Enter a Role Code for the role you are creating.

Specifying a Role Name

Enter a Name for the role you are creating.

Specifying Role Description

Enter the Role Description

Click 'Save' to save the new role that you have created.

Click 'Cancel' to discard the role details that you have defined.

Modifying/Deleting Role Details

Select the check box adjacent to the Role to be modified and click the edit button. The

Edit Role window is displayed. You can edit only the description of the chosen Role.

Note: You cannot edit the Role Code and Role Name.

Click 'Save' to save the role details that you have modified.

Click 'Cancel' to discard the role details that you have modified.

To delete a role, select the check box adjacent to the Role to be deleted and click Delete button. A warning message notifies you that you are about to delete a role. Click OK to confirm deletion or Cancel to close the message without deleting the role.

- You can delete only those roles that you have created for which the Delete button is enabled.
- Only roles that are not mapped to users can be deleted.

The Roles created during installation and their descriptions are mentioned below.

ROLE CODE	ROLE NAME	ROLE DESCRIPTION
CWSADMIN	CWS Administrator	CWS Administrator Role
DEFQMAN	DEFQ Manager	Data Entry Forma and Query Manager Role
ETLADM	ETL Analyst	ETL Analyst Role
METAAUTH	Metadata Authorizer	Metadata Authorizer Role
PR2ADM	PR2 Administrator	PR2 Administrator Role
SYSADM	System Administrator	System Administrator Role
SYSAMHM	Fusion AMHM Admin	Fusion Dimension Maintenance Admin Role
SYSAMHMU MM	Fusion AMHM UMM Map Admin	Fusion UMM Maintenance Admin Role
SYSATH	System Authorizer	System Authorizer Role
SYSBAU	Business Analyst	Business Analyst Role
SYSEXP	Fusion Expressions Admin	Fusion Expressions Admin Role

ROLE CODE	ROLE NAME	ROLE DESCRIPTION
SYSFILTERS	Fusion Filters Admin	Fusion Filters Admin Role
SYSOPC	Data Centre Manager	Operator Console Role

Mapping Function/s to Role/s

This option facilitates a more meaningful administration of system security. It informs Infrastructure about users' intention in using the system, the functional objectives and part played by users in the entire process. A role is a collection of functions defined within the system.

The Function Role Map option allows you to map a set of functions to a role. On choosing the Function - Role mapping option, the screen will show list of available Roles.

Note: Infrastructure Administrator can view the available Function-Role mapping, Unmap Function(s) from a specific Role, Map additional function(s) to a specific Role using this option.

By default, the available roles are:-

- Business Analyst
- Data Centre Manager
- CWS Administrator
- Infrastructure Administrator Role
- System Authorizer Role

The Business Analyst Role is mapped to the following functions:

- Add Attributes
- Add Computed Measures
- Add Dataset
- Add Dimension
- Add Hierarchy

- Add Measure
- Alias Admin
- Authorize Attributes
- Authorize Dataset
- Authorize Dimension
- Authorize Hierarchy
- Authorize Measure
- Business Analyst User Screen
- Computed Measure Advanced
- Create RDM
- Defi Administrator
- Defi User
- Delete Attributes
- Delete Computed Measure
- Delete Dataset
- Delete Dimension
- Delete Hierarchy
- Delete Measure
- Delete RDM
- Design RDM
- Excel Admin
- Excel User
- Hierarchy Attributes
- Import Business Model

- Modify Attributes
- Modify Computed Measure
- Modify Dataset
- Modify Dimension
- Modify Hierarchy
- View Computed Measures
- View Dataset
- View Dimension
- View Hierarchy
- View Measure
- View Metadata
- Call Remote Web Services
- Document management Access
- Execute Runs and Rules
- Refresh Hierarchies
- Remote SMS Access
- Result of own request only
- Result of Request and Status of all

The Data Centre Manager Role is mapped to the following Functions:

- Operator Console

The ETL Analyst Role is mapped to the following Functions:

- DI Designer
- DI User
- DTDQ
- Data Quality Add

The Insight Author Role is mapped to the following Functions:

- Access to Designer
- Define Custom Alerts
- Define Portal objects
- Define RDBMS Advanced Rules
- Define RDBMS Simple Rules
- Design Insight Views
- Share views/reports
- Design RDBMS Reports

The Insight Viewer Role is mapped to the following Functions:

- Access to Runner
- Access to Viewer
- Drill through
- Export Reports
- Schedule reports
- View RDBMS Reports

The PR2 Administrator Role is mapped to the following Functions:

- Access to Rule
- Access to Process
- Access to Run

The Portal Administrator Role is mapped to the following Functions:

- Alerts Administrator
- Define Customer Alerts
- Define RDBMS Advanced Rules
- Define RDBMS Simple Rules

- FIP Administrator
- Share Definitions

The Infrastructure Administrator Role is mapped to the following Functions:

- Configuration
- Database Details
- Database Server
- Hierarchy Security
- Information Domain
- Metadata Segment Map
- Operator Console
- Infrastructure Administrator
- Infrastructure Administrator Screen

The System Authorizer Role is mapped to the following Functions:

- Infrastructure Administrator Screen
- System Authorizer

Note: Default roles provided by the system cannot be edited. You need to create fresh roles for added functionality. One or more Roles can be mapped to one or more Functions

The Functions are mapped to Roles as shown below.

ROLE NAME	FUNCTION NAME
CWS Administrator	Document Management Access
CWS Administrator	Call Remote Web Services
CWS Administrator	Refresh Hierarchies
CWS Administrator	Execute Runs - Rules

ROLE NAME	FUNCTION NAME
CWS Administrator	Remote SMS Access
CWS Administrator	Remote UMM Access
CWS Administrator	Result of request - Status of all
CWS Administrator	Result of own request only
DEFQ Manager	Defq Administrator
DEFQ Manager	Defq User
ETL Analyst	Data Quality Add
ETL Analyst	DI Designer
ETL Analyst	DTDQ
ETL Analyst	DI User
Metadata Authorizer	Authorize Cube
Metadata Authorizer	View Cube
Metadata Authorizer	Authorize Alias
Metadata Authorizer	View Alias
Metadata Authorizer	Authorize Process Tree
Metadata Authorizer	Authorize RDM
Metadata Authorizer	Authorize Rule
Metadata Authorizer	Authorize Run
Metadata Authorizer	Authorize Attributes
Metadata Authorizer	View Attributes

ROLE NAME	FUNCTION NAME
Metadata Authorizer	Metadata Authorize Screen
Metadata Authorizer	Authorize BBs
Metadata Authorizer	Authorize Business Processor
Metadata Authorizer	View Business Processor
Metadata Authorizer	Authorize Computed Measure
Metadata Authorizer	View Computed Measures
Metadata Authorizer	Authorize Dataset
Metadata Authorizer	View Dataset
Metadata Authorizer	Authorize DBs
Metadata Authorizer	Authorize Derived Entities
Metadata Authorizer	View Derived Entities
Metadata Authorizer	Authorize Dimension
Metadata Authorizer	View Dimension
Metadata Authorizer	Authorize Hierarchy
Metadata Authorizer	View Hierarchy
Metadata Authorizer	Authorize KPIs
Metadata Authorizer	Model Authorize
Metadata Authorizer	Authorize Measure
Metadata Authorizer	View Measure
Metadata Authorizer	Authorize Nested Views

ROLE NAME	FUNCTION NAME
Metadata Authorizer	Authorize Pages
Metadata Authorizer	Authorize Reports
Metadata Authorizer	Sandbox Authorize
Metadata Authorizer	Authorize Templates
Metadata Authorizer	View Process
Metadata Authorizer	View Rule
Metadata Authorizer	View Run
Metadata Authorizer	Authorize Views
Metadata Authorizer	View RDM
PR2 Administrator	Add Process tree
PR2 Administrator	Add Rule
PR2 Administrator	Add Run
PR2 Administrator	Delete Process
PR2 Administrator	Delete Rule
PR2 Administrator	Delete Run
PR2 Administrator	Modify Process Tree
PR2 Administrator	Modify Rule
PR2 Administrator	Modify Run
PR2 Administrator	PR2 Screens
PR2 Administrator	View Process

ROLE NAME	FUNCTION NAME
PR2 Administrator	View Rule
PR2 Administrator	View Run
System Administrator	System Administrator
System Administrator	System Administrator Screen
System Administrator	Operator Console
System Administrator	Database Server
System Administrator	Database Details
System Administrator	Information Domain
System Administrator	Configuration
System Administrator	Application Server Screen
System Administrator	Web Server Screen
System Administrator	Administration Screen
System Administrator	Audit Trail Report Screen
System Administrator	User Activity Reports Screen
System Administrator	User Profile Report Screen
System Administrator	Enable User Screen
System Administrator	Write-Protected Batch Screen
System Administrator	User-Batch Execution Mapping Screen
System Administrator	User Attribute Upload Screen
System Administrator	User Maintenance Screen

ROLE NAME	FUNCTION NAME
System Administrator	User Group Maintenance Screen
System Administrator	User Group User Map Screen
System Administrator	User Group Domain Map Screen
System Administrator	User Group Role Map Screen
System Administrator	Function Maintenance Screen
System Administrator	Role Maintenance Screen
System Administrator	Function Role Map Screen
System Administrator	Segment Maintenance Screen
System Administrator	Holiday Maintenance Screen
System Administrator	Restricted Passwords Screen
System Administrator	Batch Monitor
System Administrator	View log
System Administrator	OLAP Details Screen
System Administrator	Design Infrastructure Menu Screen
System Administrator	Hierarchy Security
System Administrator	Rules Setup Configuration Screen
System Administrator	Metadata Segment Map
System Administrator	Save Metadata Screen
System Administrator	Metadata Difference Screen
System Administrator	Locale Desc Upload Screen

ROLE NAME	FUNCTION NAME
Fusion AMHM Admin	Fusion Add Attributes
Fusion AMHM Admin	Fusion Copy Attributes
Fusion AMHM Admin	Fusion Attributes - View Dependent Data
Fusion AMHM Admin	Fusion Delete Attributes
Fusion AMHM Admin	Fusion Edit Attributes
Fusion AMHM Admin	Fusion Attribute Home Page
Fusion AMHM Admin	Fusion View Attributes
Fusion AMHM Admin	Fusion Add Hierarchies
Fusion AMHM Admin	Fusion Copy Hierarchies
Fusion AMHM Admin	Fusion Hierarchies - View Dependent Data
Fusion AMHM Admin	Fusion Delete Hierarchies
Fusion AMHM Admin	Fusion Edit Hierarchies
Fusion AMHM Admin	Fusion Hierarchy Home Page
Fusion AMHM Admin	Fusion View Hierarchies
Fusion AMHM Admin	Fusion Add Members
Fusion AMHM Admin	Fusion Copy Members
Fusion AMHM Admin	Fusion Members - View Dependent Data
Fusion AMHM Admin	Fusion Delete Members
Fusion AMHM Admin	Fusion Edit Members
Fusion AMHM Admin	Fusion Member Home Page

ROLE NAME	FUNCTION NAME
Fusion AMHM Admin	Fusion View Members
Fusion AMHM UMM Map Admin	Fusion Hierarchies to UMM Mapping
System Authorizer	Administration Screen
System Authorizer	Profile Maintenance Screen
System Authorizer	System Administrator Screen
System Authorizer	System Authorizer
System Authorizer	User Authorization Screen
Business Analyst	Add Cube
Business Analyst	Delete Cube
Business Analyst	Modify Cube
Business Analyst	View Cube
Business Analyst	Add Alias
Business Analyst	Delete Alias
Business Analyst	Modify Alias
Business Analyst	View Alias
Business Analyst	Add Attributes
Business Analyst	Delete Attributes
Business Analyst	Modify Attributes
Business Analyst	View Attributes
Business Analyst	Add Business Processor

ROLE NAME	FUNCTION NAME
Business Analyst	Delete Business Processor
Business Analyst	Modify Business Processor
Business Analyst	View Business Processor
Business Analyst	Cash Flow Equation Defintion
Business Analyst	Add Computed Measure
Business Analyst	Computed Measure Advanced
Business Analyst	Delete Computed Measure
Business Analyst	Modify Computed Measure
Business Analyst	View Computed Measures
Business Analyst	Add RDM
Business Analyst	Add Dataset
Business Analyst	Delete Dataset
Business Analyst	Modify Dataset
Business Analyst	View Dataset
Business Analyst	Add Derived Entities
Business Analyst	Delete Derived Entities
Business Analyst	Modify Derived Entities
Business Analyst	View Derived Entities
Business Analyst	Defi Administrator
Business Analyst	Defi User

ROLE NAME	FUNCTION NAME
Business Analyst	Delete RDM
Business Analyst	Design RDM
Business Analyst	Add Dimension
Business Analyst	Delete Dimension
Business Analyst	Modify Dimension
Business Analyst	View Dimension
Business Analyst	Export Metadata
Business Analyst	GMV Defintion
Business Analyst	Add Hierarchy
Business Analyst	Delete Hierarchy
Business Analyst	Modify Hierarchy
Business Analyst	View Hierarchy
Business Analyst	Import Business Model
Business Analyst	Import Metadata
Business Analyst	Model Calibration
Business Analyst	Model Make Champion
Business Analyst	Model Defintion
Business Analyst	Model Deployment
Business Analyst	Model Execution
Business Analyst	Model Outputs

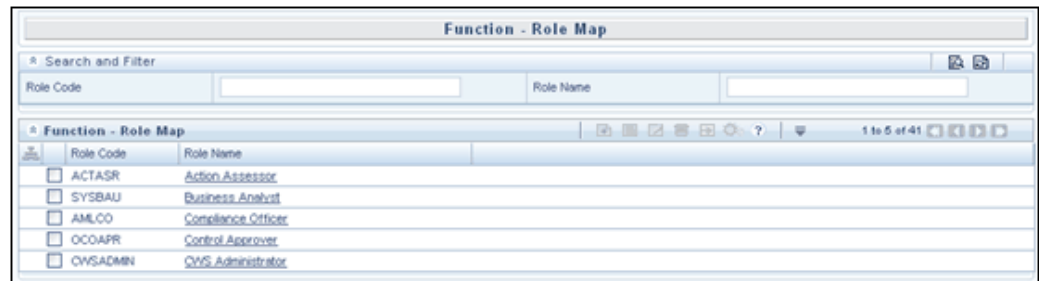
ROLE NAME	FUNCTION NAME
Business Analyst	View Metadata
Business Analyst	Modify RDM
Business Analyst	Add Measure
Business Analyst	Delete Measure
Business Analyst	Modify Measure
Business Analyst	View Measure
Business Analyst	Optimizer Add
Business Analyst	Optimizer Delete
Business Analyst	Pooling Add
Business Analyst	Pooling Delete
Business Analyst	Rule Shock Definition
Business Analyst	Sandbox Creation
Business Analyst	Sandbox Maintenance
Business Analyst	Scenario Definition
Business Analyst	Business Analyst User Screen
Business Analyst	Stress Definition
Business Analyst	Variable Defintion
Business Analyst	Variable Shock Definition
Business Analyst	View RDM
Business Analyst	Excel Admin

ROLE NAME	FUNCTION NAME
Business Analyst	Excel User
Fusion Expressions Admin	Fusion Add Expressions
Fusion Expressions Admin	Fusion Copy Expressions
Fusion Expressions Admin	Fusion View Dependency Expressions
Fusion Expressions Admin	Fusion Delete Expressions
Fusion Expressions Admin	Fusion Edit Expressions
Fusion Expressions Admin	Fusion Expns Home Page
Fusion Expressions Admin	Fusion View Expressions
Fusion Filters Admin	Fusion Add Filters
Fusion Filters Admin	Fusion Copy Filters
Fusion Filters Admin	Fusion Filters - View Dependent Data
Fusion Filters Admin	Fusion Delete Filters
Fusion Filters Admin	Fusion Edit Filters
Fusion Filters Admin	Fusion Filters Home Page
Fusion Filters Admin	Fusion Filters - View SQL
Fusion Filters Admin	Fusion View Filters
Data Centre Manager	Batch Processing
Data Centre Manager	Batch Group Creation
Data Centre Manager	Batch Group Execution
Data Centre Manager	Batch Group Monitor

ROLE NAME	FUNCTION NAME
Data Centre Manager	Batch Group Restart
Data Centre Manager	Create Batch
Data Centre Manager	Delete Batch
Data Centre Manager	Execute Batch
Data Centre Manager	Batch Monitor
Data Centre Manager	PassNumber Maintenance
Data Centre Manager	Operator Console
Data Centre Manager	View log

Mapping/Un-Mapping Function Role(s)

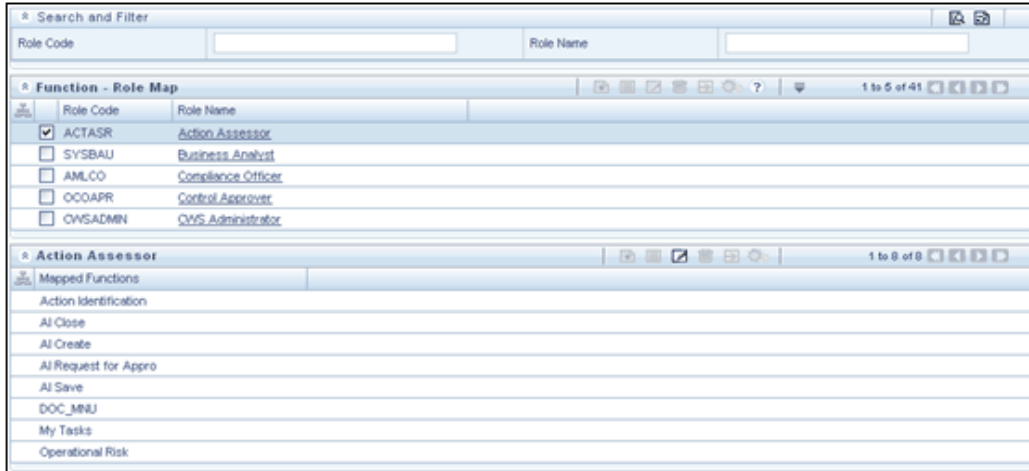
In the Security Management screen LHS menu, select the Function Role Map option. The Function Role Map screen is displayed. You can map one or more functions to the Roles in this screen.



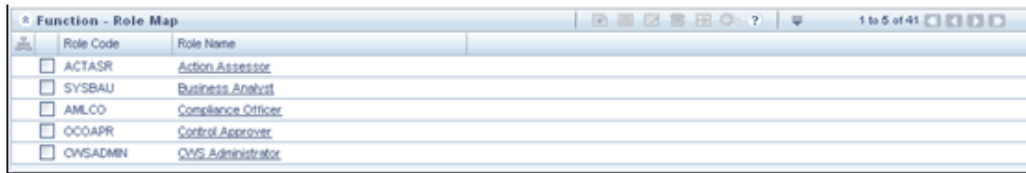
The Pagination Options toolbar above the display grid provides the various Pagination and Viewing options available which are the same as in the Function Maintenance screen.

The navigation buttons are also available. Click > to go to the next page of Role details based on the number of rows that you have chosen to be viewed per page. Click >> to go to the last page. Click < to go to the previous page and << to go to the first page.

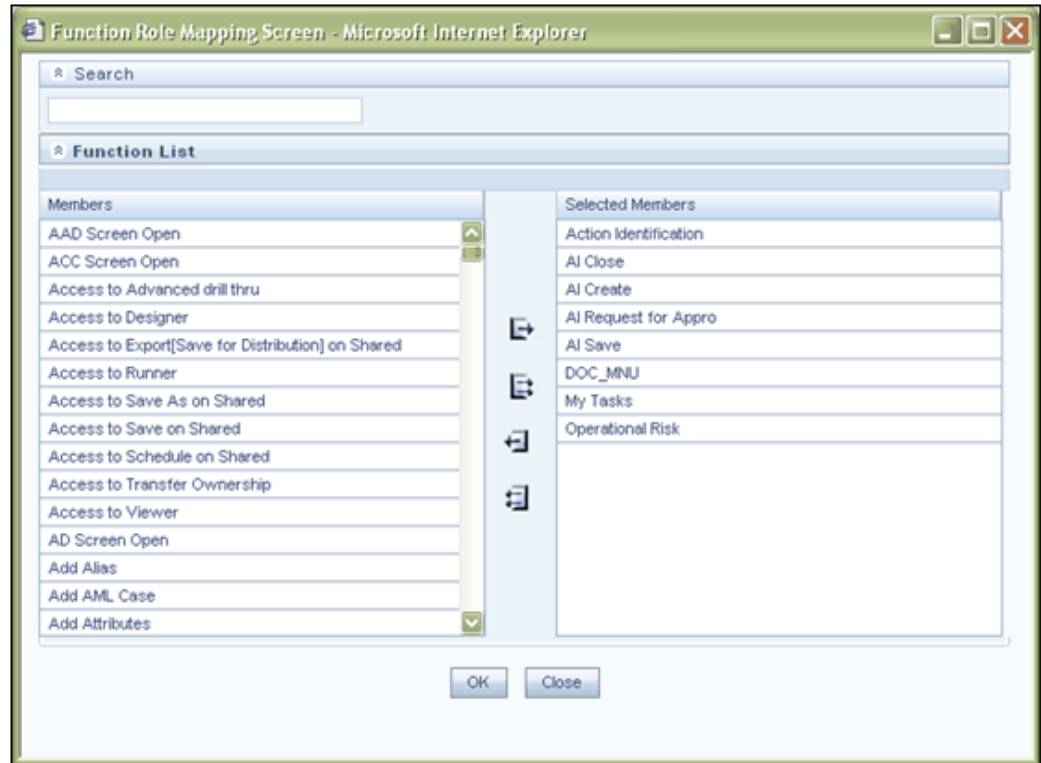
You can also search for a Role using the Search and Filter option available. Select the check box adjacent to a Role to view the Functions already mapped to it



If no Functions are mapped to the selected Role, only the Mapped Functions toolbar will be displayed as shown below:



To map a Role to a Function, select the checkbox adjacent to the Role and click the Map button in the Mapped Functions toolbar. The Hierarchy Browser window is displayed.



The Function Role Map screen displays all the available Functions in the Members pane. Select the function/s you want to map to the role from the Members pane and click the > button. The selected function/s will move to the Selected Members pane. You can select more than one Function per Role. To map all the Functions to the selected Role, click >>. You can remove a function from the Selected Members pane by highlighting the function and clicking <. To unmap all the functions from the Role, click the << button.

Click OK to save the mapping. A confirmation message will be displayed stating Function-Role Map Saved Successfully. Click OK on the message window and close the Hierarchy Browser.

On refreshing the screen, the mapped Functions will be displayed in the Mapped Functions display grid of the Function Role Map screen. The navigation buttons are also available. Click > to go to the next page of Function details if there are more than 5 functions mapped. Click >> to go to the last page. Click < to go to the previous page and << to go to the first page.

Defining Segment Maintenance Details

The Segment Maintenance function allows you to create segments/groupings to which functions are attributed. You can have different segments for different information domains.

In the Security Management screen LHS menu, select the Segment Maintenance option. The Segment Maintenance screen is displayed. You can create new segments, view and edit available segment details in this screen.

The screenshot shows the 'Segment Maintenance' interface. At the top, there is a 'Search and Filter' section with four input fields: 'Domain', 'Segment Code', 'Segment Name', and 'Segment Description'. Below this is a table with the following data:

Domain	Segment Code	Segment Name	Segment Description	Users Mapped
<input type="checkbox"/> ADHMPQA	ADHMPQA	adhmpqa	adhmpqa	0
<input type="checkbox"/> AKMODEL	AKSEG	akseg	null	1
<input type="checkbox"/> OBUREG	BASEL7	basel7	basel7	0
<input type="checkbox"/> BASEL7	BASELSEG	BASELSEG	BASELSEG	0
<input type="checkbox"/> DEMOOFSA	DEMOOFSA	demoofsa	null	0

- On choosing the Segment maintenance option the screen will be shown in the view mode displaying the first 5 Segments with Segment Code, Segment Name, Segment Description and the Number of users mapped.
- Infrastructure Administrator can add a new segment definition, view available Segments and edit the Segment Description using this option.
- Available Segments will be listed in the screen based on the display options selection.

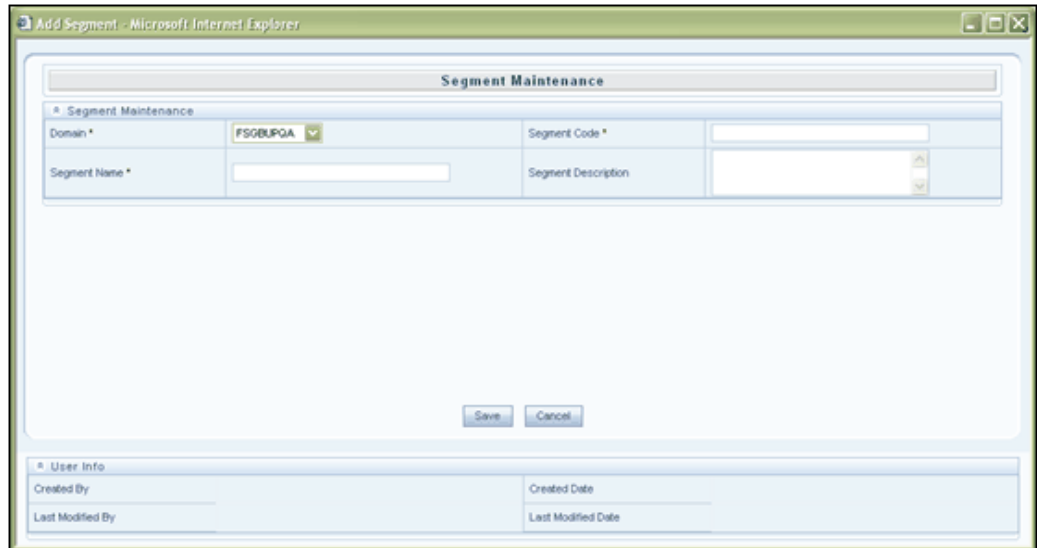
The Pagination Options toolbar above the display grid provides the various Pagination and Viewing options available which are the same as in the Function Maintenance screen.

The navigation buttons are also available. Click > to go to the next page of Role details based on the number of rows that you have chosen to be viewed per page. Click >> to go to the last page. Click < to go to the previous page and << to go to the first page.

You can also search for a Segment using the Search and Filter option available.

Creating a New Segment

Click the 'Add' symbol button in the Segment Maintenance screen to create a new segment. The Add Segment window is displayed.



Specifying the Domain Name

Select the Domain for which you are creating the segment from the Domain drop-down list.

Specifying the Segment Code

Enter a Segment Code for the segment you are creating.

Specifying the Segment Name

Enter the Segment Name.

Specifying the Segment Description

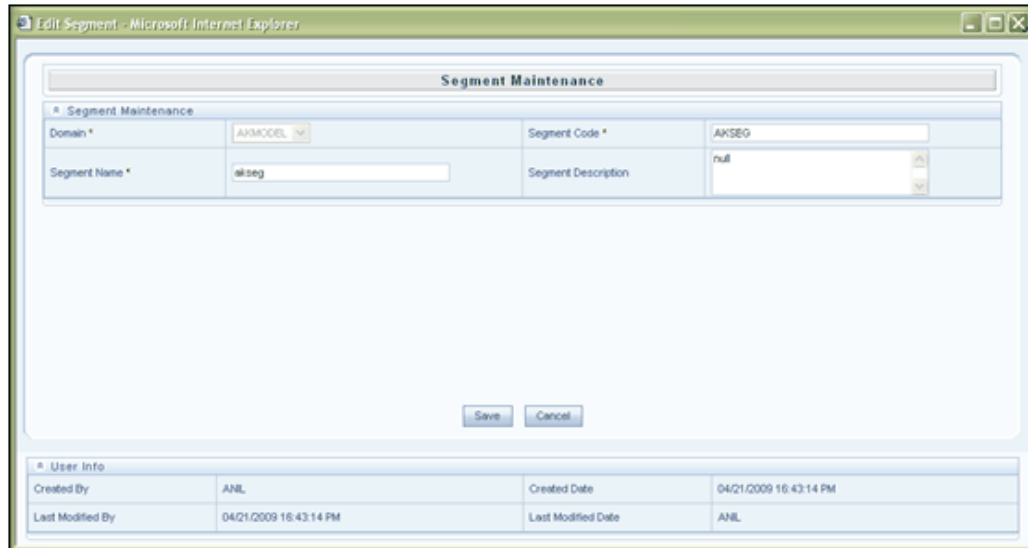
Enter the Segment Description.

Click 'Save' to save the new segment that you have created.

Click 'Cancel' to discard the segment details that you have defined.

Modifying/Deleting Segment Details

Select the check box adjacent to the Segment to be modified and click the Edit button. The Edit Segment window is displayed



You can edit the Description of the chosen Segment.

Note: You cannot edit the Domain details, Segment Code and Segment Name.

Click Save to save the segment details that you have modified. Click Cancel to discard the segment details that you have modified.

Select the Segment that is to be deleted and click the Delete button in the Segment Maintenance toolbar. A warning message notifies that a segment is about to be deleted. Click OK to confirm deletion or Cancel to close the message without deleting the segment.

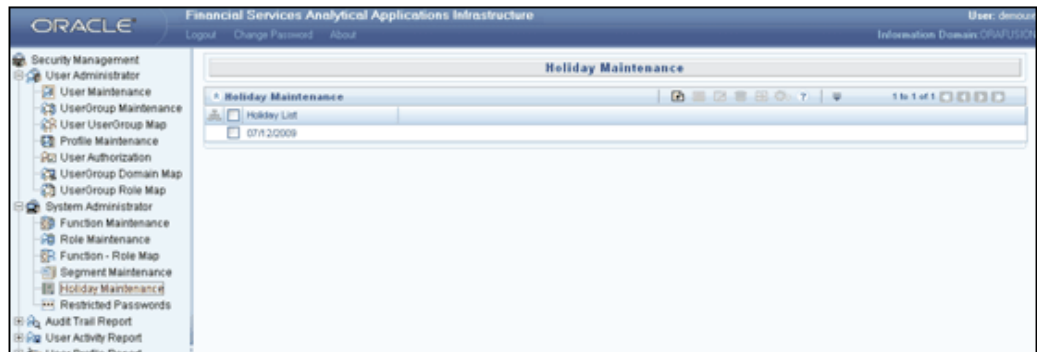
Note: Infrastructure administrator can delete only those segments that are created using the infrastructure administrator id for which the Delete button is active. You will receive a message if at all the segments are mapped to the users. Delete Icon will be enabled only for segments which are not mapped to any users.

Maintaining a Holiday Calendar

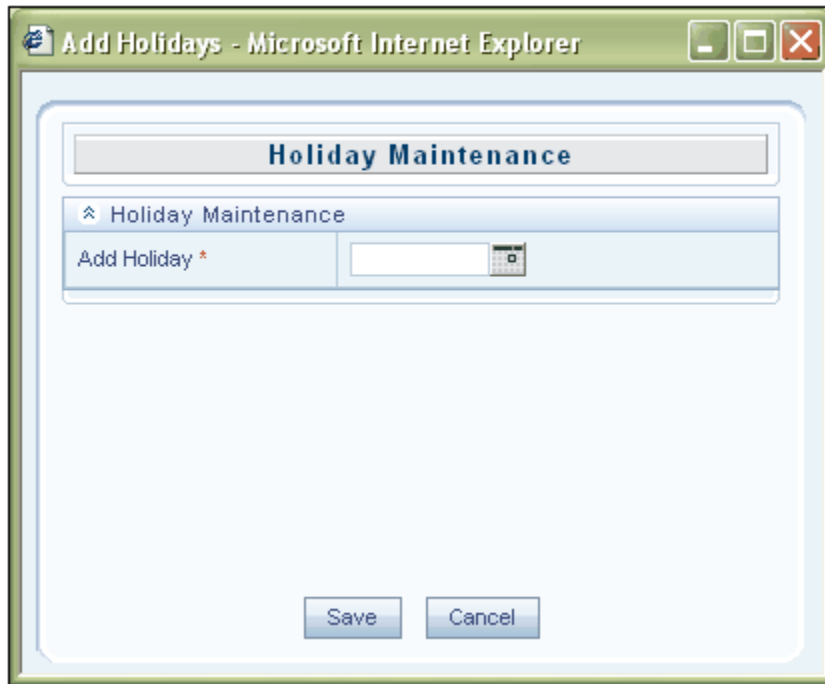
The Holiday Maintenance function allows you maintain a list of holidays or non-working days when you can limit/restrict user access to the system.

In the Security Management screen LHS menu, select the Holiday Maintenance option. The Holiday Maintenance screen is displayed. You can maintain a list of holidays during which a user is allowed or restricted access in this screen.

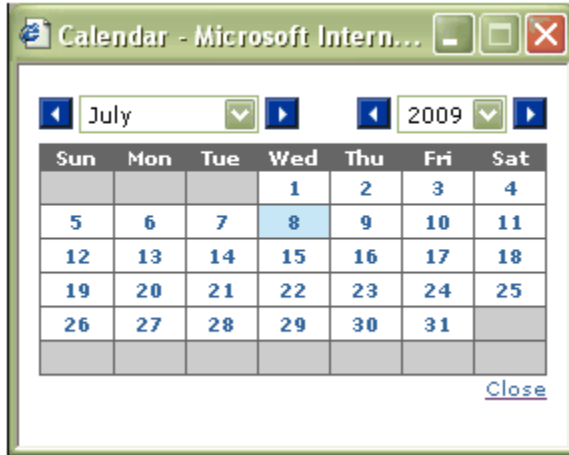
- On choosing the Holiday Maintenance option, the screen will be shown in the view mode displaying the available Holiday lists, if any.
- Infrastructure Administrator can create / modify / delete a holiday list.



To create a Holiday List, click the button. The Add Holidays window is displayed.



Click the Calendar icon adjacent to the Add Holiday field. The Calendar window is displayed.



Choose the year, click > in the left of the Year drop-down list to go to the previous year than the one displayed and > on the right of the Year list to go to the following year. Similarly, choose the month. Click the date of the month chosen on which the holiday is declared. The chosen month, date and year is displayed in the Add Holiday field of the Add Holidays screen. Click Save.

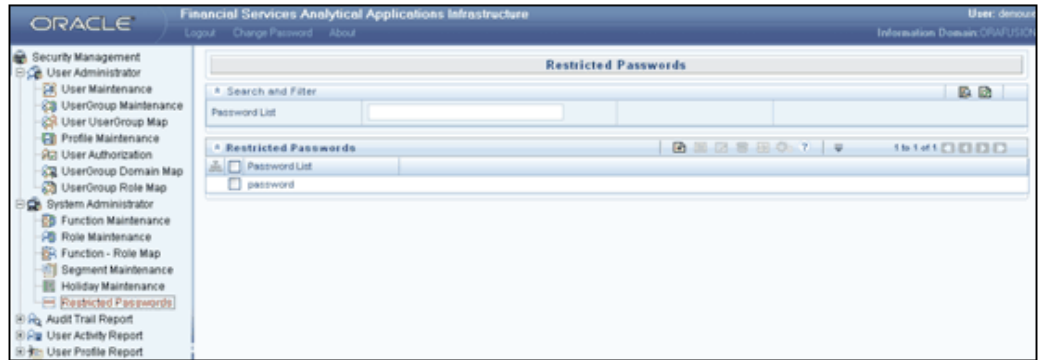
To delete, select the holiday in the Holiday Maintenance screen and click the Delete button

Defining a Restricted Password

The Restricted Password function allows you to restrict the usage of passwords for accessing Infrastructure.

In the Security Management screen LHS menu, select the Restricted Password option. The Restricted Password screen is displayed. You can specify and store restricted passwords in this screen.

Note: On choosing the Restricted Password List option, the screen will be shown in the view mode displaying the list of restricted passwords. Infrastructure Administrator has the permissions to add / delete the restricted password list.



Enter a New Password and click Add to add the defined password to the Restricted Password pane. The user will not be able to use the password that you have restricted.

Note: The password should be alphanumeric and should be at least 6 characters in length.

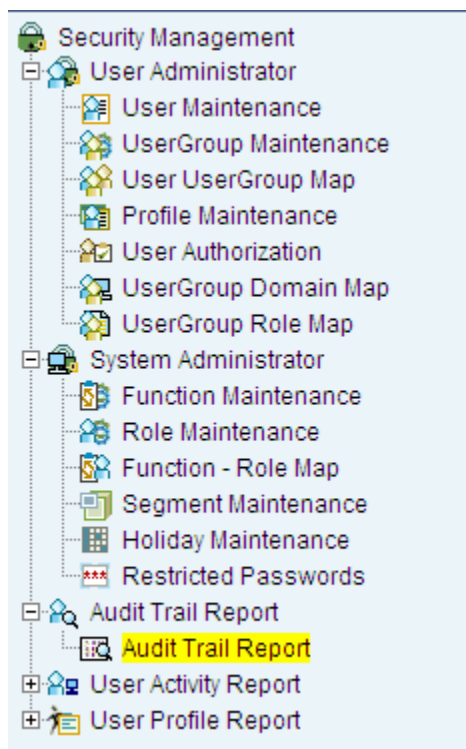
To delete a password from the Restricted Passwords list, select the checkbox adjacent to it in Restricted Password screen and click the Delete button. A confirmation message is displayed: "Are you sure you wish to delete these records? Select 'OK' to proceed or 'Cancel' to abort." Click OK to confirm the deletion. A message window will be displayed stating the password has been deleted. Click OK to close the window and return to the Restricted Password screen.

Audit Trail Report

Introduction

The infrastructure administrator can generate reports based on the domain, module, and user name, start date and end date selection in this screen.

The infrastructure administrator could monitor this report on regular intervals (Daily / Weekly / Monthly / Quarterly and so forth) to monitor the usage and activities in the system.

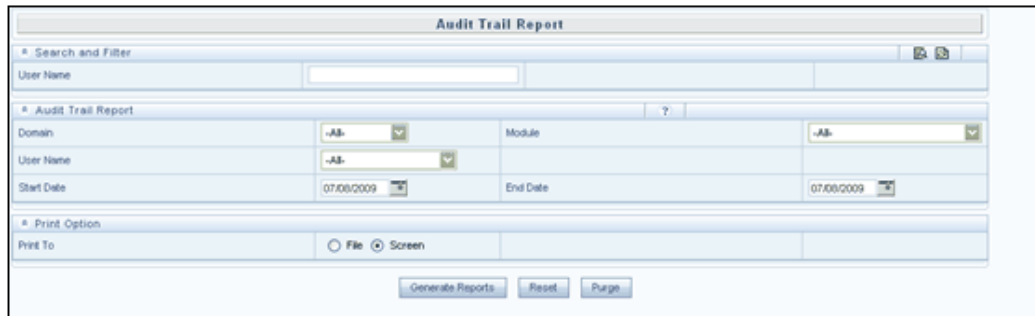


Pre-requisites

- Successful Completion of Infrastructure and Related Software.
- Successful Completion of Infrastructure System Configuration Activities and Infrastructure Administration Activities / User Administration Activities.
- Infrastructure Administration Privilege.

Generating an Audit Trail Report

In the LHS menu of the Security Management screen, click the + icon adjacent to Audit Trail Report to view the sub-menu. Select the Audit Trail Report sub-menu to open the Audit Trail Report screen. You can generate reports based on the domain, module, and user name, start date and end date in this screen.



Note: Infrastructure Administrator can generate and view the report for a domain / module / user / period.

Selecting Information Domain

Select the Domain from the drop-down list for which you want to generate the report. Select All if you want all the domain reports to be generated.

Selecting Module

Select the Module from the drop-down list for which you want to generate the report. Select All if you want all the module reports to be generated.

Specifying User Name

Select the User Name from the drop-down list for which you want to generate the report. Select All if you want all the user name reports to be generated.

Searching for a User Name

If you want to search the list of users for a particular user name, click the expand button to expand the Search and Filter grid.

A screenshot of a software interface titled "Search and Filter". It features a search bar with the label "User Name" and a search button. There are also some icons on the right side of the bar.

Enter the User name or the search string in the User Name field. Click the Search button. All the users relevant to the search filter entered in the User Name box will be listed in the User Name field in the Audit Trail Report window.

Click the Reset button to clear the fields and collapse the Search and Filter display grid.

Specifying Report Start Date

Choose the Start Date. Click calendar symbol to open the pop-up calendar. Choose the start date, month and year for which you want to generate the report and click Close. Click Cancel to close the calendar without saving the date/month/year selection.

Specifying Report End Date

Choose the End Date. Click calendar symbol to open the pop-up calendar. Choose the end date, month, and year for which you want to generate the report and click Close. Click Cancel to close the calendar without saving the date/month/year selection.

Selecting the Printing Option

Specify the Print To by selecting either print to a file or onto the screen by selecting the File or Screen.

Select the Print To option as Screen and click Generate Reports to view the Audit Trail Report in your screen.

MODULE	USER ID	FUNCTION TYPE	FUNCTION CODE	OPERATION	OPERATION TIME
SMS	ALMUSER3	SMS	SMS	ALMUSER3 : The User Logged Out.	7/8/2009 19:26:22
SMS	ALMUSER3	Logout	Logout	ALMUSER3 : The User Logged Out.	7/8/2009 19:26:22
SMS	ALMUSER3	Login	Login	[C]SMSAUDIT LOGO_IN_SUCCESS[ALMUSER3]	7/8/2009 19:25:29
SMS	ALMUSER3	SMS	SMS	User ALMUSER3 has made 0 invalid login attempts	7/8/2009 19:25:29
SMS	ALMUSER3	SMS	SMS	ALMUSER3 Logged in successfully	7/8/2009 19:25:29
SMS	ALMUSER2	Logout	Logout	ALMUSER2 : The User Logged Out.	7/8/2009 19:25:16
SMS	ALMUSER2	SMS	SMS	ALMUSER2 : The User Logged Out.	7/8/2009 19:25:16
SMS	RTUSER	Login	Login	[C]SMSAUDIT LOGO_IN_SUCCESS[RTUSER]	7/8/2009 19:16:24
SMS	RTUSER	SMS	SMS	RTUSER Logged in successfully	7/8/2009 19:16:23
SMS	RTUSER	SMS	SMS	User RTUSER has made 0 invalid login attempts	7/8/2009 19:16:23
SMS	ALMUSER2	Login	Login	[C]SMSAUDIT LOGO_IN_SUCCESS[ALMUSER2]	7/8/2009 19:9:30
SMS	ALMUSER2	SMS	SMS	User ALMUSER2 has made 0 invalid login attempts	7/8/2009 19:9:30
SMS	ALMUSER2	SMS	SMS	ALMUSER2 Logged in successfully	7/8/2009 19:9:30
SMS	ALMUSER1	SMS	SMS	ALMUSER1 : The User Logged Out.	7/8/2009 19:9:16
SMS	ALMUSER1	Logout	Logout	ALMUSER1 : The User Logged Out.	7/8/2009 19:9:16
SMS	ALMUSER1	Login	Login	[C]SMSAUDIT LOGO_IN_SUCCESS[ALMUSER1]	7/8/2009 19:5:56
SMS	ALMUSER1	SMS	SMS	ALMUSER1 Logged in successfully	7/8/2009 19:5:56

Details such as the Information Domain name, User ID, the module and the function code, the action of user and the operation time are displayed.

Select the File option if you wish to save the report. The report will be generated and saved in the html format and a link will be displayed to access the file.

The screenshot shows the 'Audit Trail Report' interface with the 'Print To' option set to 'File'. A success message is displayed: '[6957] Audit Trail Report Saved to File Successfully'. Below the message, it says 'Saved Report -' followed by a blue hyperlink: 'DEMOUSER2009-07-08.htm'.

Click the Saved Report link. The Download File window will be displayed. Click Save to save the html file. Click Open to view the file. The file will be displayed in your browser.

AUDIT TRAIL REPORT

Generated By : DEMOUSER

Date : 03/23/2009

MODULE	USER ID	FUNCTION TYP	FUNCTION CODE	OPERATION	OPERATION
SMS	SOC	Login	Login	[C][SMSAUDIT LOGO_IN_SUCCESS][SOC]	3/23/2009 10:38:5
SMS	SOC	SMS	SMS	User SOC has made 0 invalid login attempts	3/23/2009 10:38:5
SMS	SOC	SMS	SMS	SOC Logged in successfully	3/23/2009 10:38:5
SMS	SAQC	Logout	Logout	SAQC : The User Logged Out.	3/23/2009 10:38:4
SMS	SAQC	SMS	SMS	SAQC : The User Logged Out.	3/23/2009 10:38:4
SMS	DEMOUSER	SMS	SMS	User DEMOUSER has made 0 invalid login attempts	3/23/2009 10:33:9
SMS	DEMOUSER	Login	Login	[C][SMSAUDIT LOGO_IN_SUCCESS][DEMOUSER]	3/23/2009 10:33:9
SMS	DEMOUSER	SMS	SMS	DEMOUSER Logged in successfully	3/23/2009 10:33:9
SMS	DEMOUSER	Login	Login	[C][SMSAUDIT LOGO_IN_SUCCESS][DEMOUSER]	3/23/2009 10:29:2
SMS	DEMOUSER	SMS	SMS	User DEMOUSER has made 0 invalid login attempts	3/23/2009 10:29:1
SMS	DEMOUSER	SMS	SMS	DEMOUSER Logged in successfully	3/23/2009 10:29:1
SMS	DEMOUSER	Logout	Logout	DEMOUSER : The User Logged Out.	3/23/2009 10:27:4
SMS	DEMOUSER	SMS	SMS	DEMOUSER : The User Logged Out.	3/23/2009 10:27:4
SMS	SAQC	SMS	SMS	SAQC Logged in successfully	3/23/2009 10:26:2
SMS	SAQC	SMS	SMS	User SAQC has made 0 invalid login attempts	3/23/2009 10:26:2
SMS	SAQC	Login	Login	[C][SMSAUDIT LOGO_IN_SUCCESS][SAQC]	3/23/2009 10:26:2
SMS	PSI	SMS	SMS	PSI : The User Logged Out.	3/23/2009 10:26:1
SMS	PSI	Logout	Logout	PSI : The User Logged Out.	3/23/2009 10:26:1
SMS	PSI	Login	Login	[C][SMSAUDIT LOGO_IN_SUCCESS][PSI]	3/23/2009 10:19:4
SMS	PSI	SMS	SMS	User PSI has made 0 invalid login attempts	3/23/2009 10:19:4
SMS	PSI	SMS	SMS	PSI Logged in successfully	3/23/2009 10:19:4
SMS	DEMOUSER	Login	Login	[C][SMSAUDIT LOGO_IN_SUCCESS][DEMOUSER]	3/23/2009 10:18:1
SMS	DEMOUSER	SMS	SMS	DEMOUSER Logged in successfully	3/23/2009 10:18:1
SMS	DEMOUSER	SMS	SMS	User DEMOUSER has made 0 invalid login attempts	3/23/2009 10:18:1
SMS	SW	Login	Login	[C][SMSAUDIT LOGO_IN_SUCCESS][SW]	3/23/2009 10:14:4
SMS	SW	SMS	SMS	SW Logged in successfully	3/23/2009 10:14:4
SMS	SW	SMS	SMS	User SW has made 0 invalid login attempts	3/23/2009 10:14:4

Click the Reset button in the Audit Trail Report screen of Infrastructure to reset the fields.

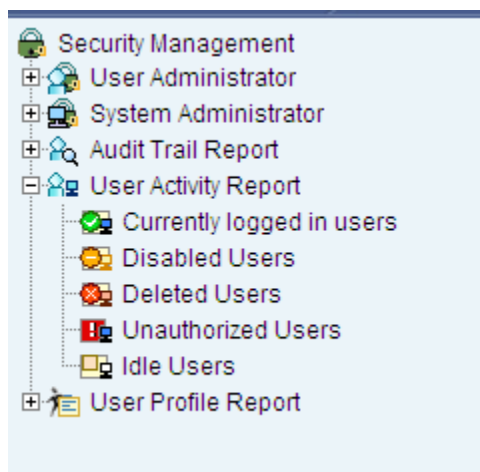
Click Purge to delete records of a selected domain, module, and user id for the specified time duration. A confirmation message will be displayed asking to confirm the deletion. Click OK to delete the Audit Trail Entries.

Maintaining User Activity Reports Details

Introduction

The User Activity Reports provides information of different types of users like Currently Logged in Users, Disabled Users, Deleted Users, Unauthorized Users and Idle Users.

In the LHS menu of the Security Management screen, click the + icon adjacent to User Activity Report to view the sub-menu.



The following options are available under User Activity Report:

- Currently Logged in Users
- Disabled Users
- Deleted Users
- Unauthorized Users

- Idle Users

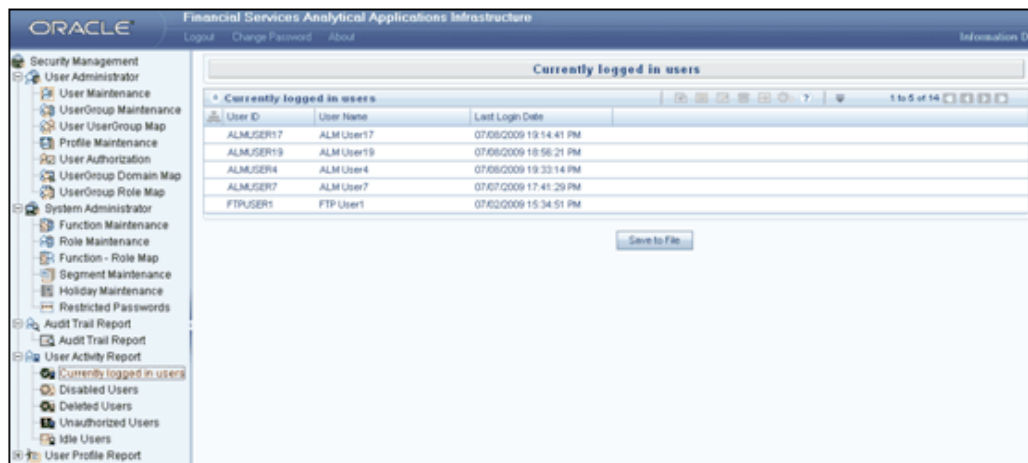
Pre-requisites

- Successful Completion of Infrastructure and Related Software.
- Successful Completion of Infrastructure System Configuration Activities such as Server Details / Database Details / Information Domain / Configuration of Miscellaneous items.
- Infrastructure Administrator Privilege.
- Successful completion of Infrastructure administration and User Administration activities.

Viewing Currently Logged in Users

Select User Activity Report > Currently logged in users in the Security Management screen to open the Currently Logged in users screen. This screen displays User ID, User Name and Last Login Date information.

Note: On choosing the any of these user activity reports, the report is generated and displayed to the screen for immediate view.



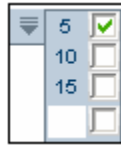
Click Save to File. The File Download window is displayed. Click Save to save the file or Open to view the file. On clicking Open, the report will be displayed in your browser. Click Help to view the help screen.

Pagination Options

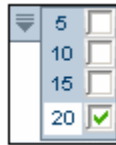
The Pagination toolbar above the display grid provides the various Pagination and Viewing options available.



The number of rows to be displayed at a time can be set by clicking the pagination options button in the toolbar. The Pagination Options dropdown will be displayed.



The option '5' will be selected by default. The other available options are 10 and 15 rows. You can also enter the required number of rows in the empty field and selecting the checkbox adjacent to it as shown below.



The toolbar also displays the number of total records available and the count of records that are displayed in the current view.

The navigation buttons are also available. Click > to go to the next page of records based on the number of rows that you have chosen to be viewed per page. Click >> to go to the last page. Click < to go to the previous page and << to go to the first page.

Viewing Users

Viewing Disabled Users

Select User Activity Report > Disabled Users in the Security Management screen to open the Disabled Users screen. This screen displays Disabled User ID, User Name and User Disabled Date information.

User ID	User Name	Disabled On
GUEST	Guest Login	--

The Pagination Options available are the same as in the Currently Logged in users screen.

The navigation buttons are also available. Click > to go to the next page of functions based on the number of rows that you have chosen to be viewed per page. Click >> to go to the last page. Click < to go to the previous page and << to go to the first page. Click Save to File. The File Download window is displayed. Click Save to save the file or Open to view the file. On clicking Open, the report will be displayed in your browser. Click Help to view the help screen.

Viewing Deleted Users

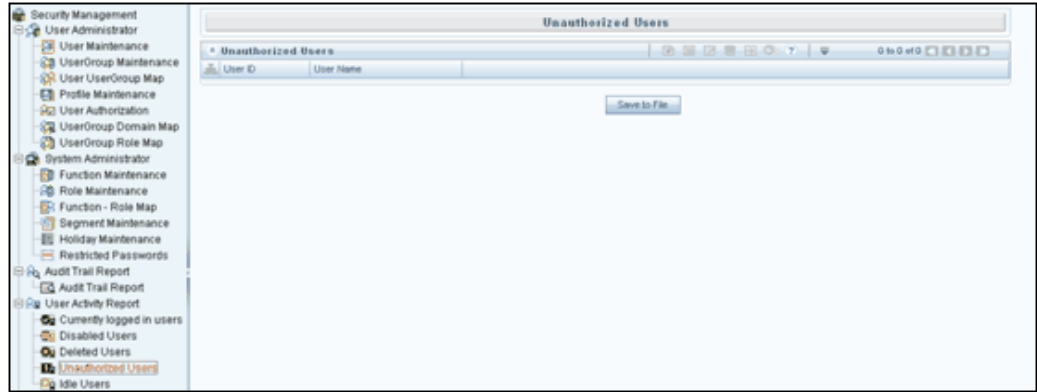
Select User Activity Report > Deleted Users in the Security Management screen to open the Deleted Users screen. This screen displays User ID, User Name, Last Login Date, User Status, and Authorization Status and User Deleted Date information.

User ID	User Name	Last Login	Authorization Status	Deleted On
CONMAPP	conmapp	04/09/2009 12:20:31 PM	A	04/09/2009 12:29:48 PM

The Pagination Options available are the same as in the Currently Logged in users screen. The navigation buttons are also available. Click > to go to the next page of functions based on the number of rows that you have chosen to be viewed per page. Click >> to go to the last page. Click < to go to the previous page and << to go to the first page. Click Save to File. The File Download window is displayed. Click Save to save the file or Open to view the file. On clicking Open, the report will be displayed in your browser. Click Help to view the help screen.

Viewing Unauthorized Users

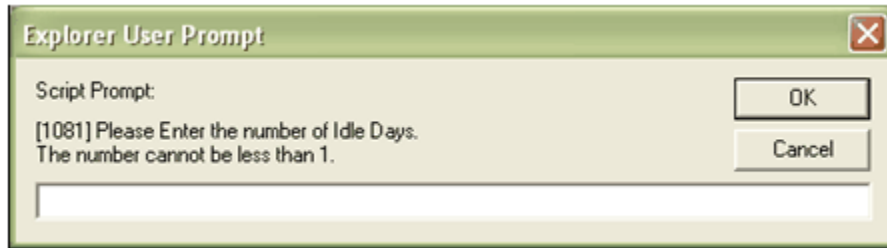
Select User Activity Report > Unauthorized Users in the Security Management screen to open the Unauthorized Users screen. This screen displays the User ID and User Name of unauthorized users.



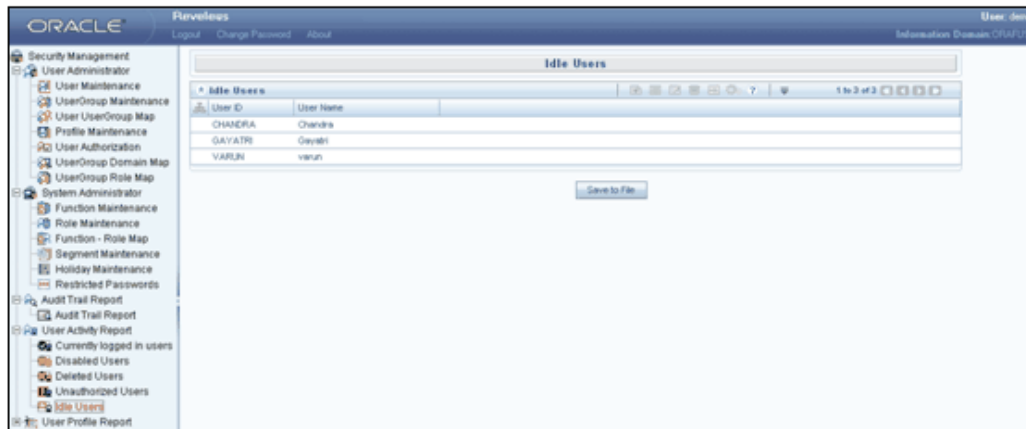
The Pagination Options available are the same as in the Currently Logged in users screen. Click Save to File. The File Download window is displayed. Click Save to save the file or Open to view the file. On clicking Open, the report will be displayed in your browser. Click Help to view the help screen.

Viewing Idle Users

Select User Activity Report > Idle Users in the Security Management screen. This opens a User Prompt as shown below.



Enter the number of Idle Days. The number of idle day cannot be less than 1. Based on the number of days specified, the information on idle users is displayed.



Example

3

It displays the list of idle users who have not accessed the system for 3 days and beyond.

The Pagination Options available are the same as in the Currently Logged in users screen. Click Save to File. The File Download window is displayed. Click Save to save the file or Open to view the file. On clicking Open, the report will be displayed in your browser. Click Help to view the help screen

User Profile Report

Introduction

The User Profile Reports provide information about the Roles and Functions to which a User is mapped.

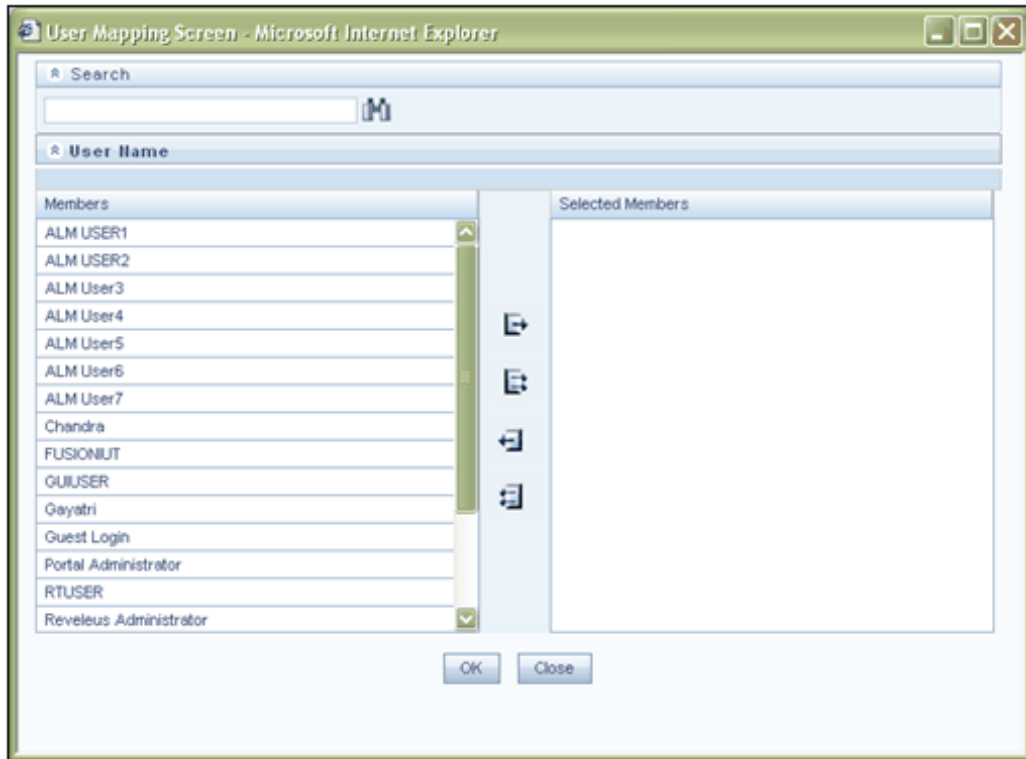


Select User Profile Report > User Profile Report in the Security Management screen to open the User Profile Report screen.



Selecting the User Name

Click the Edit button in the User Profile Report toolbar. The User Name browser is displayed. Select the user name whose Profile details you wish to view and click the > button. The selected User name moves to the Selected Members pane.



You can select multiple users by pressing the <Ctrl>key and clicking the > button. Click the < button to deselect the selected member. Click >> button to select all the user names and << button to deselect all the selected user names.

You can also search for user names in the user name browser by entering the search string in the Search field and clicking Search button. The user names corresponding to the search string will be highlighted in the Members pane of the User name browser.

Click OK in the User Name browser. The selected User Name(s) are displayed in the User Name display grid.

Selecting the Printing Option

You can choose either to print the report to a file for saving or to the screen for viewing.

Select the File or Screen option under Print to.

After selecting the required users for which the Report is to be generated, click Generate Reports.

On clicking Generate Reports, if Screen option is selected, the report will be displayed in your screen. Details such as the Segment, User Group, Roles and Functions to which the selected User is mapped will be displayed.

USER NAME	SEGMENT NAME	USERGROUP NAME	ROLE NAME	FUNCTION NAME
varun	FUSIONUT-FUSIONUT FUSIONRT-FUSIONRT ORAFUSION-ora12 ORAFUSION-orafusion	FUSIONGRP	Action Assessor	Action Identification AI Close AI Create AI Request for Appro AI Save DOC_MNU My Tasks Operational Risk
			Business Analyst	Add Alias Add Attributes Add Business Processor Add Computed Measure Add Cube Add Dataset Add Derived Entities Add Dimension Add Hierarchy Add Measure Add RDM Business Analyst User Screen Cash Flow Equation Definition Computed Measure Advanced Defn Administrator Defn User Delete Alias Delete Attributes Delete Business Processor Delete Computed Measure Delete Cube Delete Dataset

Select the File option if you wish to save the report. The report will be generated and saved in the html format and a link will be displayed to access the file.

User Profile Report Saved to File Successfully

Saved Report -

[2009-07-08_DEMOUSER.htm](#)

Click the Saved Report link. The Download File window will be displayed. Click Save to save the html file. Click Open to view the file. The file will be displayed in your browser.

USER PROFILE REPORT				
Generated By : DEMOUSER		Date : 2009-03-23		
USER NAME	SEGMENT NAME	USERGROUP NAME	ROLE NAME	FUNCTION NAME
veena	BASELSOL-wrling BASELSOL-BASELSOL MODELUP-modelup PROD1IMP-prod1imp RORSOL45-RORSOL45 SAND1IMP-sand1imp SANDBOX02-sandbox02 TESTINFO-TESTINFO VIBORREC-viborrec1	BASELGRP	Action Assessor	Access to user options link Action Identification AI Close AI Create AI Request for Appro AI Save Call Remote Web Services Close for document Document Management Access DOC_MNU Execute Runs and Rules Issue Identification My Tasks Operational Risk Refresh Hierarchies Remote SMS Access Result of request and Status of all Save for Risk Attach
			Business Analyst	Access to user options link Add Alias Add Attributes Add Business Processor Add Computed Measure Add Cube Add Dataset Add Derived Entities Add Dimension Add Hierarchy Add Measure Add RDM Application Screen Business Analyst User Screen Cash Flow Equation Definition Computed Measure Advanced

Click Reset to clear the fields.

Utilities

Click + sign on Utilities in the LHS menu to view the sub menu listed under it. The available utilities are:

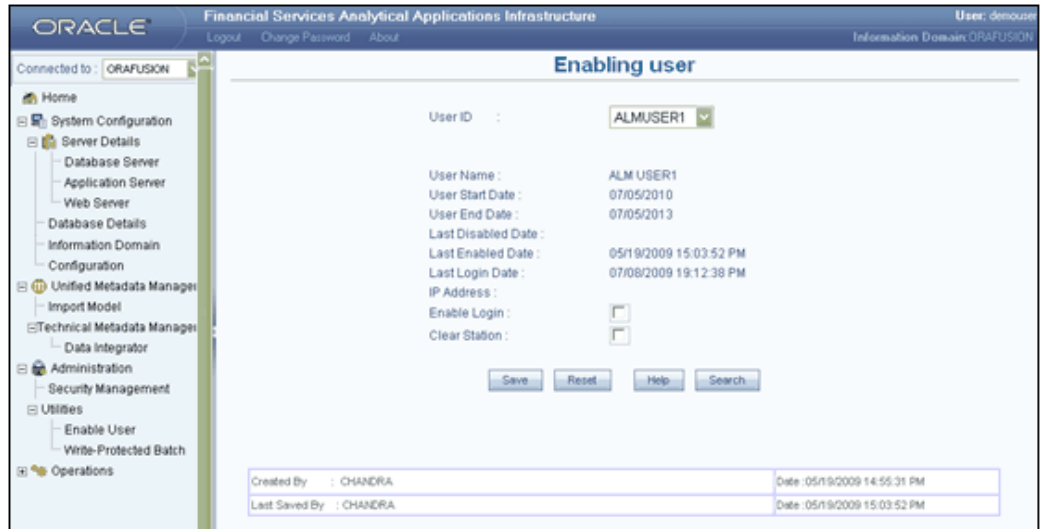
- Enabling users
- Write Protected Batch
- User Group - Batch Execution Mapping

Prerequisites

- Successful completion of Infrastructure and related Software installation.
- Successful completion of Infrastructure System Configuration, System Administration Activities and User Administration activities.
- Infrastructure System Administration privilege.

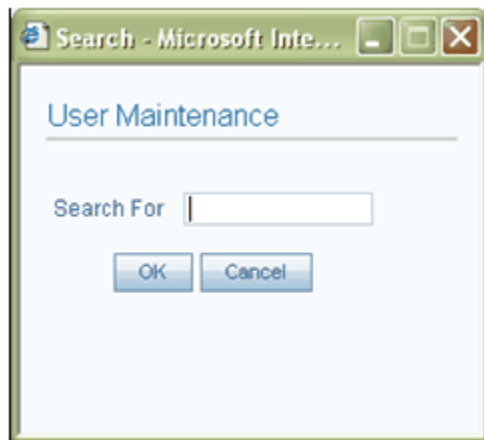
Enabling User

Click + sign on Utilities in LHS Menu to open the screen, and then click submenu Enable User to open Enabling User screen. You can enable a user or clear the user workstation information or do both in case of an abnormal exit in this screen.



Select the User ID to be enabled from the User ID drop-down list.

You can also click Search to search the list of users. The User Maintenance search window is displayed.



Enter the User name in the Search For text box field. Click OK. All the user ids relevant to the search filter entered in the Search for box will be listed in the User Name field in the Enabling User window. Click Cancel to discard search and close the pop up window.

All the details such as the User name, User Start and End dates, Last Disabled and Enabled dates, the Last Login date and the IP Address from which the user had logged in will be displayed for the selected User ID.

Select Enable Login to enable a user who is locked out due to invalid login attempts. Select Clear Station to enable a user whose account is locked due to an abnormal exit from the system.

Click Save to save the changes. Click Reset if you have checked the Enable Login or

Clear Station option and want to reset it.

Click Help to open help for the Utilities screen.

Screen information is covered under Created by, Date. It consists of the user name and the date on which it was created. It also covers Last saved by and Date that displays the name of the user who modified it and the date on which it was modified.

Write Protected Batch

The Write-Protected Batch screen is provided for the user to edit the Batch_Type (Editable/Non Editable) of the Batches for the selected information domain. This screen displays the Batch_ID, Batch_Name and Write-Protected Batch details.

Note: Write Protected Batch Screen can be accessed by the Users who are mapped to the role Infrastructure Administrator.

Click the + sign next to Utilities in the LHS Menu. Select the submenu Write Protected Batch to open the Write Protected Batch screen.



See Also: Defining a Batch Chapter.

Operations

Select (or) Check the Write Protected Batch Checkbox, will make the respective batch/batches to be non-editable in Batch Scheduling Screen.

Deselect (or) Uncheck the Write Protected Batch checkbox, will make the respective batch/batches to be editable in the Batch Scheduling Screen.

Example

TMPCASHFLOW

In this case the batch "TMPCASHFLOW" is defined as a non-editable batch in the Batch Scheduling screen and the user can make it editable by deselecting the Write Protected Batch check box.

The user can click the Check All option to make all the batches write protected / non-editable.

Note: In the Batch Scheduling screen, all the batches will be non-editable.

The user can click the Uncheck All option to clear all the selections made.

Note: In the Batch Scheduling screen all the batches will be editable.

Click Save to save the definition

Click Cancel to discard the operation.

By default, Batch Name will be in ascending order. Click the up and down symbol in Batch Name / Batch Description to sort the corresponding details in ascending/descending order respectively. Click Help to open the help screen.

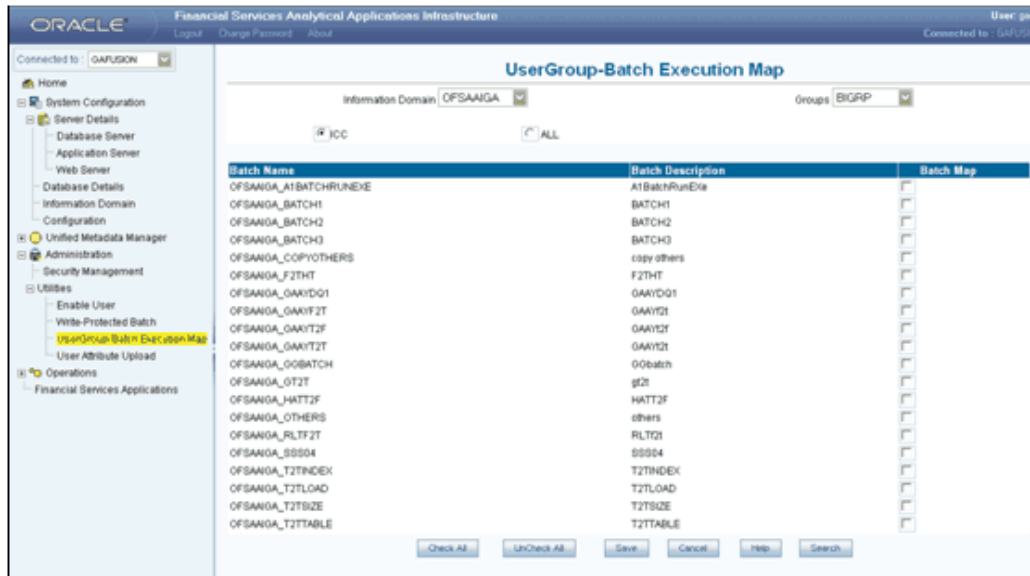
User Group - Batch Execution Mapping

The User Group - Batch Execution Map screen is provided to map the user groups to the batches that are already defined. The users will be able to run the batches from the Batch Execution/Scheduling screen only if the particular batch is mapped to the particular user group to which they belong.

- User Group -Batch Execution Map screen can be accessed only by User Groups that are mapped to the Infrastructure Administrator role.
- Multiple User Groups in the same information domain can be mapped to different batches.
- The default User Group of the user who has created the batch would be automatically mapped for execution. The default user group of a user is the user group with the maximum Precedence value among the User Groups to which he is mapped. It is not required to explicitly map this User Group to the batch.
- If a user is mapped to multiple user groups, the combined list of

batches mapped to these user groups will be available in the Batch Execution/Scheduling screen.

Click the + sign next to Utilities in the LHS Menu of the Oracle Financial Services Analytical Applications Infrastructure main screen. Click the submenu User Group - Batch Execution Map to open the User Group - Batch Execution Map screen.



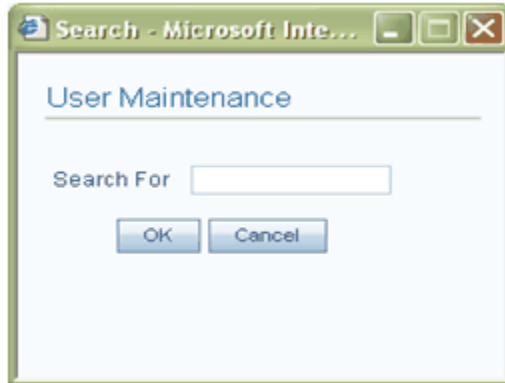
The User Group-Batch Execution Map screen displays details such as the Batch Name and Batch Description. The screen has options to select batches that are defined under the Batch Scheduling option, Rules Framework as well as Modeling Framework. The ICC option will be selected by default and the batches defined under the Batch Scheduling option will be displayed in the display grid.

See Also: Running and Executing the Batch Chapter

Select the Information Domain in which the batches are defined from the Information Domain list. By default, the name of the Information Domain to which you are connected will be displayed.

Select the User Group ID to which you wish to map the Batch Execution permissions from the Groups list. All the User Groups mapped to the Infodomain will be displayed in this drop-down list.

You can also click Search button to search the list of user groups. The User Maintenance Search window is displayed.



Enter the User Group name or the appropriate search string in the Search For field. Click OK. All the user groups relevant to the search filter entered in the Search for box will be listed in the Groups drop-down list in the User Group-Batch Execution Map window.

Click Cancel to discard the search and close the Search window. It is possible to filter the batches based on whether they are defined under the Batch Scheduling, Rules Framework or Modeling Framework options.

Select the ICC option if you wish to view the batches defined under the Batch Scheduling process. The ICC option will be selected by default.

Select the Rules Framework option if you wish to view the batches defined under the Rules Framework option.

Select the Modeling Framework option if you wish to view the batches defined under the Modeling Framework option.

Select the All option button if you wish to view all the batches defined in the selected information domain.

Based on the selection made above, the batches will be displayed in the display grid. Details such as Batch Name and Batch Description are displayed.

Select the Batch Map checkbox to map the particular batch to the user id selected in the Users list. The user will be able to view the selected batch in the Batch ID list under the Run option of Batch Execution/Scheduling screen and execute the same. Please note that the Batch Execution/Scheduling screen will list only the batches of the selected information domain and not all batches which are mapped.

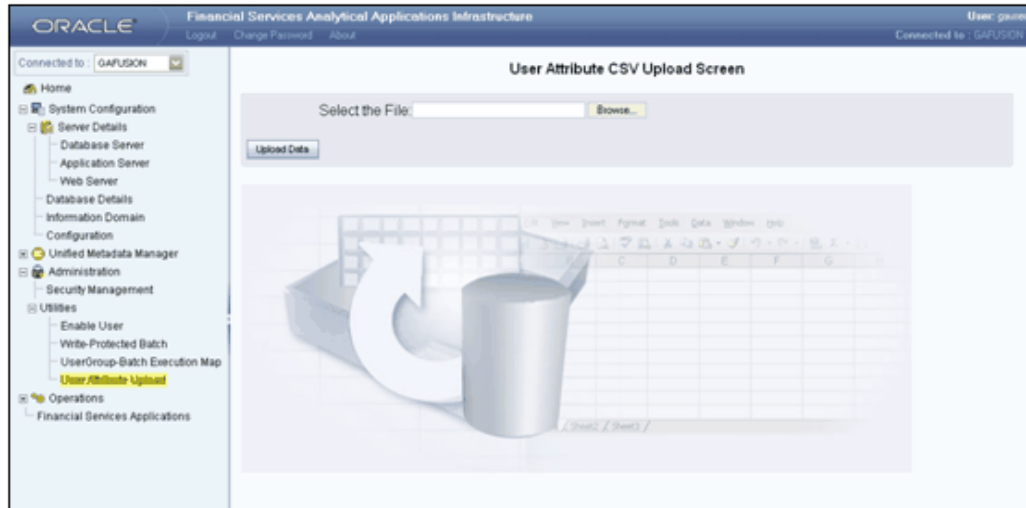
Select the Check All button to map all the batches displayed to the selected user group. In this case, the users of the mapped user group will be able to execute all the batches displayed. Select the Uncheck All button to clear all the selections made.

Click Save to save the User Group – Batch Execution Mapping. A message is displayed stating "Batch Mapped Successfully." Click OK.

Click Cancel to discard the operation.

User Attribute Upload

It is possible to upload the user attributes in .csv format. The user attributes will be updated and can be viewed by clicking the User Attributes button in the User Maintenance screen. Click the + sign next to Utilities in the LHS Menu. Click the submenu User Attribute Upload to open the User-Batch Execution Mapping screen.



Click the Browse button adjacent to the Select the File field. The Select File window is displayed. Choose the file to be uploaded and click Open. The file name will be displayed in the Select the File field.

Click Upload Data. A confirmation message will be displayed on successfully uploading the user attributes details. These details can be viewed by clicking the User Attributes button in the User Maintenance screen.

Rules, Process, and Run Framework

Introduction to Rules, Process, and Run Framework

This framework assists the user to configure and maintain a set of rules and processes that can be used for advanced reporting. As each process is driven by a set of rules, the system enables definition of different rules. It also enables the various rules defined using the Rules Framework to be combined together and executed as different "Runs" for different underlying approaches.

Accessing Rules Framework

The Rules Framework Designer is used for 3 main purposes namely:

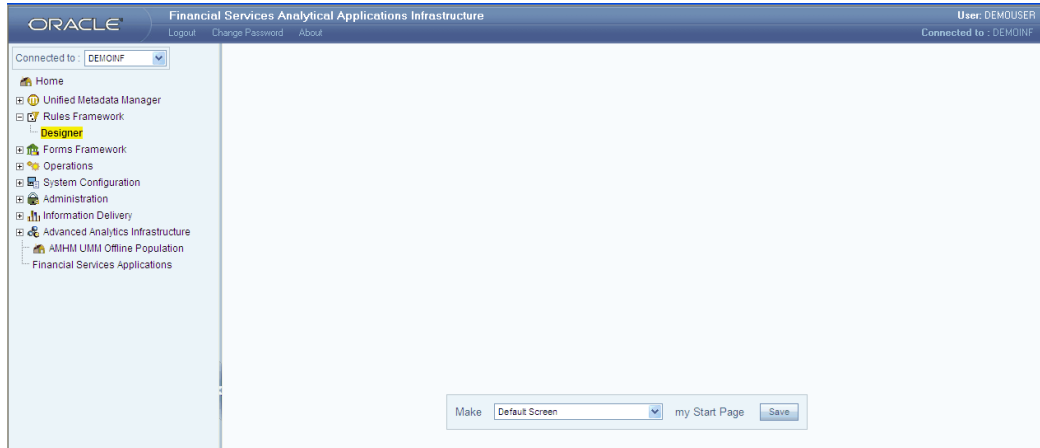
1. To design a set of rules, processes and structuring execution flow of processes that are required to transform data in a data warehouse or data store.
2. To design reporting objects based on already transformed data that is stored as aggregated data in multidimensional databases.
3. To design reporting objects based on the atomic information stored in the data warehouse or data store.

This chapter focuses on the first purpose – to design a set of rules and processes that are required to transform data in a data warehouse or data store. The functionality of the Rules Framework Designer that achieves this purpose is collectively called the Rules, Process & Run Framework.

Click the



option provided for the Rules Framework function menu in the home page to expand the same.



Click the Designer option. This will launch the Designer window as shown in the following figure.



Selecting the Information Domain

An Information Domain is a logical grouping of information specific to a group or organization. It points to an underlying data warehouse or data store in which the physical data model has been implemented.

When you first access the Rules Framework Designer window, click the list of the **Connected to** field to select the Information Domain. The window will be refreshed to display information pertaining to the Information Domain/Segment you have selected. You can use the **Connected to** list to change the information domain. The access rights of the user determine the list of Information domains displayed here.

Note: You will see only those Information Domains that are mapped to your user ID. Contact your System Administrator for permissions to access a specific Information Domain.

Selecting a Segment

Segments are defined through the System Administration menu options. Segments facilitate classification of related metadata in a single segment. You will be permitted access to only those metadata objects that are mapped to the same segment that the you have been mapped to.

Note:

- For PR2 functionality, the default system roles that are required are Business Analyst, Insight Author and PR2 Administrator.
- If you are mapped to the role PR2ADMIN, you will be able to access metadata objects across all segments within an Information Domain through the Rules, Process and Run Framework.
- If you are mapped to the PR2 Administrator role, you will have the rights to perform add / edit / delete / view using the Rule, Process and Run menu options within the Designer.
- If you are mapped to the particular information domain and segment you can view only the Rules/Process/Run definitions defined in the selected information domain and segment.

Hiding/Unhiding the Rules Framework Designer Menu

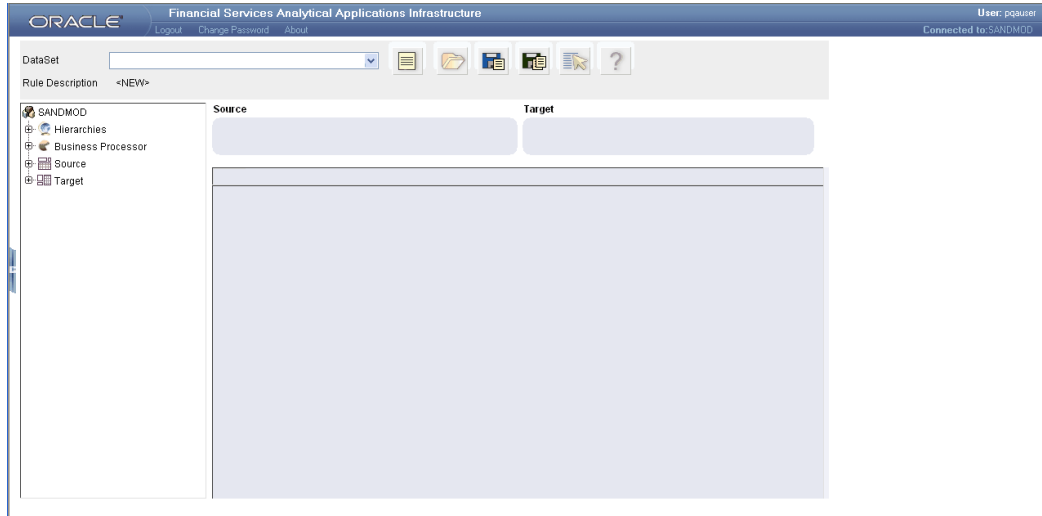
You can Hide/Unhide the Rules Framework Designer Menu using the buttons provided. The Hide button is provided within the Designer menu in the left hand side frame. When you hide the Designer menu, the right frame expands across the window. To Unhide the Designer menu, use the unhide button provided on the extreme left of the window. You are provided illustrations of the hide and unhide buttons in the sections to follow:

Hiding the Rules Framework Designer Menu

To hide the Designer menu, click

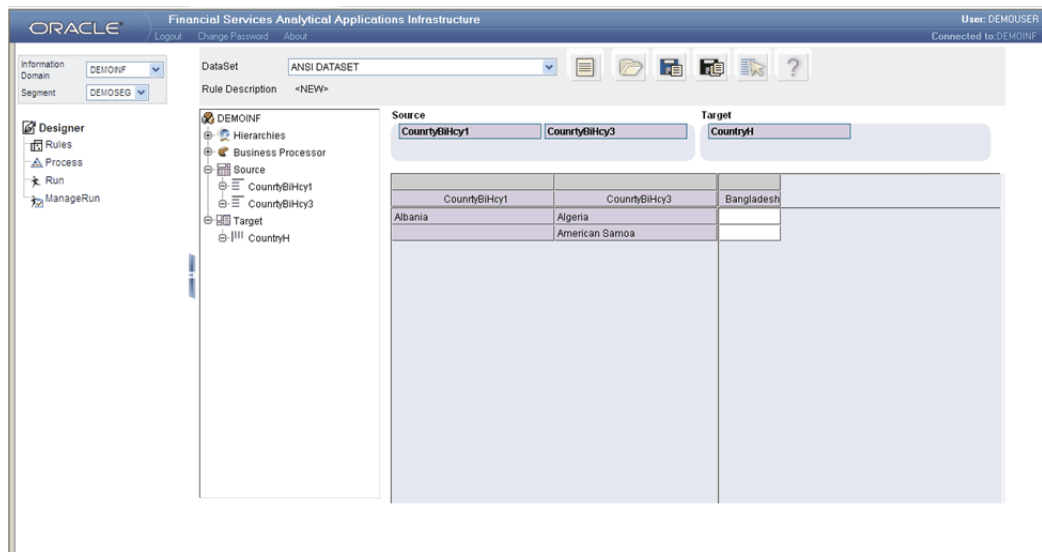


This will increase the work area for data.



Unhiding the Rules Framework Designer Menu

To unhide the Designer menu, click



All features in the Designer module are context based. To access general features, use the icons provided at the top of the window.

Accessing Rule

Institutions in the financial sector may require constant monitoring and measurement of risk in order to conform to prevalent regulatory and supervisory standards. Such measurement often entails significant computations and validations with an organizations data. Data must be transformed to support such measurements and calculations. The data transformation is achieved through a set of defined rules.

The **Rules** option in the Rules Framework Designer provides a framework that facilitates the definition and maintenance of a transformation. The metadata abstraction layer is actively used in the definition of rules where you are permitted to re-classify the attributes in the data warehouse model thus transforming the data.

Underlying metadata objects such as Hierarchies that are non-large or non-list, Datasets and Business Processors drive the Rule functionality.

Note:

- You must have an in-depth knowledge of the underlying source and data warehouse model that stores the organizations data.
- You are also expected to have a fair understanding of data warehousing and must be familiar with the OFSAAI Data Integrator process flow that populates the data warehouse model and OFSAAI Unified Metadata Manager that define metadata objects on the data warehouse model.

Types of Rules

From a business perspective, Rules can be of 3 types:

- **Type 1:** This type of Rule involves the creation of a subset of records, from a given set of records in the data model, based on certain filters. This process may or may not involve transformations or aggregation or both.

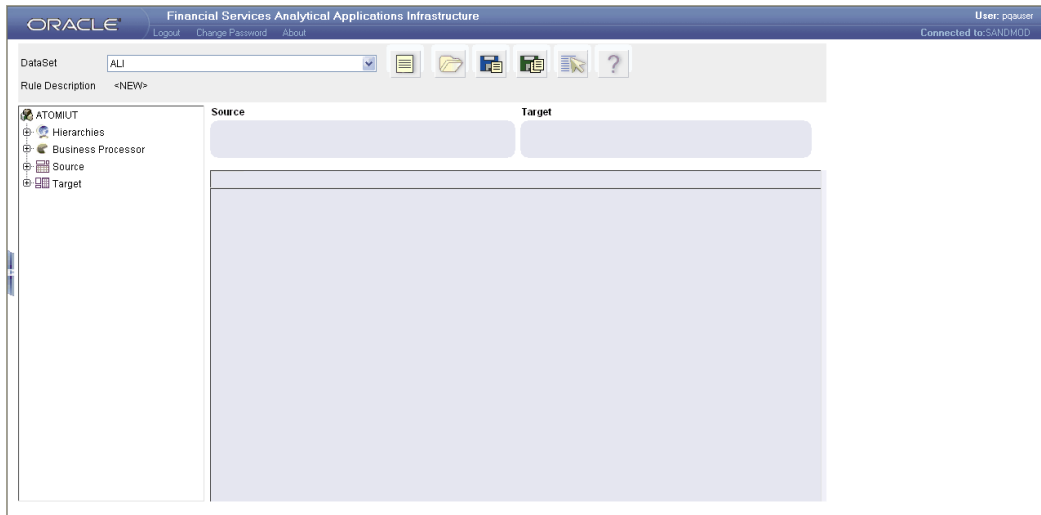
Such type 1 rule definitions are achieved through Table-to-Table (T2T) Extract.

- **Type 2:** This type of Rule involves re-classification of records in a table in the data model based on criteria that include complex Group By clauses & Sub Queries within the tables.
- **Type 3:** This type of Rule involves computation of a new value / metric based on a simple measure and updating an identified set of records within the data model with the computed value.

Rules Framework Designer is used to define Type 2 and Type 3 class of rules.

Launching the Rule Designer

Click **Designer** in the Rules Framework main window to display the Designer window. The Information Domain and the Segment will be displayed. Select the Information Domain within which you wish to create a rule. Click the **Rule** option in the left frame of the Designer window. On selecting the **Rule** option, the menu frame is hidden and the right frame is displayed in window.



Note: Only those users mapped with the PR2ADMIN role will have access to the Rule definition.

Understanding the Rule Menu



The following list comprises the menu options provided just above the data area in Rule Definition in the Designer window.

- New
- Open
- Save
- Save As
- Properties

- Help

New

With the New



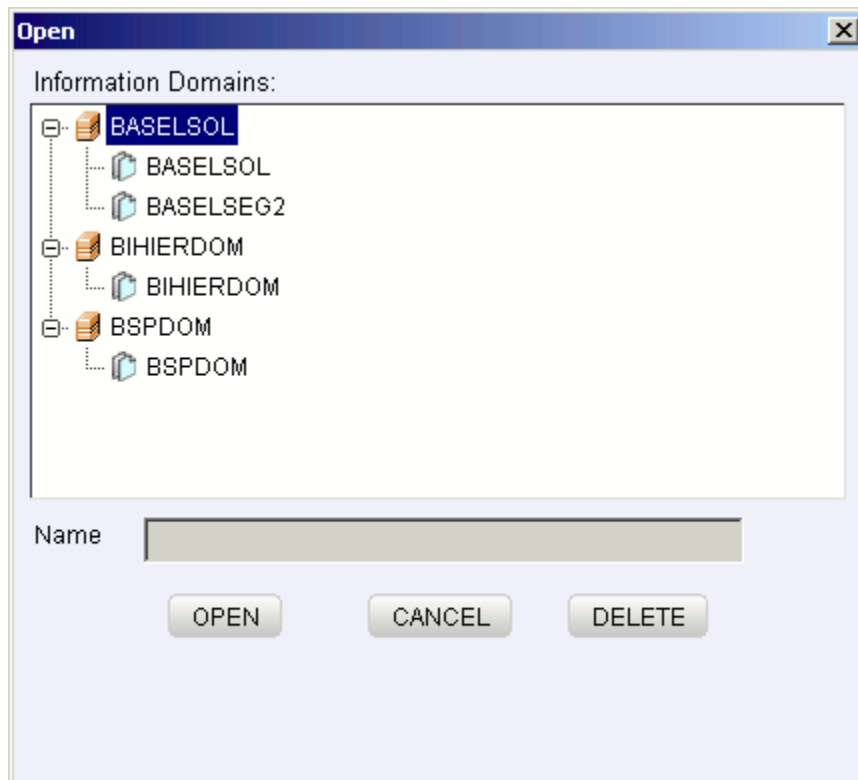
option you will be able to define a new rule definition. Click on New to add a new rule definition. If you already have an unsaved definition open, the system will display an alert that requests for your confirmation. In order to proceed with creating a new Rule definition you must select the source dataset type from the Source Dataset drop down menu on the top of the window.

Open

Click Open

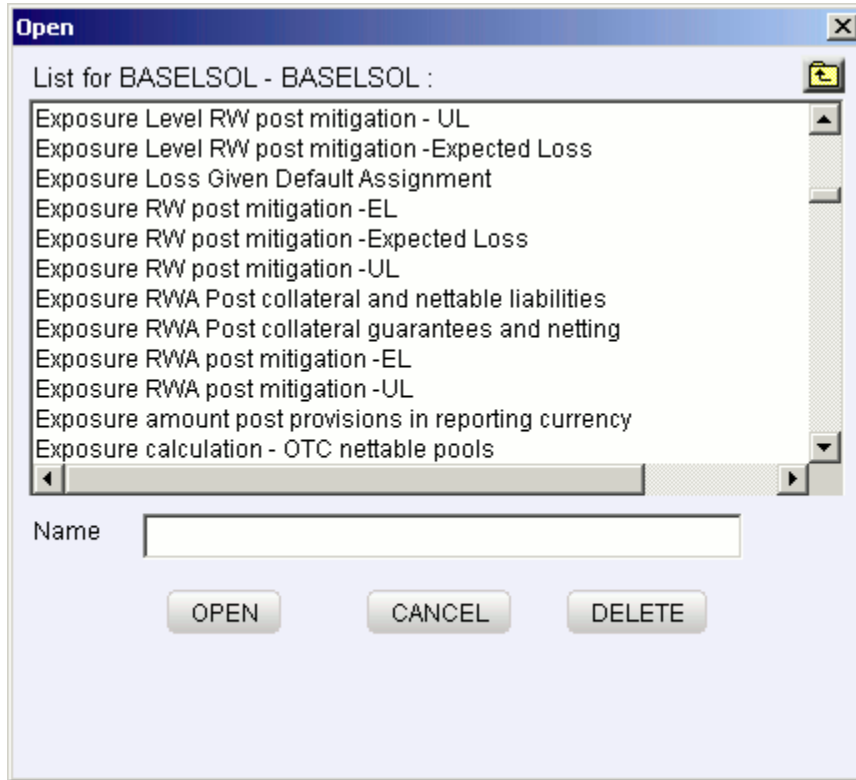


to open an existing rule.



The list of Information Domains mapped to you appear in the window. Click the

Information Domain to view the list of available segments mapped to the selected information domain. Double-click to select the **Segment** within the sub menu to view the list of associated rule definitions or Double-click the segment to see the list of rule definitions.



Select the rule from the list of rules presented in the window. The name of the selected rule appears in the Name textbox.

Click **Open** to open the rule or click **Cancel** to exit the window and return to the main window.

Click **Delete** to delete the selected rule. Once you click the delete option, a message will appear requesting the user to confirm the delete operation. The selected rule definition will be deleted from the selected information domain and segment.

Click **Yes** to clear the confirmatory message and delete the selected rule. Click **No** to cancel the delete operation.

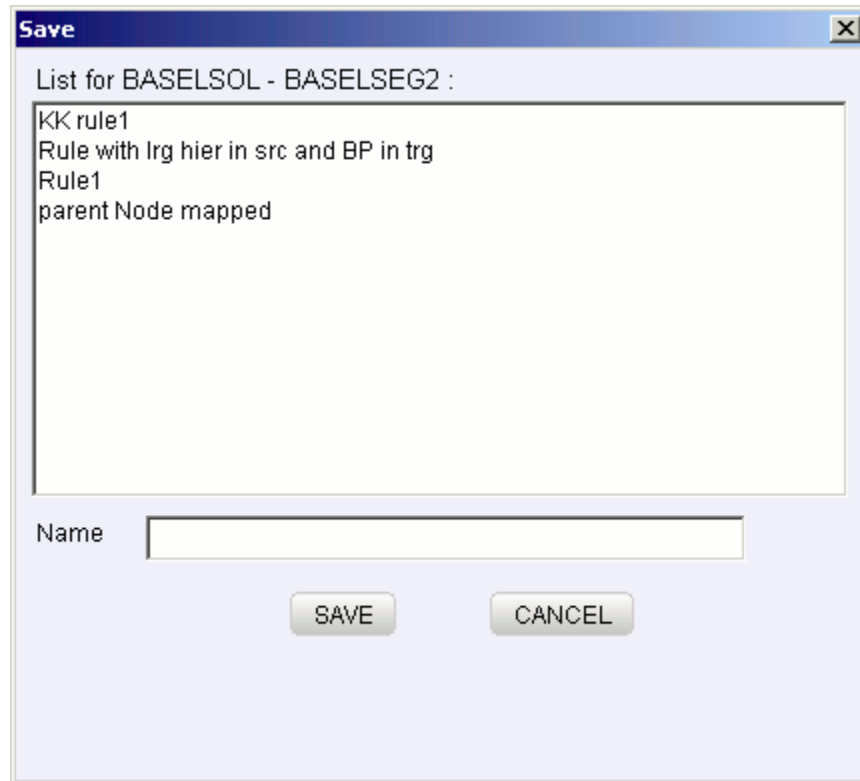
Save and Save As

Once you have created a new rule or modified an existing rule, click Save



A save window will be displayed. This window displays the existing rules available

under the selected Information Domain. Enter the name for the new rule in the Name textbox provided.



Click **Save**. The rule definition will be saved in the selected information domain / segment. The information domain and segment name will be displayed in the top pane. A confirmation message will be displayed if the operation is successful.

Note:

- In order to save a rule definition, a mapping between the source and target must be defined. For more information, see Rule Definition, page 42-12 in this chapter for understanding Source, Target and Mapping.
- When a rule is saved in a particular segment, by default it will be mapped to that segment and the users mapped to the particular segment can view the Rules definition.

If a rule already exists with the same name as entered in the text box, a message is displayed that cautions the user about the duplicate rule. Click **Yes** to overwrite the existing rule definition with the one newly created. Click **No** to cancel the overwrite and re-enter a new name in the **Name** textbox.

If you are working on an existing rule definition and wish to save it under a new **Name**,

click the **Save As**



option. On clicking **Save As**, the Save... window is displayed. Enter a name for the rule in the name field. The rule definition will be saved in the selected information domain / segment.

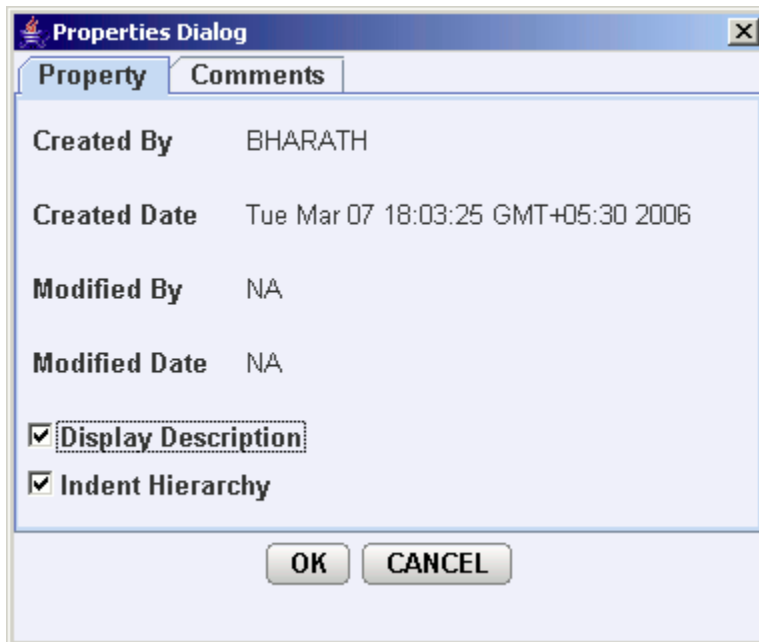
Properties

Click the **Properties**



option. The **Properties Dialog** window is displayed.

The window displays the name of the user who has created the rule definition along with the date and time of creation. It also displays the name of the user who has last modified the rule definition along with the date and time of the last modification.



Note: The Modified date details will be displayed only if any modifications have been made to the rule. If modifications are not made to the component, NA will be displayed against it.

Select the **Display Description** option if you require the description of the hierarchies

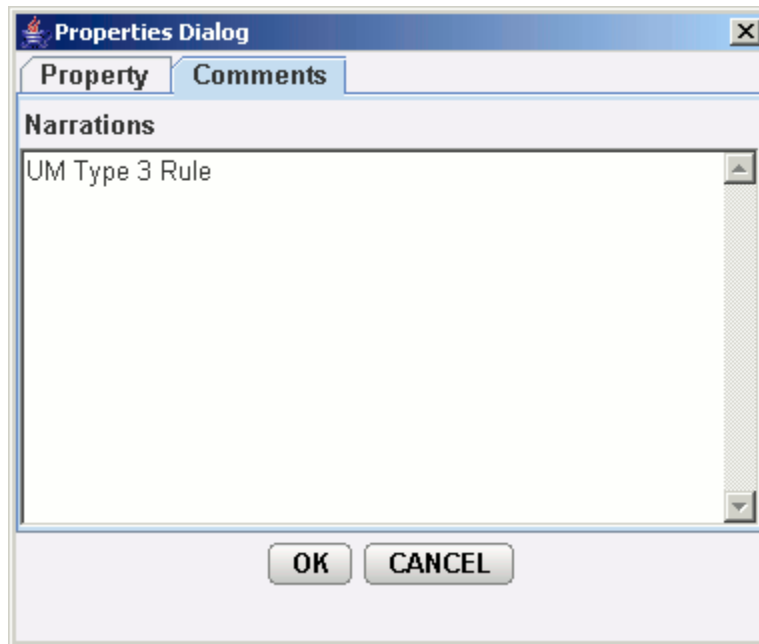
participating in the rule to be displayed in the work area grid. When you select the Display Description option and click OK, the window is refreshed to display the short description of the hierarchies that are selected / will be selected.

Note: If the Display Description option is not selected, a system-generated code is displayed for the hierarchies participating in the rule definition. This system-generated code is not a part of metadata and will not be accessible through the Metadata Browser.

Select the **Indent Hierarchy** option if you want to view the hierarchies participating in the rule definition in a tree structure. Selecting this property will ensure that when parent members of a hierarchy are expanded the child members will be indented inwards thus forming a tree. Leaving this option cleared will ensure that when parent members are expanded, the child members will be displayed without an indent from the parent member.

Note: The Indent Hierarchy and Display Description property is only for purposes of display and will not be saved in the definition.

Click the **Comments** tab provided in the Properties Dialog window to enter the narration/comments about the created rule definition.



Click OK to save the Rules definition with the comments given. Click CANCEL to discard the operation.

Help

The Help



option provides online help for users.

Rule Definition

A rule is defined using existing metadata objects. The various components of a rule definition are:

Dataset – This is a set of tables that are joined together by keys. A dataset must have at least one FACT table. Type 3 rule definitions may be based on datasets that contain more than 1 FACT tables. Type 2 rule definitions must be based on datasets that contain a single FACT table. The values in one or more columns of the FACT tables within a dataset are transformed with a new value.

Source – This component determines the basis on which a record set within the dataset is classified. The classification is driven by a combination of members of one or more hierarchies. A hierarchy is based on a specific column of an underlying table in the data warehouse model. The table on which the hierarchy is defined must be a part of the dataset selected. One or more hierarchies can participate as a source so long as the underlying tables on which they are defined belong to the dataset selected.

Target – This component determines the column in the data warehouse model that will be impacted with an update. It also encapsulates the business logic for the update. The identification of the business logic can vary depending on the type of rule that is being defined. For type 3 rules, the business processors determine the target column that is required to be updated. Only those business processors must be selected that are based on the same measure of a FACT table present in the selected dataset. Further, all the business processors used as a target must have the same aggregation mode. For type 2 rules, the hierarchy determines the target column that is required to be updated. The target column is in the FACT table and has a relationship with the table on which the hierarchy is based. The target hierarchy must not be based on the FACT table.

Mapping – This is an operation classifies the final record set of the target that is to be updated into multiple sections. It also encapsulates the update logic for each section. The logic for the update can vary depending on the hierarchy member / business processor used. The logic is defined through the selection of members from an intersection of a combination of source members with target members.

Node Identifier – This is a property of a hierarchy member. In a Rule definition the members of a hierarchy that cannot participate in a mapping operation are target members, whose node identifiers identify them to be an „Others node, „Non-Leaf node or those defined with a range expression. For more information on hierarchy properties, see Defining Business Hierarchies, page 13-52. Source members, whose node identifiers identify them to be Non-Leaf nodes, can also not participate in the mapping.

Selecting the Dataset

Click **New** to define a new Rule.

The Rule Description field will display < NEW >.

Note: If you are modifying an existing rule, the name of the rule that is being modified will be displayed this field.

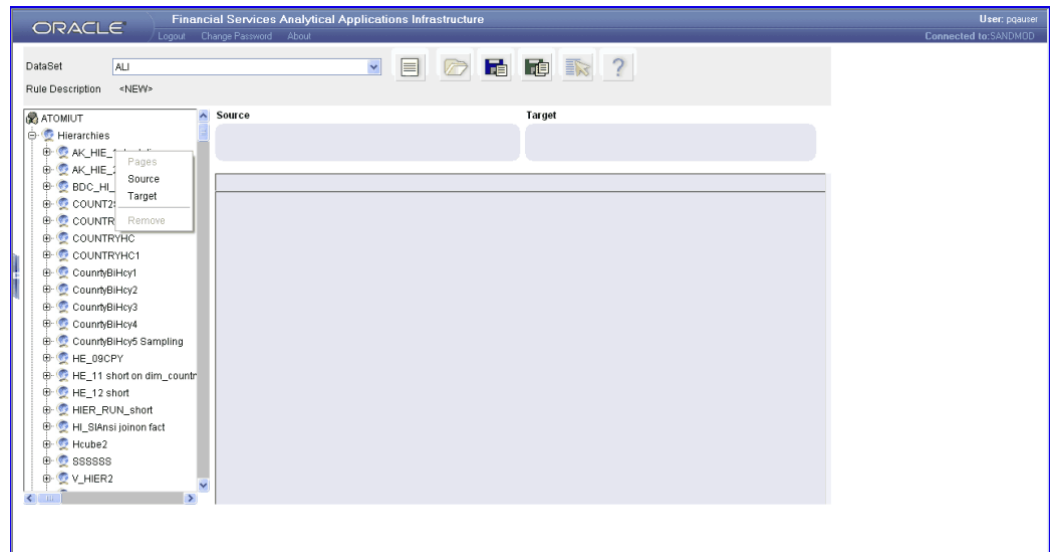
Click the Dataset drop-down and select the dataset from the list of available datasets. The list of available datasets contains all datasets defined under the Information Domain across all segments.

Note: If you are modifying an existing rule, the name of the rule that is being modified will be displayed this field.

Click the Dataset drop-down and select the dataset from the list of available datasets. The list of available datasets contains all datasets defined under the Information Domain across all segments.

Example

Non-Securitization Exposure



Selecting the Source and Target

The left pane of the window displays the Information Domain on which the rule is being defined. Under the Information Domain 4 metadata object tags are displayed – **Hierarchies**, **Business Processor**, **Source**, and **Target**. The right pane will be empty except for areas marked Source and Target. In the left pane, click the



button to expand the Hierarchies tag. The expansion will display only those hierarchies

that are based on tables that are part of the selected dataset. Select a hierarchy and right-click the mouse button. Select Source if you want to add the hierarchy as a source. Select Target if you want to add the hierarchy as a target.

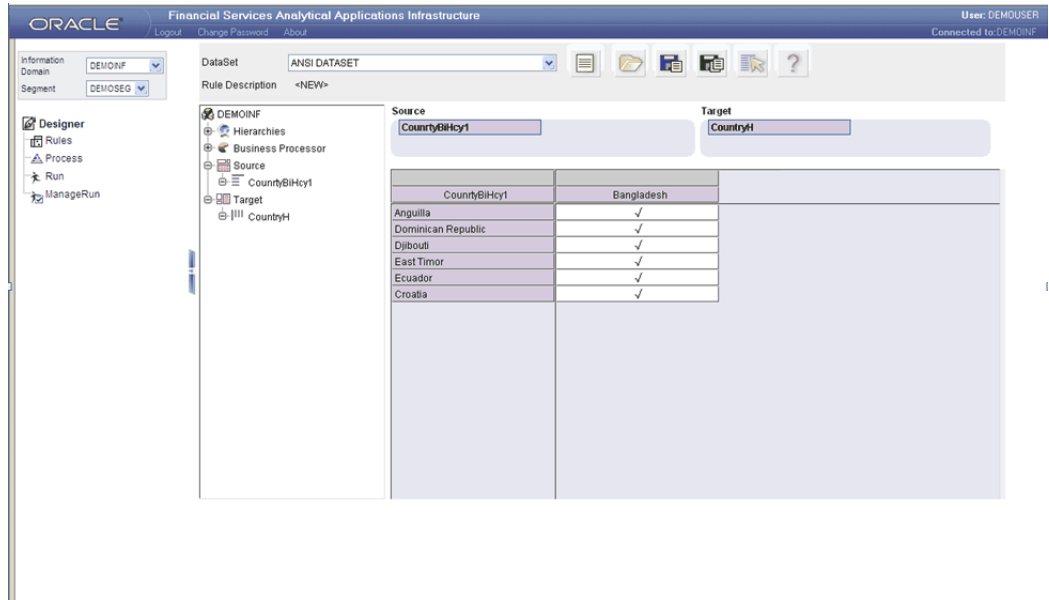
Note:

- List and Large hierarchies will not be displayed under the hierarchy tag.
- Once a Hierarchy is selected as Source/Target, the hierarchy will continue to be displayed under Hierarchies since the same hierarchy can be selected again onto Source/Target.
- You can select more than one hierarchy as a source
- You can select either a hierarchy or a business processor as target. For more information, see Rule Definition, page 42-12 in this chapter .

In the left pane, click the



button to expand the Business Processor tag. The expansion will display a list of only those business processors that are related to the selected dataset. Select a Business Processor and right click the mouse button. Select Target to add the business processor as a target.



If any of the selected business processor has place holders defined with default values, then the business processor will be displayed along with the placeholder name and the default value in the grid.

Note:

- A Business processor can only be selected as a target.
- You can select either a hierarchy or a business processor as target. For more information, see Rule Definition, page 42-12 in this chapter .

Upon selection of a source and target, the right work area is populated with a rule grid. The section above the rule grid identifies the metadata objects that have been selected.

The section marked as **Source** displays the hierarchy names of all selected hierarchies.

The section marked **Target** displays either the hierarchy name or the tag business processor depending on the selection.

The default members of the hierarchies selected as source will form the row axis of the rule grid.

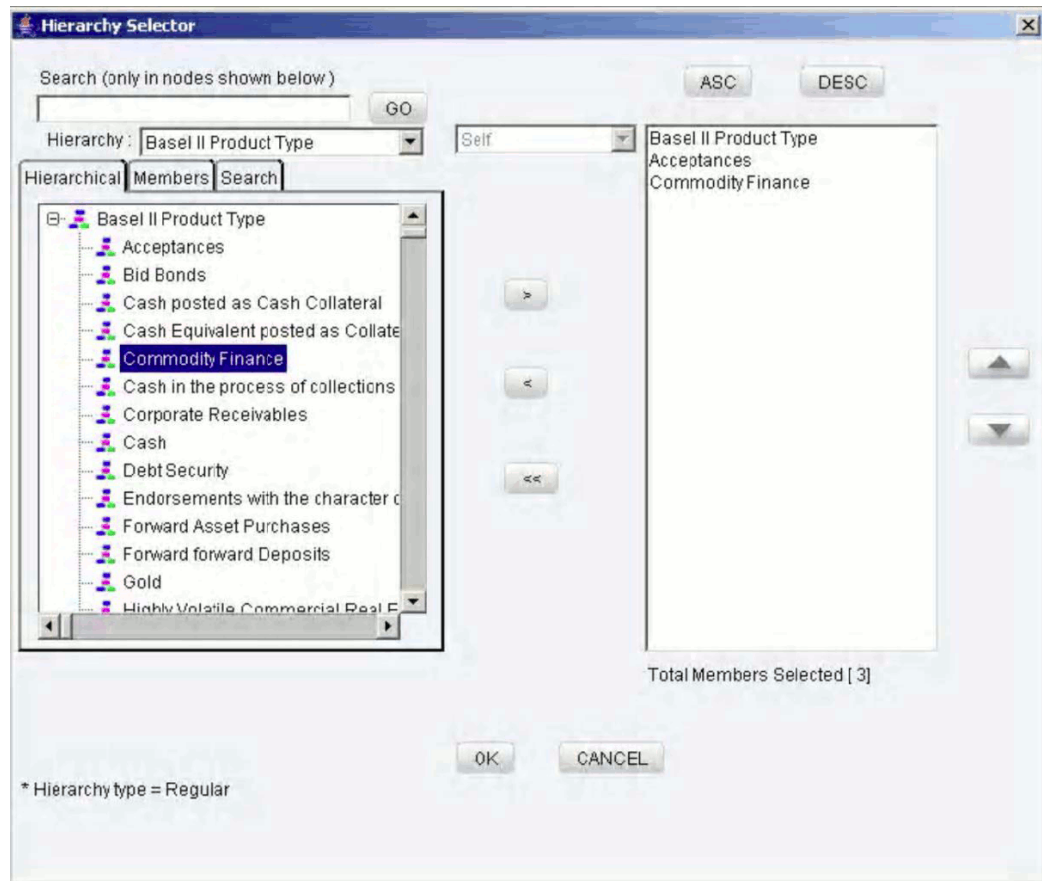
Adding Hierarchy Members to Source

Click the hierarchy under Source in the section above the rule grid. This opens a Hierarchy Selector window. The left pane of the Hierarchy Selector displays the name of the hierarchy that was selected and its members. If the hierarchy has multiple levels, the members can be expanded to display the child members in a tree structure.

Search

To search for a particular member, you may enter the keyword of the hierarchy member you are looking for and click GO.

If a member containing the keyword is located, the corresponding member is highlighted. Click Search again to be taken to the next member that contains the keyword used in the search field.



In the bottom left corner of the Hierarchy Selector, information about the hierarchy is displayed.

Member Selection

The right pane of the Hierarchy Selector displays the selected members of the hierarchy. In order to move a member from the right pane to the left pane, first select the member in the left pane.

Example

Appl Type Fresh

The hierarchy name will be displayed in the Hierarchy drop down list. Click the



button to move the selected hierarchy member to the right pane.

To aid the selection process, certain standard modes are offered through a drop-down. The available modes are **Self**, **Self & Descendent**, **Self & Children**, **Children Only**.

- The Self mode is the default mode displayed. In this mode, only the specific member selected in the left pane will be selected onto the right pane.
- Choose the Self & Descendent mode when you want a specific member and all its descendants right up to the end of its branch to be selected onto the right pane.
- Choose the Self & Children mode when you want a specific member and only its immediate children to be selected onto the right pane.
- Choose the Children Only mode when you want only the immediate children of a specific member to be selected onto the right pane mode.

The number of members selected onto the right pane is displayed below the pane.

De-selecting the Members

To clear a hierarchy member from the right pane, click the member in the right pane.

Click the



button.

Click the



button to deselect all the members from the right pane.

Ordering Members in the right pane

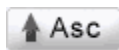
To set the order of display of the hierarchy members selected onto the right pane, click on a member and use the buttons



and



to move the member up or down in the order respectively. You may also click on the buttons

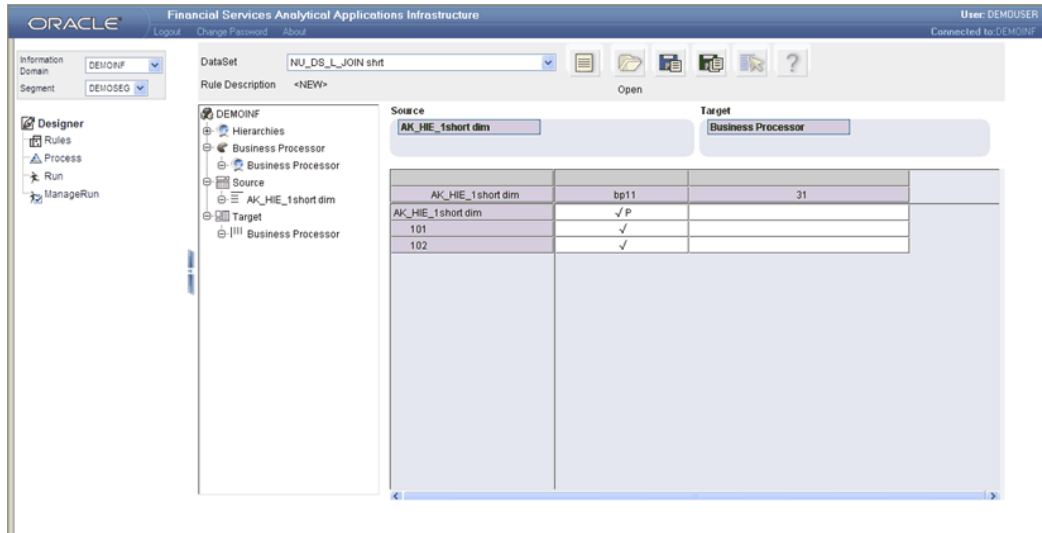


or



Click **OK** to save the selection and close the Hierarchy Selector. Click **CANCEL** to discard the selection.

The selected hierarchy members will be displayed in the specified order in the row axis of the rule grid.



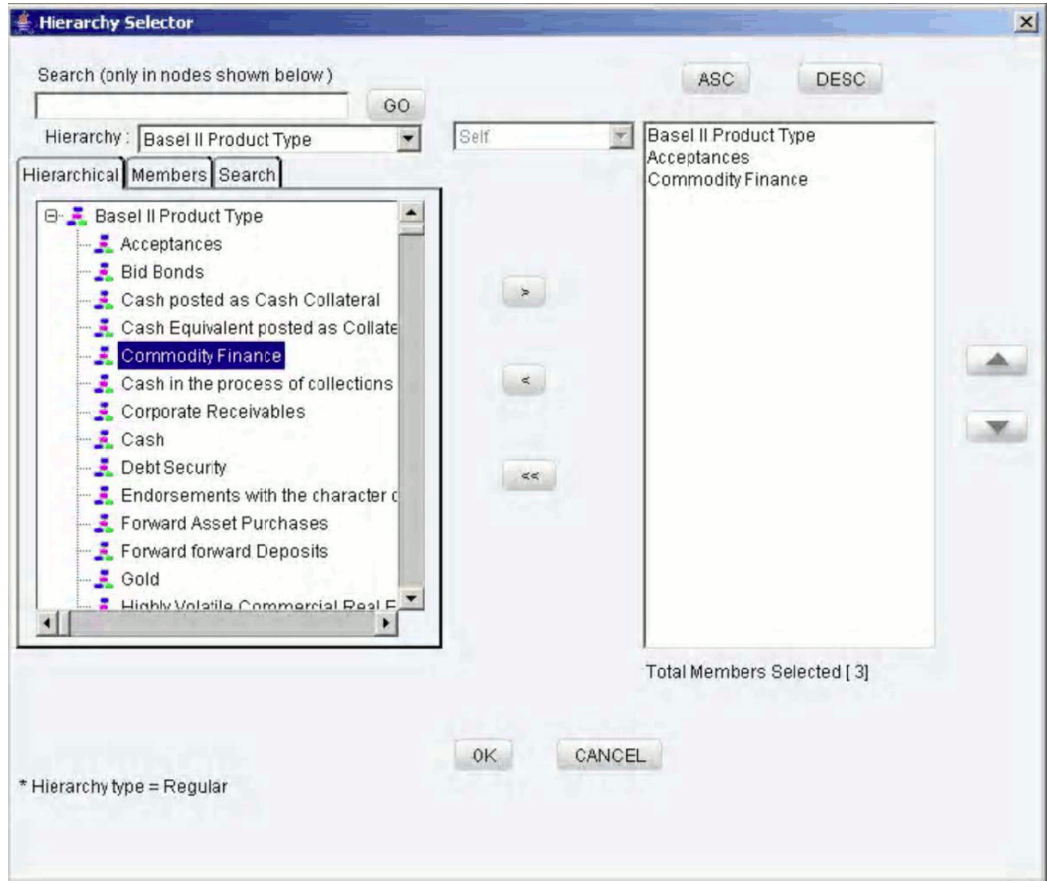
Note: The hierarchy selected for the source cannot be mapped to the target.

Adding Hierarchy Members to Target

Click the hierarchy under Target in the section above the rule grid. This opens a Hierarchy Selector window. The left pane of the Hierarchy Selector displays the name of the hierarchy that was selected and its members. If the hierarchy has multiple levels, the members can be expanded to display the child members in a tree structure.

Search

To search for a particular member, you may enter the keyword of the hierarchy member you are looking for and click **GO**. If a member containing the keyword is located, the corresponding member is highlighted. Click **Search** again to be taken to the next member that contains the keyword used in the search field.



In the bottom left corner of the Hierarchy Selector, information about the hierarchy is displayed.

Member Selection

The right pane of the Hierarchy Selector displays the selected members of the hierarchy. In order to move a member from the right pane to the left pane, first select the member in the left pane.

Example

Acceptances

The hierarchy name will be displayed in the Hierarchy list. Click the



button to move the selected hierarchy member to the right pane.

Note:

Note: The following members cannot be selected onto the right pane:

- Non-leaf members
- Members with "Others" node identifier
- Members whose node identifiers bear range expressions

For more information, see *Creating a Business Hierarchy*, page 13-60.

Default Member

You can mark a hierarchy member as a default member by selecting the Mark as Default check box. The Default Member property will be displayed below the right pane. If more than one hierarchy member is selected onto the right pane, the Mark as Default option is disabled.

Note:

- The member marked as default is automatically mapped to the non-leaf member combinations of hierarchies selected as source.
- At least one member must be marked as the default member to save the rule definition.

To change the default member, the existing hierarchy member marked as default must first be deselected. A new hierarchy member must be selected onto the right pane and then marked as the default one.

De-selecting the Members

To clear a hierarchy member from the right pane, click the member in the right pane.

Click the



button.

Click the



button to deselect all the members from the right pane.

Ordering Members in the right pane

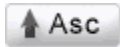
To set the order of display of the hierarchy members selected onto the right pane, click a member and use the buttons



and



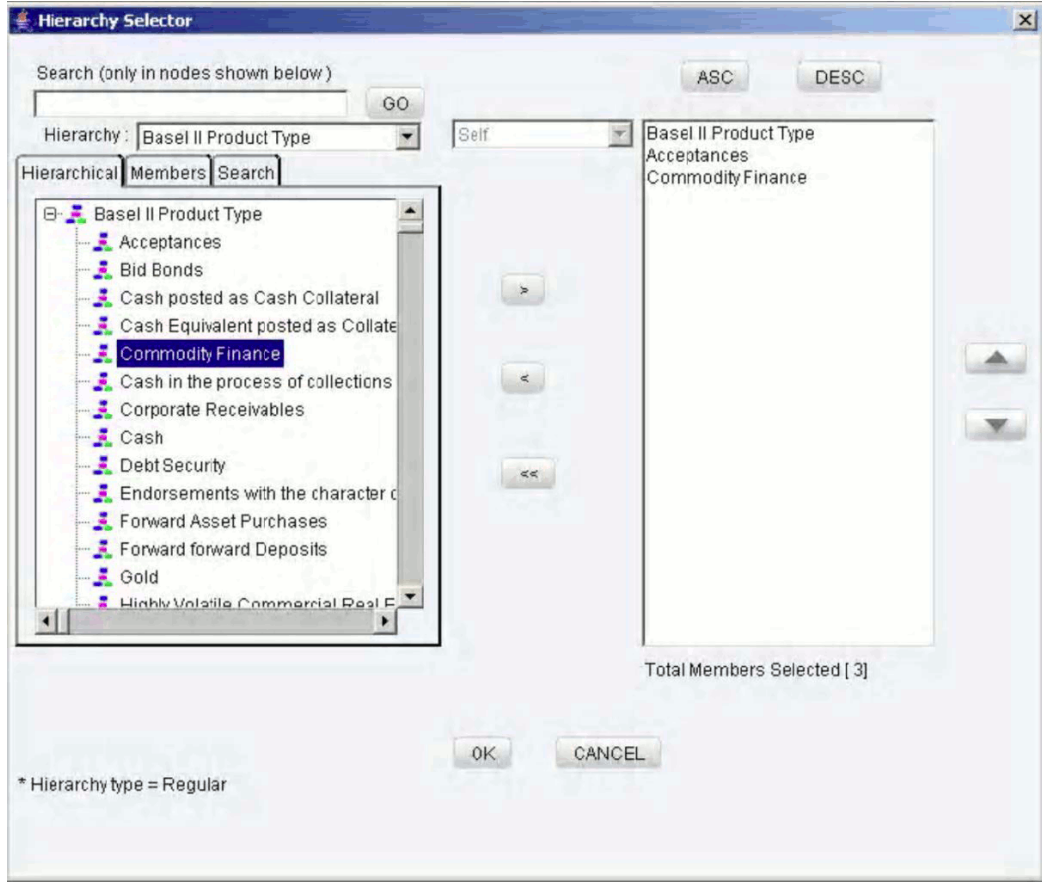
to move the member up or down in the order respectively. You may also click the buttons



or

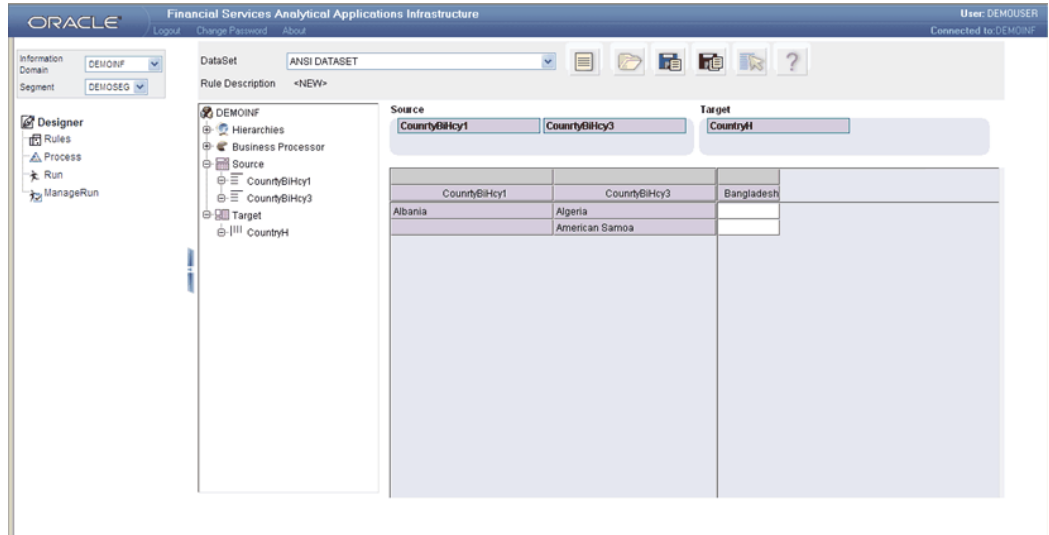


to set the list of members in the order of alphabetical ascension or declension respectively.



Click OK to save the selection and close the Hierarchy Selector. Click CANCEL to discard the selection.

The selected hierarchy members will be displayed in the specified order in the column axis of the rule grid. The default member is highlighted in blue.

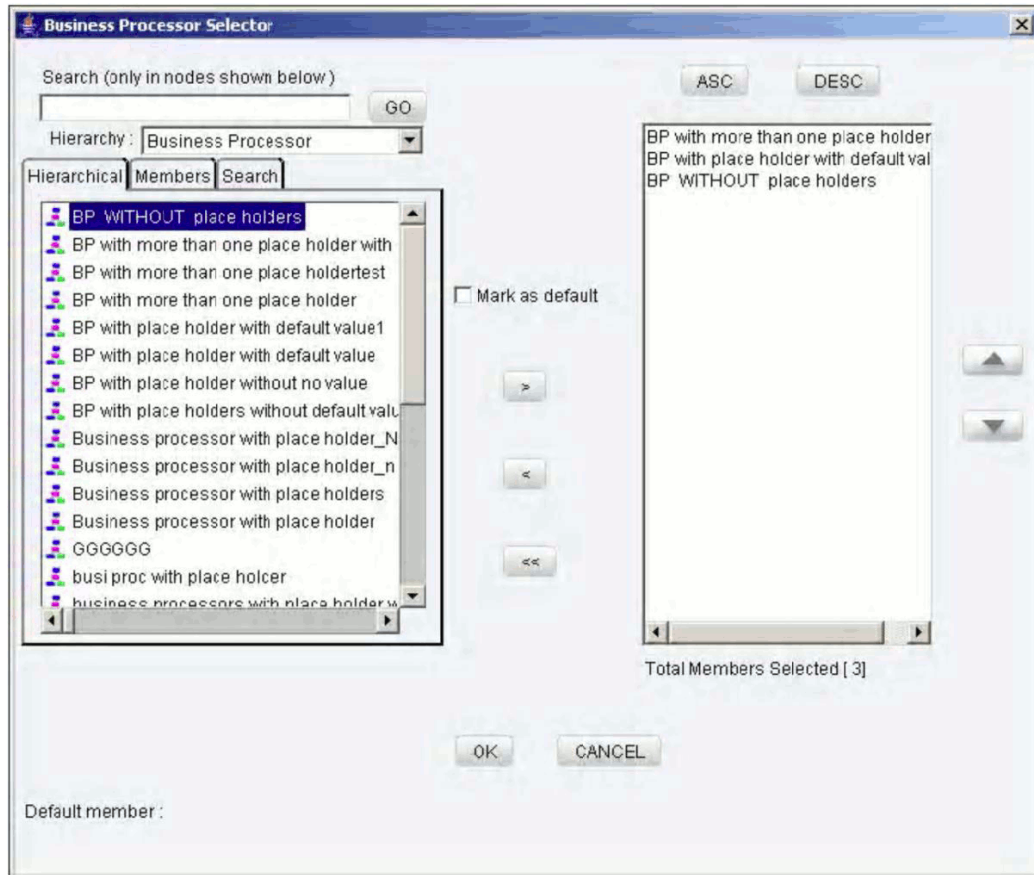


Adding Business Processors to Target

Click business processor under Target in the section above the rule grid. This opens a Business Processor Selector window. The left pane of the Business Processor Selector displays the tag business processor and its members.

Search

To search for a particular business processor, you may enter the keyword of the member you are looking for and click GO. If a business processor containing the keyword is located, the corresponding member is highlighted. Click Search again to be taken to the next business processor that contains the keyword used in the search field.



Business Process Selection

The right pane of the Business Process Selector displays all business processors defined on the dataset used in the rule definition. In order to select a business processor onto the right pane, click on the member in the left pane

Example

K Business Processor Non Sec Bpr and Bpr

Click the



button to move the business processor to the right pane. The number of members selected onto the right pane is displayed below the pane.

Note:

- You can select multiple business processors onto the right pane so long as they are all defined on the same measure of the FACT table of the dataset used in the rule definition.

- The multiple business processors selected must all have the same aggregation mode.

Default Member

You can mark a business processor as a default member by selecting the Mark as Default check box. The Default Member property will be displayed below the right pane. If more than one business processor is selected onto the right pane, the Mark as Default option is disabled.

Note:

- The member marked as default is automatically mapped to the leaf member combinations of hierarchies selected as source.
- At least one member must be marked as the default member to save the rule definition.

To change the default member, the existing business processor marked as default must first be deselected. A new business processor must be selected onto the right pane and then marked as the default one.

De-selecting the Members

To clear a hierarchy member from the right pane, click the member in the right pane.

Click the



button.

Click the



button to deselect all the members from the right pane.

Ordering Business Processors in the Right Pane

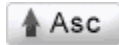
To set the order of display of the hierarchy members selected onto the right pane, click on a member and use the buttons



and



to move the member up or down in the order respectively. You may also click on the buttons

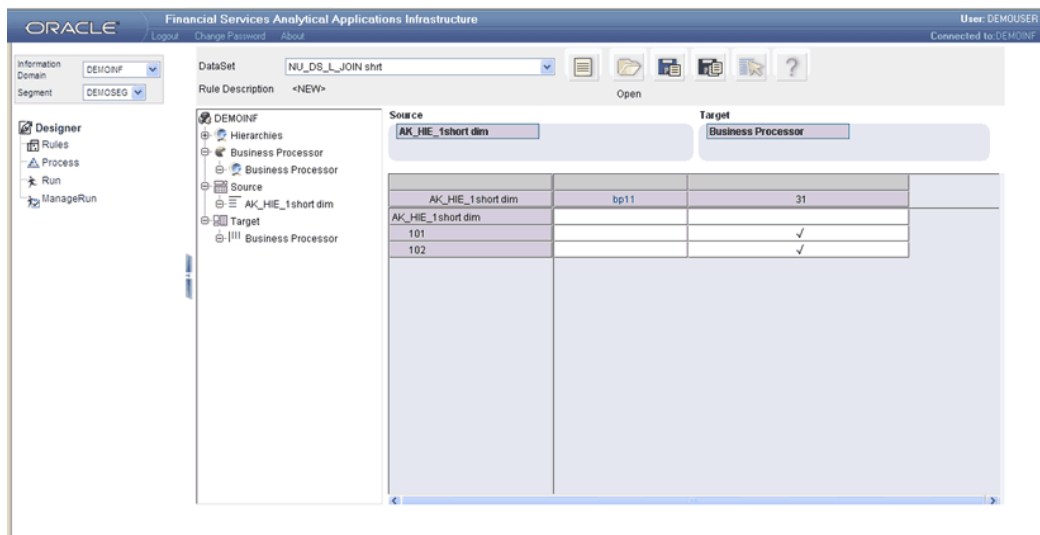


or



to set the list of members in the order of alphabetical ascension or descension respectively.

Click **OK** to save the selection and close the Business Process Selector. Click **CANCEL** to discard the selection.



The selected business processor will be displayed in the specified order in the column axis of the rule grid. The default member is highlighted in blue.

Removing Hierarchy or Business Processor from the Rule Grid

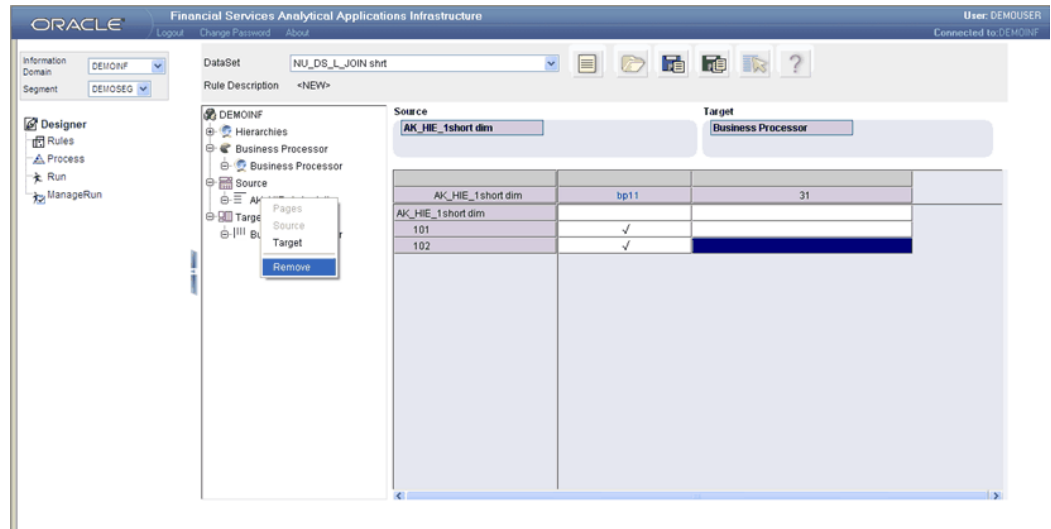
The left pane of the window displays the Information Domain on which the rule is being defined. Under the Information Domain 4 metadata object tags are displayed – Hierarchies, Business Processor, Source and Target.

In the left pane, click the



button to expand the Source tag. The expansion will display only those hierarchies that have been selected as source. Select the hierarchy and right-click the mouse button.

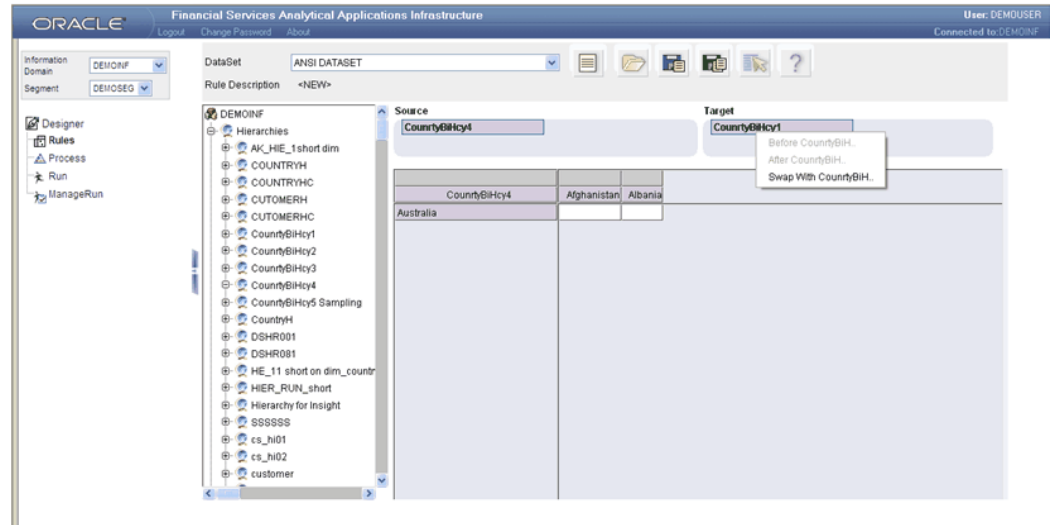
Select REMOVE if you want to remove this hierarchy from the grid.



In the left pane, click the



button to expand the Target tag. The expansion will display either the hierarchy or business processor that has been selected as target. Select the hierarchy and right-click the mouse button. Select REMOVE if you want to remove this hierarchy from the grid. Select the business processor and right-click the mouse button. Select REMOVE if you want to remove this business processor from the grid.



Working on the Rule Grid

The section above the rule grid identifies the metadata objects that have been selected. The section marked as Source displays the hierarchy names of all selected hierarchies.

The section marked Target displays either the hierarchy name or the tag business processor depending on the selection. To aid the rule definition process, the user is provided with swap options between Source and Target. The hierarchy content on the row axis of the grid (Source) can be moved to the column axis of the grid (Target) and vice-versa using the swap option. The swap results in a change in the display in the rule grid.

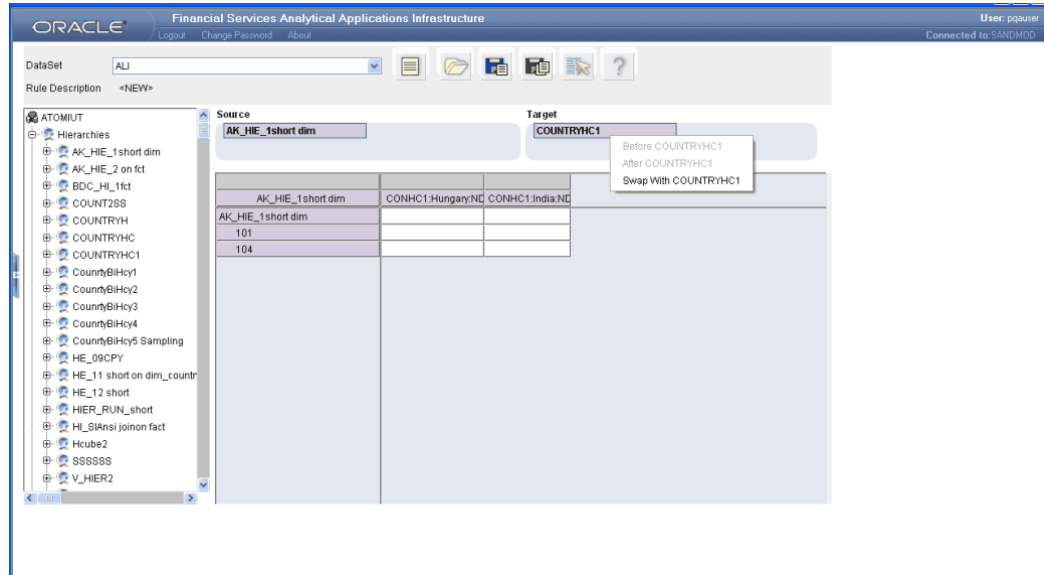
Moving From Source to Target

Click a hierarchy in the Source section and without releasing the mouse click, drag the item and drop it on the Target section. A menu will be displayed in the Target section as shown in the following Figure. Select the Swap with <Target Hierarchy Name > option to initiate the swap.

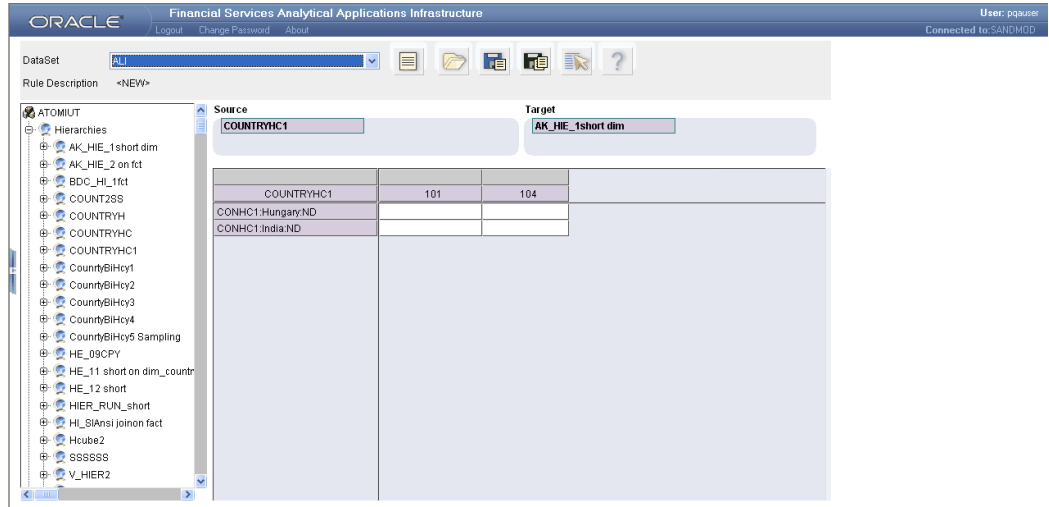
When a hierarchy is swapped from source to target, only the non 1=1 leaf nodes and non range leaf nodes will appear in the target section.

Example

Click the hierarchy Residual Maturity for Add on Assignment in the Source section, drag and drop it on the Target section. Select the Swap with Basel II E ...option. This will result in the hierarchy Residual Maturity for Add on Assignment moving to the Target and hierarchy Basel II Exposure Type moving to Source.



The preceding Figure shows the rule grid formation before the swap.



The preceding Figure shows the rule grid formation after the swap.

Note:

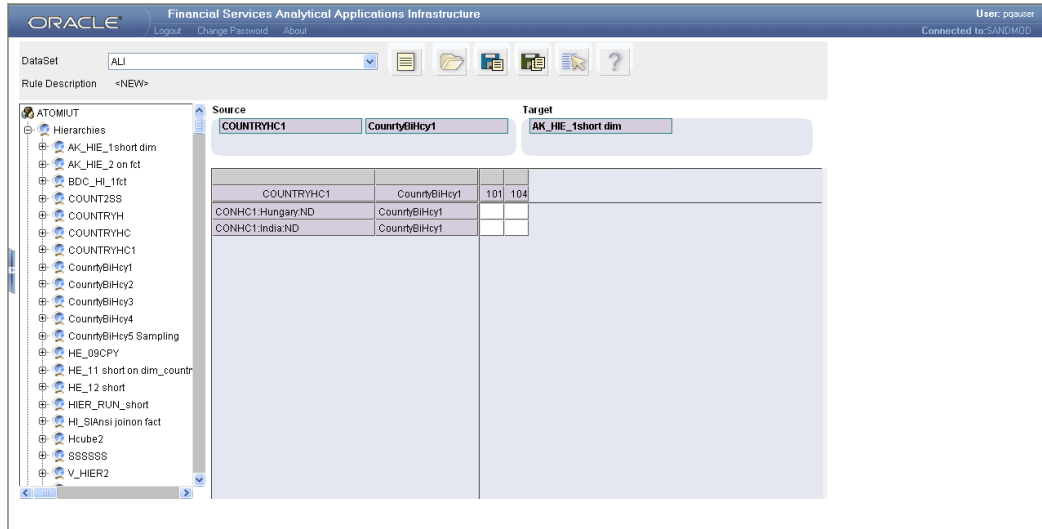
- Moving from Source to Target is possible only if a hierarchy is previously selected as the Target.
- If a Business Processor has been selected as the Target, the swap is not possible.
- Swapping of same hierarchy from source to target and vice versa is not allowed.

Moving Within Source

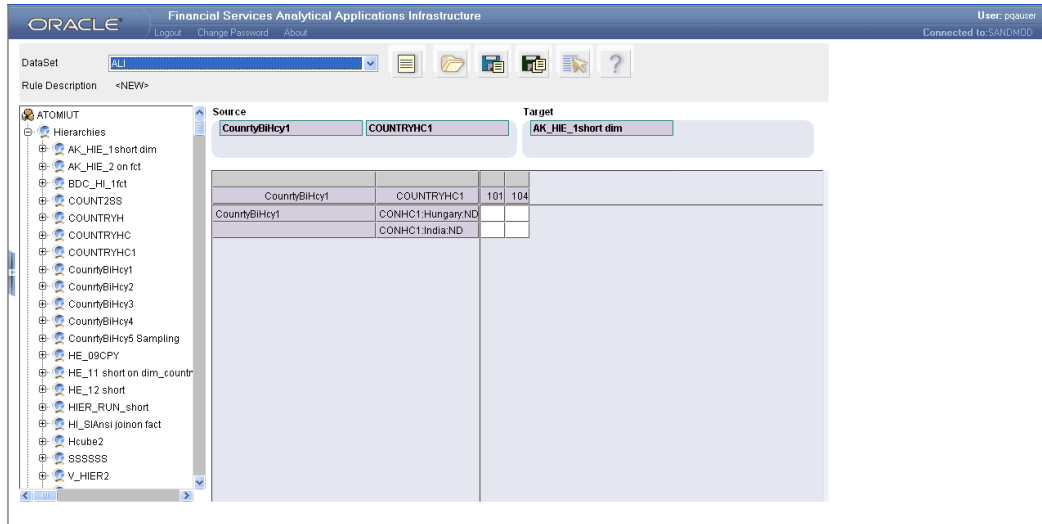
Multiple hierarchies can be selected onto the Source section. The order in which the hierarchies are positioned in the Source section can be altered using the swap option. Click on a hierarchy in the Source section and without releasing the mouse click, drag the item and drop it on another hierarchy in the Source section. This will initiate a position swap between the two hierarchies.

Example

Click the hierarchy Customer Type in the Source section, drag and drop it on the hierarchy Original Maturity that is also in the Source section. The position of the hierarchy Customer Type will be swapped with the position of the hierarchy Original Maturity.



The preceding figure shows the rule grid formation before the swap.



The preceding figure shows the rule grid formation after the swap.

Moving From Target to Source

Click hierarchy in the Target section and without releasing the mouse click, drag the item and drop it on the Source section. A menu will be displayed in the Source section as shown in the following Figure. Select the Swap with < Source Hierarchy Name > option to initiate the swap.

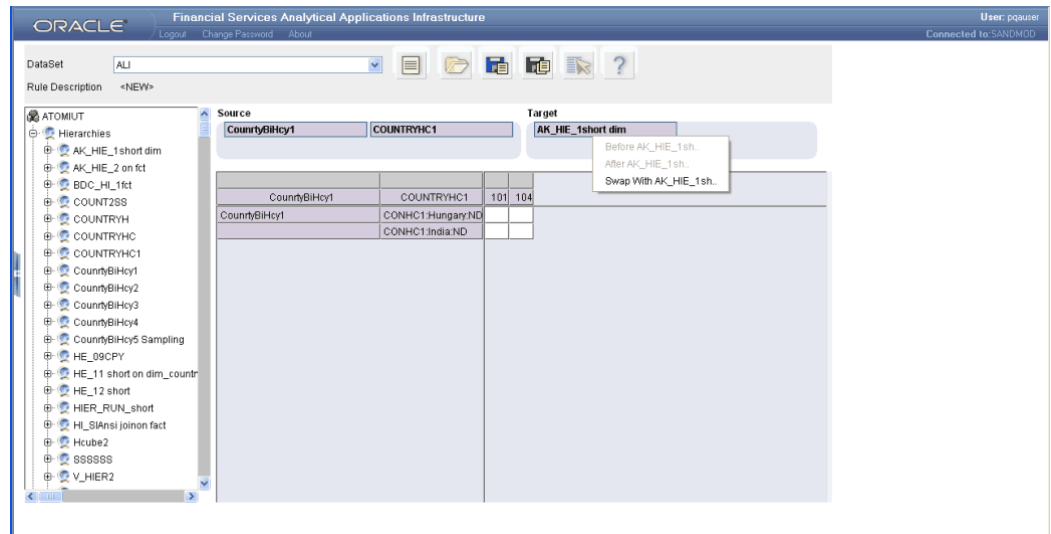
When a hierarchy is swapped from target to source, only leaf nodes will appear in the source section.

Note:

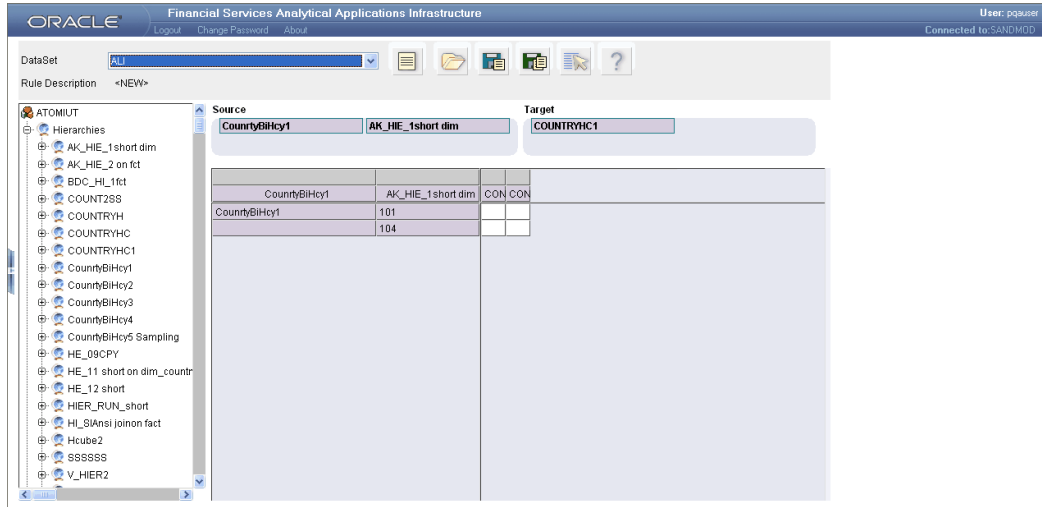
- If a Business Processor is selected as the target, then it cannot be swapped with the source.
- Swapping of the same hierarchy from target to source and vice versa is not allowed.

Example

Click the hierarchy Original Maturity in Target section, drag and drop it on the hierarchy Customer type in the Source section. This will result in the hierarchy Original Maturity moving to the Source and the hierarchy Customer Type moving to Target.



The preceding Figure shows the rule grid formation before the swap.



The preceding Figure shows the rule grid formation after the swap.

Resizing Column Width in the Rule Grid

For a complete view of lengthy member names in the rule grid, the column width can be re-sized, thus providing better readability. Position your mouse on the margin line of the column that you wish to re-size. Click the margin, and without releasing the mouse click drag the margin line outward or inward as desired.

Note:

- The column width re-sizing is only for display purposes and will not be saved.
- The number of rows and columns displayed on the grid depends on the parameter value defined in the configuration tables.

For more information, see *Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) Installation and Configuration Guide*.

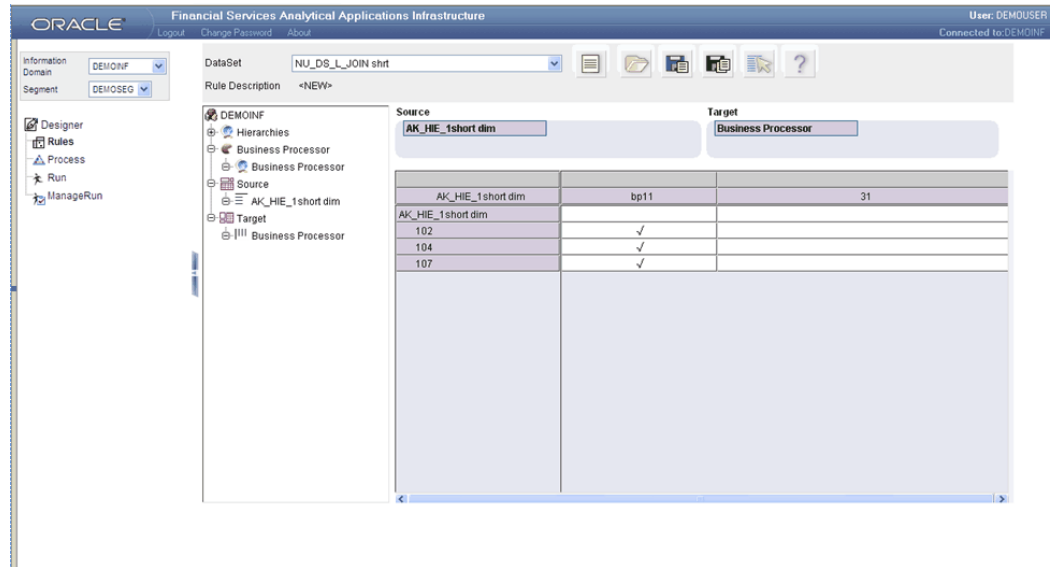
Mapping

Two important characteristics of Mapping are:

1. At least one row that denotes a source leaf member combination must be mapped with a target member.
2. Only one of the target members can be mapped to a particular source member combination.

If you have specified a default member while selecting hierarchy / business processor members as the target (for more information, see the sections, Adding Hierarchy

Members to Target, page 42-18 / Adding Business Processors to Target, page 42-23 in this chapter), an automatic mapping of source leaf-member combinations with the default member will be displayed in the rule grid. The mapping is represented with a tick mark as shown in the following figure. The default hierarchy / business processor member in the target is highlighted in blue.

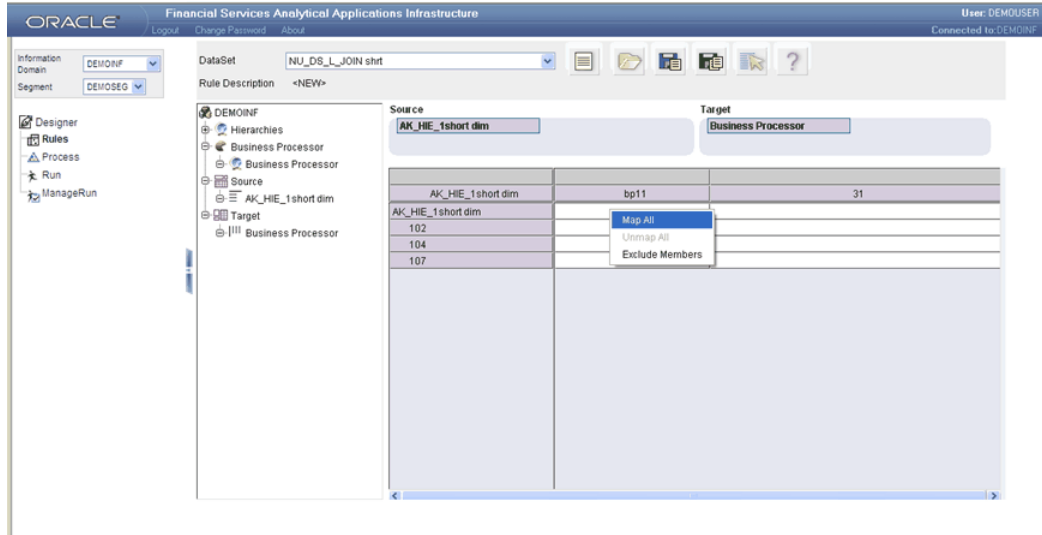


Note: The right-click options of Map All, Unmap All and Exclude members will not be available in the case of a Default Target Member.

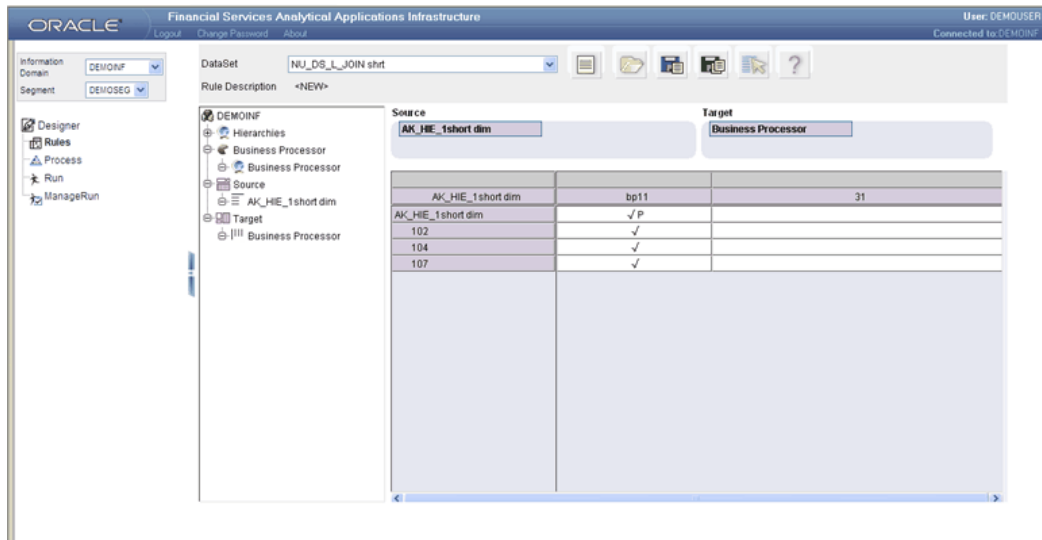
If you have not specified a default member in the hierarchy / business processor selection in the target section, then you must explicitly map the required combinations.

To define mapping, click a cell that results from an intersection between the row hierarchy member(s) and column hierarchy / business processor member.

Use the right mouse button (right-click) a cell in the grid to map all the hierarchy member(s) and column hierarchy /business processor member combinations for the selected cell.

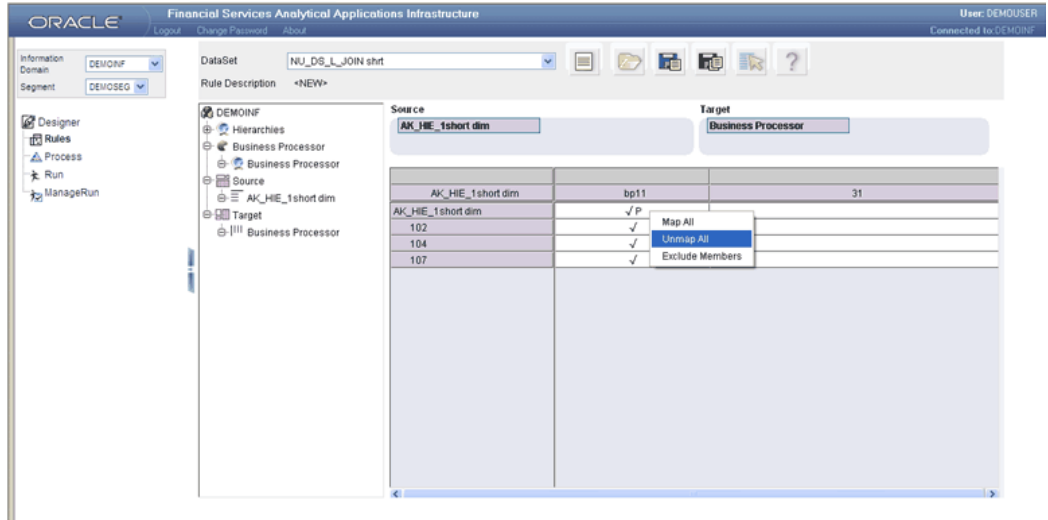


Click Map All to map all the source/target member combinations for the selected cell.

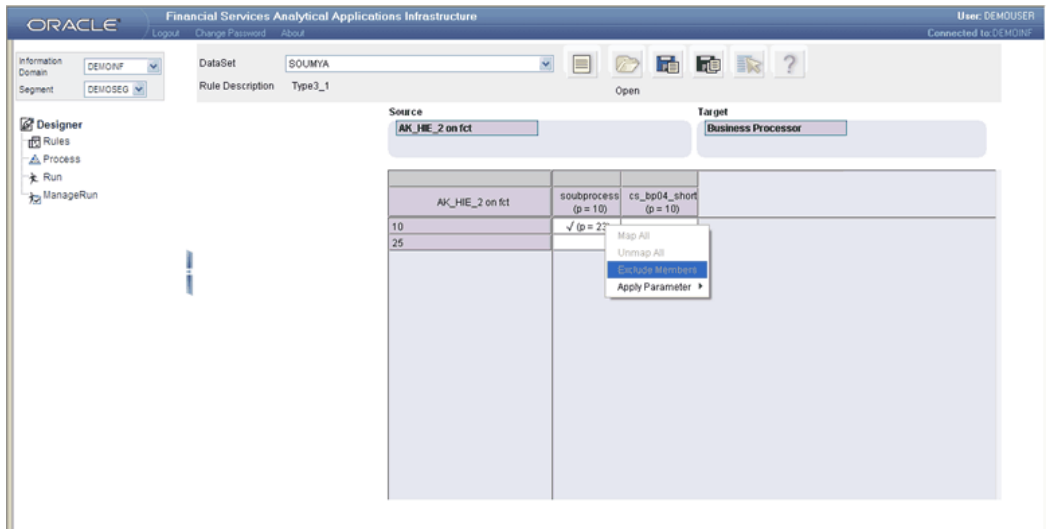


A check mark is displayed on the mapped cell.

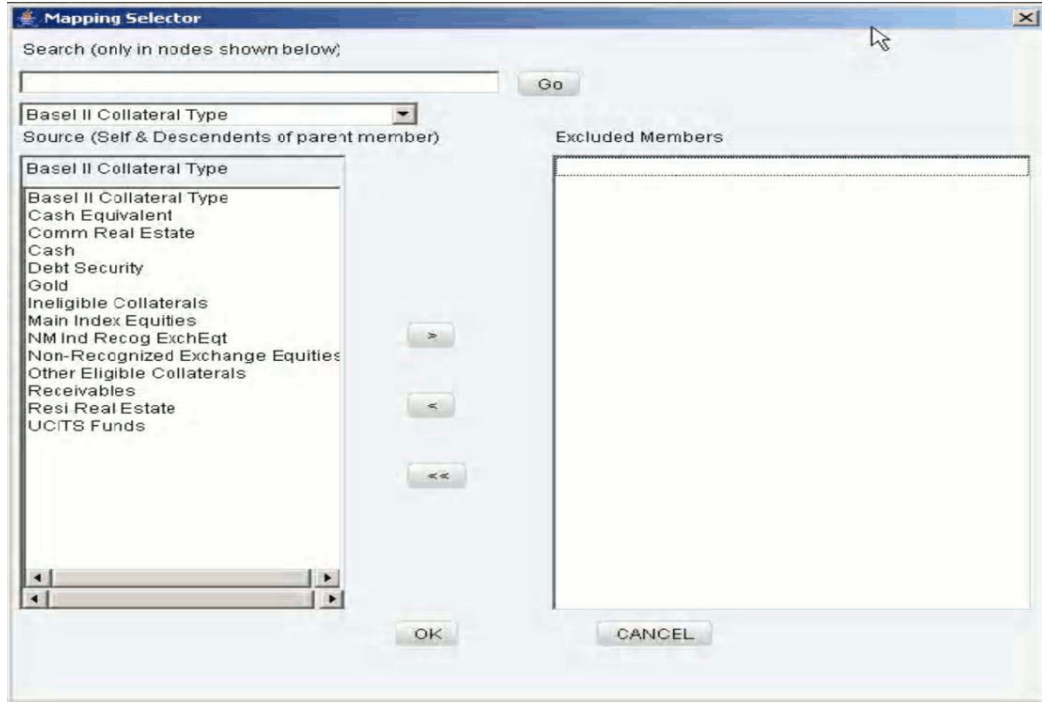
Note: If you select the Map All option to map all the source/target member combinations for the selected cell, then Apply Parameters option will not be enabled for the child level members.



Click the Unmap All option to un-map the mappings done using the map all option. To exclude selected members from mapping select the Exclude Members option.



This opens up the Mapping Selector.

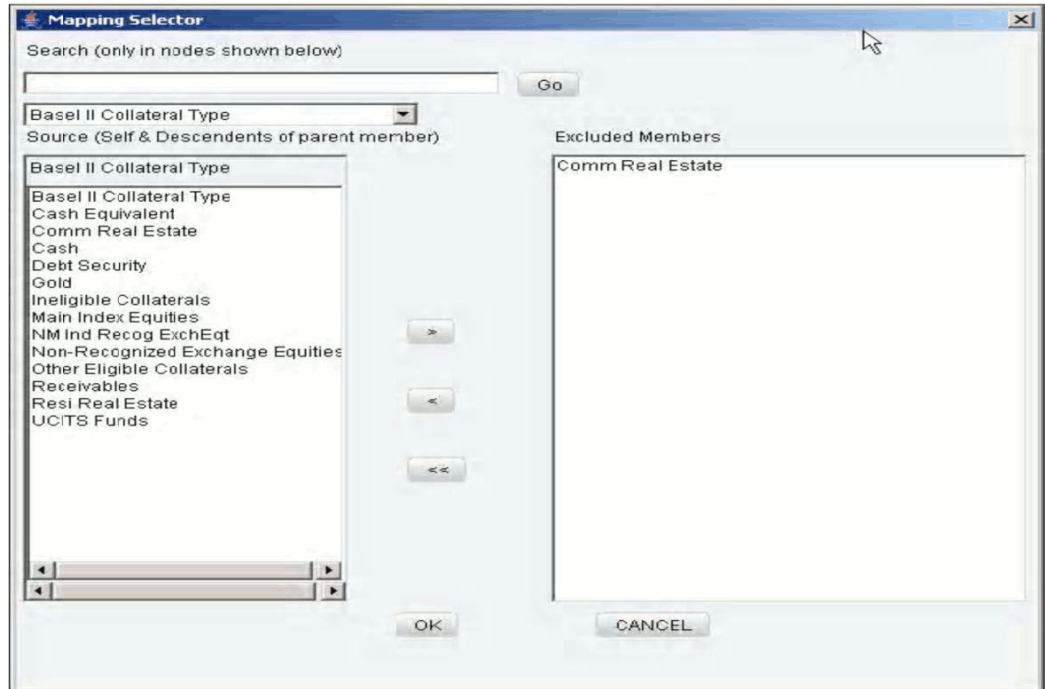


The selected source hierarchy name will be displayed in the list. Enter the node name for the selected hierarchy member in the Search box to search for a specific node from the selected hierarchy.

The members for the selected hierarchy will be displayed under the Source pane. Click the



button to move the selected hierarchy member to the Excluded Members pane.



To clear a hierarchy member from the right pane, click the member in the right pane.

Click the



button.

Click the



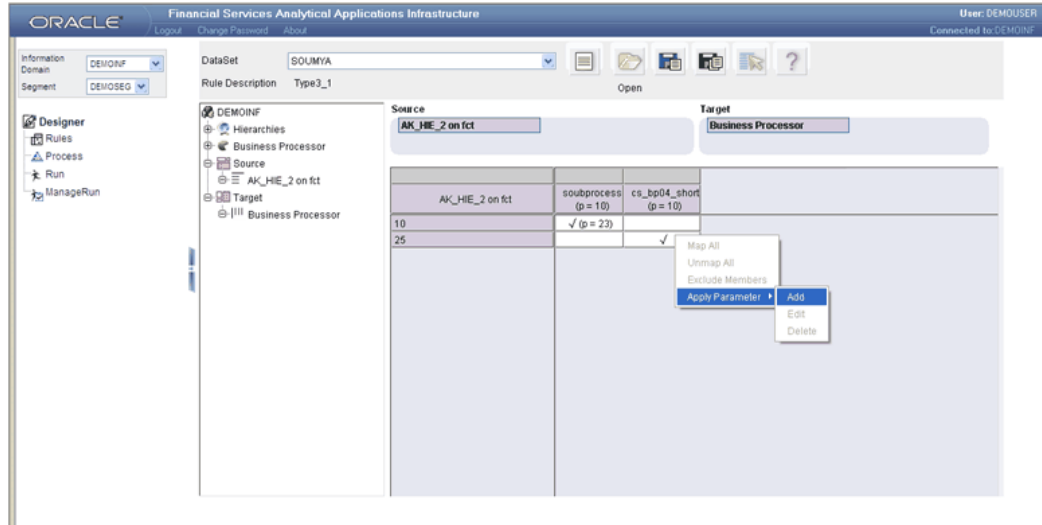
button to deselect all the members from the right pane.

Click OK to save the selection and close the Mapping Selector. Click CANCEL to discard the selection.

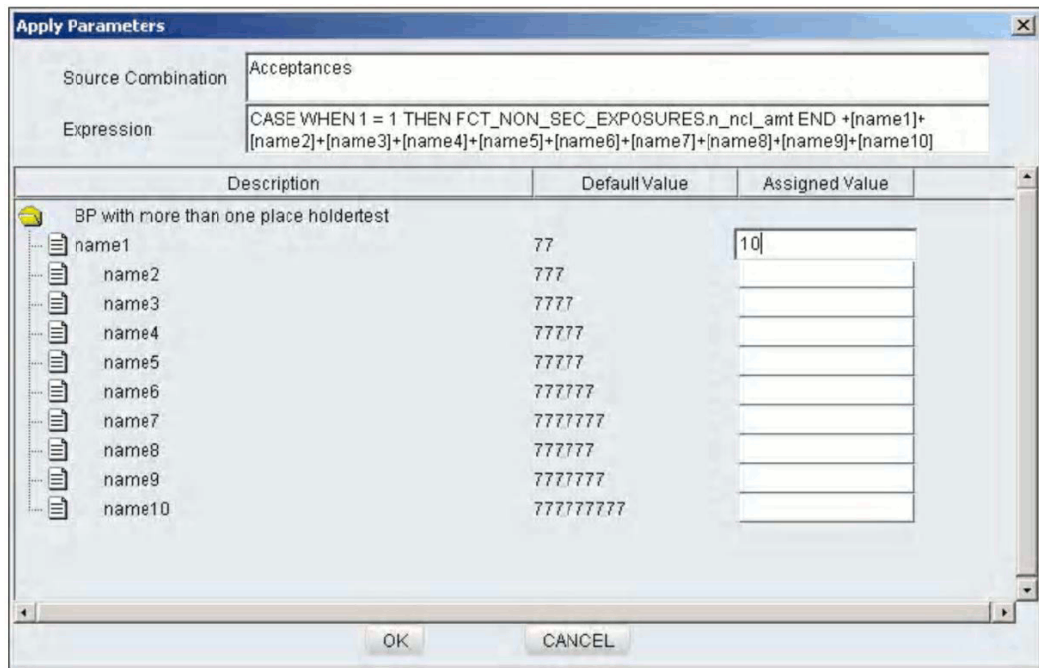
The selected hierarchy members will be excluded in the row axis of the rule grid.

Note: If you click OK in the Mapping Selector without selecting the members to be excluded, all the members/member-combinations will be mapped to the target for the specific cell.

Once the Mapping is completed, you can assign values to the placeholders defined for the selected business processor(s).



Right click the business processor column where place holders are available against the member which is mapped, select Apply Parameters and click Add option to assign values to the Placeholders. This opens up the Apply Parameters window.



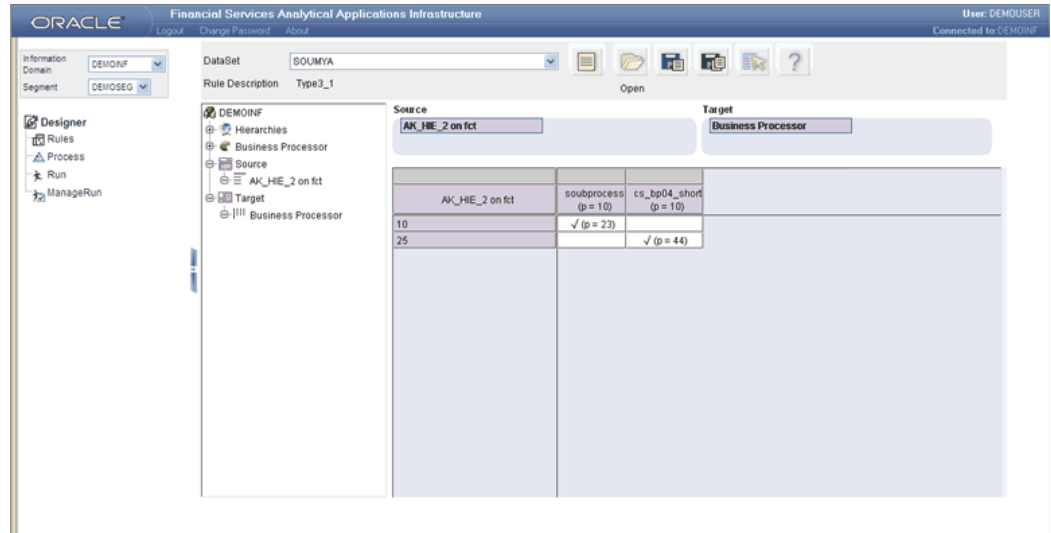
The Source Combination and the Expression defined for the selected mapped cell is displayed in the Apply Parameters window. The Description, default value (if specified) will be displayed in the grid.

Enter the value for the placeholder in the box provided in the Assigned Values column against each placeholder name.

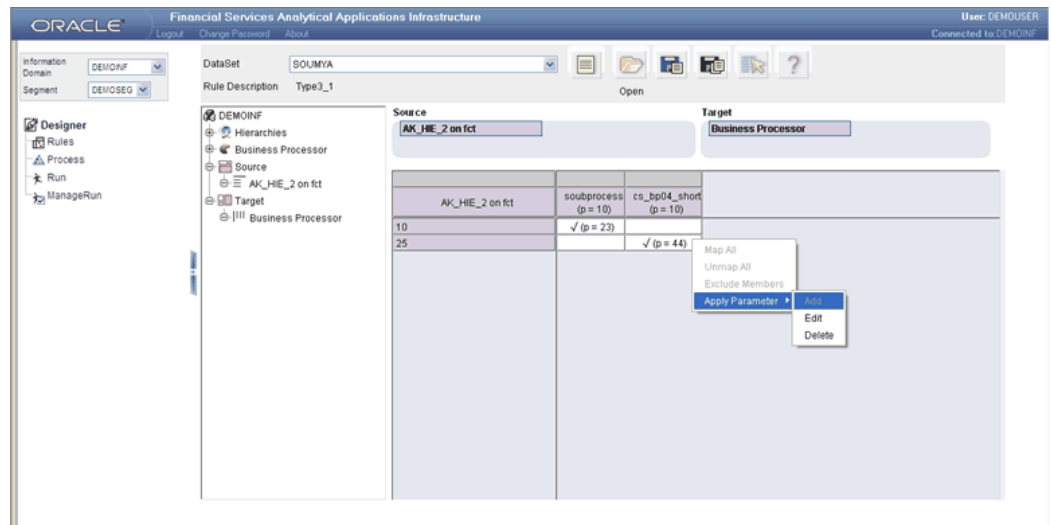
Note: There will be a confirmation pop up displayed, if the assigned value for a Place Holder is same as Default value. The user can go ahead with the same value or change the assigned value as required.

Click OK to save the assigned values. Click Cancel to discard the operation.

The Placeholder names and the assigned values will be displayed in the grid.



When a Type 3 rule (Business Processor with Placeholder) is being created, then Add link will be enabled, while the other options as Edit and Delete options will be disabled.



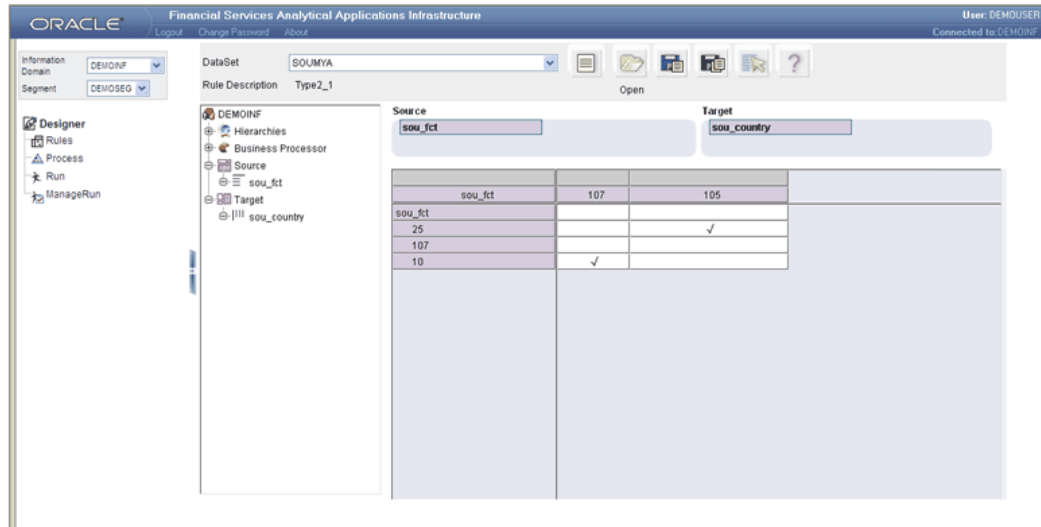
Once the assigned values are defined for the business processor, the ADD option will be disabled and the Edit and Delete options will be in the enabled state.

Click Edit to re-define the assigned values for the placeholders. Clicking Delete will

delete all the assigned values defined for the placeholder for the selected business processor, which enables the user to give new assigned values for the placeholders.

Note: If the Map All option is selected to map all the source/target member combinations for the selected cell, then the values can be assigned only to the Parent level node. By default the same assigned value will be updated to all the members in it.

Once the mapping is complete, you can save the rule definition.



Note:

- Only leaf members on the source can participate in the mapping.
- A source member combination can have only one target node mapped to it.
- Parent members in the row axis cannot be mapped.
- You cannot save a rule definition unless a mapping is defined.

Accessing Process

How the rule framework must be used to define complex data transformation processes, is described in the Accessing Rule section. A set of rules collectively forms a Process. A process definition is represented as a Process Tree.

The Process option in the Rules Framework Designer provides a framework that facilitates the definition and maintenance of a process. A hierarchical structure is

adopted to facilitate the construction of a process tree. A process tree can have many levels and one or many nodes within each level. Sub-processes are defined at level members and rules form the leaf members of the tree. Through the definition of Process, the you are permitted to logically group a collection of rules that pertain to a functional process.

Further, the business may require simulating conditions under different business scenarios and evaluate the resultant calculations with respect to the baseline calculation. Such simulations are done through the construction of Simulation Processes and Simulation Process trees.

Underlying metadata objects such as Rules, T2T Definitions, Non End-to-End Processes and Database Stored Procedures drive the Process functionality.

Types of Processes

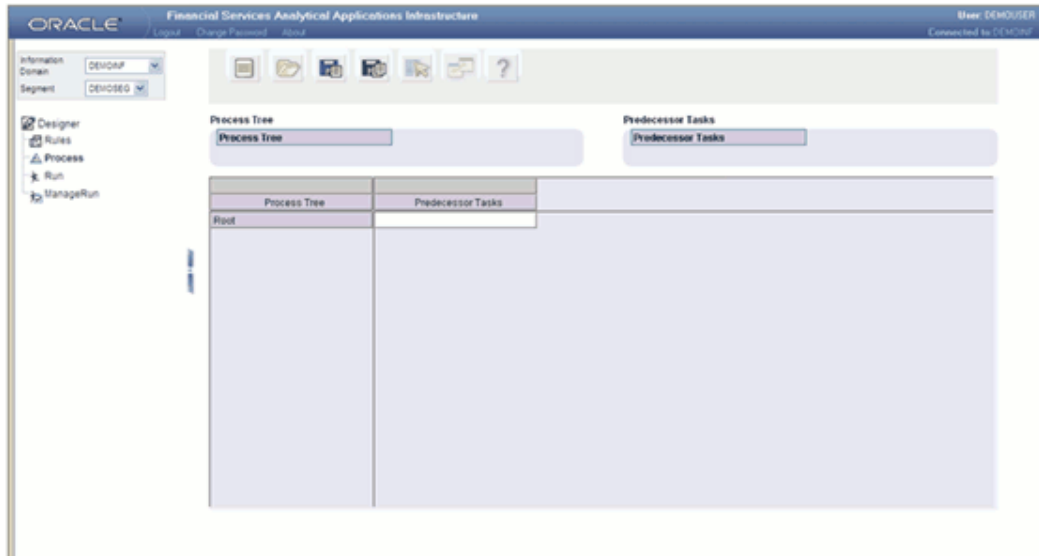
From a business perspective, processes can be of 2 types:

End-to-End Process – As the name suggests, this process denotes functional completeness. This process is ready for execution.

Non End-to-End Process – This is a sub-process that is a logical collection of rules. It cannot be executed by itself. It must be defined as a sub-process in an end-to-end process to achieve a state ready for execution.

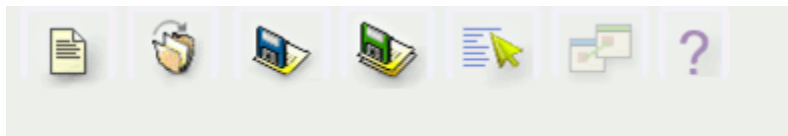
Launching the Process Designer

Click **Designer** in the Rules Framework main window to display the Designer window. The Information Domain and the Segment will be displayed. Select the Information Domain within which you wish to create a process. Click the Process option in the left frame of the Designer window. On selecting the Process option, the menu frame is hidden and the right frame is displayed in full window.



Note: Only those users mapped with the PR2ADMIN role will have access to the Rule definition.

Understanding the Process Menu



The following list comprises the menu options provided just earlier the data area in Process Definition in the Designer window.

- New
- Open
- Save
- Save As
- Properties
- Map
- Help

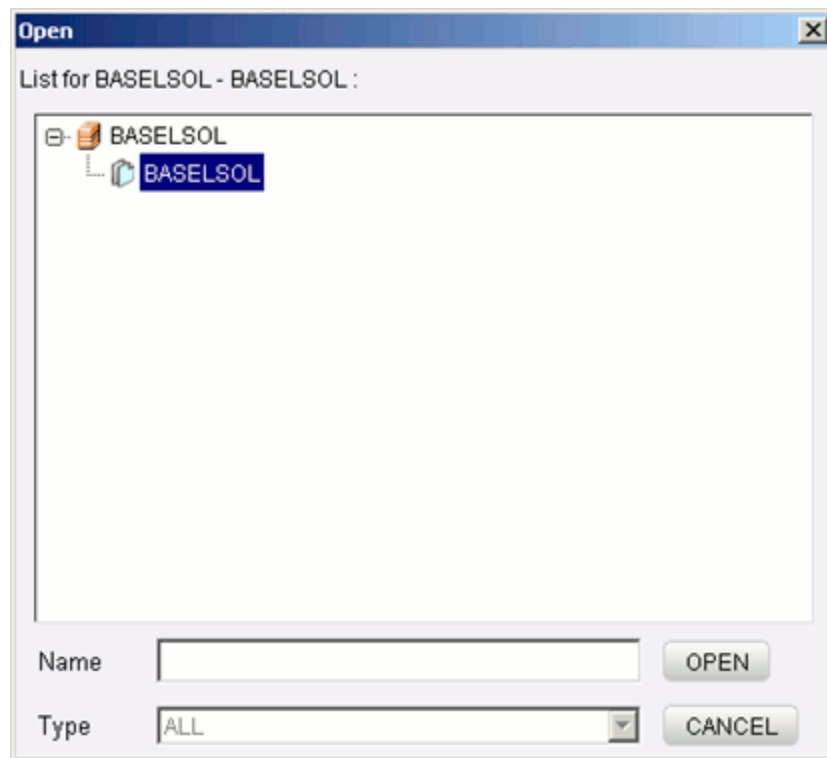
New

With the **New** option you will be able to define a new process definition. Click **New** to add a new process definition. The process definition may be a baseline definition or a variation of the baseline definition (termed as scenario definition). For more information of the base process tree definition and Simulation Process tree definition, see Defining a Process, page 42-50.

If you are working on a new definition and subsequently move to the **New/Open** menu option without saving the new definition, the system will display an alert that requests for your confirmation.

Open

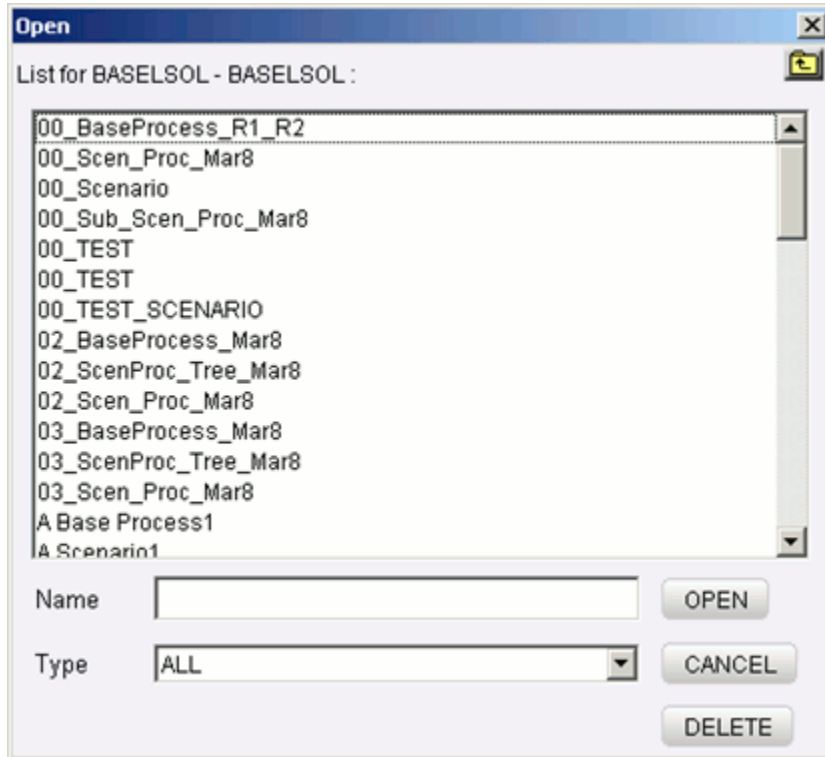
Click **Open** to open an existing process definition. On clicking **Open** the Open Process pop up window is displayed which displays all the process definitions under the selected information domain.



Double-Click the Information domain name displayed in the Open dialog to view the list of process definitions.

Example

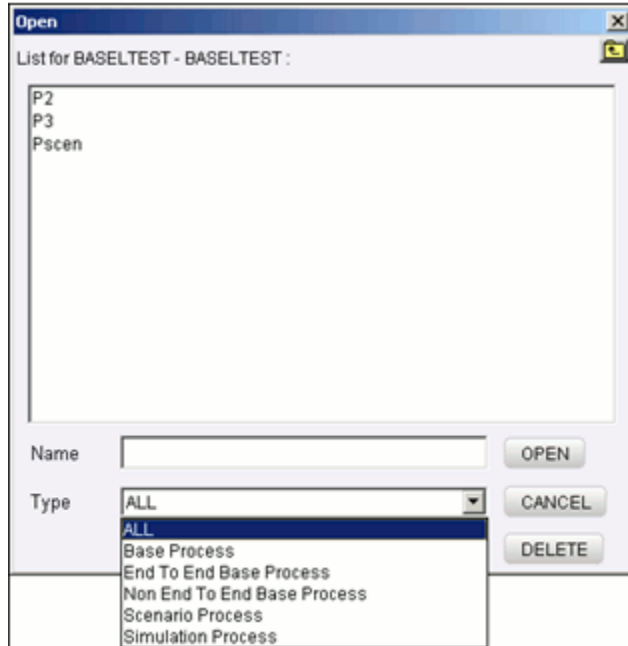
BASELSOL



The list of all associated process definitions will be displayed in the Open Dialog.

Select the process definition from the list of available processes presented in the window. The name of the selected process definition appears in the Name textbox.

Click **Open** to open the process or click **CANCEL** to exit the window and return to the main window.



Click the Type of list to view only the selected process definitions in the Open Dialog, which filters the list of processes to be displayed based upon the selection.

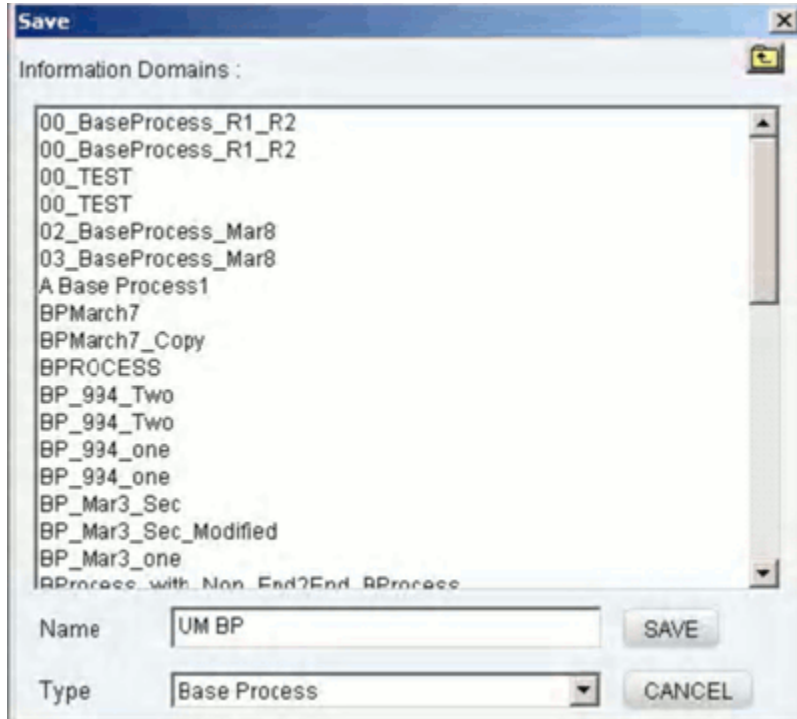
There is an option to view only the Base Process/End to End Base Process/Non End to End Base Process/Scenario Process and Simulation Process Tree in the Open Dialog by selecting the appropriate option in the **Type** list.

Click **Open** to open the process or click **CANCEL** to exit the window and return to the main window.

Click **Delete** to delete the selected Simulation Process. Once you click the **delete** option, a message will appear requesting the user to confirm the delete operation. Click **Yes** to clear the confirmatory message and **delete** the selected process. The selected process definition will be deleted from the selected information domain and segment. Click **No** to cancel the delete operation.

Save and Save As

Once you have created a new process or modified an existing process, click **Save**. A save window will be displayed. This window displays the existing processes available under the selected Information Domain and segment. Enter the name for the new process in the Name textbox provided.



Click **Save**. The process definition will be saved in the selected information domain/segment, and the users mapped to the segment can view the process definitions. A confirmation message will be displayed if the operation is successful. The type of the definition saved will be displayed in the **Type** list.

Note: In order to create a process definition, at least one rule must be defined as a sub-process member.

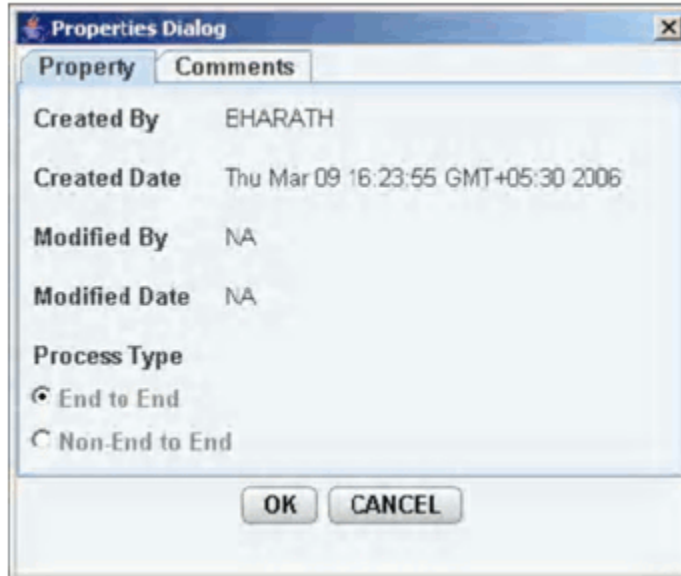
If a process already exists with the same name as entered in the text box, a message is displayed that cautions the user about the duplicate process. Click **Yes** to overwrite the existing process definition with the one newly created. Click **No** to cancel the overwrite and re-enter a new process name in the Name textbox.

If you are working on an existing process definition and wish to save it under a new **Name**, click the **Save As** option. On clicking Save As, the Save.. window is displayed. Enter a name for the process in the name field. Click **Save** to save as a new definition. The process definition will be saved in the selected information domain/segment, and the users mapped to the segment can view the process definitions. Click **CANCEL** to discard changes.

Properties

Click the **Properties** option. A Process Properties window is displayed. The window displays the name of the user who has created the process definition along with the date and time of creation. It also displays the name of the user who has last modified the process definition along with the date and time of the last modification.

Note: The Modified date details will be displayed only if any modifications have been made to the rule. If modifications are not made to the component, NA will be displayed against it.

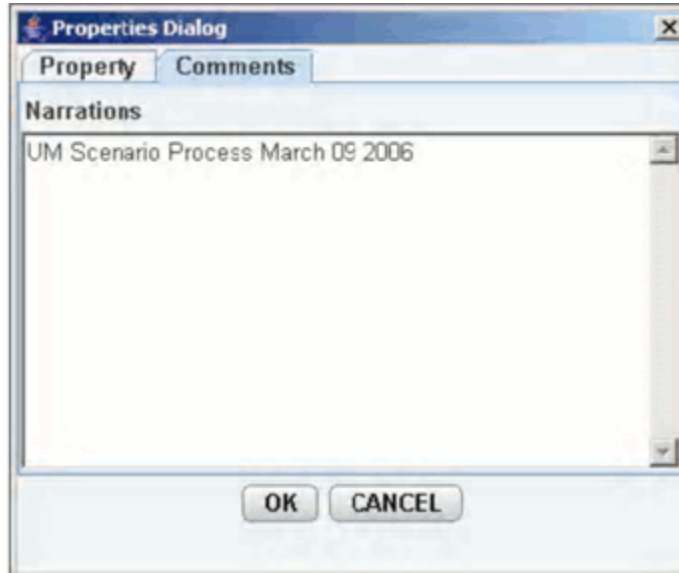


Selecting the Process Type

Select the **End to End** process type if the process tree can be executed as a stand alone process in order to achieve the final output.

Select the **Non-End to End** process type if the process is required to be executed in conjunction with other process trees in order to achieve the final output.

Click the **Comments** tab provided in the **Properties Dialog** window to enter the narration/comments about the created process definition.



Click **OK** to save the Process definition with the comments given. Click **CANCEL** to discard the operation.

Note: Only End to End processes will be available at the time of Run definition.

Map

Click the **Map** button to map the Base Processes for the Simulation Processes. In case of Simulation Process definition, clicking the **Map** button enables the user to select a list of base processes from the available End to End base process for mapping.

Note: The Map button will be enabled only for the Simulation Processes definition.

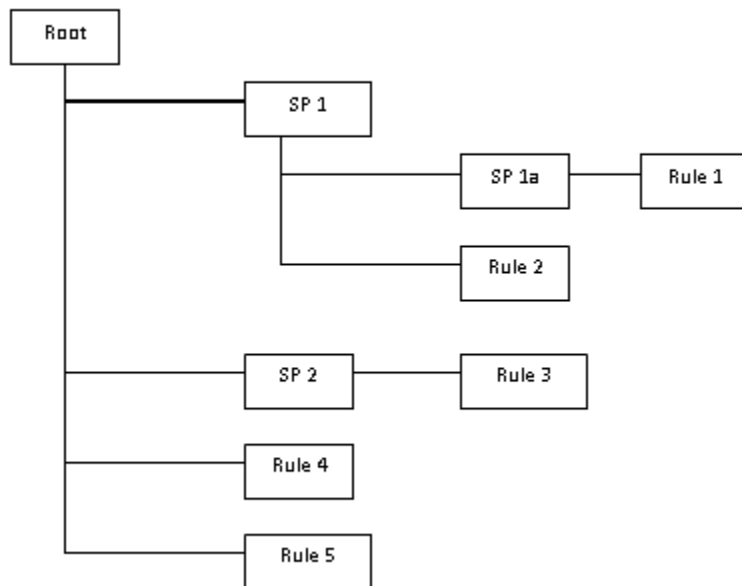
Help

The **Help** option provides online help for users.

Process Definition

A process is defined using existing rule metadata objects. The various components of a process definition are:

Process Tree - This is a hierarchical collection of rules that are processed in the natural sequence of the tree. The process tree can have levels and members. Each level constitutes a sub-process. Each member can either be a Type 2 rule or Type 3 rule, an existing non end-to-end process, a Type 1 rule (T2T) or an existing transformation that is defined through Data Integrator. If no predecessor is defined, the process tree is executed in its natural hierarchical sequence as explained in the stated example.



Example

In the earlier figure, first the sub process SP1 will be executed. The sub process SP1 will be executed in following manner: Rule 1 > SP1a > Rule 2 > SP1.

The execution sequence will be start with Rule 1, followed by sub-process SP1a, followed by Rule 2 and will end with sub-process SP1:

The Sub Process SP2 will be executed after execution of SP1. SP2 will be executed in following manner: - Rule 3 > SP2. The execution sequence will start with Rule 3 followed by sub-process SP2

After execution of sub-process SP2, Rule 4 will be executed, and then finally the Rule 5 will be executed.

Note: Same rule cannot be selected more than once in the process hierarchy, if it is selected more than once it will display an alert

"Process Definition with same name already exists".

The Process tree can be built by adding one or more members called **Process Nodes**.

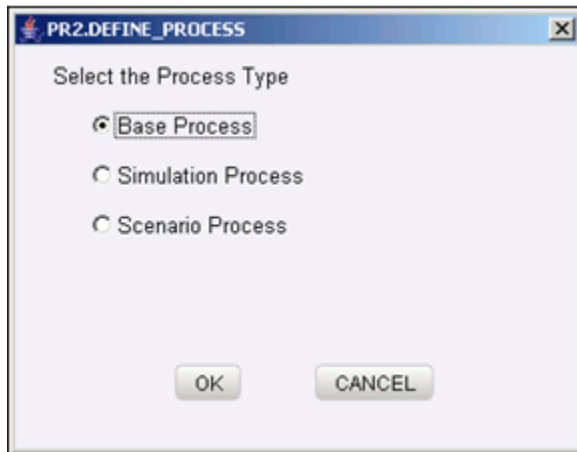
If there are Predecessor Tasks associated with any member, the tasks defined as predecessors will precede the execution of that member.

Type of Process Trees – Two types of process trees can be defined. A Base Process Tree is a hierarchical collection of rules that are processed in the natural sequence of the tree. The rules are sequenced in a manner required by the business condition. The base process tree does not include sub-processes that are created at run time during execution. A Simulation Process Tree as the name suggests is a tree constructed using a

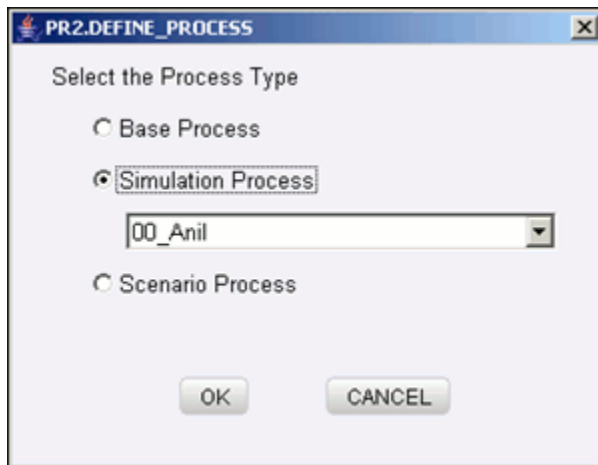
base process tree. It is also a hierarchical collection of rules that are processed in the natural sequence of the tree. It is however different from the base process tree in that it reflects a different business scenario. The scenarios are built by either substituting an existing process with another or inserting a new process / rules.

Defining New Process

Click **New** to define a new process.



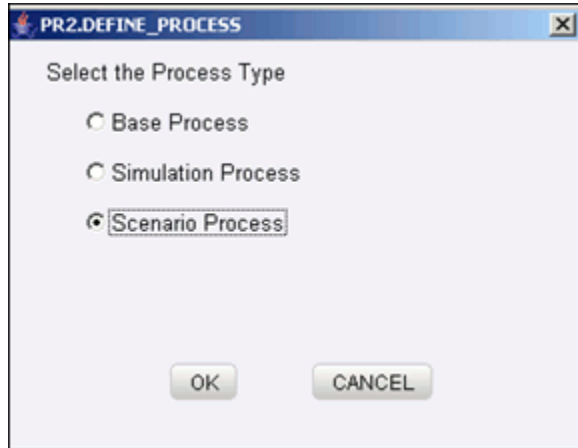
Defining New Process This opens up the Define a Process window. Select the Base Process option to define a Base Process. For more information, see Defining a Base Process Tree, page 42-51.



Select the Simulation Process option to define a Simulation Process.

For more information, see Defining a Simulation Process, page 42-74.

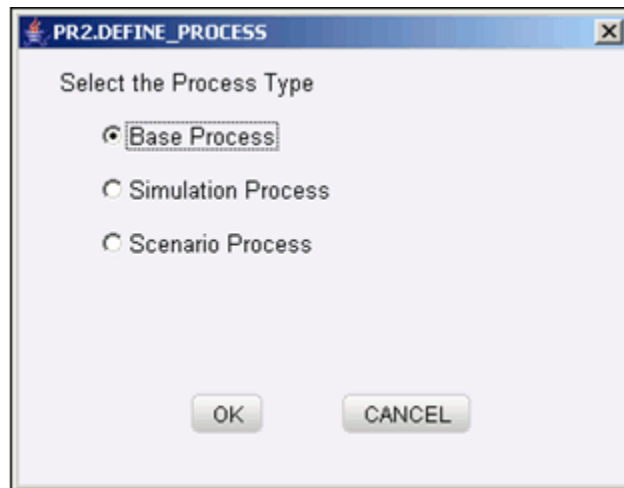
Note: In order to define a Simulation Process, you must have a Base Process already defined.



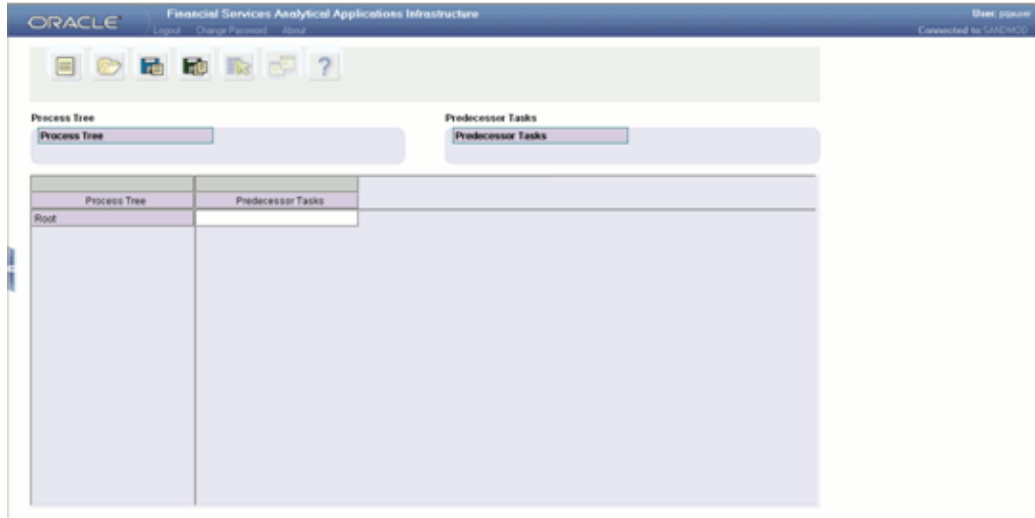
Select the Scenario Process option to define a Scenario Process. For more information, see Defining a Scenario Process, page 42-78.

Defining a Base Process

Click **Base Process** option in the Define a Process window. Click **OK**.

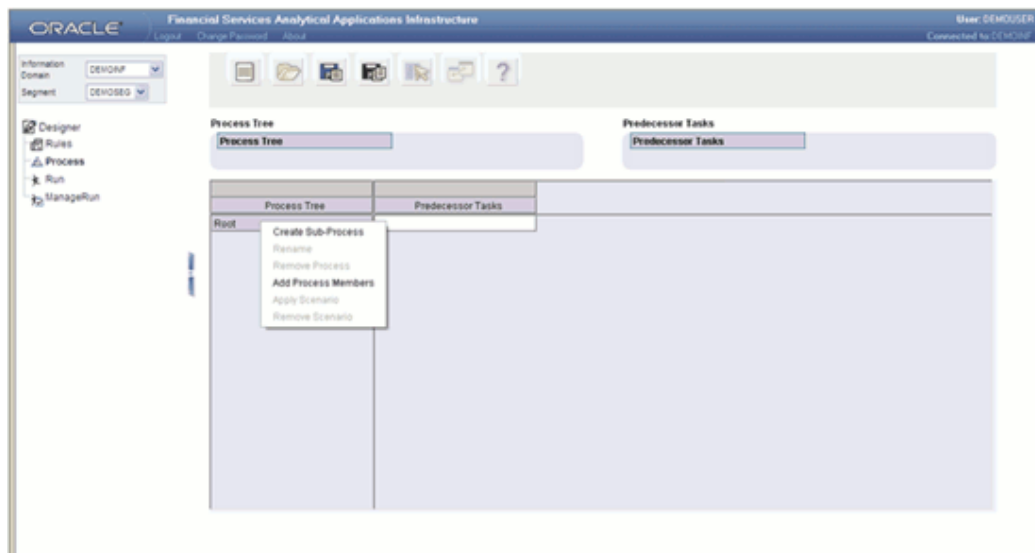


By default the Root node will be displayed under the Process Tree in the grid below.

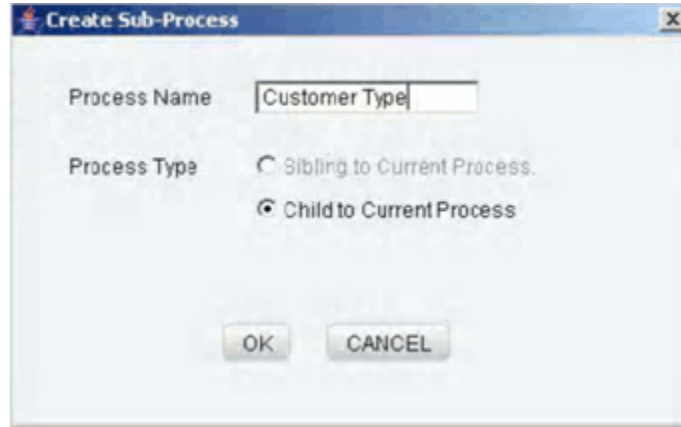


Adding a Sub Process to Root

Right click on the root node to display the menu.



Select the **Create Sub-Process** option. This opens the **Insert Process** window. Enter the name of the process.



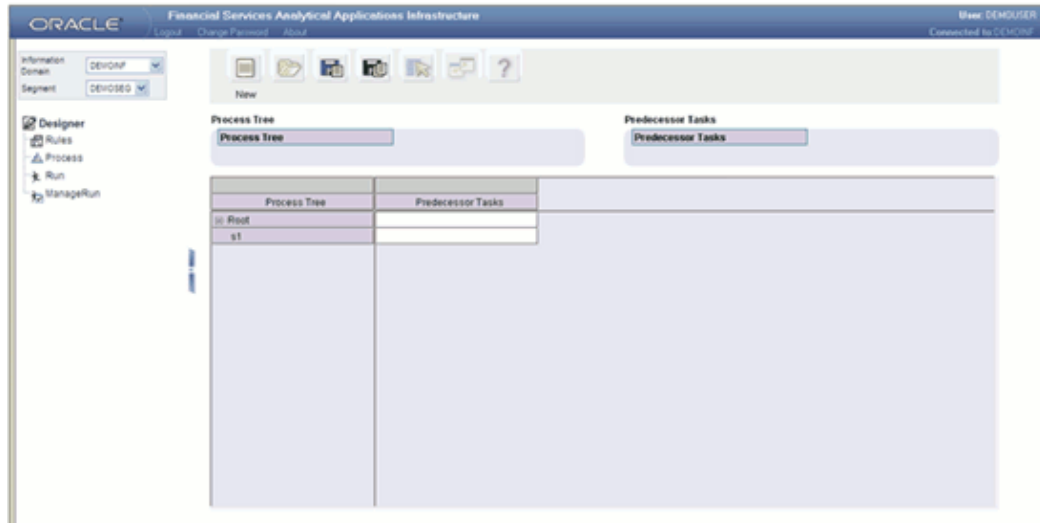
Enter the process name in the **Process Name** text box.

Example

SP1

Note:

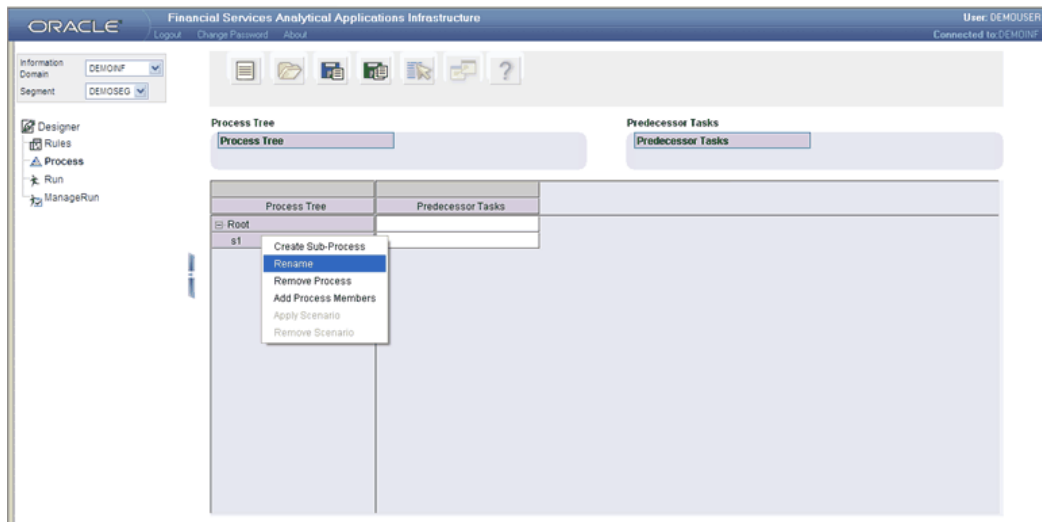
- The current OFSAAI version provides only the Child to Current Process option as the Process Type.
- Once a process definition is saved, the Root node is replaced with the name of the process.
- The Root node cannot be deleted. It can be renamed, irrespective of the tree status.



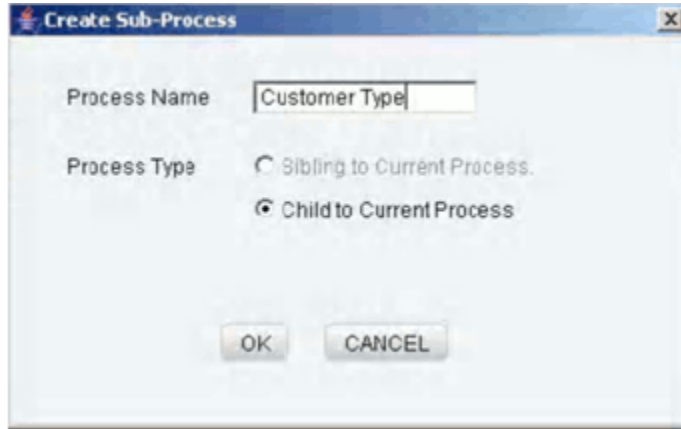
Note: You can add more than one unique sub process to the root node.

Adding Sub Process to a Sub Process

Select a sub-process on the row axis of the process grid. Right-click on the sub process node to display the menu.



Select the option **Create Sub-Process**. This opens an Insert Process window. Enter the name of the sub-process.



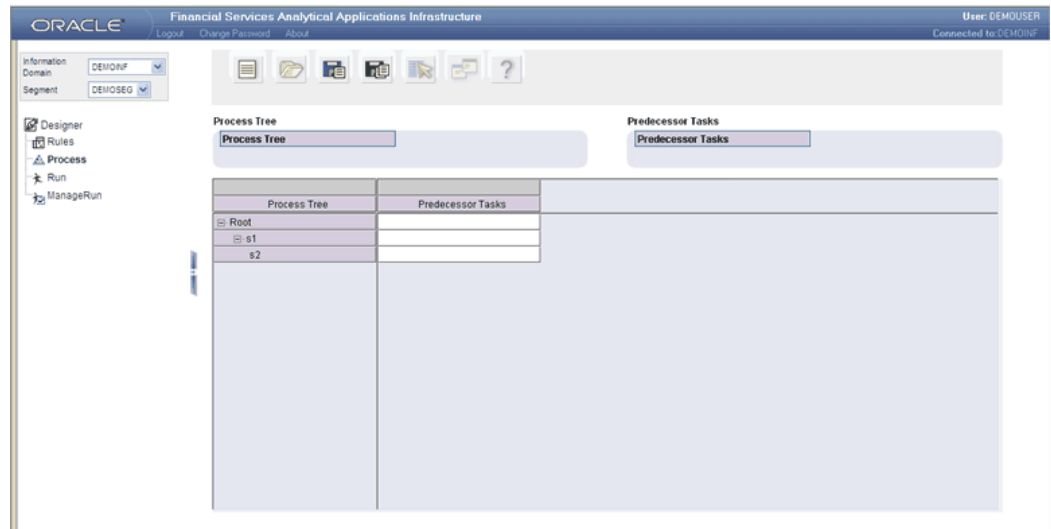
Enter the sub process name in the Process Name text box.

Example

SP1a

Note: The current OFSAAI version provides only the Child to Current Process option as the Process Type.

Click **OK**. The sub-process to which a new sub-process has been added is displayed in a collapsed mode (+). Expand the same to view the newly added sub-processes.

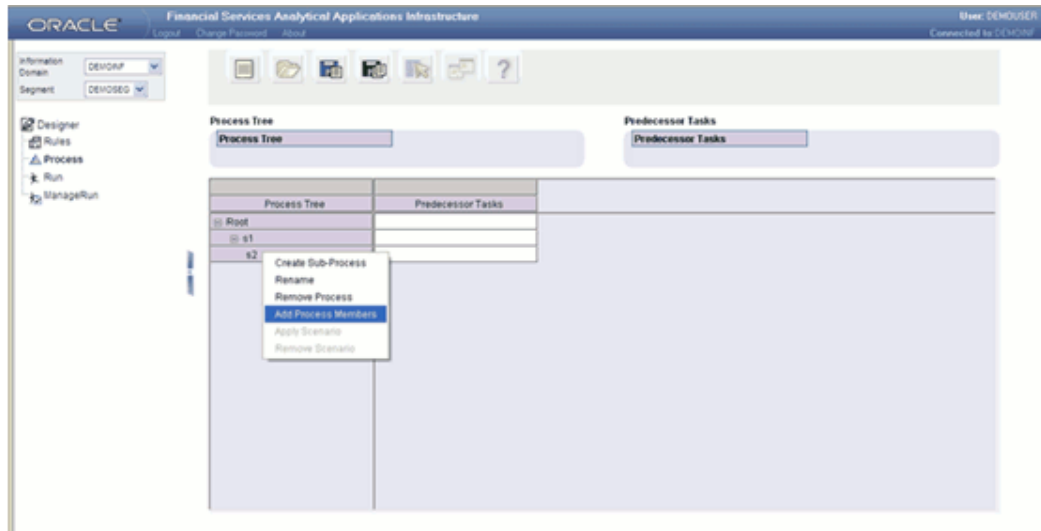


Note:

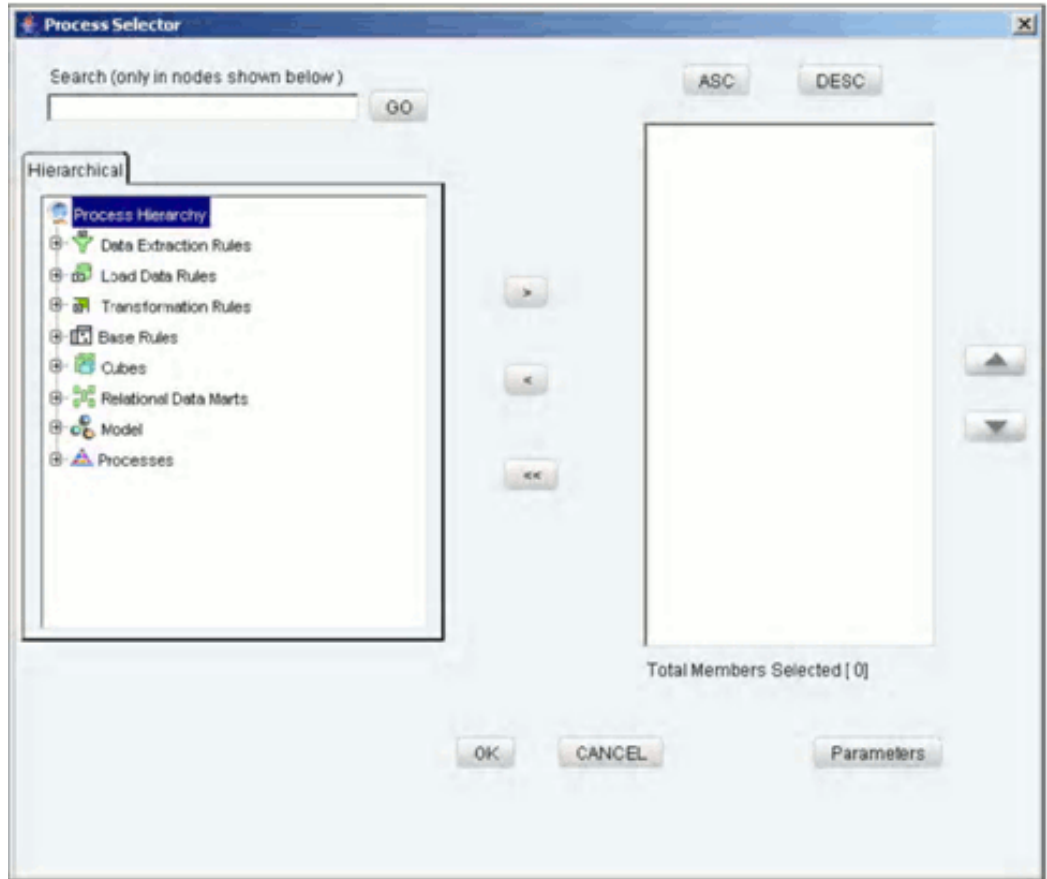
- You can add more than one sub processor to the sub processor node.
- Same rule cannot be selected more than once in the process hierarchy, if it is selected more than once it will display an alert "Process Definition with same name already exists".

Adding Process Member to a Sub Process

Select a sub-process on the row axis of the process grid. Right click on the sub process node. This displays a menu. Select the Add Process Member option.



This opens a Process Selector window. The left pane of the Process Selector displays the tag Process Hierarchy. Each of the members can be expanded to display the child members in a tree structure.

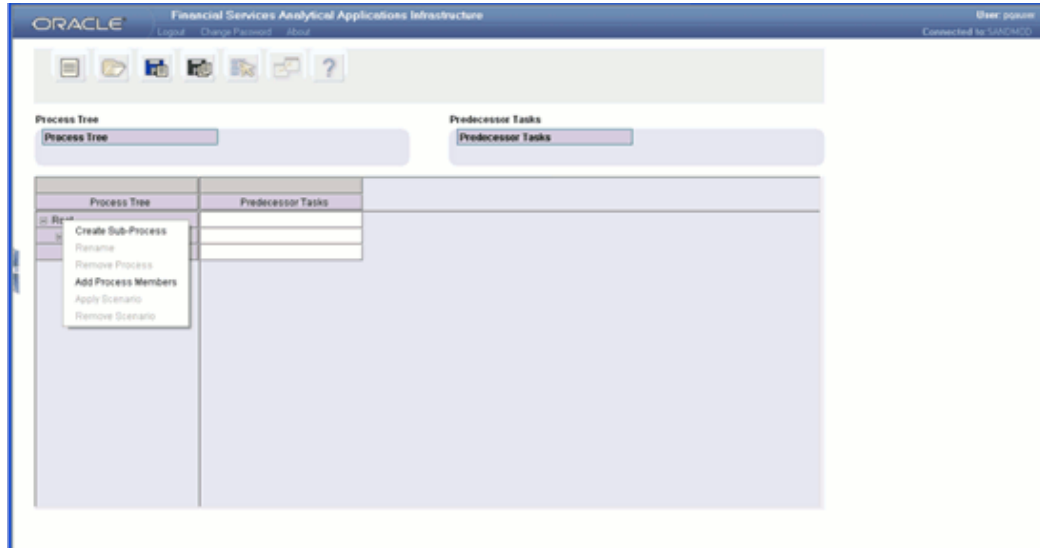


You can select process hierarchy members as required. Refer the section Adding Process Member to Root, page 42-57 for details on the procedure.

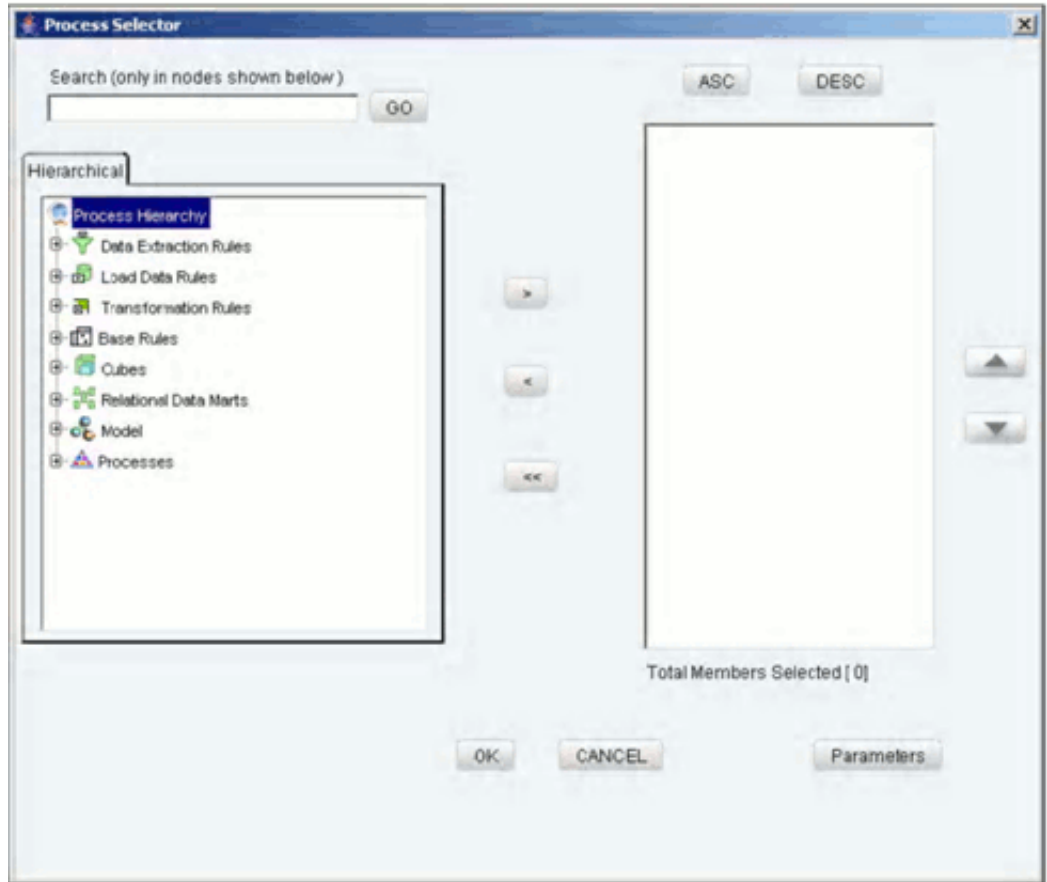
Note: Same rule cannot be selected more than once in the process hierarchy, if it is selected more than once it will display an alert " Process Definition with same name already exists".

Adding Process Member to Root

Right Click on the root node and click the **Add Process Members** option.



This opens a Process Selector window. The left pane of the Process Selector displays the tag Process Hierarchy. The members of this tag are Data Extract Rules, Load Data Rules, Transformation Rules, Base Rules, Cubes, Relational Data Marts, Model and Processes. Each of the members can be expanded to display the child members in a tree structure.



Data Extraction Rules will expand to display all the Extract definitions defined through OFSAAI Data Integrator.

Load Data Rules will expand to display the following two sub types of definitions:

- File Loading Rules will expand to displays all the File to Table definitions defined through OFSAAI Data Integrator.
- Insertion Rules (Type1 Rules) will expand to display all the Table to Table definitions defined through OFSAAI Data Integrator.

Transformation Rules will expand to display the following two sub types of definitions:

- Database Functions – Quality Checks will expand to display all the DQ definitions defined in OFSAAI Data Integrator.
- Database Functions-Transformations will expand to display all the DT definitions defined in OFSAAI Data Integrator.

Base Rules will expand to display the following two sub types of definition.

- Classification (type 2 rule) will expand to display all the type 2 rules defined in the

Rules Designer.

- Computation rules (type 3 rule) will expand to display all the type 3 rules defined in the Rules Designer.

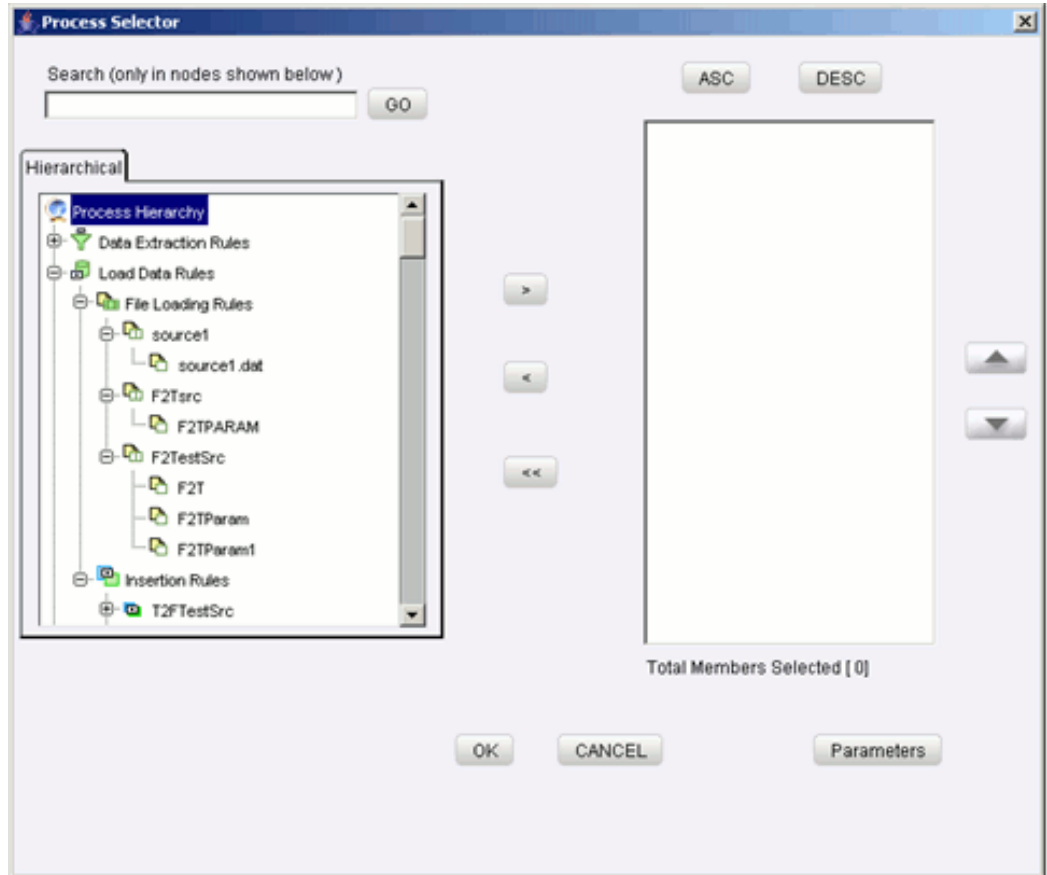
Cubes will expand to display all the cubes definitions defined for the selected information domain in OFSAAI unified metadata manager.

Note: The cubes under the segment to which the user is mapped only will be displayed.

Relational Data Marts will expand to display all the RDM's defined through the OFSAAI Business Metadata Management – Relational Data Mart.

Model will expand to display all the existing pooling and optimizer definitions defined in the Modeling framework Optimizer and Pooling windows.

Processes will expand to display all the existing Non End-to-End processes defined through Process Designer.



Search

To search for a particular member, you may enter the keyword of the member you are looking for and click **GO**. If a member containing the keyword is located, the corresponding member is highlighted. Click **Search** again to be taken to the next member that contains the keyword used in the search field.

Member Selection

The right pane of the Process Selector displays the selected members of the process hierarchy. In order to move a process from the right pane to the left pane, first select the process in the left pane.

Example

New DS Rule1

Click the



button to move the selected hierarchy member to the right pane. The number of members selected onto the right pane is displayed below the pane.

De-selecting Members

To deselect a process hierarchy member from the right pane, click the member in the right pane. Click the



button.

Click the



button to deselect all the members from the right pane.

Ordering Members in the right Pane

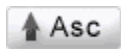
To set the order of display of the process hierarchy members selected onto the right pane, click a member and use the buttons



and



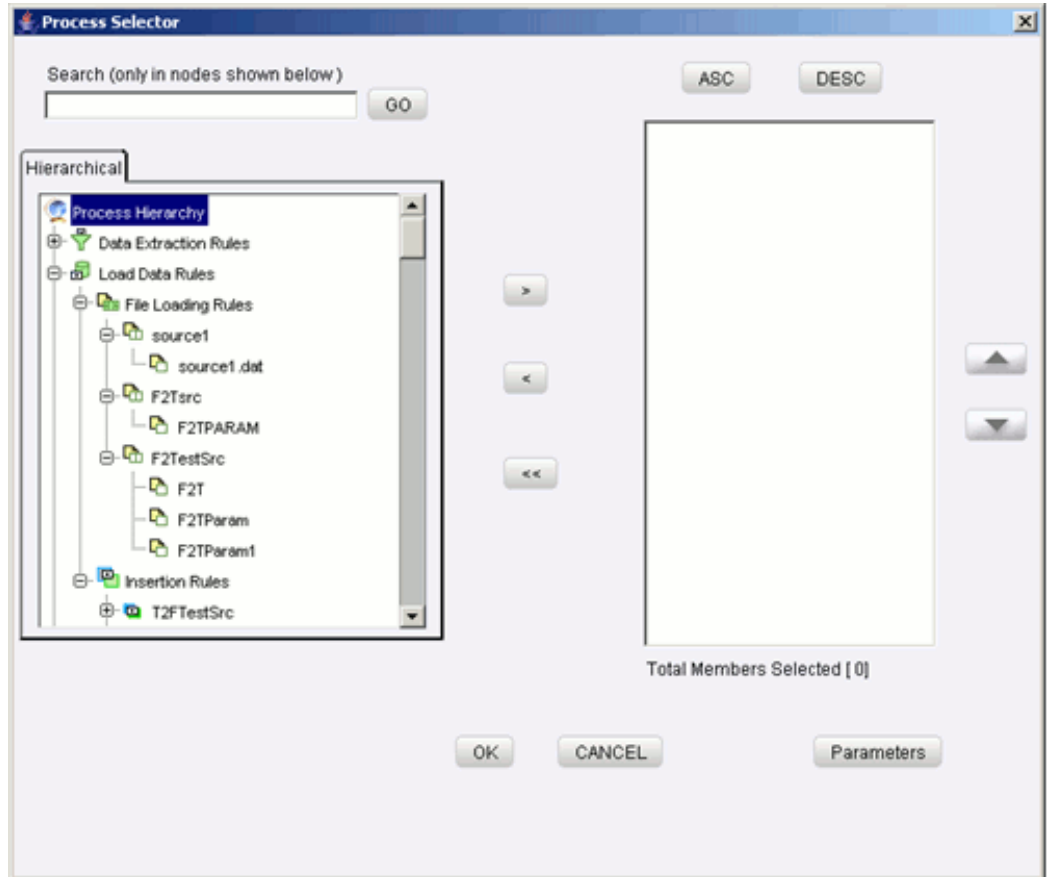
to move the member up or down in the order respectively. You may also click the buttons



or



to set the list of members in the order of alphabetical ascension or dissension respectively.



Click **OK** to save the selection and close the Process Selector. Click **CANCEL** to discard the selection.

Defining Parameters

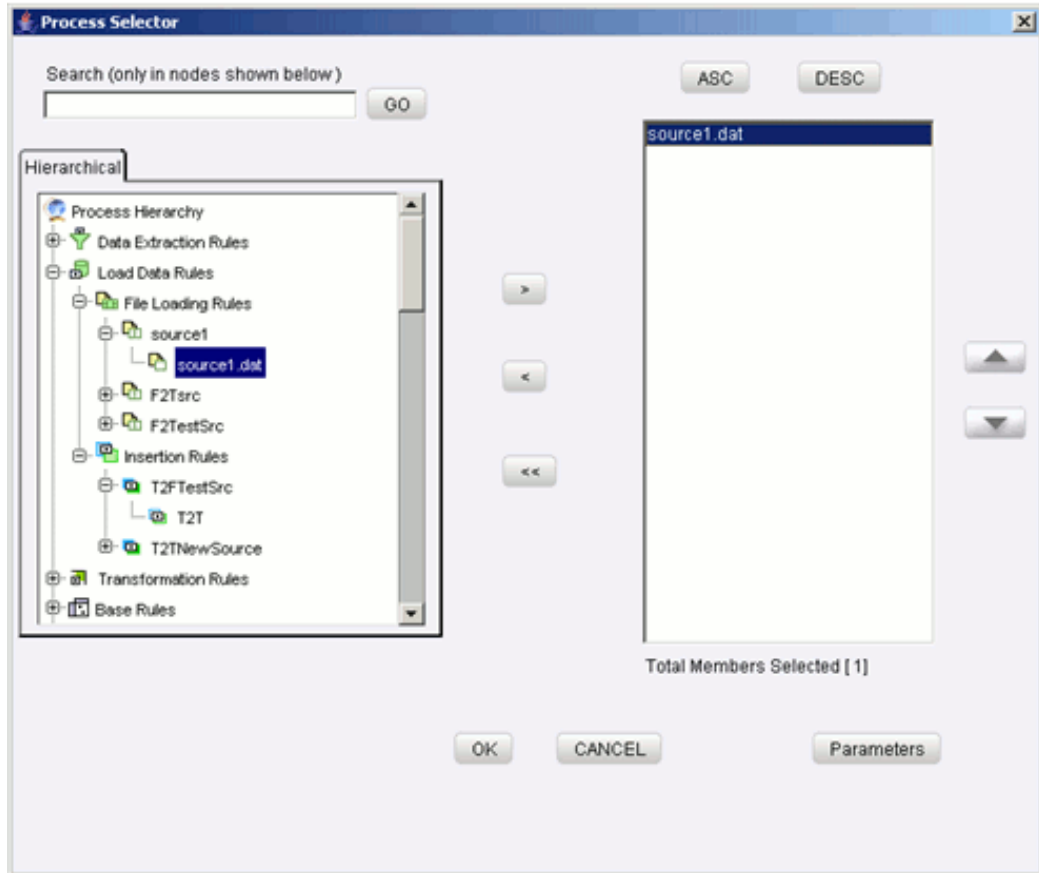
Parameters reflect the parameters that are being applied to the selected member. Select the members from left pane (Load Data Rules/ Transformation Rules/ Cubes/ Relational Data Marts and so on) and click



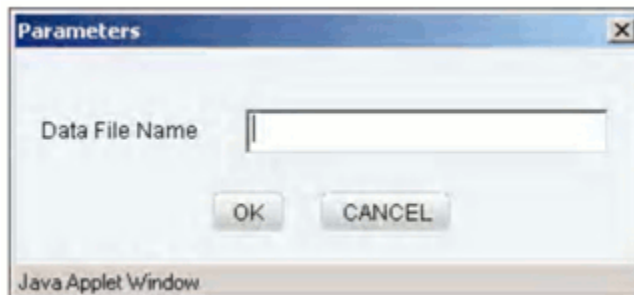
button to move the selected member into the right pane. The number of members selected onto the right pane is displayed below the pane.

Defining Parameters for File Loading Rules

Select the member from the right pane and click **Parameters** button in the Process Selector window to define the parameters for the selected member.



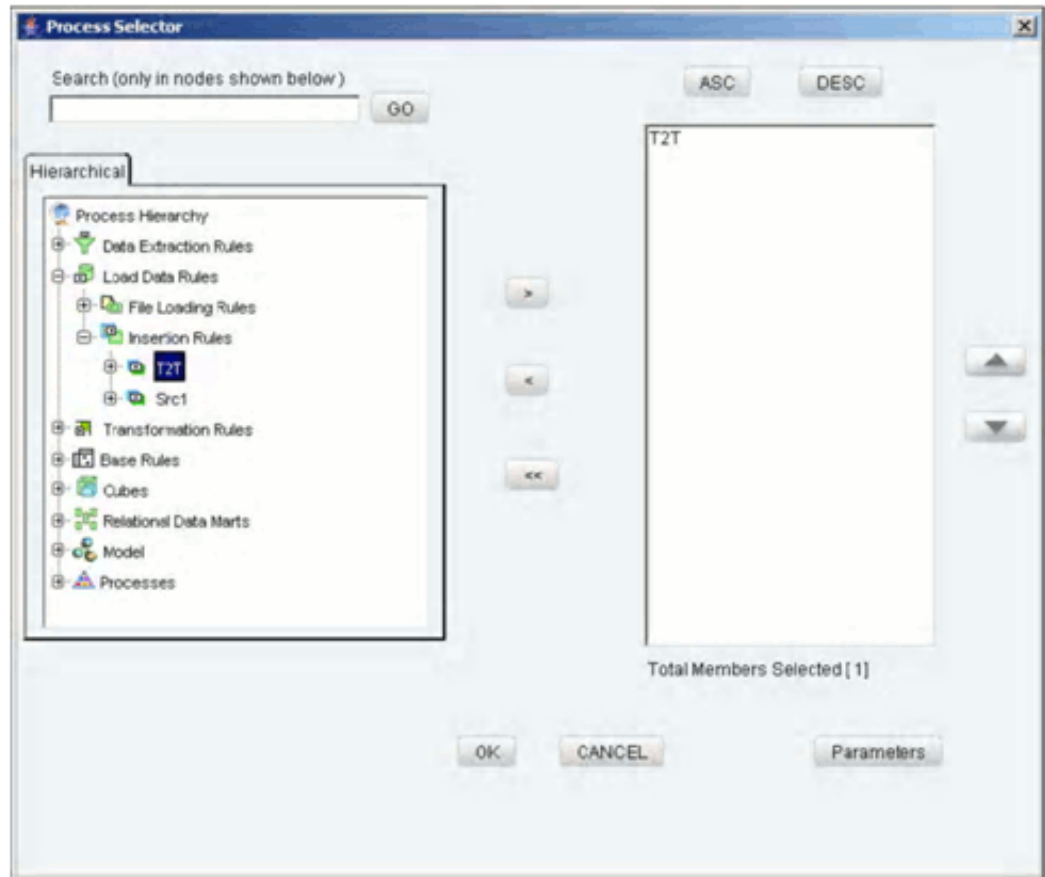
This opens up the Parameters window.



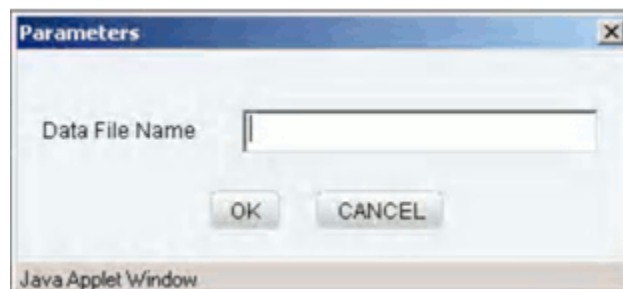
Enter the data file name in the **Data File Name** box. Click **OK** to save the parameter. Click **CANCEL** to discard the operation.

Defining Parameters for Insertion Rules (Type1 Rules)

Select the member from the right pane and click **Parameters** button in the Process Selector window to define the parameters for the selected member.



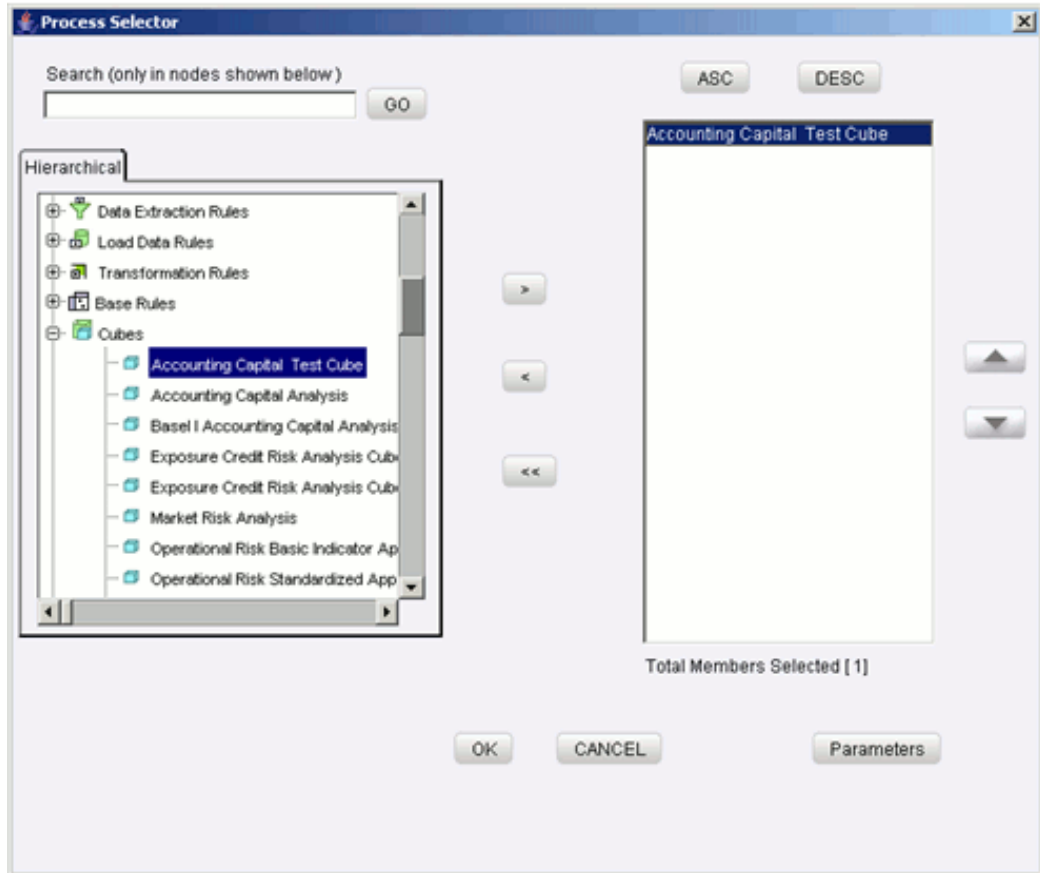
This opens up the Parameters definition window.



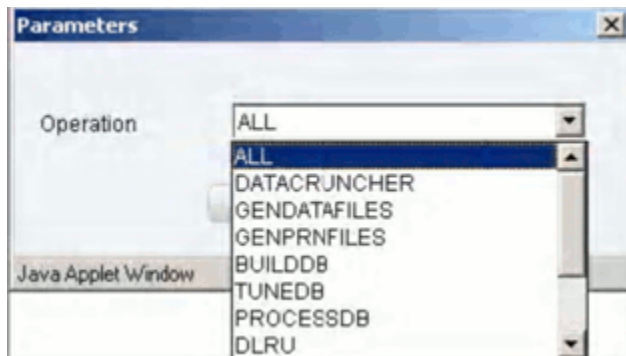
Enter the data file name in the Data File Name box. Click **Ok** to save the parameter. Click **CANCEL** to discard the operation.

Defining Parameters for Cubes

Select the member from the right pane and click **Parameters** button in the Process Selector window to define the parameters for the selected member.



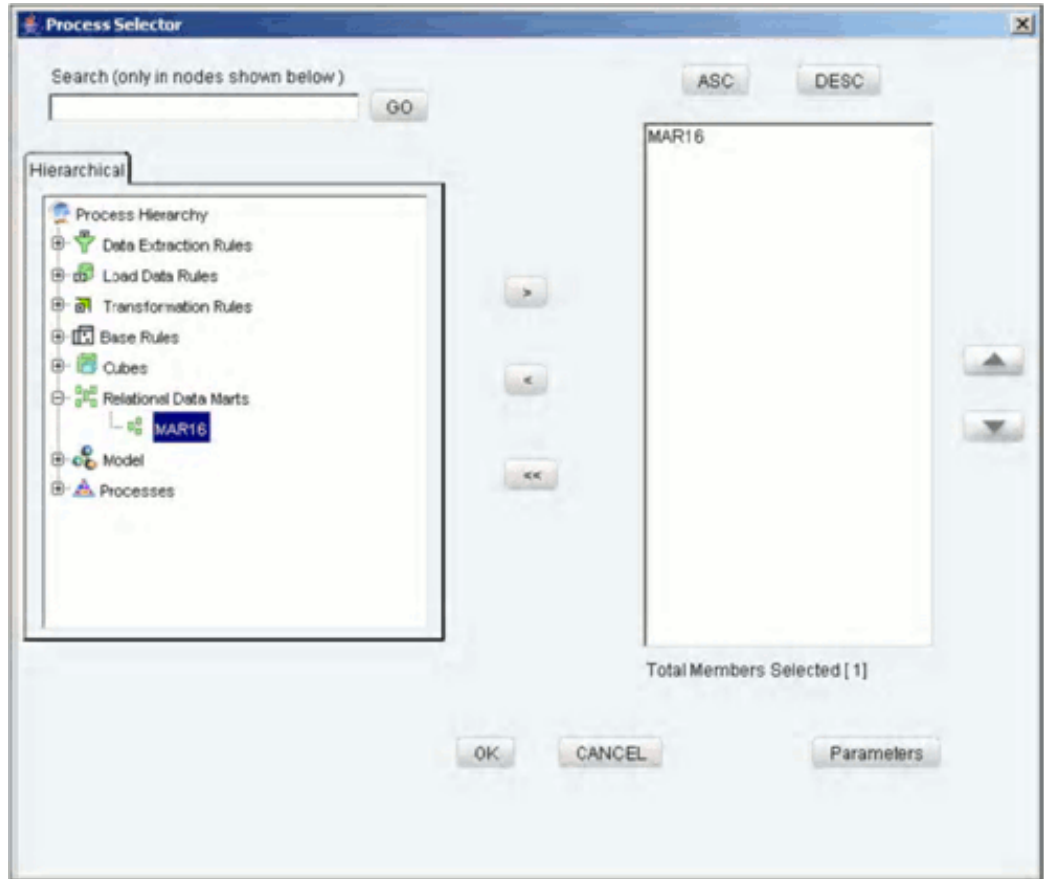
This opens up the Parameters definition window.



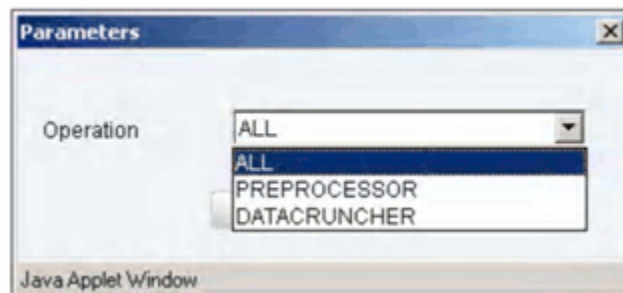
Click the list box of the field provided for Operation in the Value field to select the Operation. Operation refers to the operation to be performed for cube build operation.

Defining Parameters for Relational Data Marts

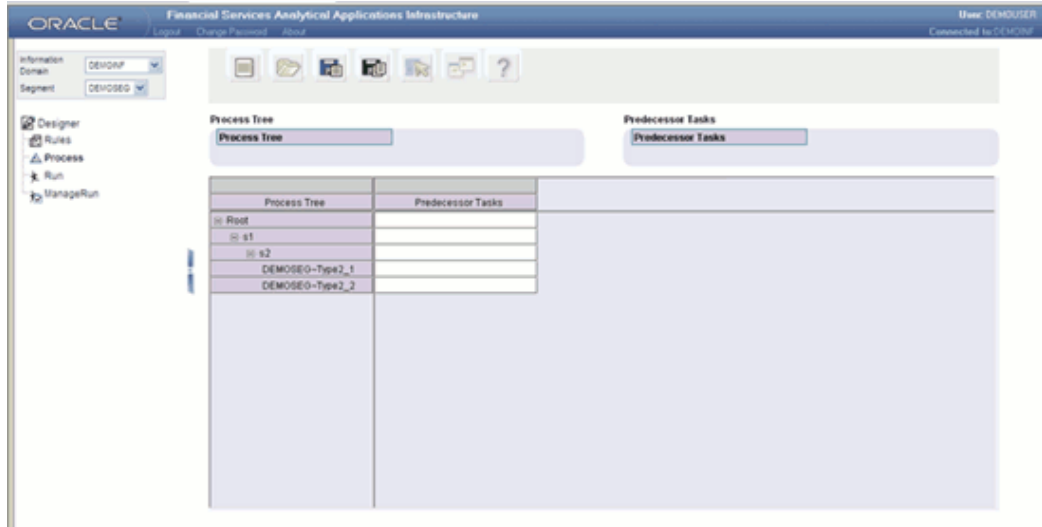
Select the member from the right pane and click **Parameters** button in the Process Selector window to define the parameters for the selected member.



This opens up the Parameters definition window.



Defining Parameters Click the list box of the field provided for Operation in the Value field to select the Operation. Operation refers to the operation to be performed for cube build operation. The selected process hierarchy members will be displayed in the specified order in the row axis of the process grid.

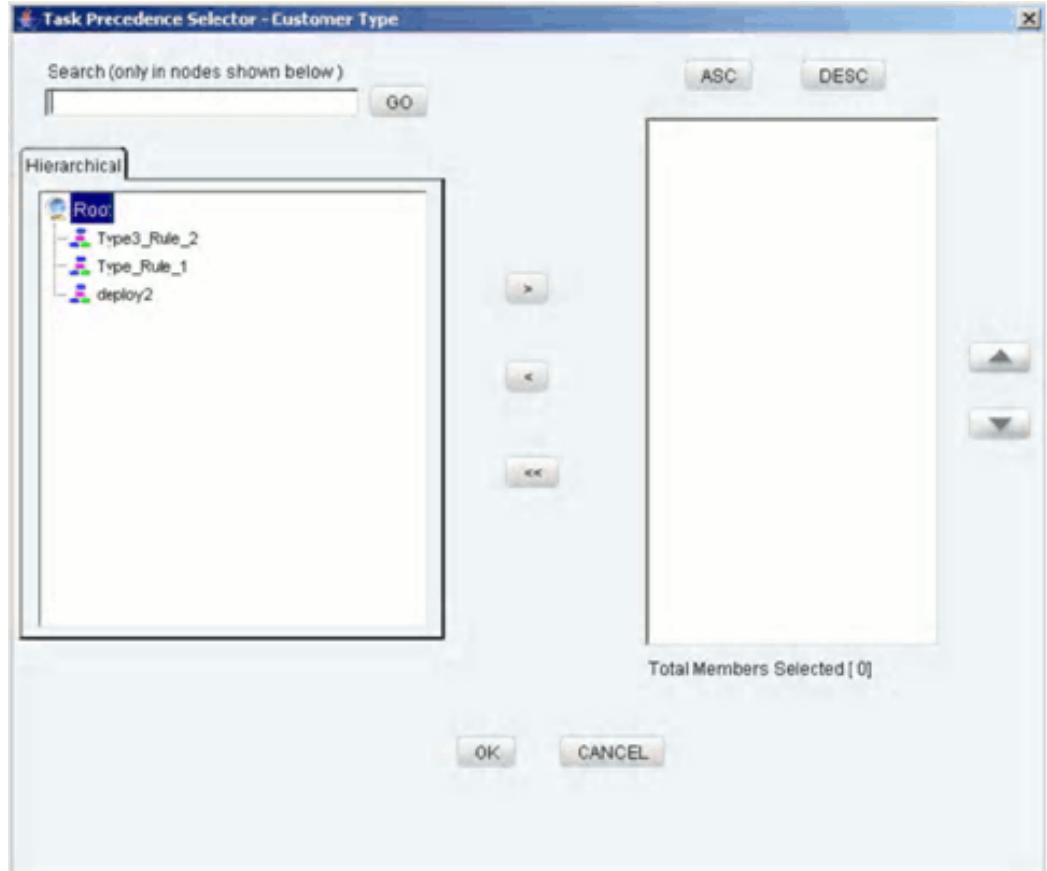


Specifying a Predecessor Task

The process tree is executed in its natural hierarchical sequence. If you wish the execution of certain members to be preceded by the execution of other members, you must define task precedence.

Defining Predecessor Task

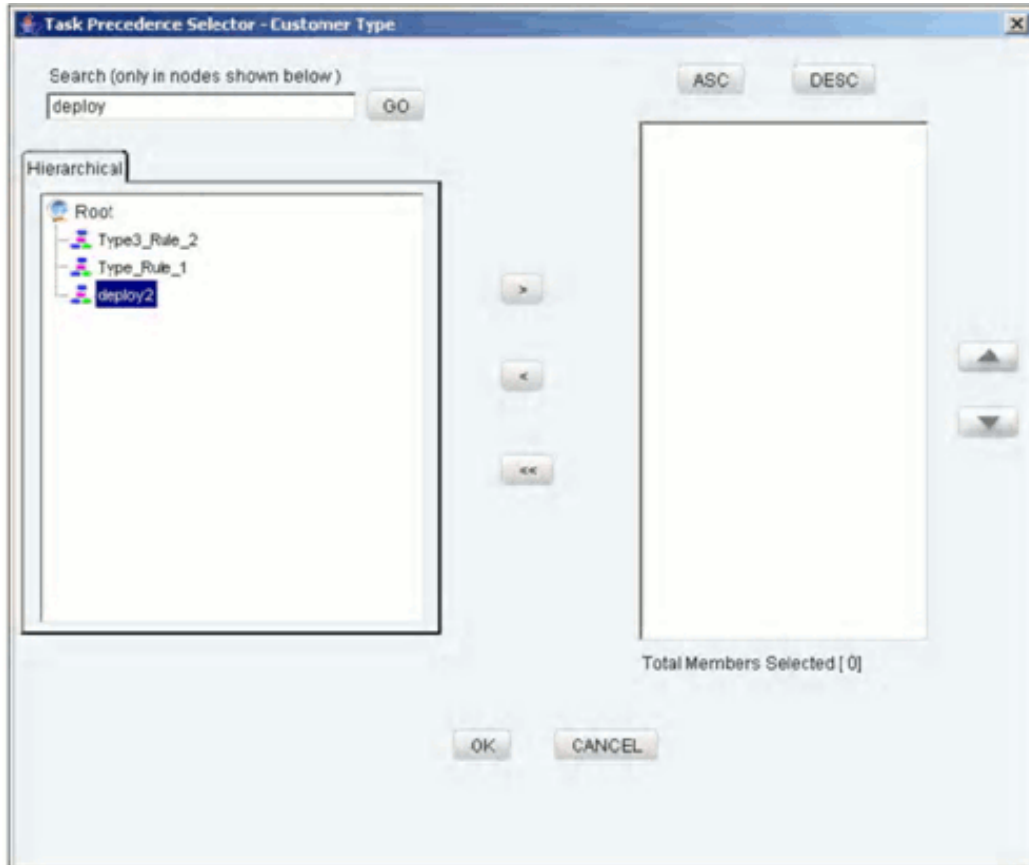
Note: You cannot open the Task Precedence selector for the corresponding root node.



The left pane of the Task Precedence Selector displays the tag Root. The members of this tag are the sibling members of the selected process hierarchy member.

Search

To search for a particular member, you may enter the keyword of the member you are looking for and click **GO**. If a member containing the keyword is located, the corresponding member is highlighted. Click **Search** again to be taken to the next member that contains the keyword used in the search field.



Member Selection

The right pane of the Task Precedence Selector displays the sibling members of the selected member of the process hierarchy. Select a sibling member that you want to specify as the predecessor in the left pane.

Example

KType3 Rule1

Click the



button to move the selected hierarchy member to the right pane. The number of members selected onto the right pane is displayed below the pane.

De-selecting Members

To deselect a process hierarchy member from the right pane, click the member in the right pane. Click the



button.

Click the



button to deselect all the members from the right pane.

Ordering Members in the right Pane

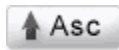
To set the order of display of the process hierarchy members selected onto the right pane, click a member and use the buttons



and



to move the member up or down in the order respectively. You may also click the buttons



or

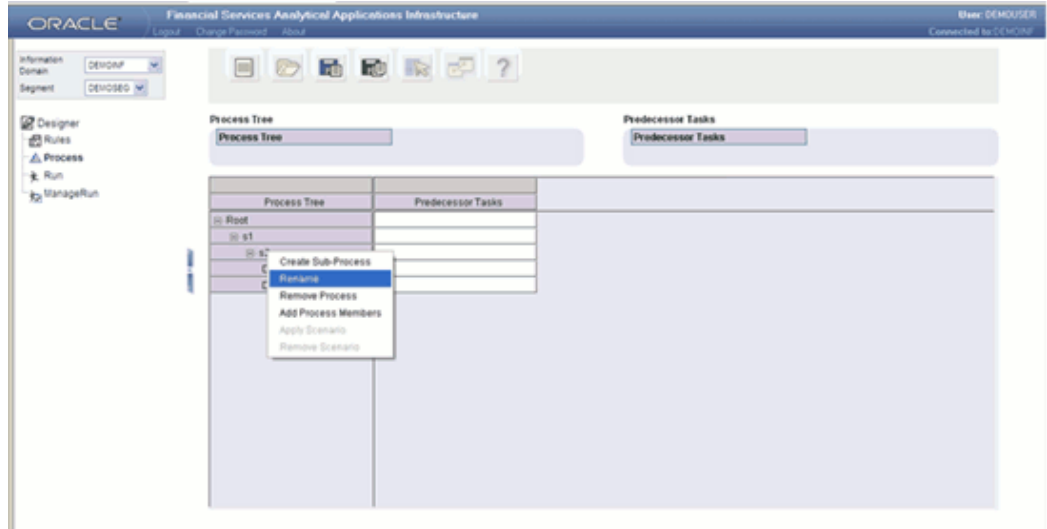


to set the list of members in the order of alphabetical ascension or dissension respectively.

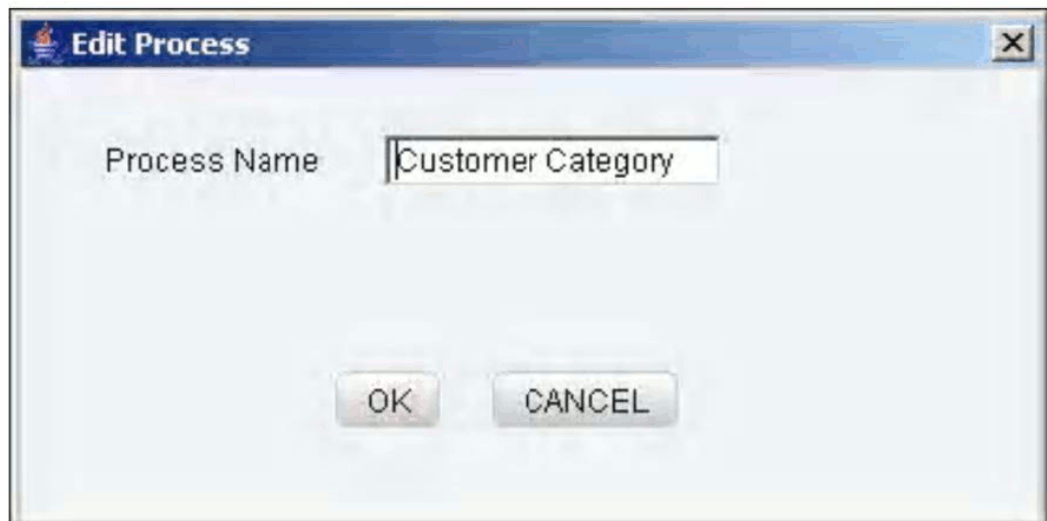
Click **OK** to save the selection and close the **Task Precedence Selector**. Click **CANCEL** to discard the selection.

The selected members will be displayed in the specified order under the column **Predecessor Tasks** in the process grid against the identified row member.

Note: If there is more than one predecessor task specified for a process member / sub process, then those predecessor tasks will be executed in parallel.



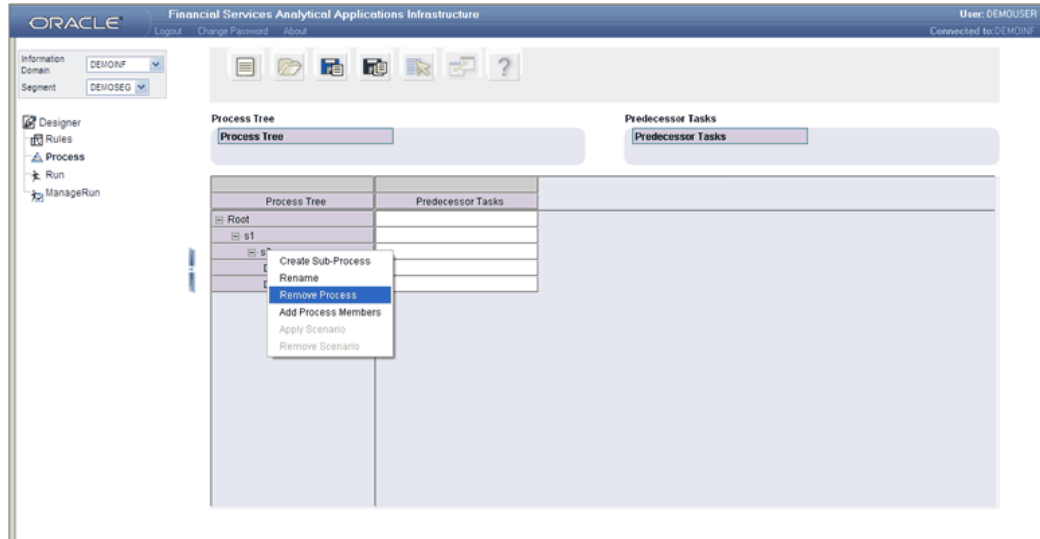
This will open the Edit Process window.



Enter the new name in the **Process Name** text box. Click **OK** to rename the member. Click **CANCEL** to exit from the renaming process.

Removing a Sub Process

Select the sub-process member on the row axis of the process grid that you wish to remove. Right click on the member to display the menu. Select the Remove Process option.



This will open the Delete Process window.



The Delete Process window will display the process name that has been selected for deletion. Click **OK** to confirm the deletion. Click **CANCEL** to exit the deletion process.

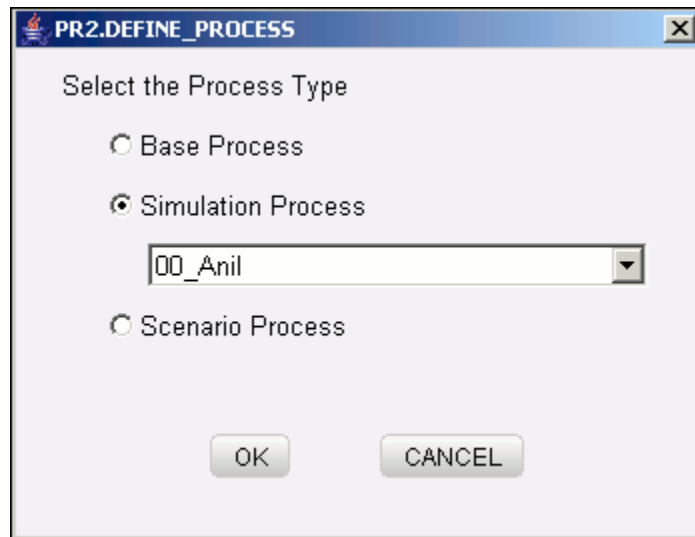
Defining Simulation Process

Click the **Simulation Process** option in the Define a Process window.

Defining a Simulation Process is a 2-step process. The first step involves defining the Scenario Process. Since the simulation process is created around a base process, the base process must be selected while defining the Simulation Process.

The second step is to define the Simulation Process by substituting or inserting the newly created scenario process in the base process tree. The base process tree definition is not over-written. Instead the simulation process definition is saved as a separate

process tree.



Select the **Simulation Process** option to define a new Simulation Process.

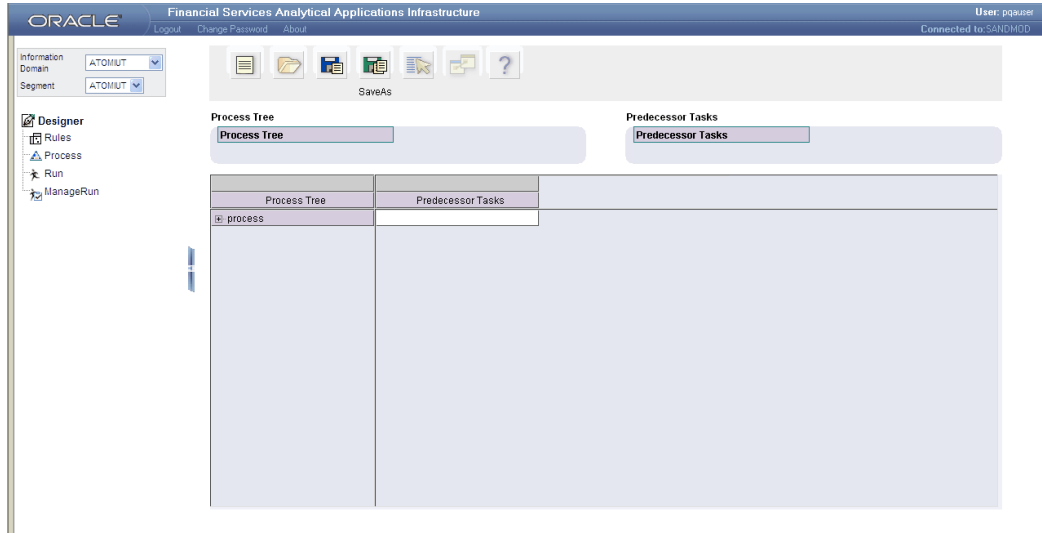
The list displays the list of all available base processes. Select the base process tree which will be used in the Simulation Process definition.

Note:

- The Simulation Process can have multiple base processes assigned to it.
- The Map button will be enabled only for the Simulation Processes.

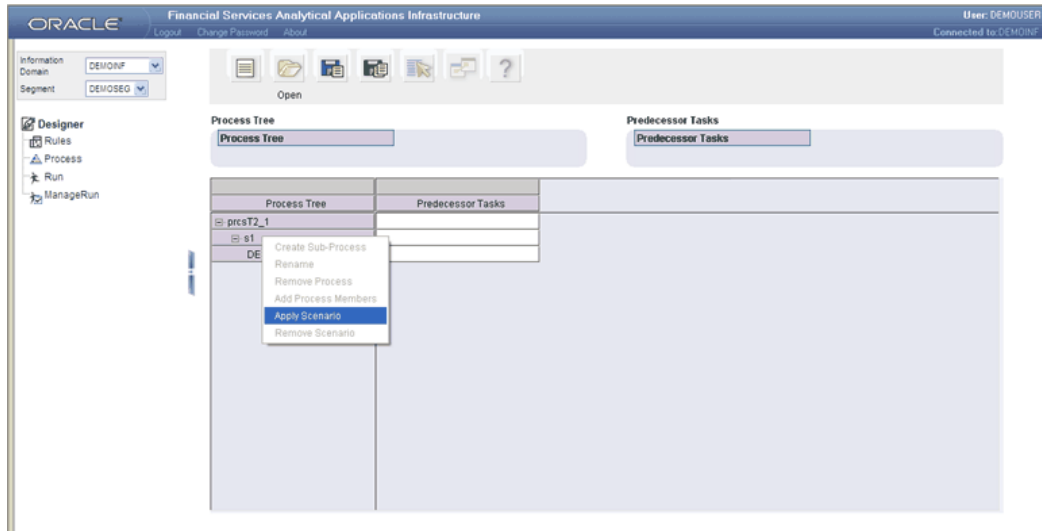
Simulation Process Definition

Click the **Simulation Process** option and select the base process from the list in Define a Process window.

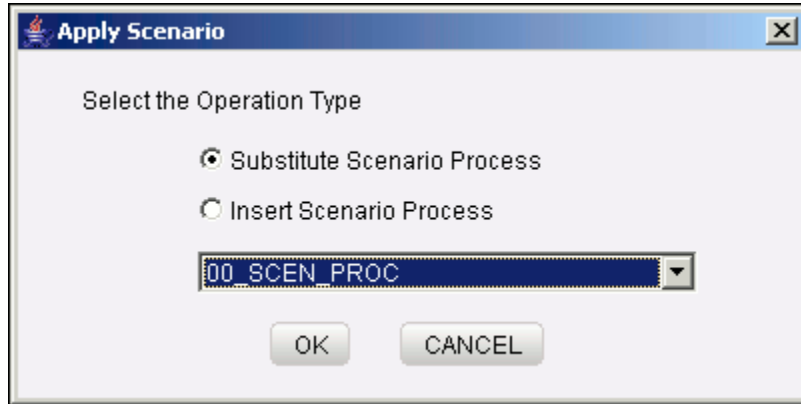


Applying Scenario

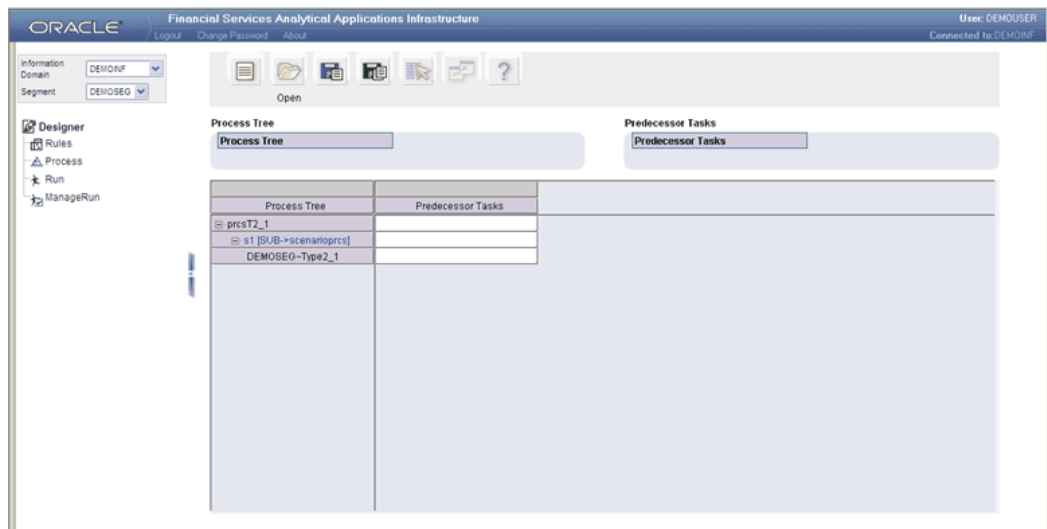
Select a base process from the tree and right click on the sub process for which the scenario substitution / insertion is required. Select the **Apply Scenario** option.



This opens up the Apply Scenario pop up window.

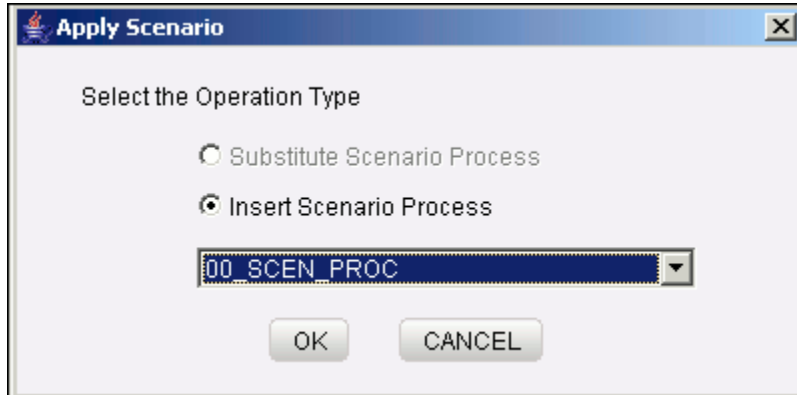


If a base process is required to be substituted with a scenario process, select the **Substitute** option and from the list, select a scenario for the substitution. Click **OK** to proceed or click **CANCEL** to discard the selection.

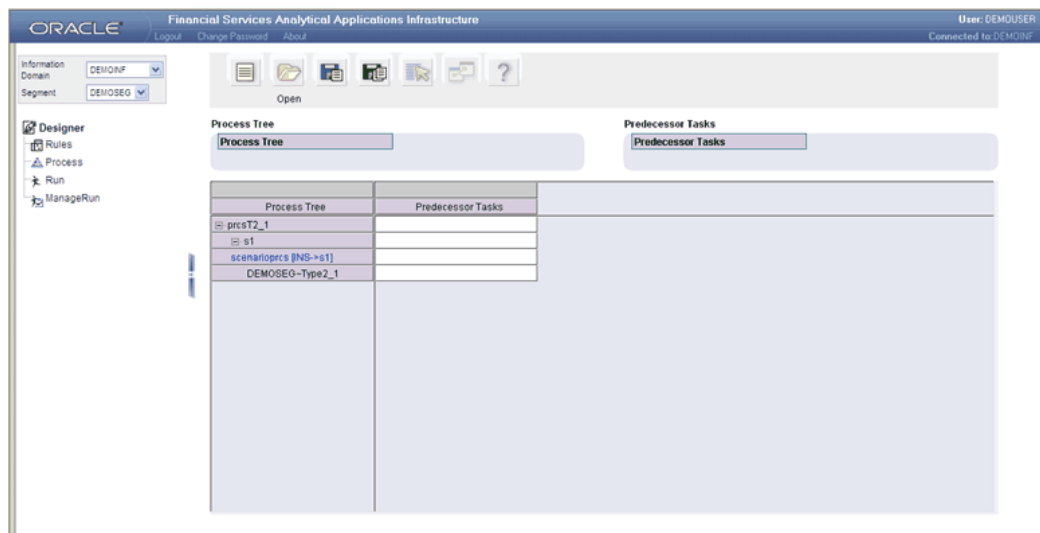


The selected scenario will be substituted for the selected process. Click **Save** to save the process tree. The new process tree when saved becomes the Simulation Process.

If a scenario process is required to be added to the process tree, select the Insert option and from the list, select a scenario to be inserted. Click **OK** to proceed or click **CANCEL** to discard the selection.



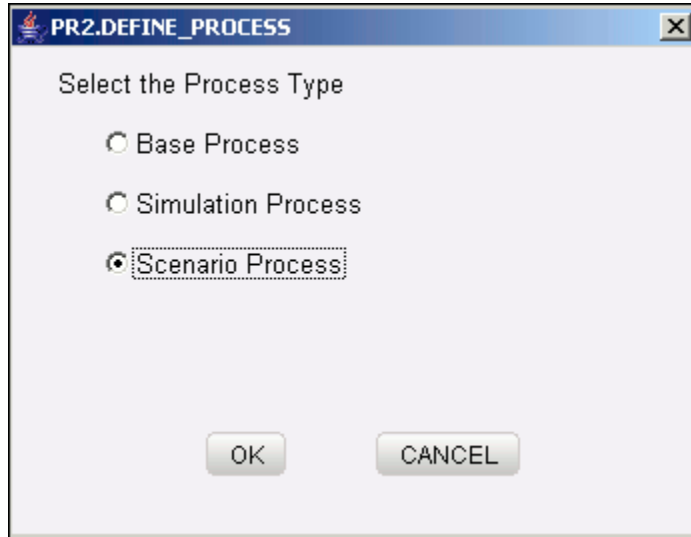
The selected scenario will be inserted into the existing process tree.



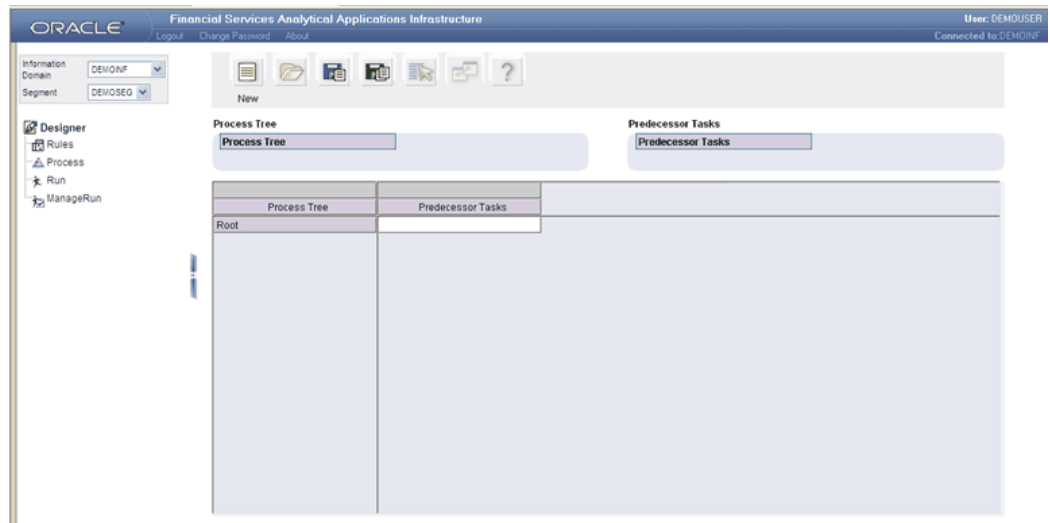
Click **Save** to save the process definition. The new process definition when saved becomes the Simulation Process.

Defining Scenario Process

Click the **Scenario Process** option in the Define a Process window.

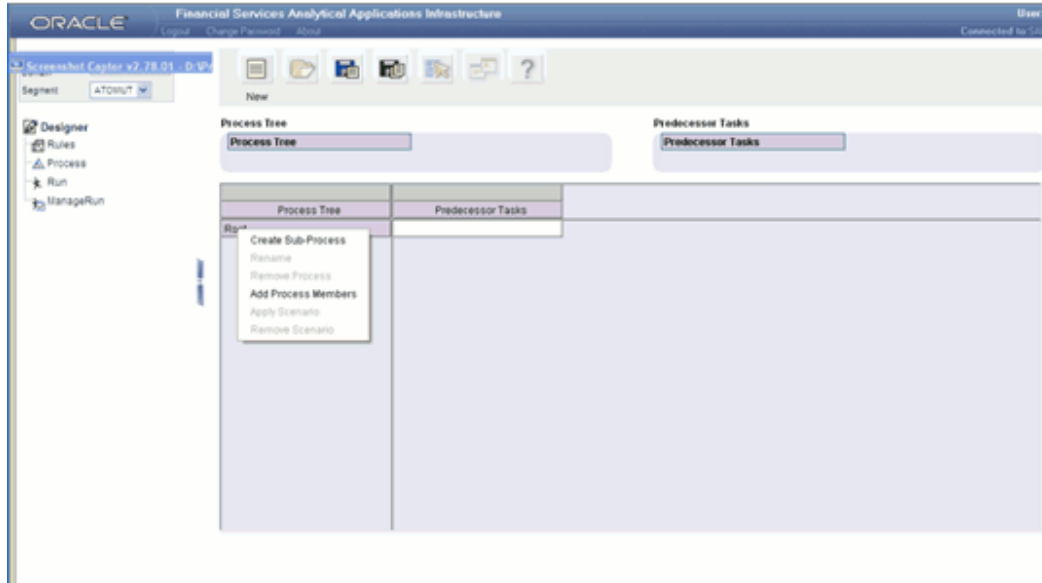


Click **OK** to proceed or click **CANCEL** to discard the selection.

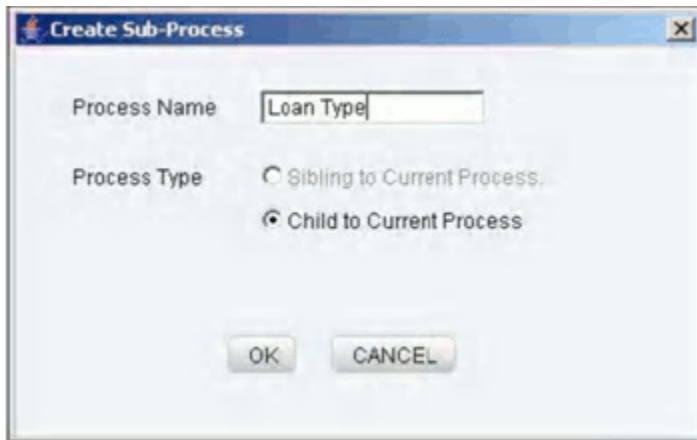


Adding a Sub Process to Root

Right click against the root node to display the menu.



Select the **Create Sub-Process** option. This opens the Insert Process window. Enter the name of the process.



Enter the process name in the **Process Name** text box.

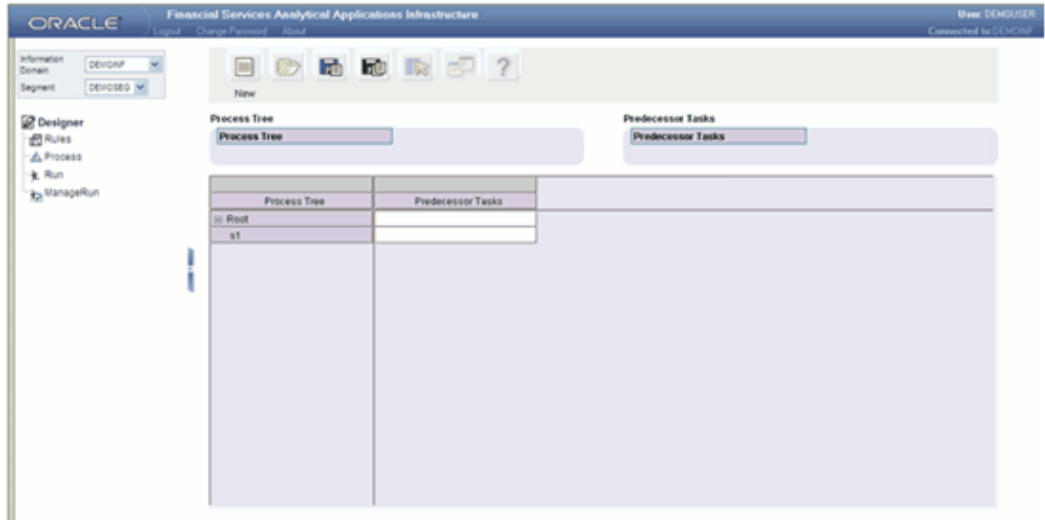
Example

Loan Type

Note:

- The current OFSAAI version provides only the Child to Current Process option as the Process Type.
- Once a process definition is saved, the Root node is replaced with the name of the process.

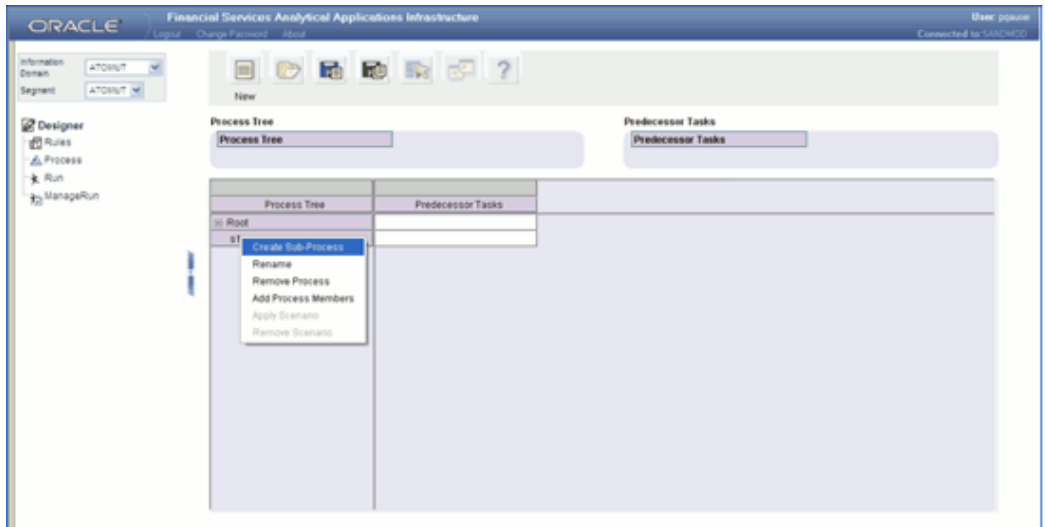
- The Root node cannot be deleted. It can be renamed, irrespective of the tree status.



Note: You can add more than one sub process to the root node.

Adding Sub Process to a Sub Process

Select a sub-process on the row axis of the process grid. Right click on the sub process node to display the menu.



Select the option **Create Sub-Process**. This opens an Insert Process window. Enter the name of the sub-process.



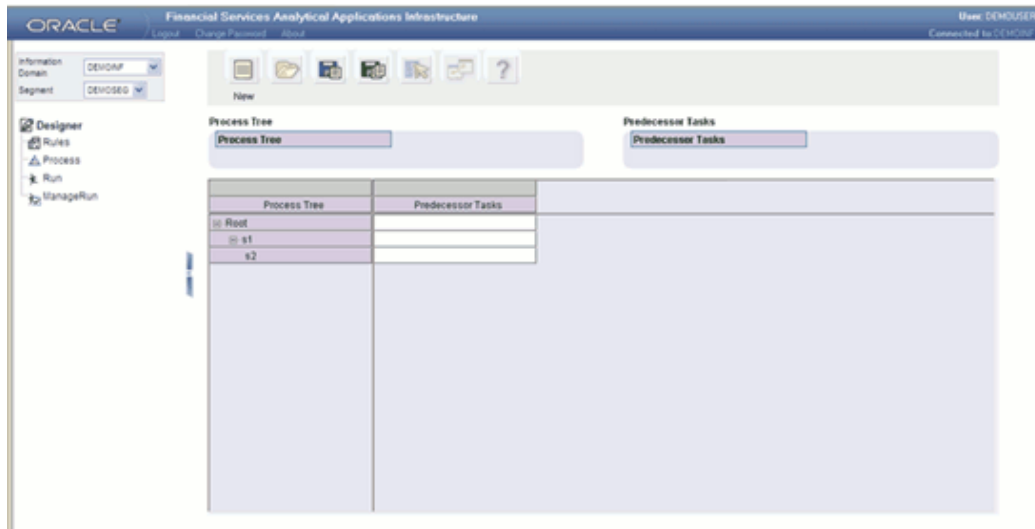
Enter the sub process name in the Process Name text box.

Example

Description

Note: The current OFSAAI version provides only the Child to Current Process option as the Process Type.

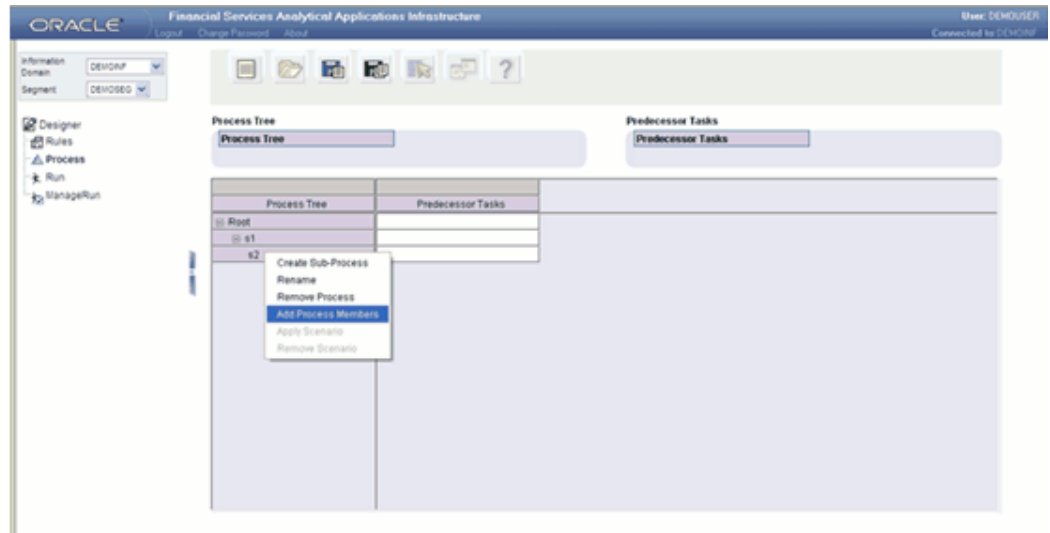
Click **OK**. The sub-process to which a new sub-process has been added is displayed in a collapsed mode (+). Expand the same to view the newly added sub-processes.



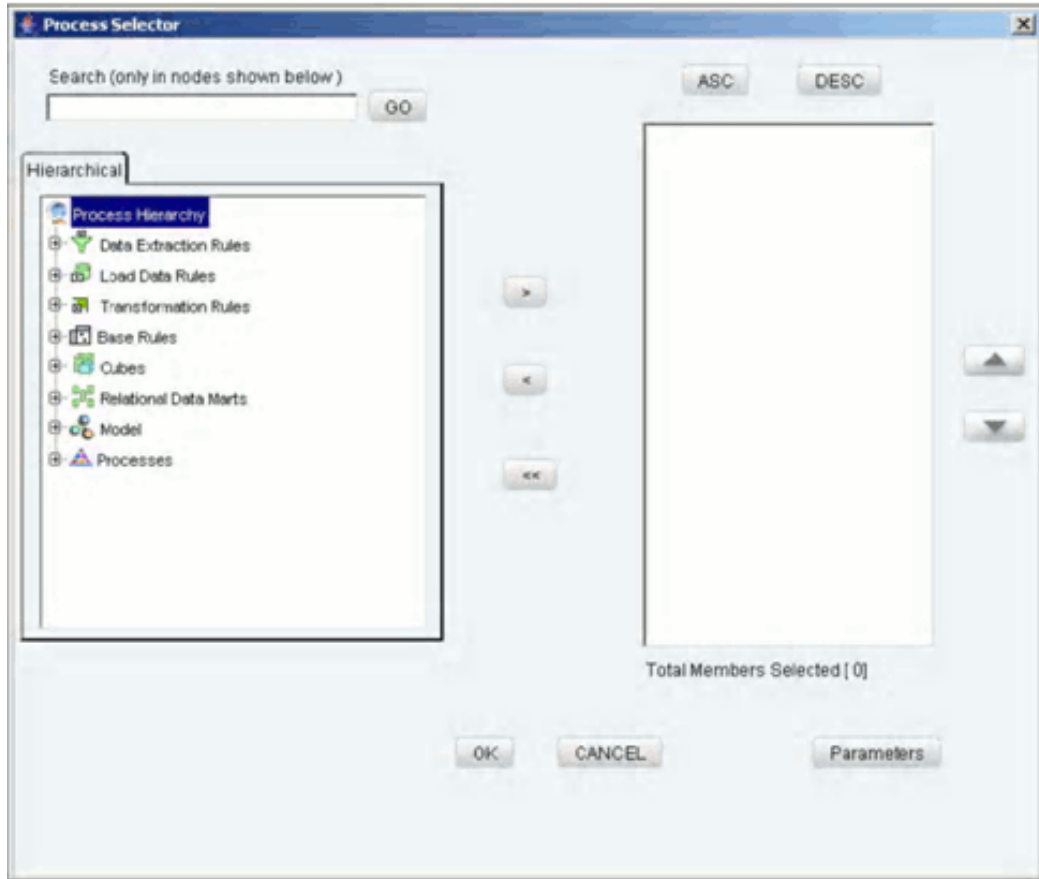
Note: You can add more than one sub processor to the sub processor node.

Adding Process Member to a Sub Process

Select a sub-process on the row axis of the process grid. Right click on the sub process node. This displays a menu. Select the **Add Process Member** option.



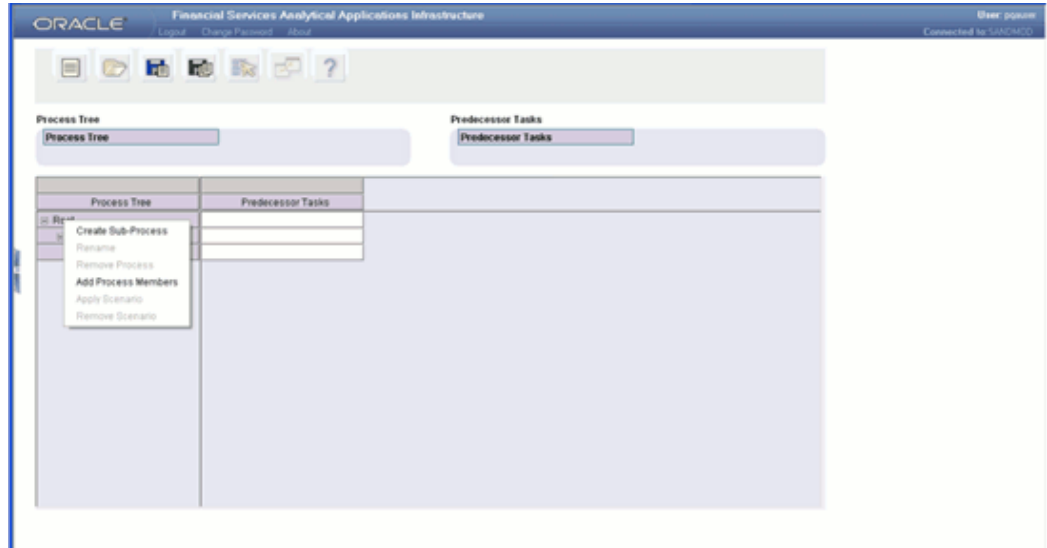
This opens a Process Selector window. The left pane of the Process Selector displays the tag Process Hierarchy. The members of this tag are Data Extract Rules, Load Data Rules, Transformation Rules, Base Rules, Cubes, Relational Data Marts, Model and Processes. Each of the members can be expanded to display the child members in a tree structure.



You can select process hierarchy members as required. Refer the section Adding Process Member to Root for details on the procedure.

Adding Process Member to Root

Right Click on the root node and click the **Add Process Members** option.



This opens a Process Selector window. The left pane of the Process Selector displays the tag Process Hierarchy. Each of the members can be expanded to display the child members in a tree structure.

Data Extraction Rules will expand to display all the Extract definitions defined through OFSAAI Data Integrator.

Load Data Rules will expand to display the following two sub types of definitions:

- File Loading Rules will expand to displays all the File to Table definitions defined through OFSAAI Data Integrator.
- Insertion Rules (Type1 Rules) will expand to display all the Table to Table definitions defined through OFSAAI Data Integrator.

Transformation Rules will expand to display the following two sub types of definitions:

- Database Functions – Quality Checks will expand to display all the DQ definitions defined in OFSAAI Data Integrator.
- Database Functions-Transformations will expand to display all the DT definitions defined in OFSAAI Data Integrator.

Base Rules will expand to display the following two sub types of definition.

- Classification (type 2 rule) will expand to display all the type 2 rules defined in the Rules Designer.
- Computation rules (type 3 rule) will expand to display all the type 3 rules defined in the Rules Designer.

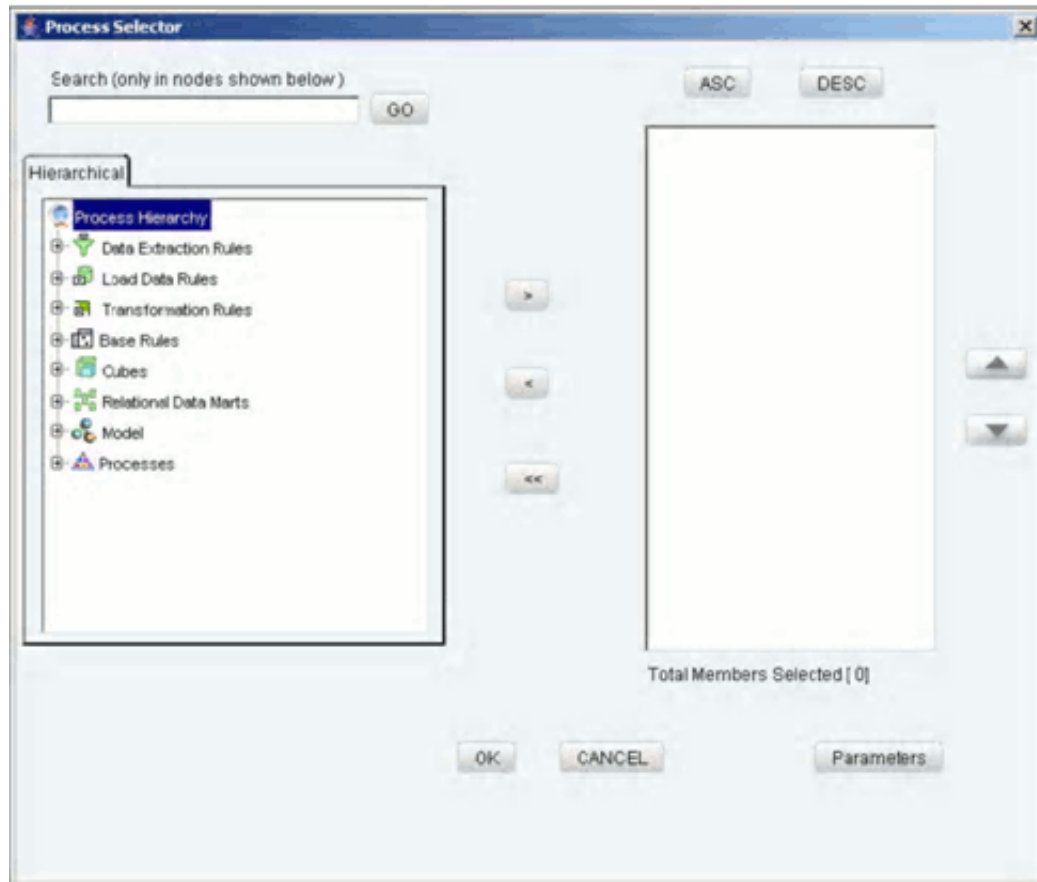
Cubes will expand to display all the cubes definitions defined for the selected information domain in OFSAAI unified metadata manager.

Note: The cubes under the segment to which the user is mapped only will be displayed.

Relational Data Marts will expand to display all the RDM's defined through the OFSAAI Business Metadata Management – Relational Data Mart.

Model will expand to display all the existing pooling and optimizer definitions defined in the Modeling framework Optimizer and Pooling windows.

Processes will expand to display all the existing Non End-to-End processes defined through Process Designer.



Search

To search for a particular member, you may enter the keyword of the member you are looking for and click **GO**. If a member containing the keyword is located, the corresponding member is highlighted. Click **Search** again to be taken to the next member that contains the keyword used in the search field.

Member Selection

The right pane of the Process Selector displays the selected members of the process

hierarchy. In order to move a process from the right pane to the left pane, first select the process in the left pane.

Example

New DS Rule1

Click the



button to move the selected hierarchy member to the right pane. The number of members selected onto the right pane is displayed below the pane.

De-selecting Members

To deselect a process hierarchy member from the right pane, click the member in the right pane. Click the



button.

Click the



button to deselect all the members from the right pane.

Ordering Members in the right Pane

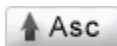
To set the order of display of the process hierarchy members selected onto the right pane, click a member and use the buttons



and



to move the member up or down in the order respectively. You may also click the buttons

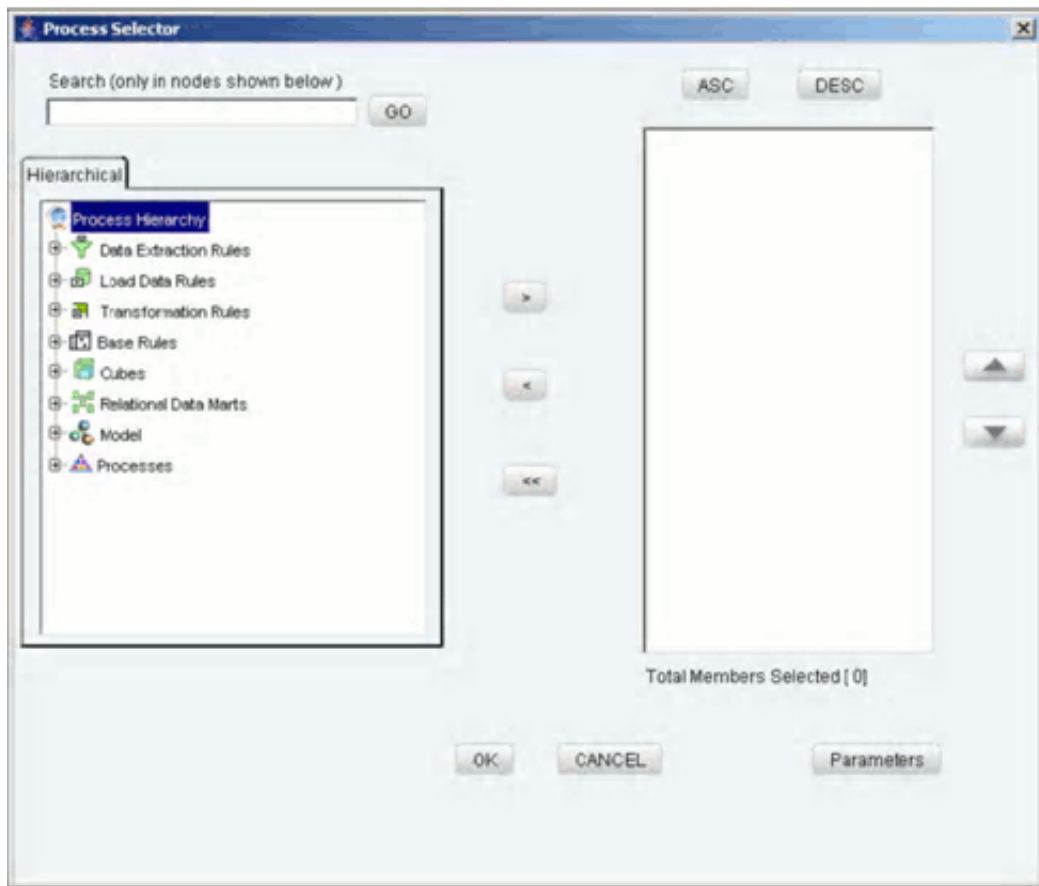


or



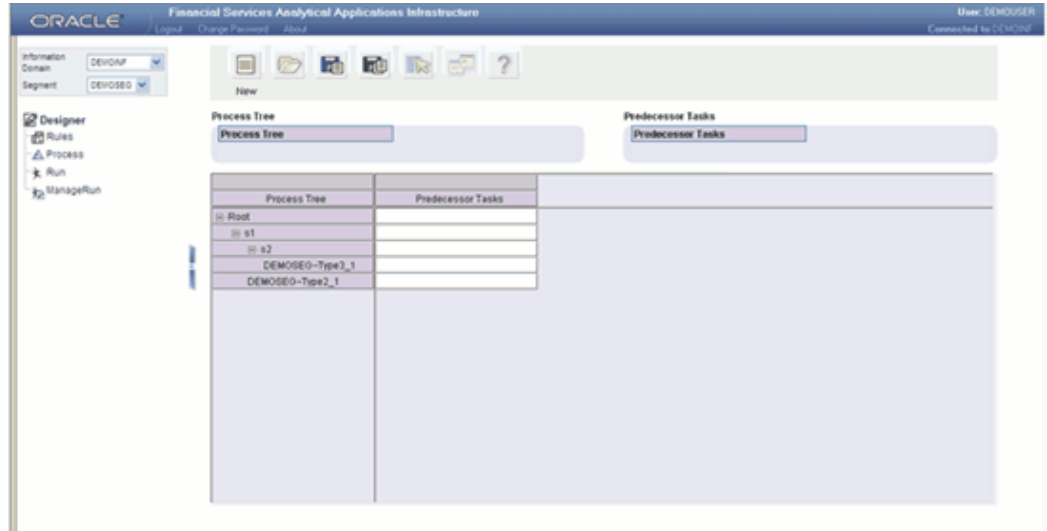
to set the list of members in the order of alphabetical ascension or dissension

respectively.



Click **OK** to save the selection and close the Process Selector. Click **CANCEL** to discard the selection.

The selected process hierarchy members will be displayed in the specified order in the row axis of the process grid.



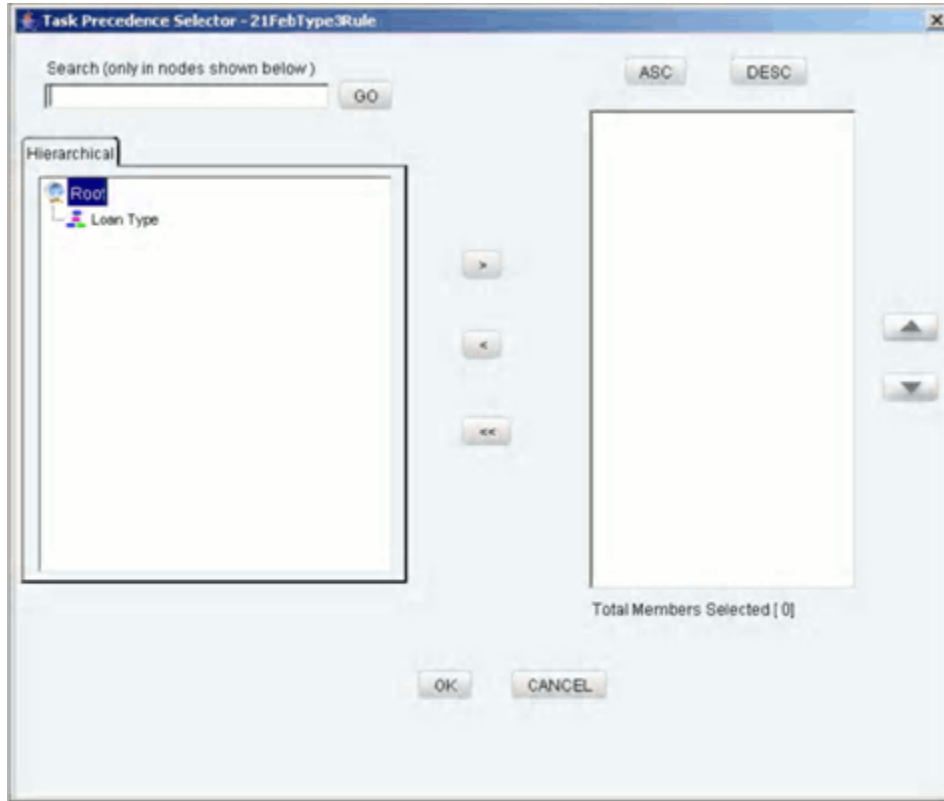
Specifying a Predecessor Task

The process tree is executed in its natural hierarchical sequence. If you wish the execution of certain members to be preceded by the execution of other members, you must define task precedence.

Defining Predecessor Task

Select the member on the row axis in the process grid for which you want to specify precedence. Right click on column section for the selection. This opens the Task Precedence Selector window.

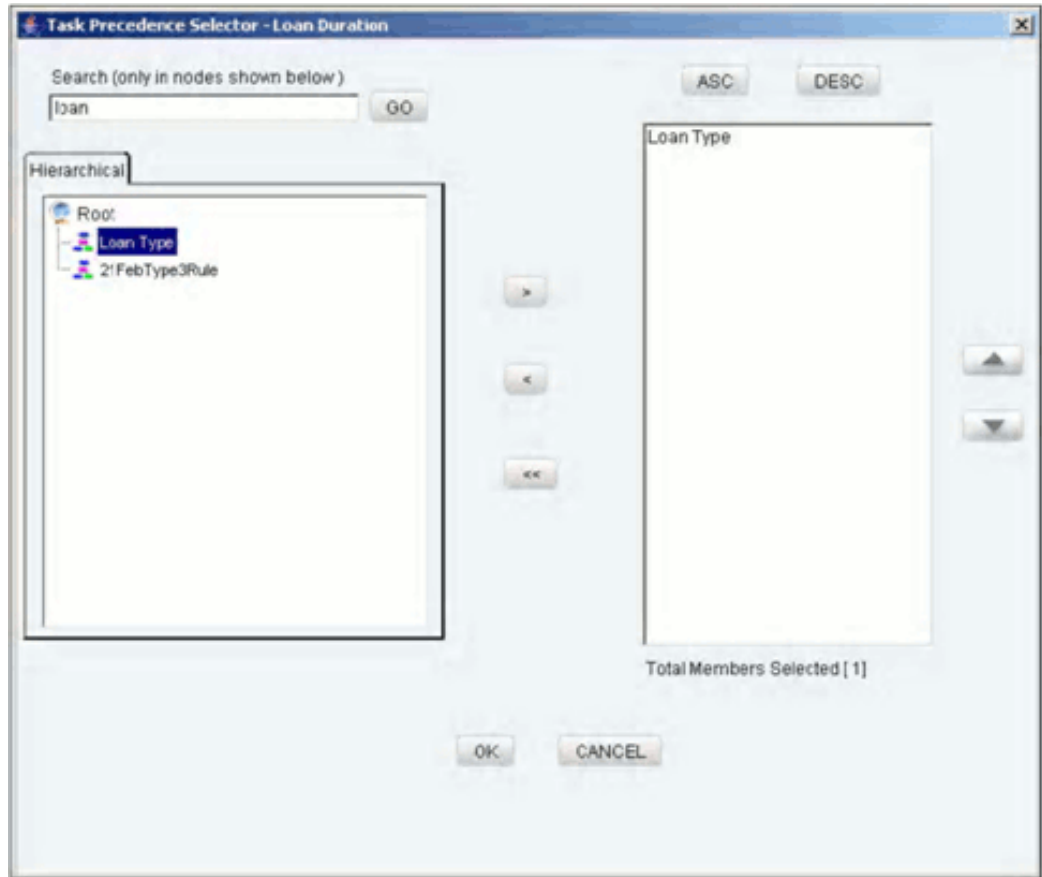
Note: You cannot open the Task Precedence selector for the corresponding root node.



The left pane of the Task Precedence Selector displays the tag Root. The members of this tag are the sibling members of the selected process hierarchy member.

Search

To search for a particular member, you may enter the keyword of the member you are looking for and click **GO**. If a member containing the keyword is located, the corresponding member is highlighted. Click **Search** again to be taken to the next member that contains the keyword used in the search field.



Member Selection

The right pane of the Process Selector displays the selected members of the process hierarchy. In order to move a process from the right pane to the left pane, first select the process in the left pane.

Example

KType3 Rule1

Click the



button to move the selected hierarchy member to the right pane. The number of members selected onto the right pane is displayed below the pane.

De-selecting Members

To deselect a process hierarchy member from the right pane, click the member in the right pane. Click the



button.

Click the



button to deselect all the members from the right pane.

Ordering Members in the right Pane

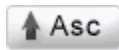
To set the order of display of the process hierarchy members selected onto the right pane, click a member and use the buttons



and



to move the member up or down in the order respectively. You may also click the buttons



or

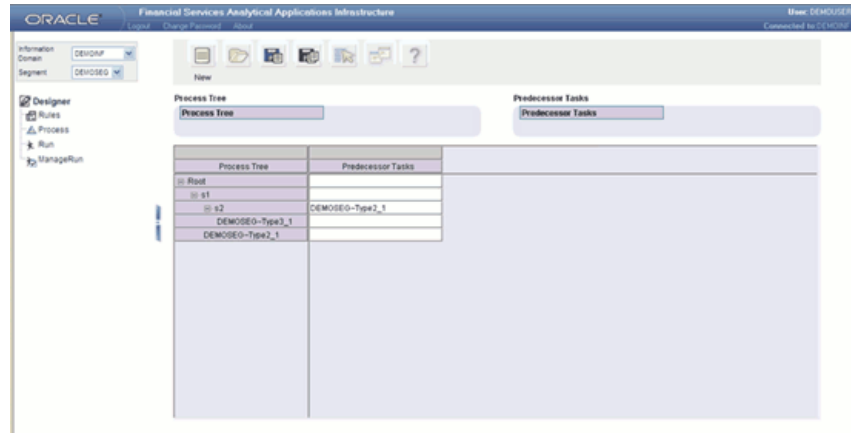


to set the list of members in the order of alphabetical ascension or dissension respectively.

Click **OK** to save the selection and close the Task Precedence Selector. Click **CANCEL** to discard the selection.

The selected members will be displayed in the specified order under the column Predecessor Tasks in the process grid against the identified row member.

Note: If there is more than one predecessor task specified for a process member / sub process, then those predecessor tasks will be executed in parallel.



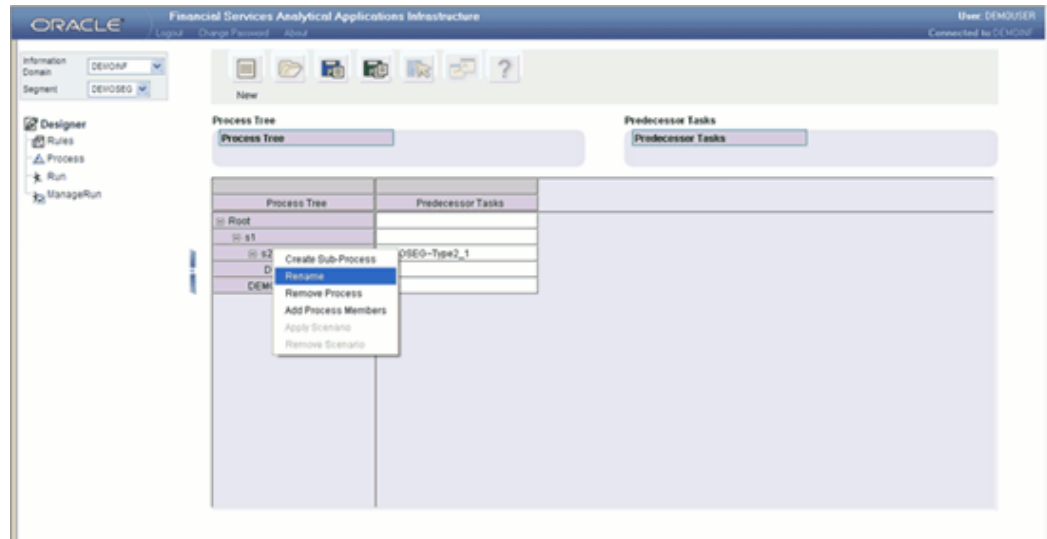
Example

In the earlier window the process members rule with BP and sample rule will precede the execution of process member Rule001. The process members rule with BP and sample rule will be executed in parallel.

Note: The column width in the grid can be resized during the display but the resized column width cannot be saved.

Renaming a Process

Select the member on the row axis of the process grid that you wish to rename. Right click on the member to display the menu. Select the **Rename** option.



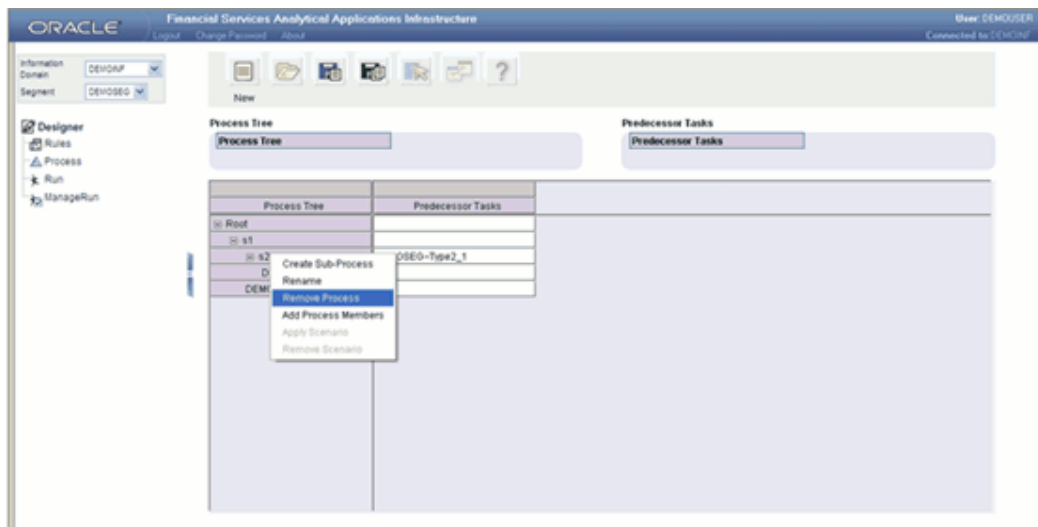
This will open the Edit Process window.



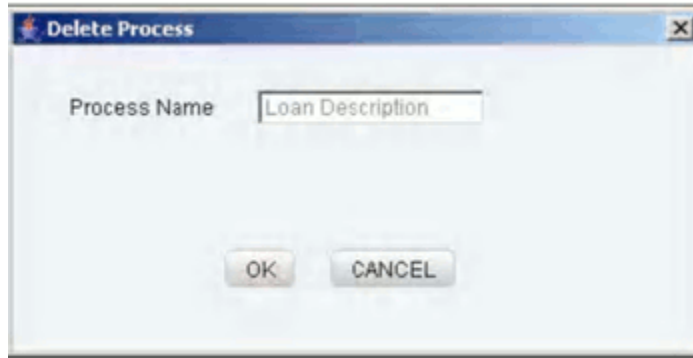
Enter the new name in the Process Name text box. Click **OK** to rename the member. Click **CANCEL** to exit from the renaming process.

Removing a Sub Process

Select the sub-process member on the row axis of the process grid that you wish to remove. Right click on the member to display the menu. Select the **Remove Process** option.

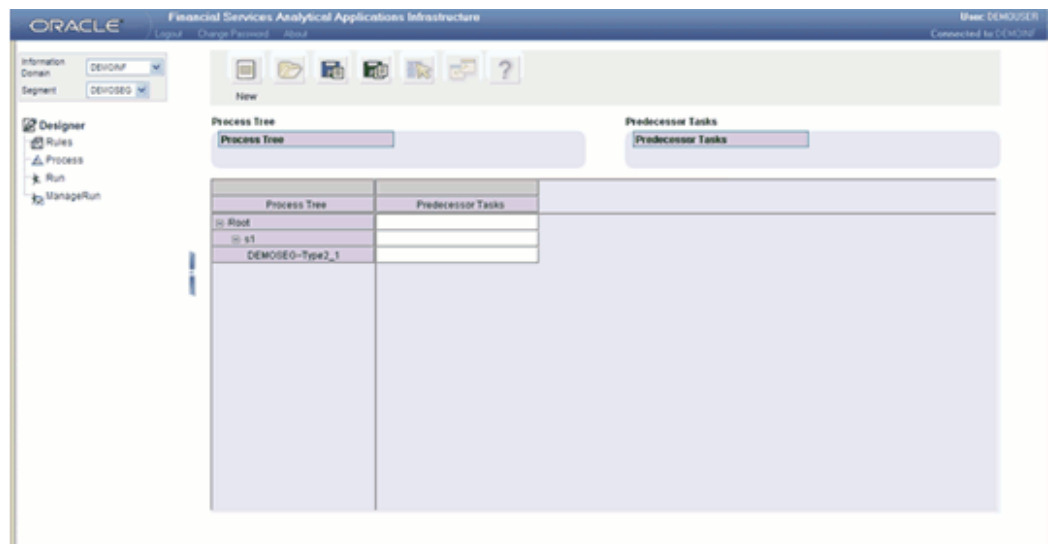


This will open the Delete Process window.

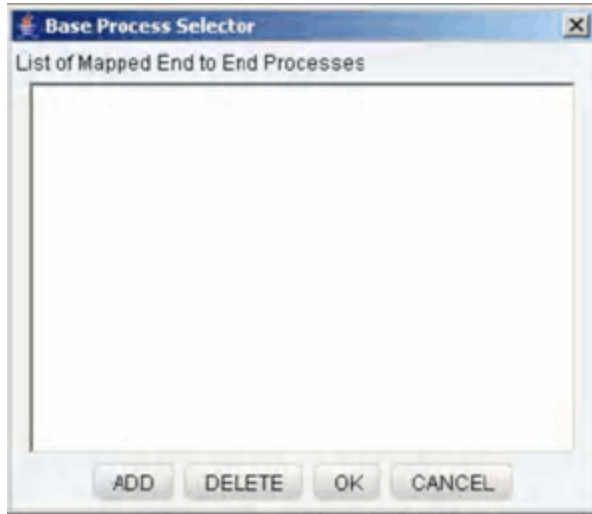


The Delete Process window will display the process name that has been selected for deletion. Click **OK** to confirm the deletion. Click **CANCEL** to exit the deletion process.

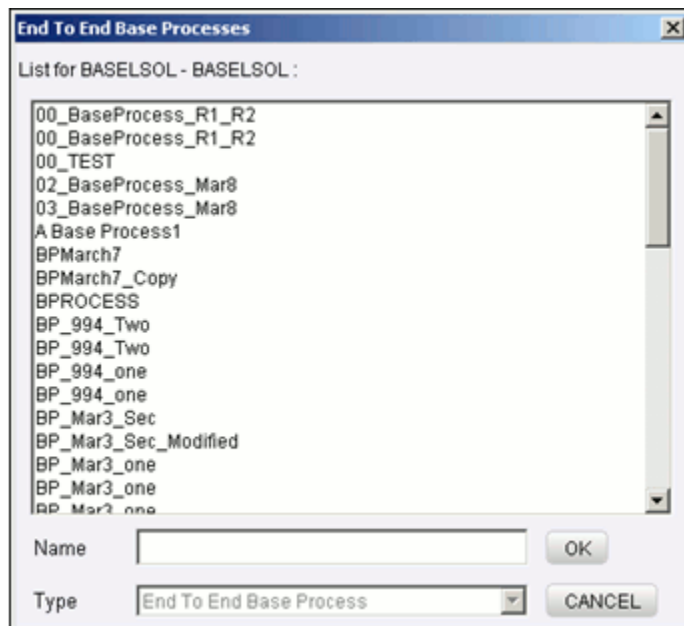
Mapping Base Processes



Click the **Map** button to map the base processes (from the available End to End base process) for the scenario process defined, which opens up the Base Process Selector.



Click **ADD** to select the end-to-end process from the list of available Mapped End to End Processes. This opens up the End to End Base Process selector.



The list of all associated end-to-end base process definitions for the selected information domain will be displayed in the Open Dialog.

Select the end-to-end base process definition from the list of available end-to-end base processes presented in the window. The name of the selected end-to-end base process definition appears in the Name textbox.

Click **OK** to add the selected end-to-end base process to the Base Process Selector or click **CANCEL** to exit the window.



Click **OK** to map the selected base process with the scenario process defined.

Click **CANCEL** to discard the operation. Click **DELETE** to delete the base process listed in the Base Process Selector window. Click **Save** to save the Scenario Process definition.

Note: Multiple base processes can be mapped to the Scenario Process definition.

Accessing Run

How the rule framework must be used to define complex data transformation processes, is described in the **Accessing Rule** section. In the **Accessing Process** section, how the process framework must be used to logically group a collection of rules that pertain to a functional process or simulate a business scenario, is described.

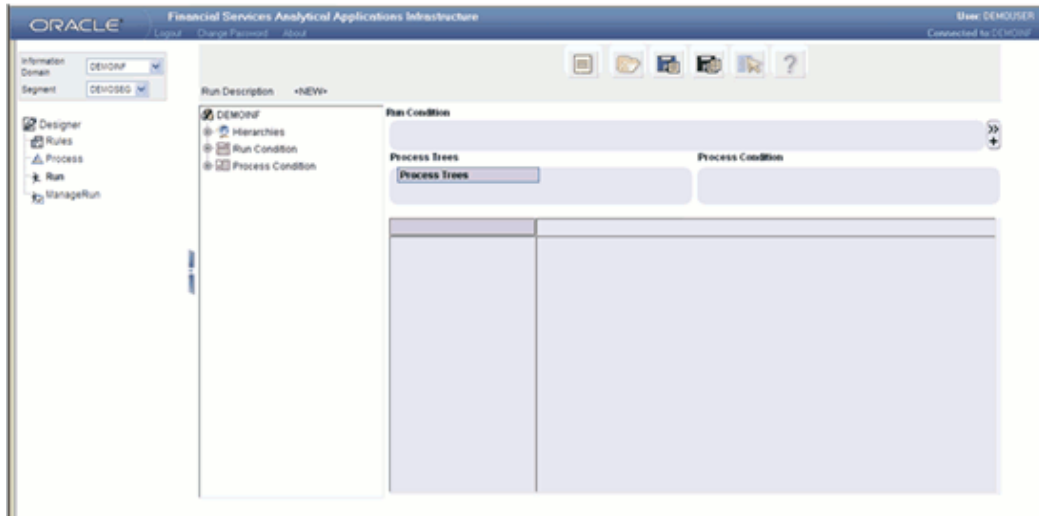
In this section, how the processes are combined together and defined as **Run** is described. From a business perspective, different **Runs** of the same set of processes may be required to satisfy different approaches to the underlying data.

The Run Framework enables the various Rules defined in the Rules Framework to be combined together (as processes) and executed as different **Baseline Runs** for different underlying approaches. Different approaches are achieved through process definitions. Further, run level conditions or process level conditions can be specified while defining a Run.

In addition to the baseline runs, simulation runs can be executed through the usage of the different Simulation Processes. Such simulation runs are used to compare the resultant performance / calculations with respect to the baseline runs. This comparison will provide useful insights on the effect of anticipated changes to the business.

Launching the Run Designer

Click **Designer** in the Rules Framework main window to display the Designer window. The Information Domain and the Segment will be displayed. Select the Information Domain for which you require to create a rule. Click the Run option in the left frame of the Designer window. On selecting the Run option, the menu frame is hidden and the right frame is displayed in full window.



Understanding the Run Menu



The following list comprises the menu options provided just earlier the data area in Run Definition in the Designer window.

- New
- Open
- Save
- Save As
- Properties
- Help

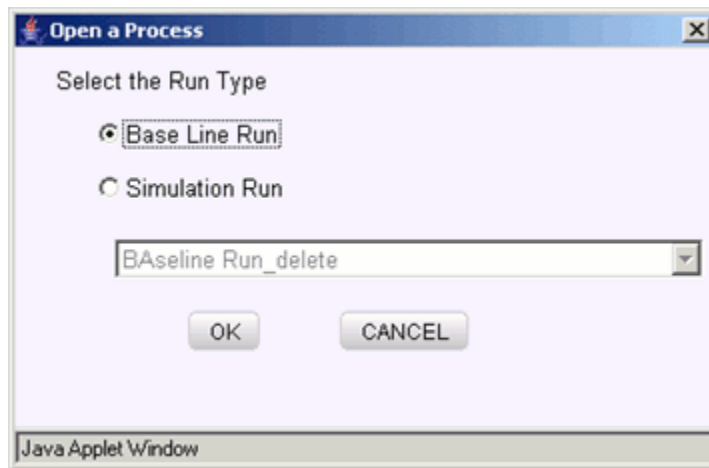
New

With the **New** option you will be able to define a new process definition. Click **New** to add a new run definition. The run definition may be a baseline definition or a variation of the baseline definition termed as simulation run. Details of the Base Line Run and Simulation Run definition are provided under section Defining a Run.

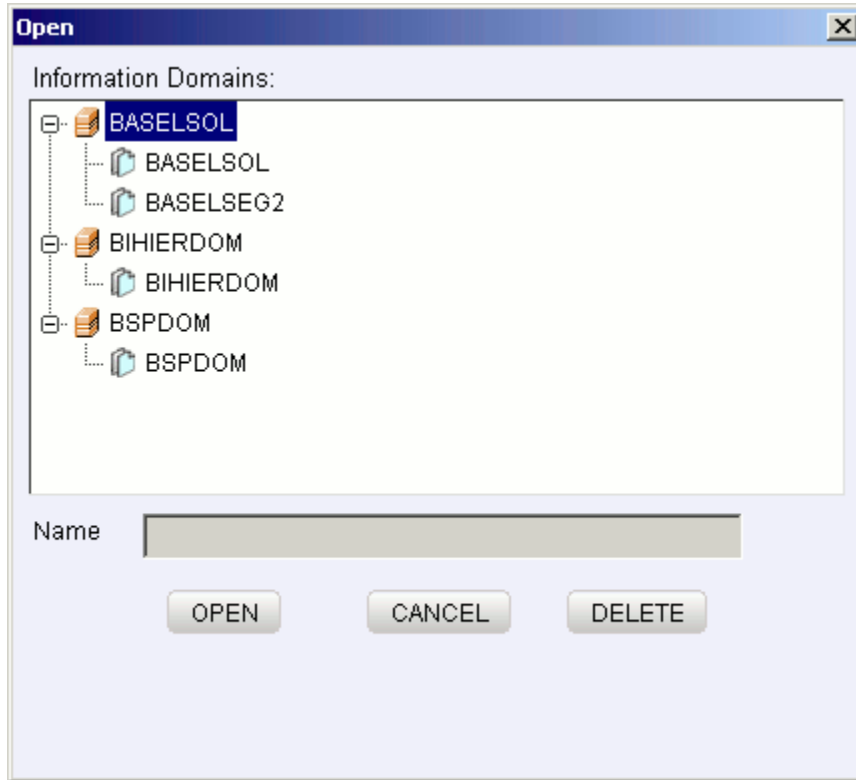
If you are working on a new definition and subsequently move to the **New/Open** menu option without saving the new definition, the system will display an alert that requests for your confirmation.

Open

Click **Open** to open an existing run. This opens up the Open a Process pop up which has the options to select the run type.



Select the Run type.



The list of Information Domains mapped to the user appears in the pop-up window. Click the Information Domain to view the list of available segments mapped to the selected information domain. Double-click to select the Segment within the pop-up menu to view the list of associated baseline run definitions or Double-click the segment to see the list of baseline run definitions.



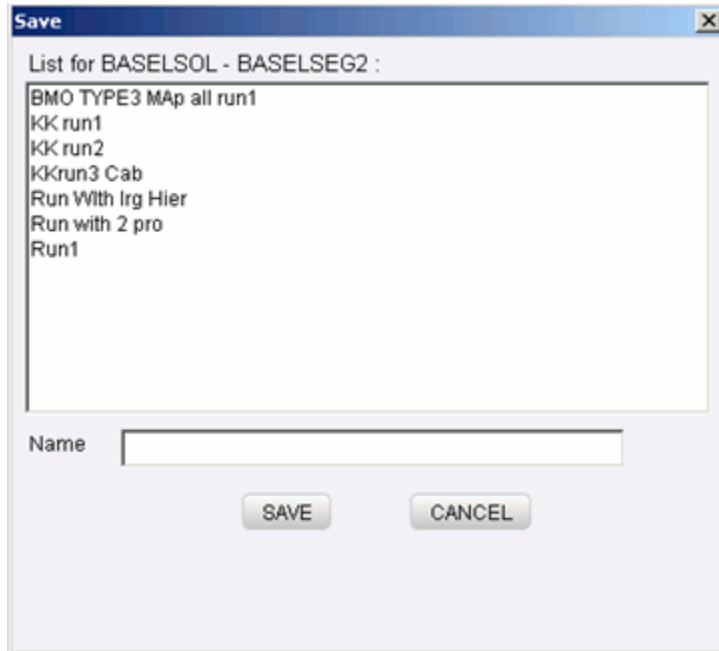
Select the baseline runs/simulation runs from the list of runs presented in the window. The name of the selected run appears in the Name textbox.

Click **Open** to open the baseline run/simulation run or click **Cancel** to exit the window and return to the main window.

Click **Delete** to delete the selected baseline run/simulation run. Once you click the delete option, a message will appear requesting the user to confirm the delete operation. Click **Yes** to clear the confirmatory message and delete the selected baseline run/simulation run. The selected run definition will be deleted from the selected information domain and segment. Click **No** to cancel the delete operation.

Save and Save As

Once you have created a new run or modified an existing baseline run/simulation run, click **Save**. A save window will be displayed. This window displays the existing baseline run/simulation run available under the selected Information Domain and Segment. Enter the name for the new baseline run/simulation run in the Name textbox provided.



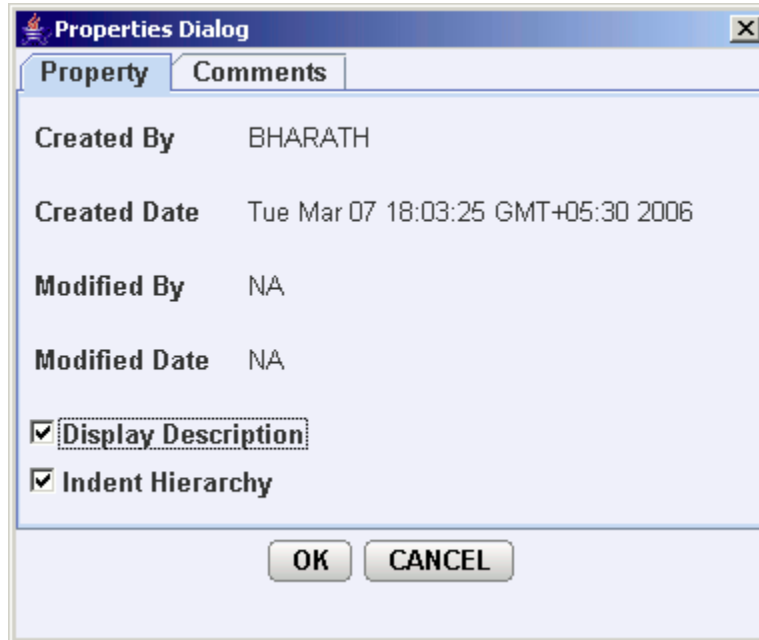
Click **Save**. A confirmation message will be displayed if the operation is successful.

If a baseline run/simulation run already exists with the same name as entered in the text box, a message is displayed that cautions the user about the duplicate run. Click **Yes** to overwrite the existing run definition with the one newly created. Click **No** to cancel the overwrite option and re-enter a new run name in the Name textbox.

If you are working on an existing baseline run / simulation run definition and wish to save it under a new Name, click the **Save As** option. On clicking Save As, the Save... window is displayed. Enter a name for the run in the name field. Click **Save** to save as a new definition. Click **Cancel** to discard changes.

Properties

Click the **Properties** option. A Run **Properties** window is displayed: The window displays the name of the user who has created the run definition along with the date and time of creation. It also displays the name of the user who has last modified the run definition along with the date and time of the last modification.



Note: The Modified date details will be displayed only if any modifications have been made to the run definition. If modifications are not made to the component, NA will be displayed against it.

Select the **Display Description** option if you require the description of the hierarchies participating in the run to be displayed in the work area grid. When you select the Display Description option and click **OK**, the window is refreshed to display the short description of the hierarchies that are selected / will be selected.

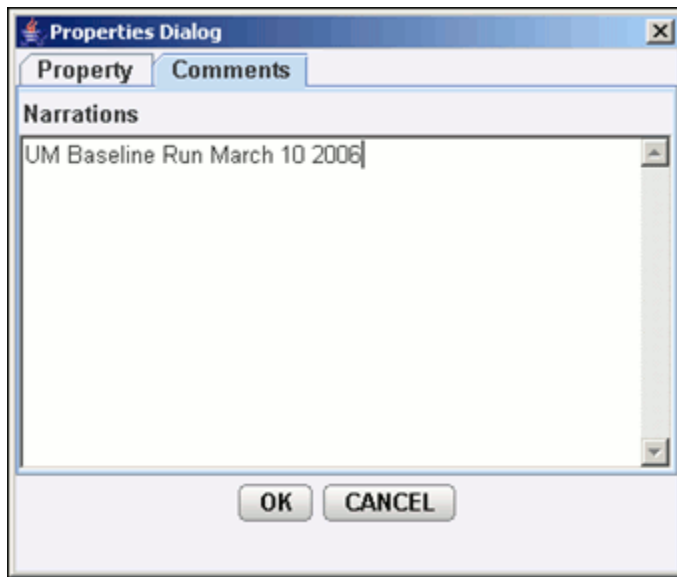
Note: If the Display Description option is not checked, a system-generated code is displayed for the hierarchies participating in the rule definition. This system-generated code is not a part of metadata and will not be accessible through the Metadata Browser.

Select the **Indent Hierarchy** option, if you want to view the hierarchies participating in the run definition in a tree structure. Selecting this property will ensure that when parent members of a hierarchy are expanded the child members will be indented inwards thus forming a tree. Leaving this option de-selected will ensure that when parent members are expanded, the child members will be displayed without an indent from the parent member.

Note: The Indent Hierarchy and Display Description property is only for purposes of display and will not be saved in the definition.

Click the **Comments tab** provided in the Properties Dialog window to enter the

narration/comments about the created run definition.



Click **OK** to save the run definition with the comments given. Click **CANCEL** to discard the operation.

Help

The **Help** option provides online help for users.

Run Definition

A Run is a collection of processes that are required to be executed on the database. The various components of a run definition are:

Process - The user may select one or many End-to-End processes that need to be executed as part of the Run.

Run Condition - When multiple processes are selected, there is likelihood that the processes may contain rules / T2Ts whose target entities are across multiple datasets. When the selected processes contain Rules, the target entities (hierarchies) which are common across the datasets are made available for defining Run Conditions. When the selected processes contain T2Ts, the hierarchies that are based on the underlying destination tables which are common across the datasets are made available for defining the Run Condition. A Run Condition is defined as a filter on the available hierarchies.

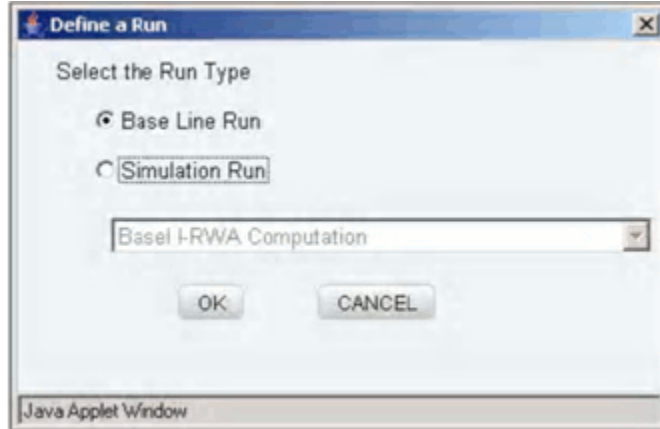
Process Condition - A further level of filter can be applied at the process level. This is achieved through a mapping process.

Types of Runs – Two types of runs can be defined namely Baseline Runs and Simulation Runs. Baseline Runs are those base End-to-End processes that are executed. Simulation Runs are those scenario End-to-End processes that are executed. Simulation Runs are compared with the Baseline Runs and therefore the Simulation Processes used

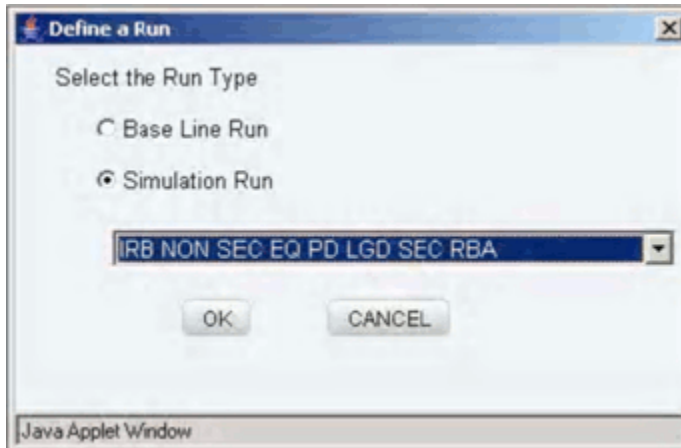
during the execution of a simulation run are associated with the base process.

Defining a New Run

Click **New** to create a new Run Definition. This opens a Define a Run pop-up window. Select the **Base Line Run** option to define a Base Line run.



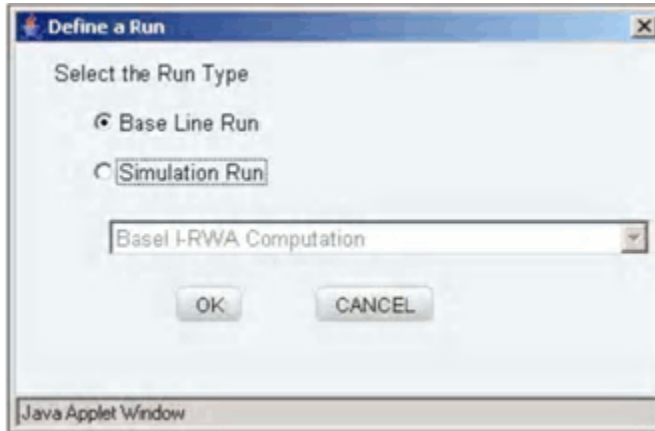
Select the **Simulation Run** option and select the Base line Run from the list which has to be associated to the simulation run.



Click **OK** to proceed or click **CANCEL** to discard the selection.

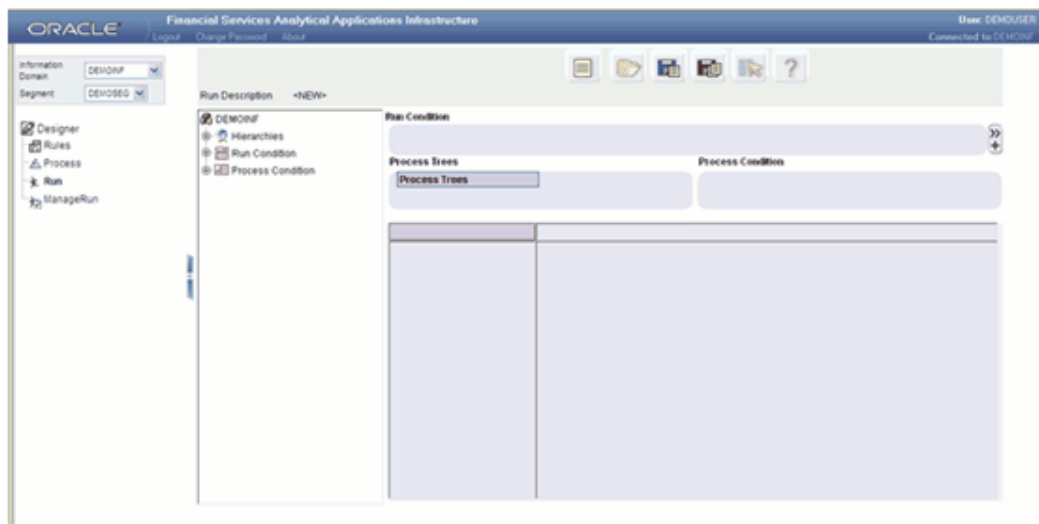
Defining a Baseline Run

Clicking **New** opens up the Define a Run window. Select the **Base Line Run** option to define a Base Line run.



The Run Description field will display <NEW>

Note: If you are modifying an existing run, the name of the run that is being modified will be displayed in this field.

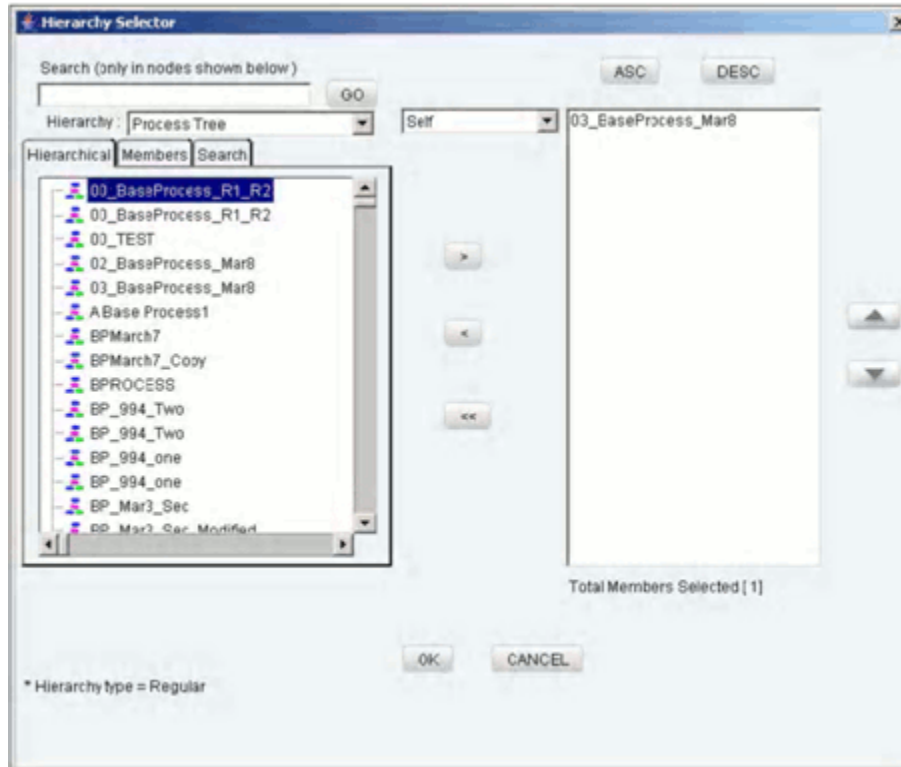


Defining the Run

Right-click on Process Tree.

Note:

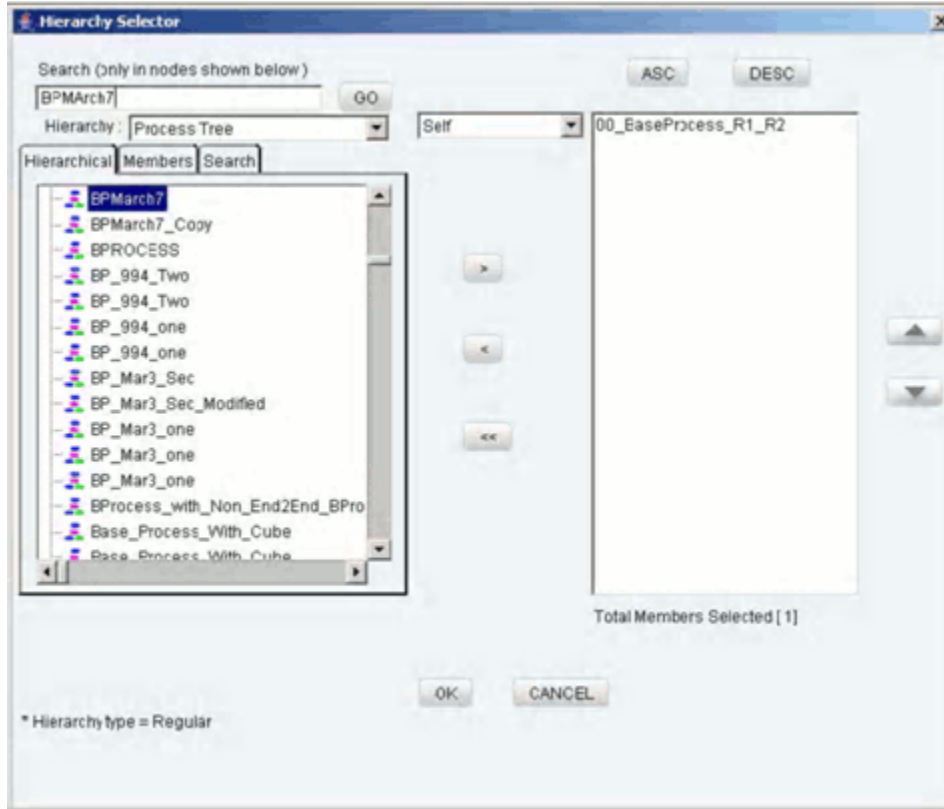
- By default, the first process appearing in the Process Tree will be displayed in the row axis of the run grid.
- If you have not yet defined a process, you will not be able to define a run.



This opens a **Process Selector** window. The left pane of the Process Selector displays the tag Process Trees. The members of this tag will display all the End-to-End processes that have been defined.

Search

To search for a particular member, you may enter the keyword of the member you are looking for and click **GO**. If a member containing the keyword is located, the corresponding member is highlighted. Click **Search** again to be taken to the next member that contains the keyword used in the search field.



Member Selection

The right pane of the Process Selector displays the end-to-end processes under the Process Tree tag. In order to move a process from the right pane to the left pane, first select the process in the left pane.

Example

sqaprocess

Click the



button to move the selected hierarchy member to the right pane. The number of members selected onto the right pane is displayed below the pane.

De-selecting Members

To deselect a process hierarchy member from the right pane, click the member in the right pane. Click the



button.

Click the



button to deselect all the members from the right pane.

Ordering Members in the right Pane

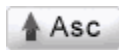
To set the order of display of the process hierarchy members selected onto the right pane, click a member and use the buttons



and



to move the member up or down in the order respectively. You may also click the buttons



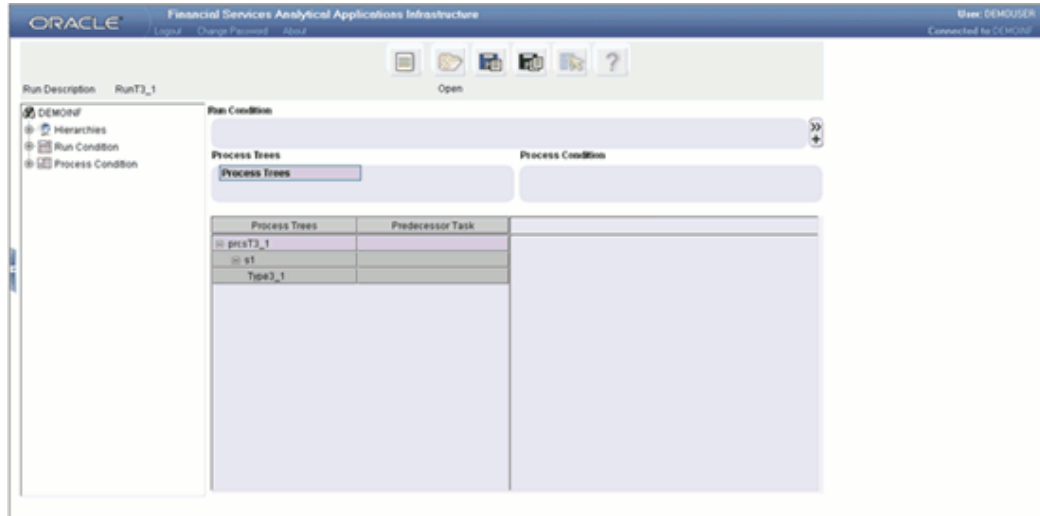
or



to set the list of members in the order of alphabetical ascension or dissension respectively.

Click **OK** to save the selection and close the Process Selector. Click **CANCEL** to discard the selection.

The selected process members will be displayed in the specified order in the row axis of the run grid.

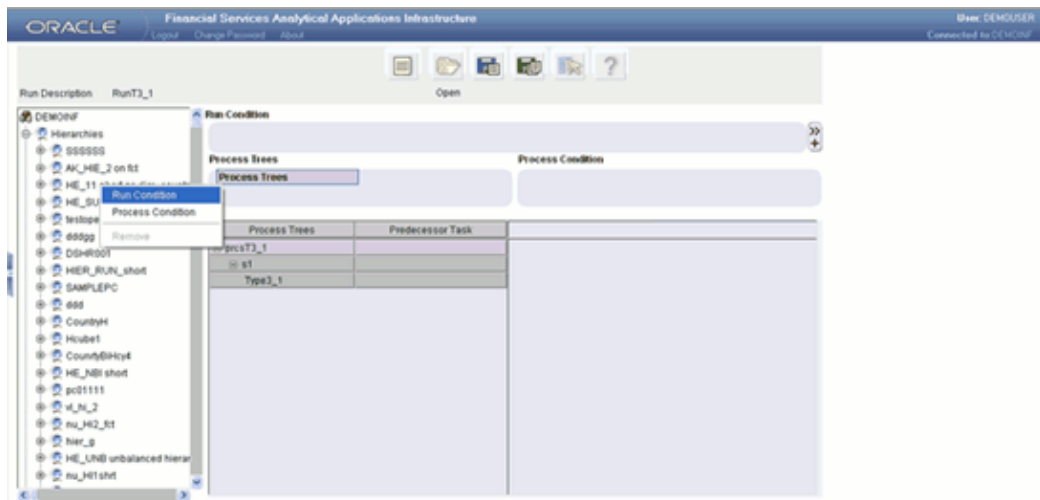


Specifying the Run Condition

From the left pane, click the



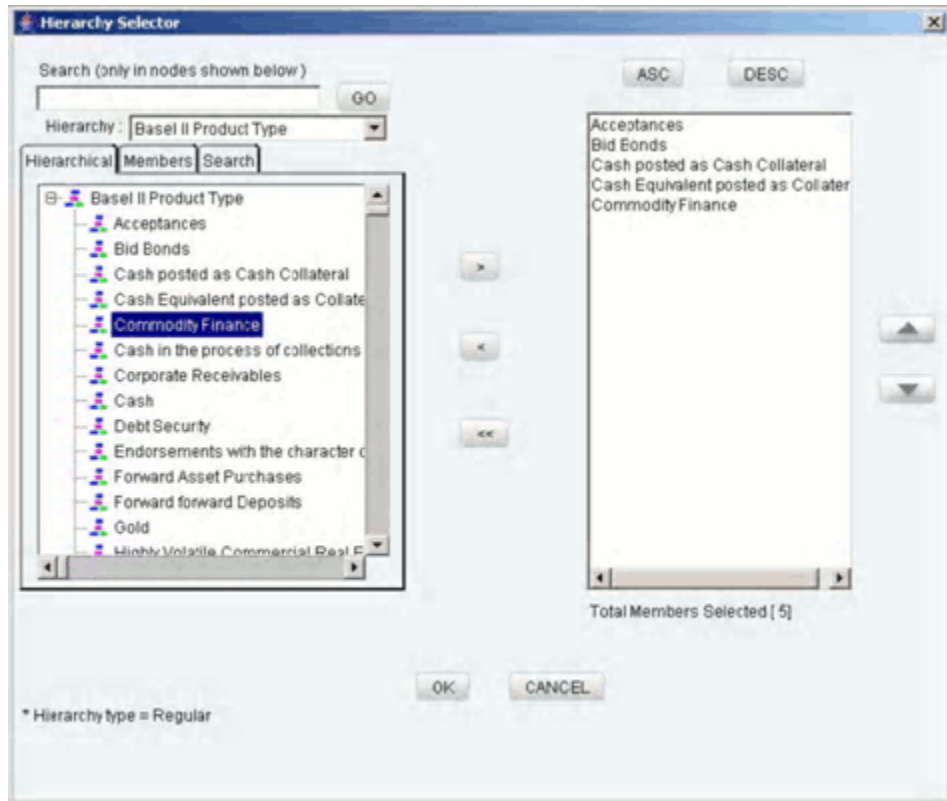
button to expand the Hierarchies tag. The expansion will display only those hierarchies that are based on tables that are part of the selected dataset. Select a hierarchy and right-click the mouse button. Select Run Condition if you want to add the hierarchy as a run condition.



Right Click the **Run Condition**. This opens a Hierarchy Selector window.

Note:

- Multiple Hierarchies can be mapped to the Run condition.
- Once the hierarchy is mapped to the Run Condition then it will not be displayed in the list of Hierarchies in the left Pane.



The left pane of the Hierarchy Selector displays the hierarchies.

In the bottom left corner of the Hierarchy Selector, information about the hierarchy is displayed.

Member Selection

The right pane of the Hierarchy Selector displays the selected members of the hierarchy. In order to move a process from the right pane to the left pane, first select the process in the left pane.

Example

Appl Type Fresh

The hierarchy name will be displayed in the **Hierarchy** list.

Click the



button to move the selected hierarchy member to the right pane.

To aid the selection process, certain standard modes are offered through a list. The available modes are Self, Self & Descendent, Self & Children, Children Only.

- The Self mode is the default mode displayed. In this mode, only the specific member selected in the left pane will be selected onto the right pane.
- Choose the Self and Descendent mode when you want a specific member and all its descendants right up to the end of its branch to be selected onto the right pane.
- Choose the Self and Children mode when you want a specific member and only its immediate children to be selected onto the right pane.
- Choose the Children Only mode when you want only the immediate children of a specific member to be selected onto the right pane mode.

The number of members selected onto the right pane is displayed below the pane.

De-selecting Members

To deselect a hierarchy member from the right pane, click the member in the right pane. Click the



button.

Click the



button to deselect all the members from the right pane.

Ordering Members in the right Pane

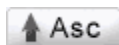
To set the order of display of the process hierarchy members selected onto the right pane, click a member and use the buttons



and



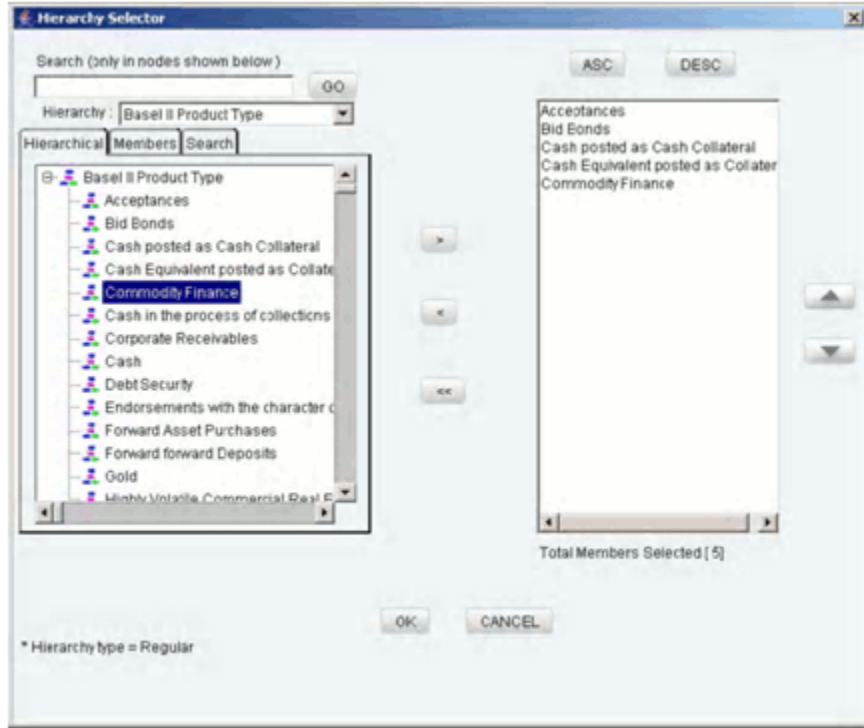
to move the member up or down in the order respectively. You may also click the buttons



or

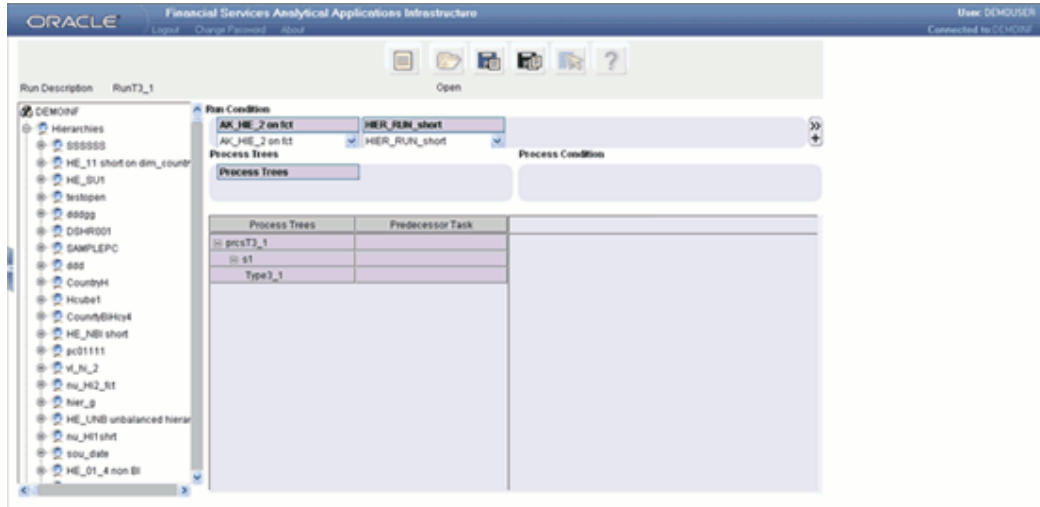


to set the list of members in the order of alphabetical ascension or dissension respectively.



Click **OK** to save the selection and close the Hierarchy Selector. Click **CANCEL** to discard the selection.

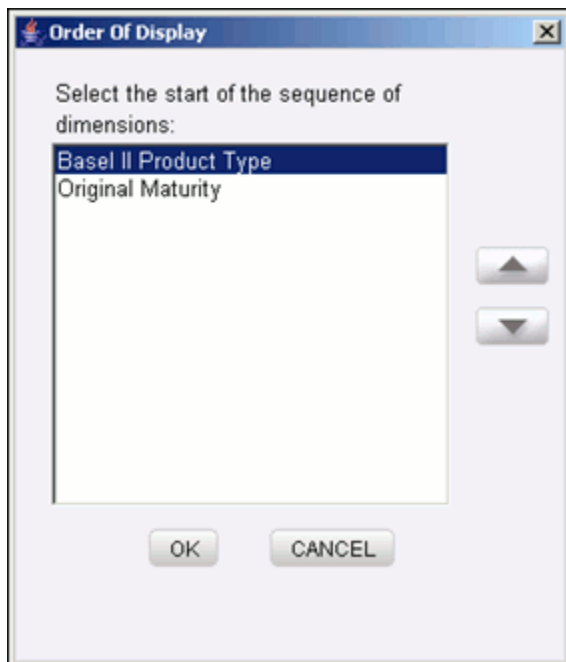
The selected hierarchy members will be displayed in the specified order in the Run Condition pane.



Click the



button in the right extreme end of the Run Condition section to open the Order of Display pop-up. You can specify the sequence or the order of display of the hierarchies in the Run Condition section.



To set the order sequence, select the hierarchy and click



to move it up.

and

Click



to move the hierarchy down in the order.

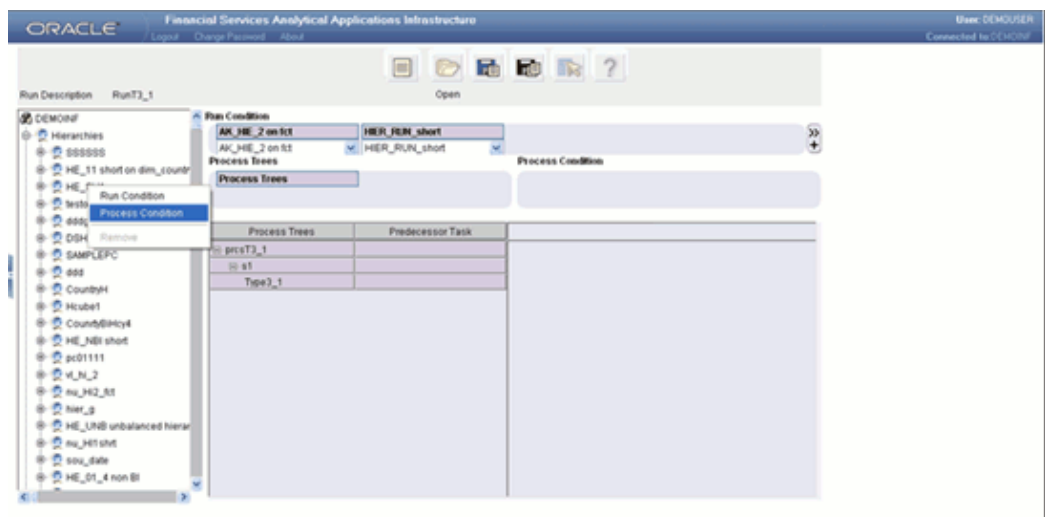
Click **OK** to save the sequence order. Click **CANCEL** to discard the sequence order and exit the window.

Specifying a Process Condition

In the left pane, click the

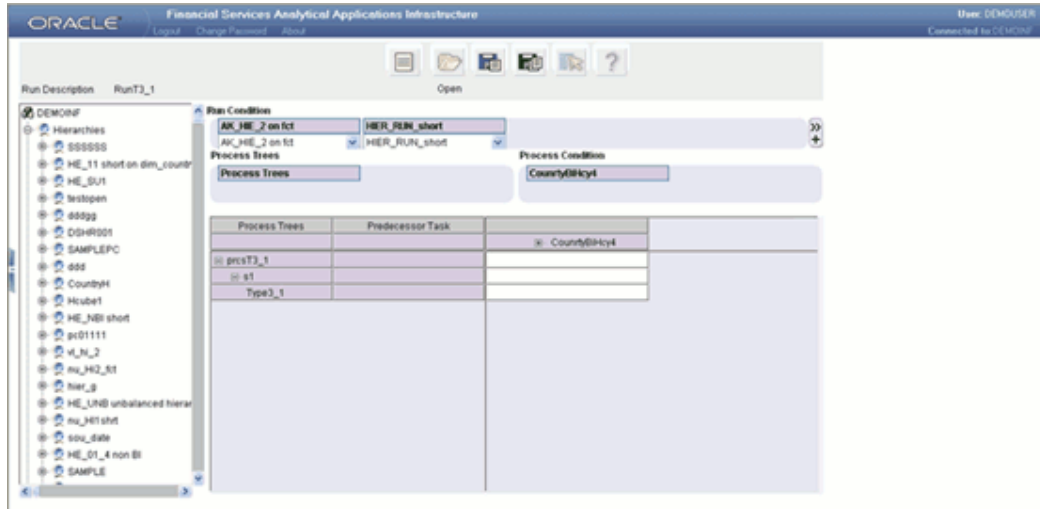


button to expand the Hierarchies tag. The expansion will display only those hierarchies that are based on tables that are part of the selected dataset. Select a hierarchy and right-click the mouse button.

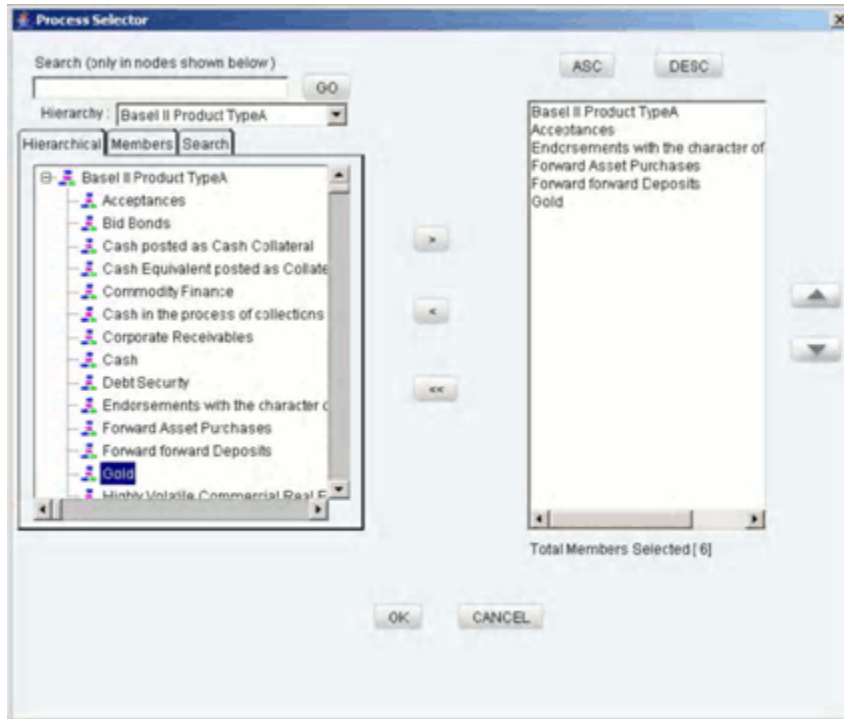


Select **Process Condition** if you want to add the hierarchy as a process condition.

- Only one hierarchy can be mapped to the Process condition.
- Once the hierarchy is mapped to the Process Condition then it will not be displayed in the list of Hierarchies in the left Pane.



Right Click the Process Condition. This opens a Process Selector window.



Member Selection

The right pane of the Process Selector displays hierarchies. In order to move a process from the right pane to the left pane, first select the process in the left pane.

Example

sqaprocess

Click the



button to move the selected member to the right pane. The number of members selected onto the right pane is displayed below the pane.

De-selecting Members

To deselect a member from the right pane, click the member in the right pane. Click the



button.

Click the



button to deselect all the members from the right pane.

Ordering Members in the right Pane

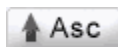
To set the order of display of the members selected onto the right pane, click a member and use the buttons



and



to move the member up or down in the order respectively. You may also click the buttons

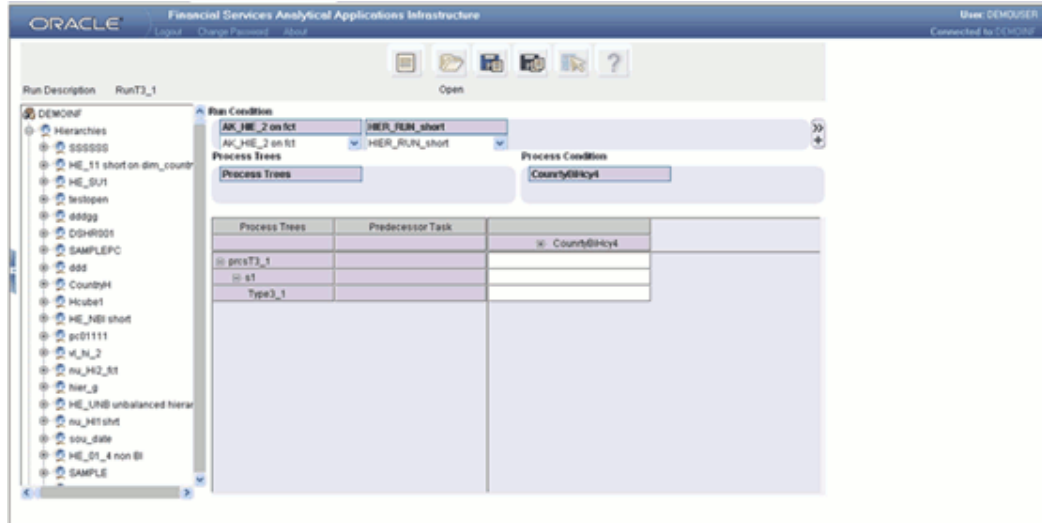


or



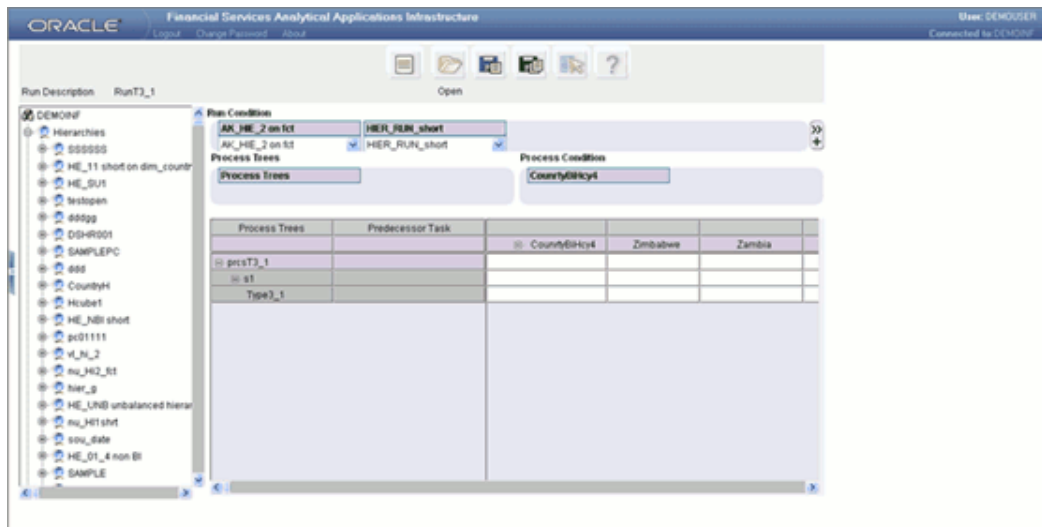
to set the list of members in the order of alphabetical ascension or dissension respectively.

Click **OK** to save the selection and close the Process Selector. Click **CANCEL** to discard the selection.

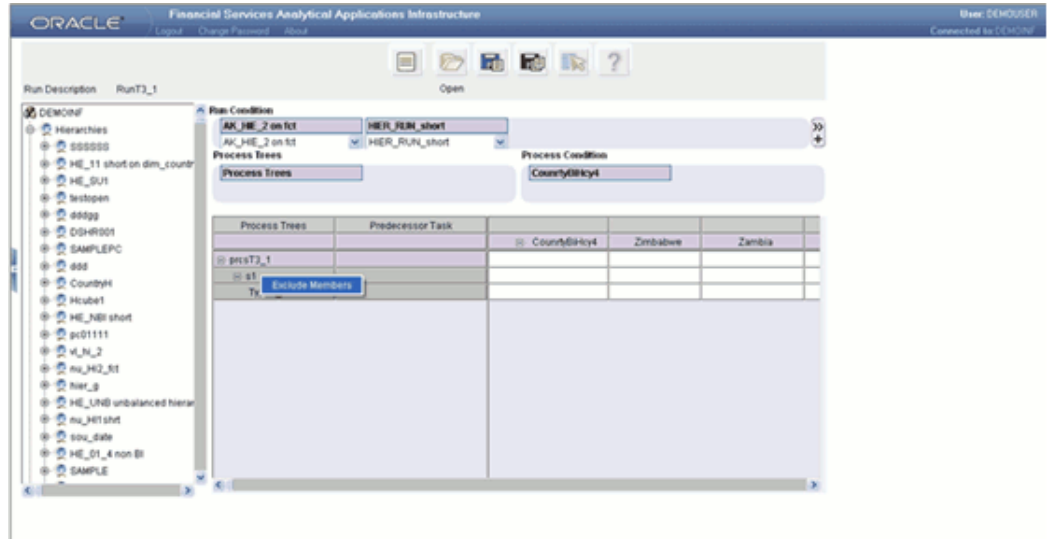


If the user selects more than one hierarchy to map it to the Process condition, the system will display an alert message saying "Multiple hierarchies cannot be added to this container".

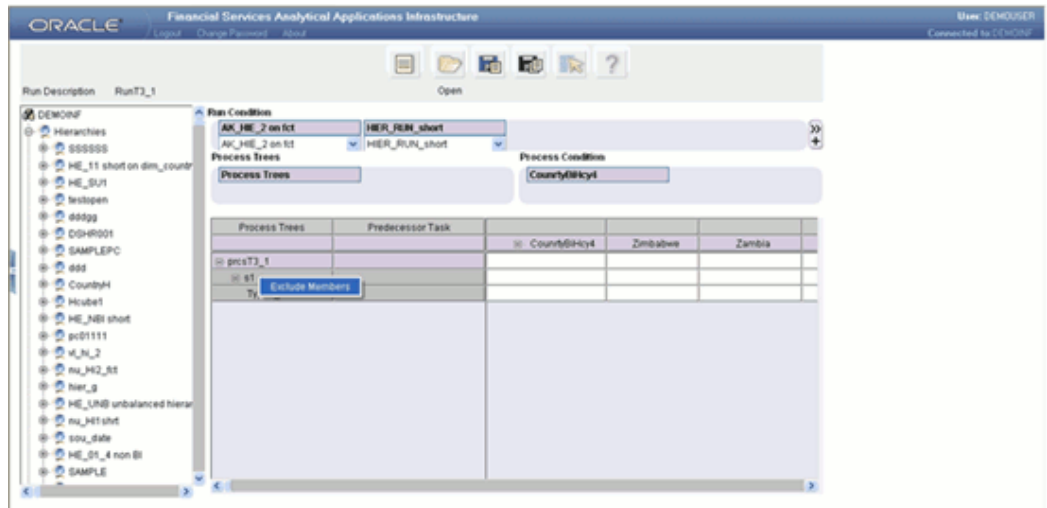
The selected members will be displayed in the specified order in the Process Condition.



Right-click the mouse on the grid in the Process Tree column, which displays the option to exclude selected members from the execution.



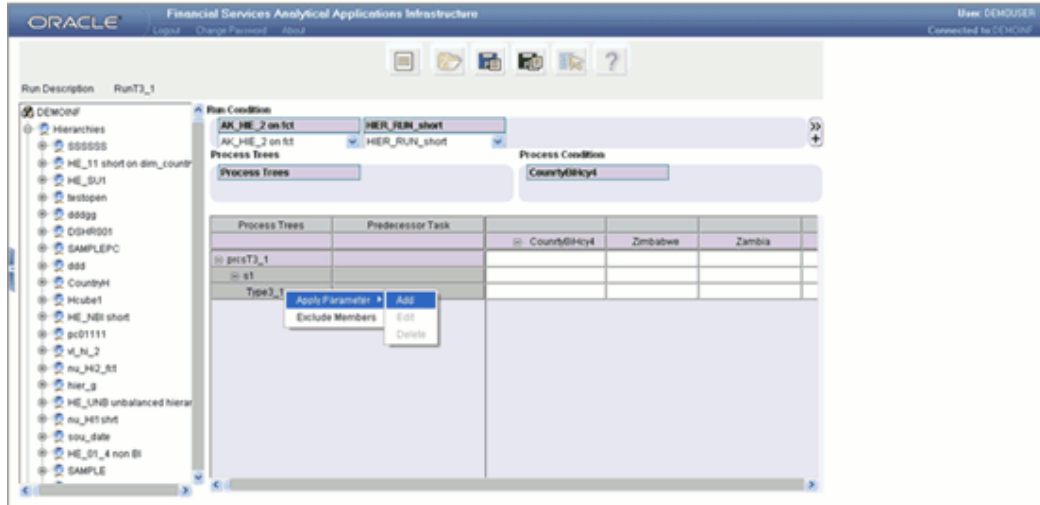
Click **Exclude Members** option to exclude the selected member from the execution, while executing the specific run condition as a Batch Group in the Batch Group Execution window.



The excluded member name will be displayed in red color in the grid.

If the Baseline definition is having type 3 rule as a part of the Process Tree, there is an option to specify run time values to the specific rule.

Right-click the mouse on the type 3 rule in the grid. Select the Apply Parameter option and select Add to assign values to the selected rule definition.



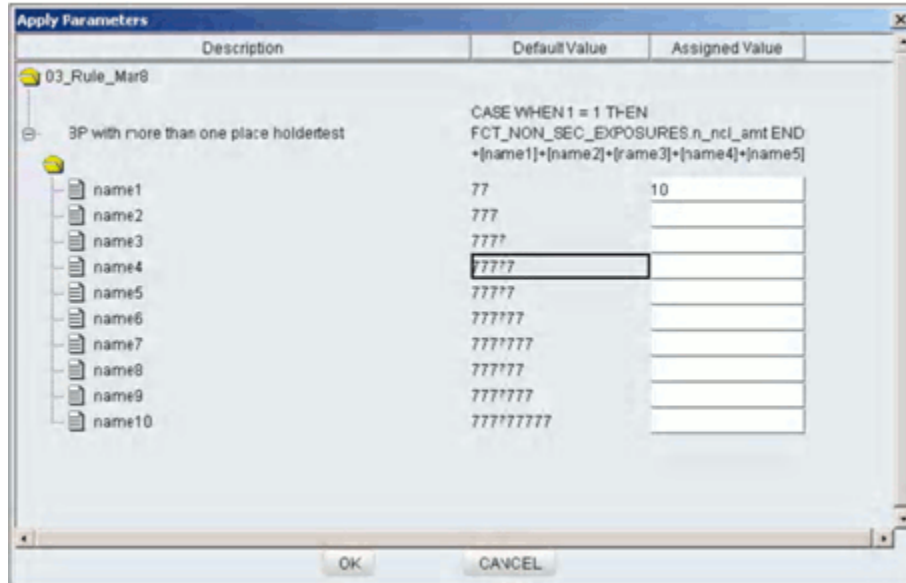
This opens up the **Apply Parameters** window.



Click the

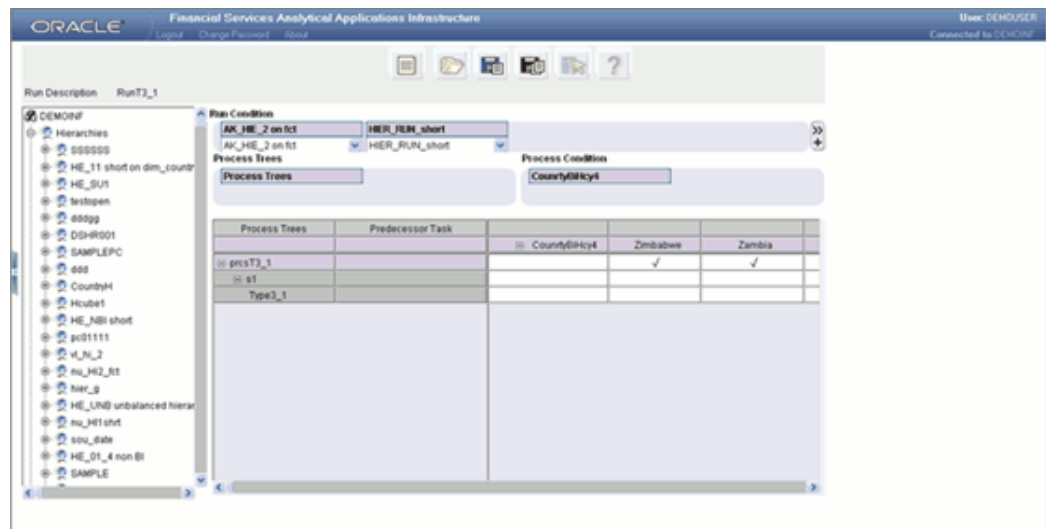


button to expand the node. The expansion will display all the parameters defined for the business processor in the selected type 3 rule definition.



Enter the value in the Assigned Value box provided against each parameter name. Click **OK** to save the assigned value.

Click **CANCEL** to discard the operation.



Once the assigned values are defined for the business processor, the **ADD** option will be disabled and the **Edit** and **Delete** options will be in the enabled state.

Click **Edit** to re-define the assigned values for the placeholders. Clicking **Delete** will delete all the assigned values defined for the placeholder for the selected business processor, which enables the user to give new assigned values for the placeholders.

Note: All the process members defined as a part of the process

condition will be available as tasks along with the parameters defined.

Search

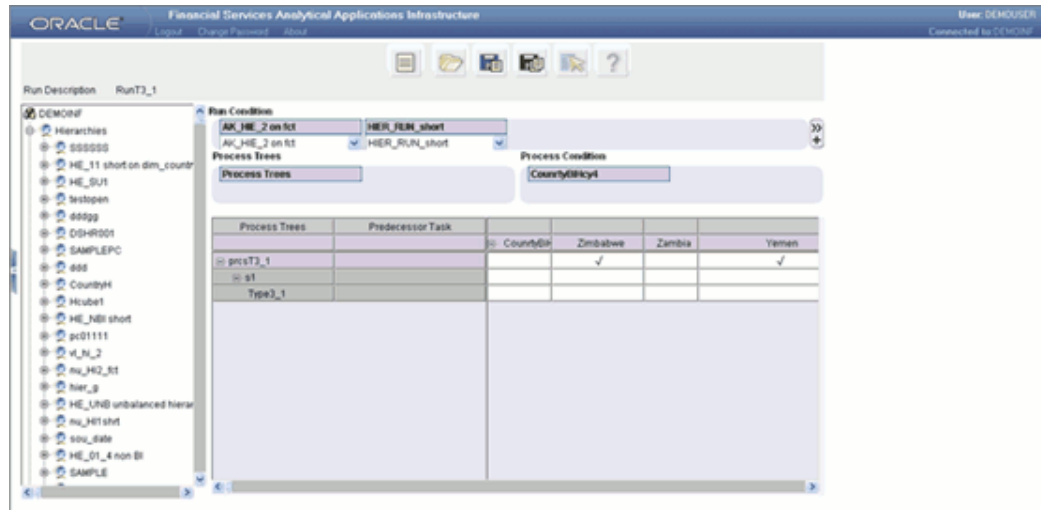
To search for a particular member, you may enter the keyword of the hierarchy member you are looking for and click **GO**. If a member containing the keyword is located, the corresponding member is highlighted. Click Search again to be taken to the next member that contains the keyword used in the search field.

The selected hierarchy members will be displayed in the specified order in the column axis of the run grid.

Mapping

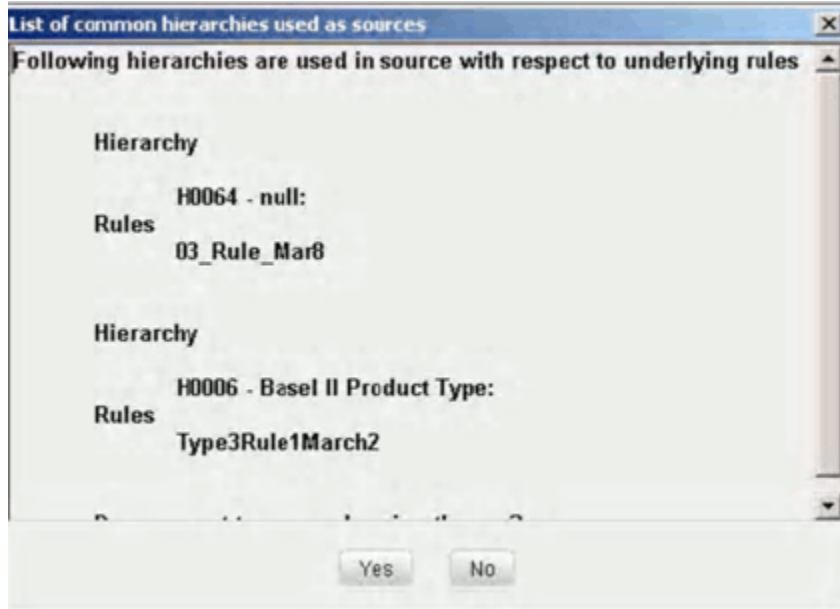
A Mapping between a row member and column member in the run grid defines the condition for the process appearing in the corresponding column. Only the leaf nodes are allowed to be mapped.

Note: A row member can be mapped to multiple column members (process trees) in a mapping.

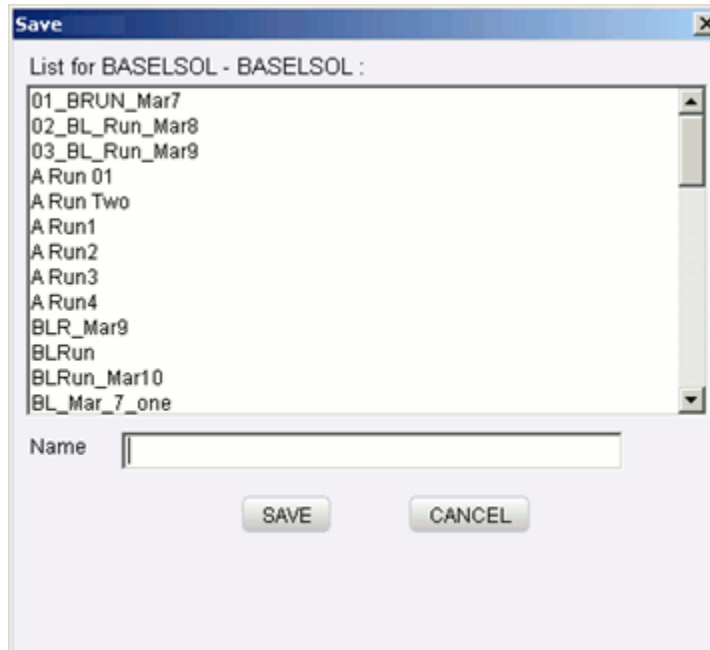


Click **Save** to save the run definition.

A message box appears, displaying the hierarchies that are used in the source.



Click **Yes** to save the run definition and proceed. This opens up the Save Dialog.

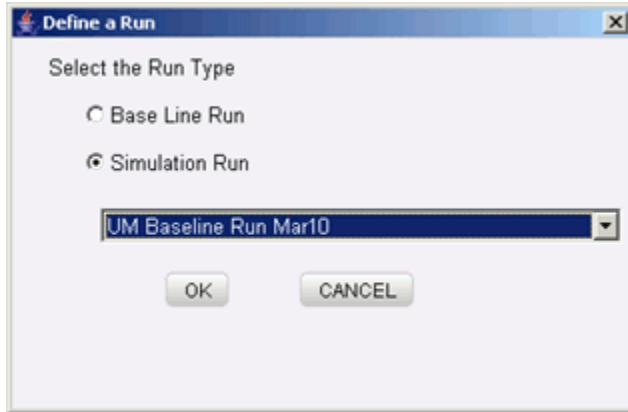


This window displays the existing run definitions available under the selected Information Domain. Enter the name for the new rule in the Name textbox provided. Click **Yes** to save the run definition.

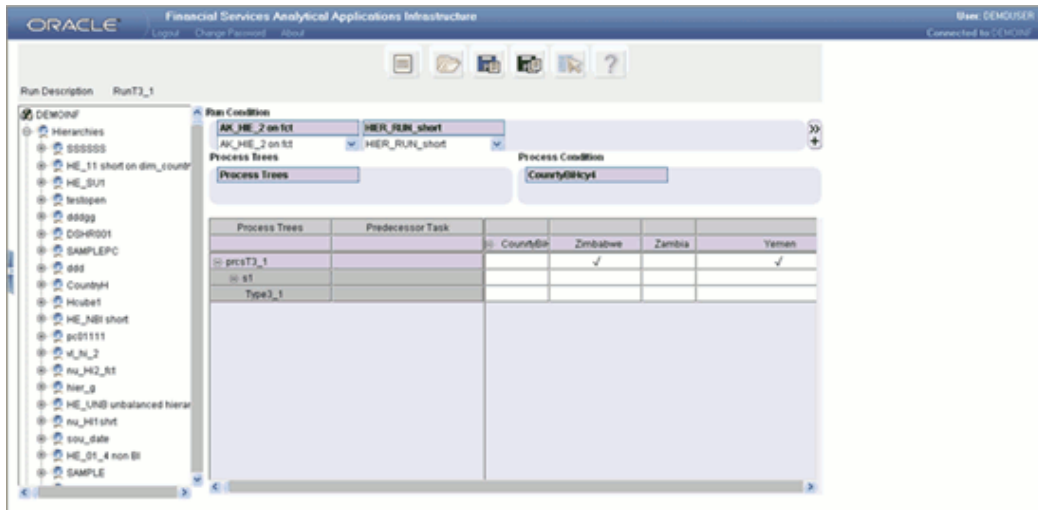
Click **No** to cancel the save option.

Defining a Simulation Run

Select the **Simulation Run** option and select the **Baseline run** from the list which has to be associated to the simulation run.



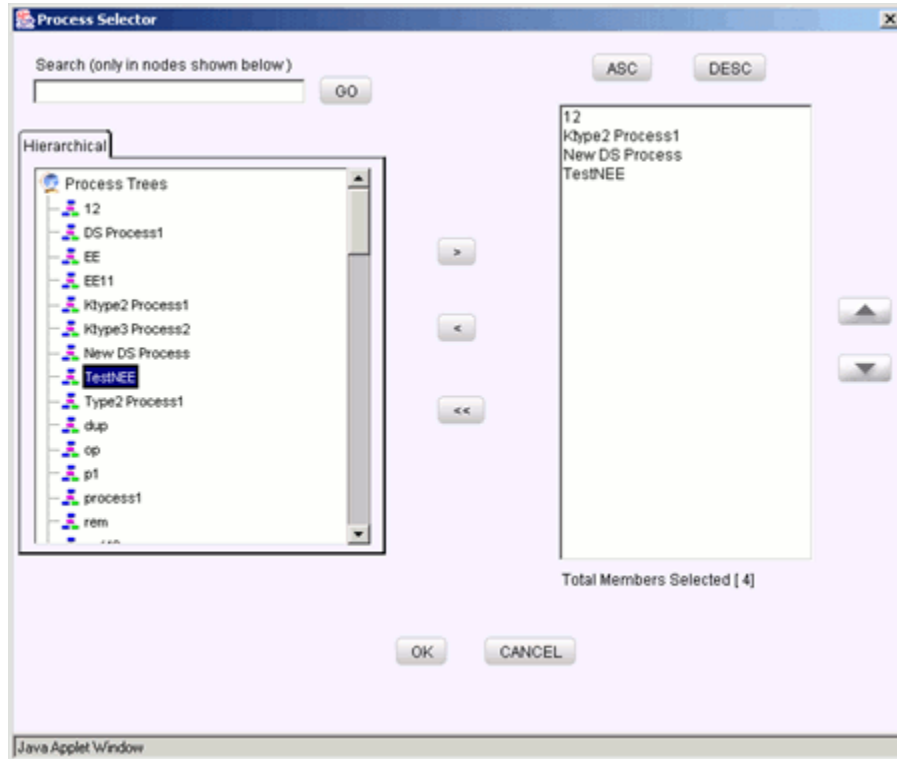
Click **OK** to proceed or click **CANCEL** to discard the selection. When you click **OK**, the run window is displayed for the selected baseline run.



Right-click Process Tree.

Note:

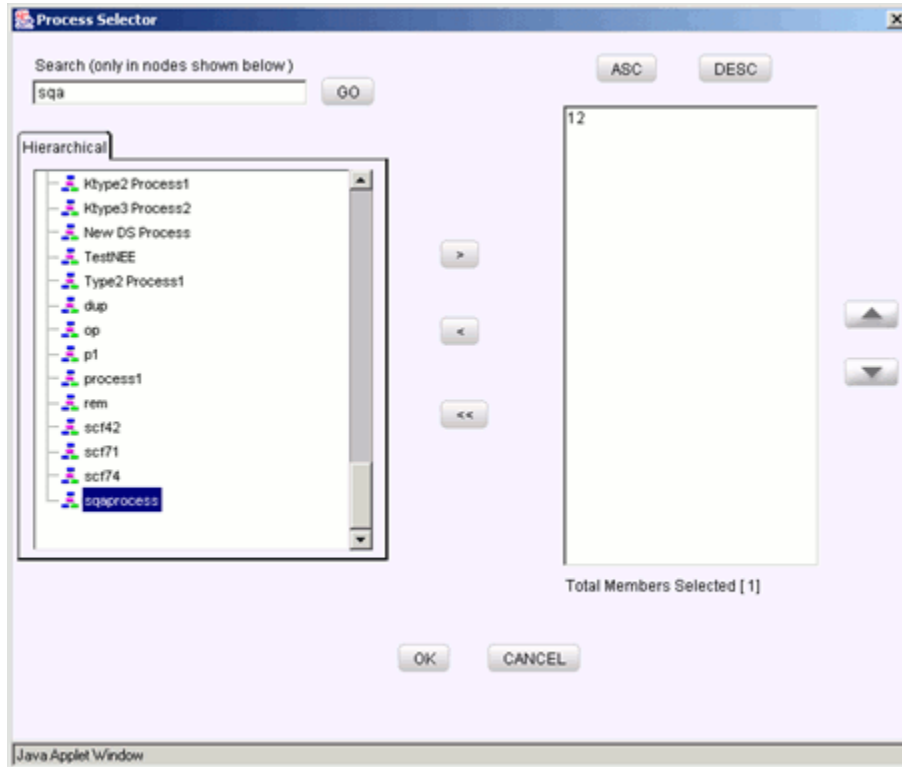
- By default, the first process appearing in the Process Tree will be displayed in the row axis of the run grid.
- If you have not yet defined a process, you will not be able to define a run.



This opens a Process Selector window. The left pane of the Process Selector displays the tag Process Trees. The members of this tag will display all the End-to-End processes that have been defined.

Search

To search for a particular member, you may enter the keyword of the member you are looking for and click **GO**. If a member containing the keyword is located, the corresponding member is highlighted. Click **Search** again to be taken to the next member that contains the keyword used in the search field.



Member Selection

The right pane of the Process Selector displays the end-to-end processes under the Process Tree tag. In order to move a process from the right pane to the left pane, first select the process in the left pane.

Example

sqaprocess

Click the



button to move the selected process member to the right pane. The number of members selected onto the right pane is displayed below the pane.

De-selecting Members

To deselect a process member from the right pane, click the member in the right pane.

Click the



button.

Click the



button to deselect all the members from the right pane.

Ordering Members in the right Pane

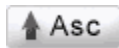
To set the order of display of the process members selected onto the right pane, click a member and use the buttons



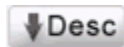
and



to move the member up or down in the order respectively. You may also click the buttons



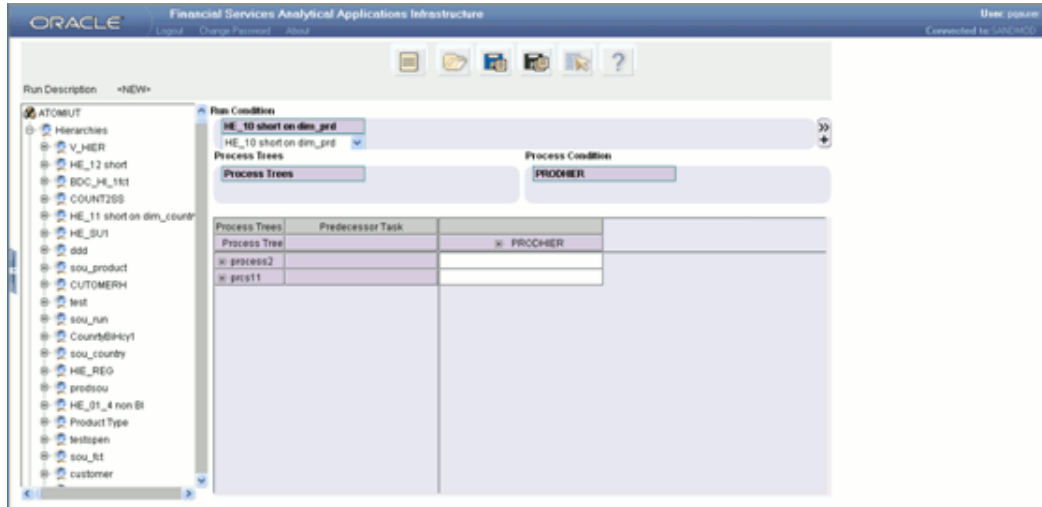
or



to set the list of members in the order of alphabetical ascension or dissension respectively.

Click **OK** to save the selection and close the Process Selector. Click **CANCEL** to discard the selection.

The selected process members will be displayed in the specified order in the row axis of the run grid.

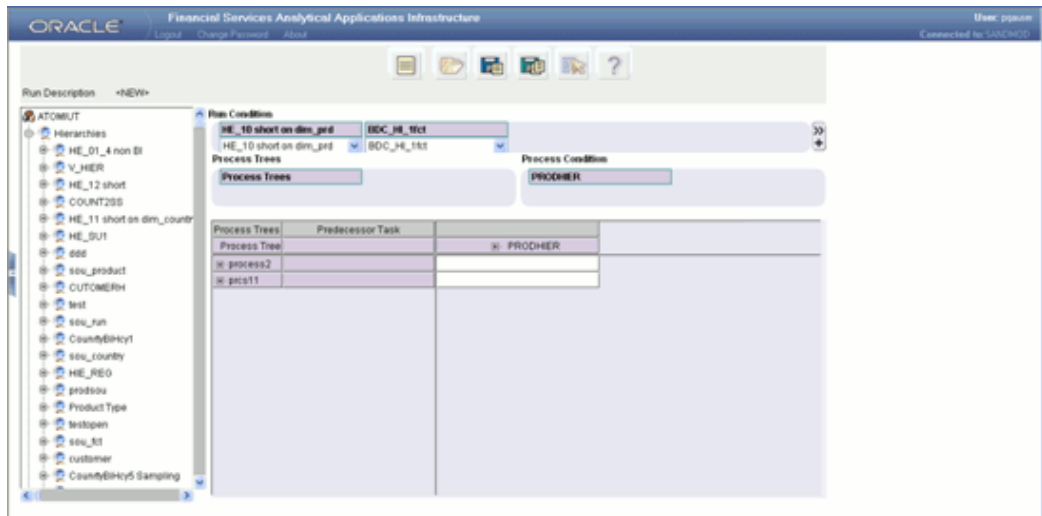


Specifying the Run Condition

From the left pane, click the



button to expand the Hierarchies tag. The expansion will display only those hierarchies that are based on tables that are part of the selected dataset. Select a hierarchy and right-click the mouse button. Select Run Condition if you want to add the hierarchy as a run condition.

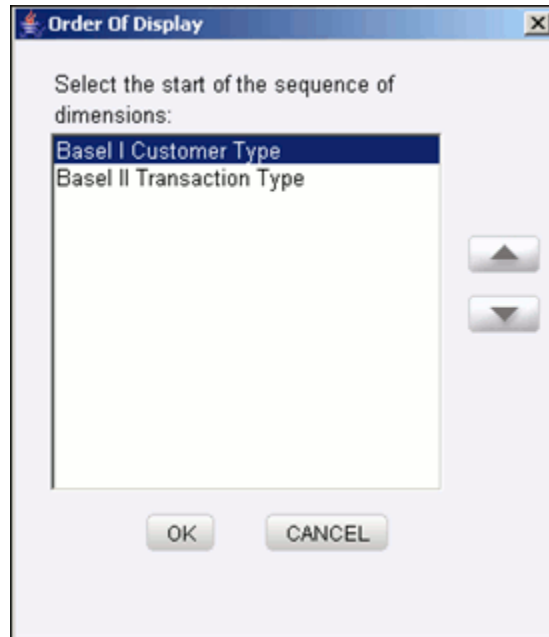


Click the



button in the right extreme end of the Run Condition section to open the Order of

Display pop-up. You can specify the sequence or the order of display of the hierarchies in the Run Condition section.



To set the order sequence, select the hierarchy and click



to move it up.

and

Click



to move the hierarchy down in the order.

Click **OK** to save the sequence order. Click **CANCEL** to discard the sequence order and exit the window.

Specifying a Process Condition

In the left pane, click the

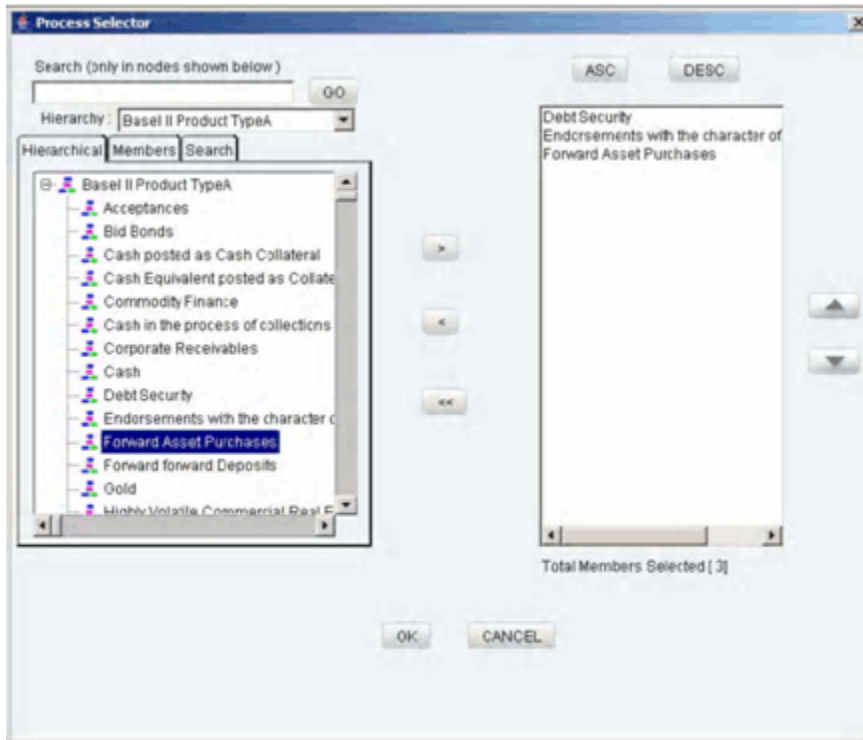


button to expand the Hierarchies tag. The expansion will display only those hierarchies that are based on tables that are part of the selected dataset. Select a hierarchy and right-click the mouse button. Select Process Condition if you want to add the hierarchy as a process condition.

Click hierarchy in the Process Condition section. This opens the Process Selector window. The left pane of the Process Selector displays the name of the hierarchy that was selected and its members. If the hierarchy has multiple levels, the members can be expanded to display the child members in a tree structure.

Search

To search for a particular member, you may enter the keyword of the hierarchy member you are looking for and click **GO**. If a member containing the keyword is located, the corresponding member is highlighted. Click **Search** again to be taken to the next member that contains the keyword used in the search field.



In the bottom left corner of the Process Selector, information about the hierarchy is displayed.

Member Selection

The right pane of the Process Selector displays the selected members of the hierarchy. In order to move a process from the right pane to the left pane, first select the process in the left pane.

Example

Debt Security

Click the



button to move the selected hierarchy member to the right pane.

To aid the selection process, certain standard modes are offered through the list. The available modes are **Self**, **Self & Descendent**, **Self & Children**, **Children Only**.

- The Self mode is the default mode displayed. In this mode, only the specific member selected in the left pane will be selected onto the right pane.
- Choose the Self & Descendent mode when you want a specific member and all its descendants right up to the end of its branch to be selected onto the right pane.
- Choose the Self & Children mode when you want a specific member and only its immediate children to be selected onto the right pane.
- Choose the Children Only mode when you want only the immediate children of a specific member to be selected onto the right pane mode.

The number of members selected onto the right pane is displayed below the pane.

De-selecting the Members

To clear a hierarchy member from the right pane, click the member in the right pane.

Click the



button.

Click the



button to deselect all the members from the right pane.

Ordering Members in the right pane

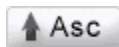
To set the order of display of the hierarchy members selected onto the right pane, click on a member and use the buttons



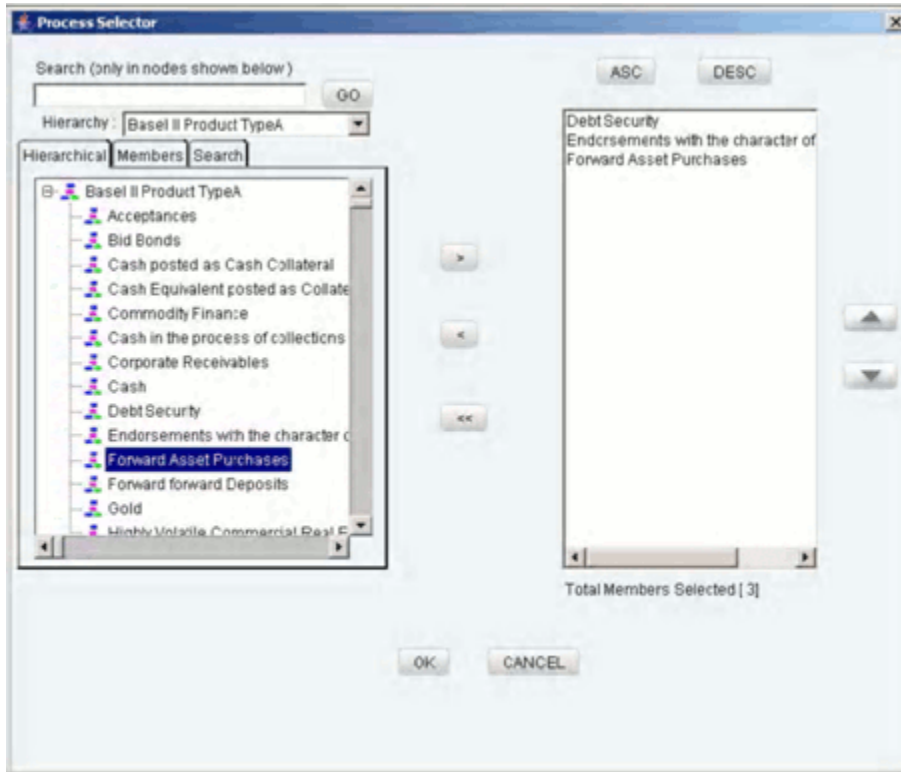
and



to move the member up or down in the order respectively. You may also click on the buttons



or



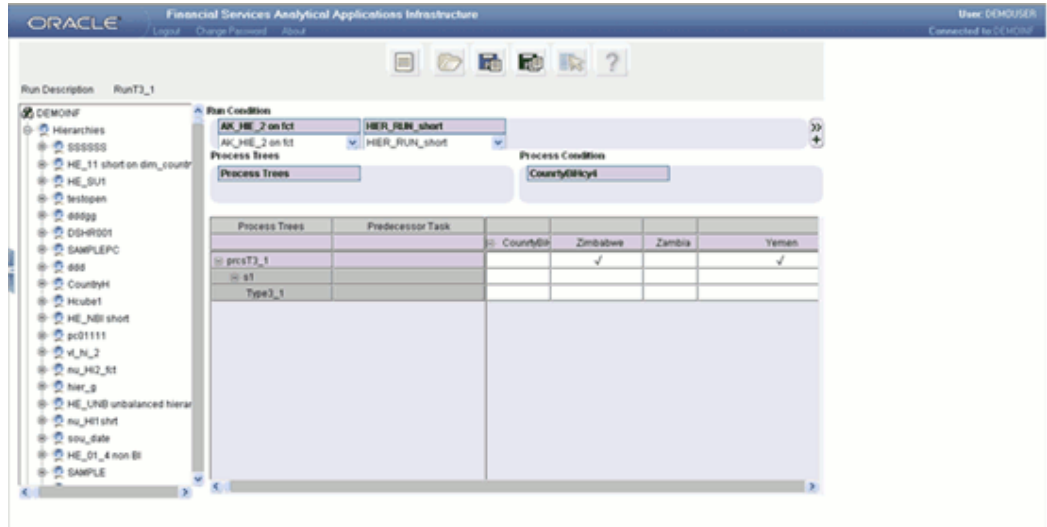
Click **OK** to save the selection and close the Hierarchy Selector. Click **CANCEL** to discard the selection.

The selected hierarchy members will be displayed in the specified order in the row axis of the rule grid.

Mapping

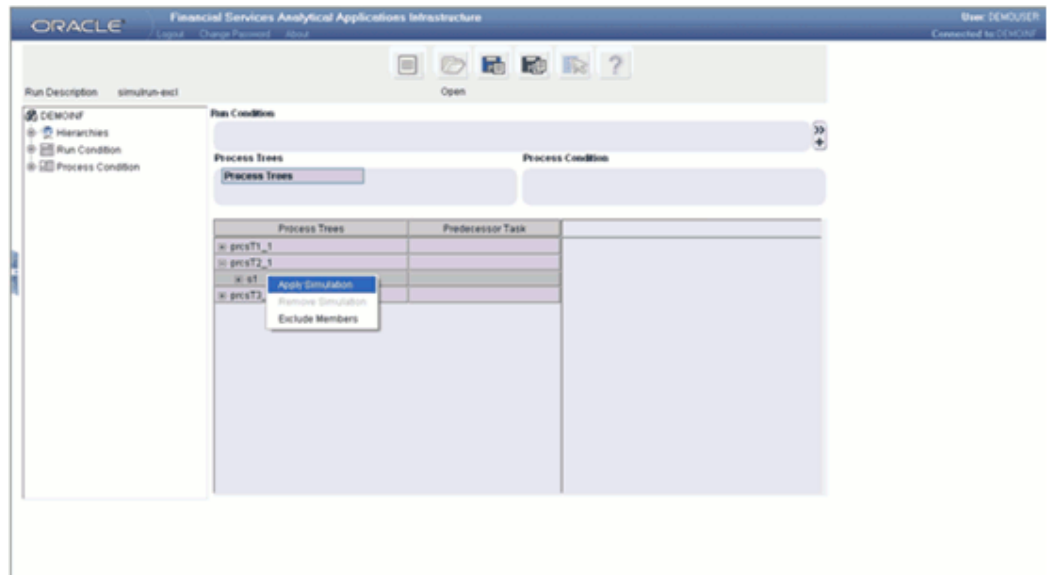
A mapping between a row member and column member in the run grid defines the condition for the process appearing in the corresponding column. Only the leaf nodes are allowed to be mapped.

Note: A row member can be mapped to multiple column members (process trees) in a mapping.

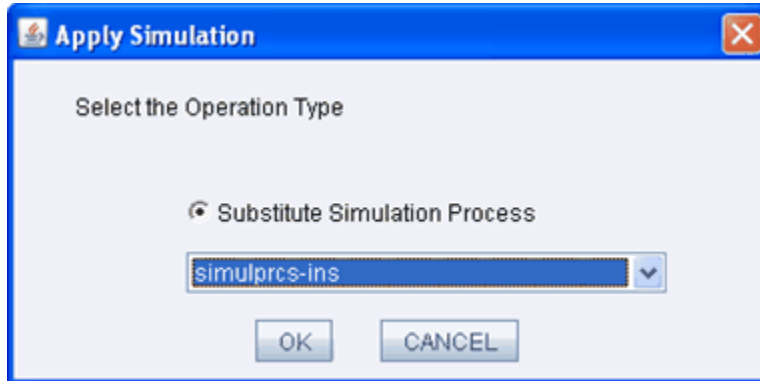


Applying Simulation

Click the base process in the grid and without releasing the mouse right click on it. A menu will be displayed as shown in the Figure below. Click the **Apply Simulation** option.

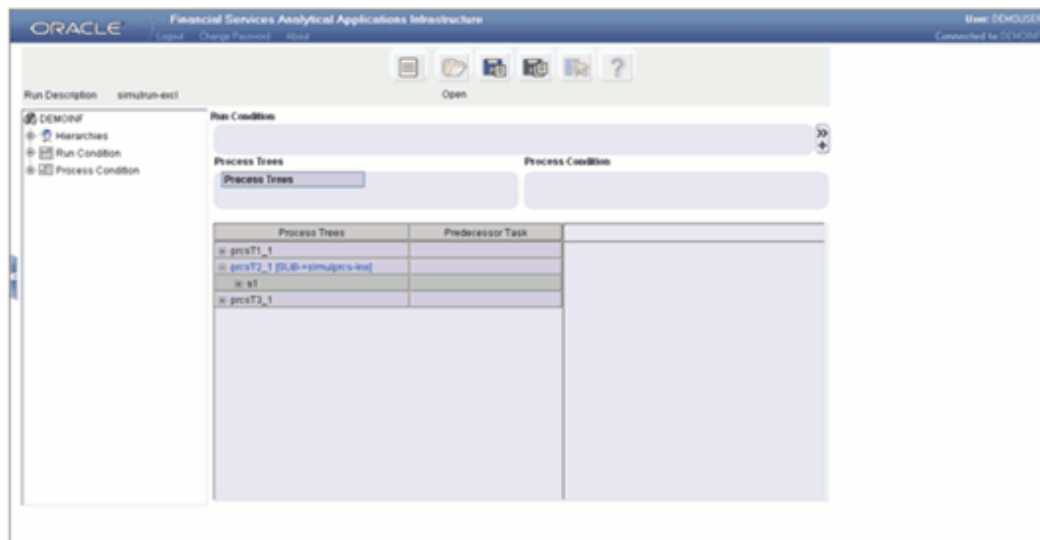


This opens an Apply Simulation pop-up window. Select a Simulation Process that is required to be substituted for the base process.



Click **OK**. The selected Simulation Process Tree will be substituted as follows.

Note: Only those Simulation Process defined using the same base process that has been selected in the run definition will be displayed in the Apply Simulation list.



Click **Save** to save the run definition.

The definition becomes the **Simulation Run Definition**.

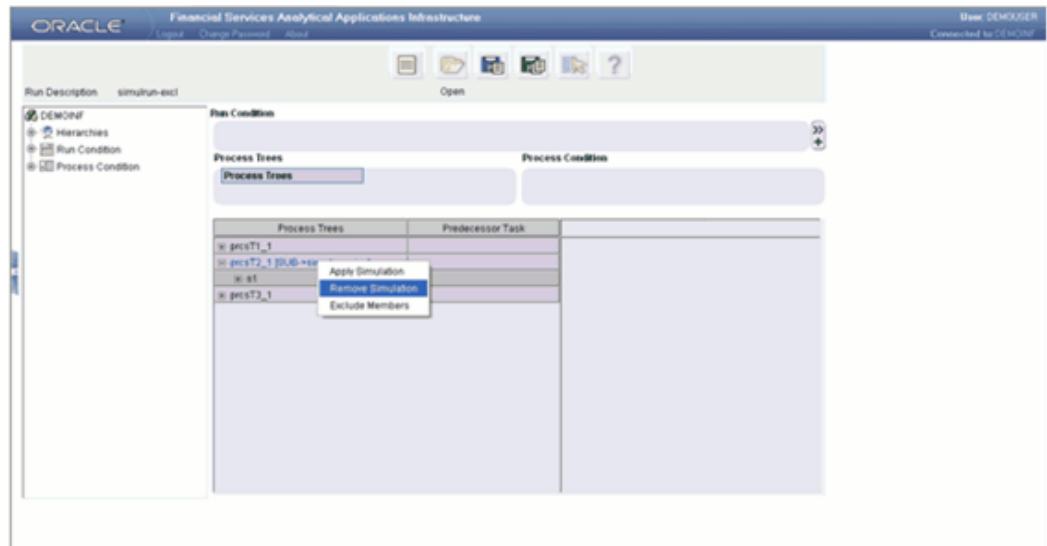
Note:

- If the substituted Simulation Process Tree and the selected base process do not have common hierarchies the Run Condition section and Process Condition will not be populated with hierarchies.
- The run cannot be saved without substituting atleast one

Simulation Process tree to the base process.

Removing Simulation

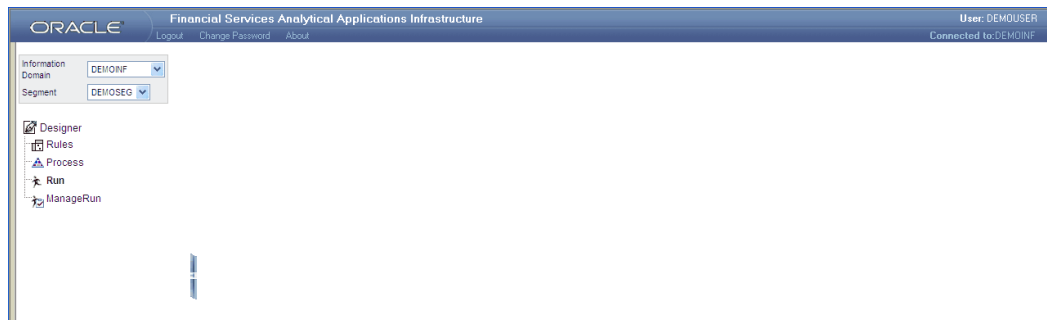
Click base process in the grid and without releasing the mouse right-click on it. A menu will be displayed. Select the **Remove Simulation** option.



This will remove the simulation applied.

Accessing Manage Run

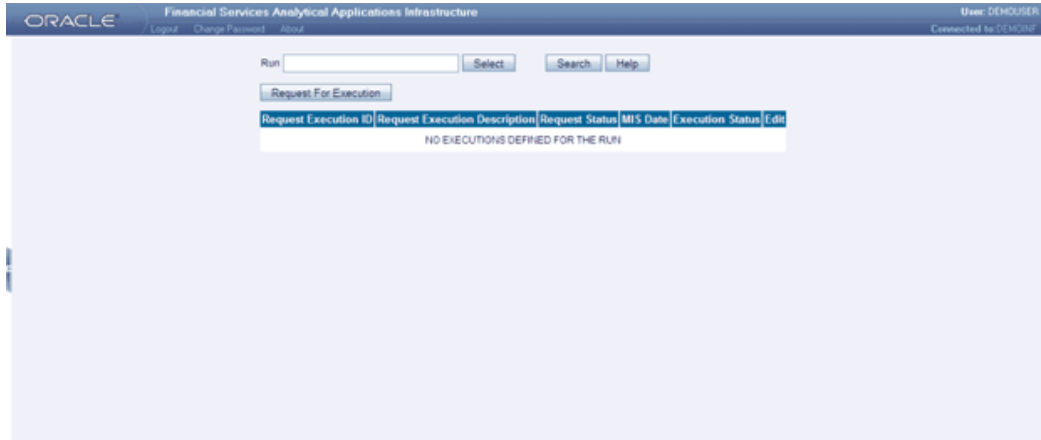
The Run definitions created will result in a unique batch group. These batches could then be scheduled for execution in the Manage Run window. Every request for execution of a RUN definition will become a batch in that batch group.



For further instructions to execute the run definition, see Batch Group Execution, page 33-4.

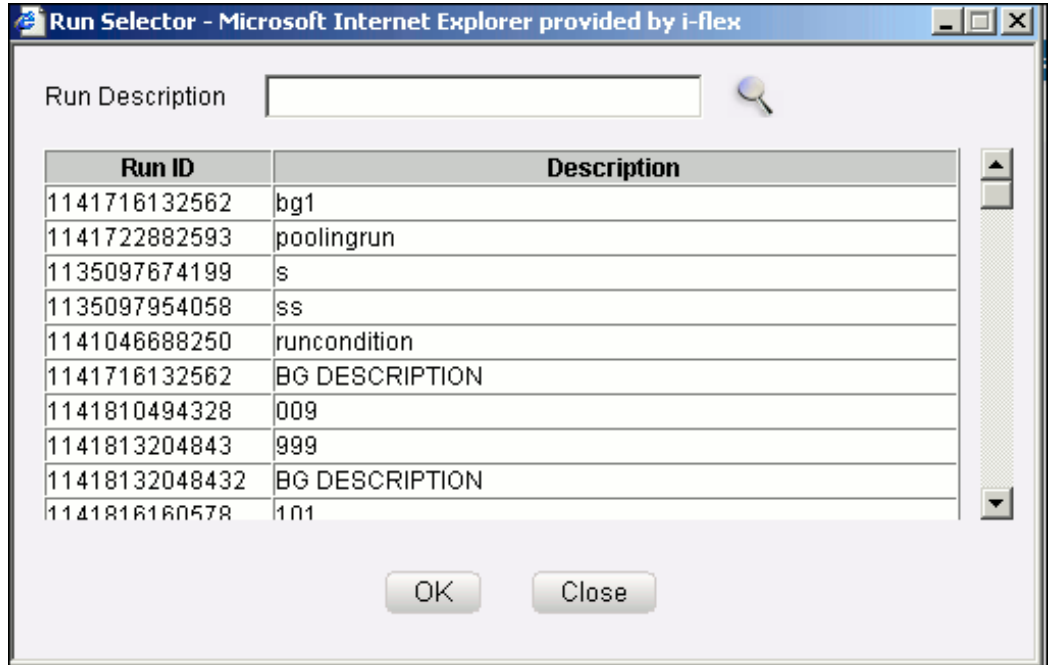
Launching the Manage Run Designer

Click Designer in the Rules Framework main window to open the Designer window. The Information Domain and the Segment will be displayed. Select the Information Domain and Segment for which you need to select the run definitions for execution. Click the Manage Run option in the left frame of the Designer window. On selecting the Manage Run option, the menu frame is hidden and the right frame is displayed in full window.



Selecting the Run Definition

Click Select to open an existing run definition. This opens up the Run Selector window which has the options to select the existing run definitions.



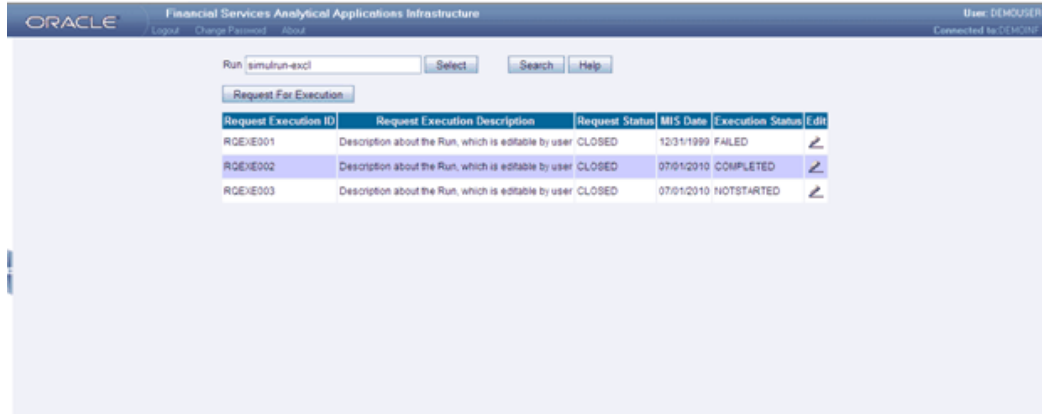
Select the run definition which is to be marked for execution from the list of run definitions presented in the window. The name of the selected run definition appears in the Run Description textbox.

Enter the run id or run definition name in the Run Description textbox and click



to search for the specific run definitions.

Click OK to open run definition or click Close to exit the window and return to the main window. The selected Run definition will be displayed in the window.



The Manage Run window displays details such as the Request Execution ID, Request Execution Description, Request Status, MIS Date and Execution Status. The window has options to select batches that are defined for execution.

Note:

- The Request Status Open indicates that the selected run id is ready for execution.
- The Execution Status NOT STARTED indicates that the particular run definition/batch has not been executed in the Batch Group Execution window.

Click Edit to edit the request for execution.

Run: runcondition

Request Execution ID: RQEXE007

Request Execution Description: Description about the Run, which is editable by user

Requested User: BASEL

Request Date: 3/24/2006 18:22:9

Modified Date: 3/24/2006 18:22:9

Request Status: OPEN

MIS Date: 24/10/2007

Execution Status: NOTSTARTED

Save Close

The Edit Request for Execution window displays details such as the Run definition Name, Request Execution ID, Request Execution Description, Requested User, Request Date, Modified Date, Request Status, MIS Date and the Execution Status.

Run:	runcondition
Request Execution ID:	RQEXE007
Request Execution Description:	Description about the Run, which is editable by user
Requested User:	BASEL
Request Date:	3/24/2006 18:22:9
Modified Date:	3/24/2006 18:22:9
Request Status:	<input type="button" value="OPEN"/> <input type="button" value="CLOSED"/> <input type="button" value="OPEN"/> <input type="button" value="TBD"/>
MIS Date:	<input type="button" value="31"/>
Execution Status:	NOTSTARTED

Click the Request Status list to specify the request status for the selected run definition.

- The status Open indicates that the particular batch is ready and can be selected for execution.
- The status Closed indicates that the particular batch has been selected for execution.
- The status TBD indicates that the particular batch has to be deleted and should not take part in the batch group for execution.

Note: More than one batch can be created for the selected Run ID.

Click



to specify the MIS date for the execution of the selected run definition /batch.

Run: runcondition

Request Execution ID: RQEXE007

Request Execution Description: Description about the Run, which is editable by user

Requested User: BASEL

Request Date: 3/24/2006 18:22:9

Modified Date: 4/5/2006 14:36:45

Request Status: CLOSED

MIS Date: 24/10/2007

Execution Status: NOTSTARTED

Save Close

The selected run definition will be executed as a batch for the selected MIS Date. Click Save to save the execution request. Click Close to discard the operation.

Once the particular batch is executed in the Batch Group Execution window, the Execution Status in the Manage Run window will be displayed as Executed.

If more than one batch is created for the selected run id, the user can change the status as Final for a selected batch after the batches in the batch group being executed in the Batch Group Execution window.

Note:

- Once a batch in the batch group is made as final for a selected MIS date, then a new batch cannot be created on the same MIS date.
- If the Request Status is Final for a selected batch for the selected run definition, all the other batch definitions for the run definition will become invalid and the status will be changed to TBD.

Modeling Framework

Introduction to Modeling Framework

This chapter is aimed at assisting you to utilize the Oracle Financial Advanced Analytics Infrastructure for your advantage. It encompasses all the activities involved in executing the Modeling Framework independently.

Accessing Advanced Analytics Infrastructure

In an age of intense competition and volatility, where seizing the opportunities is the order of the day and every new opportunity comes bundled along with risk therefore measuring the risk becomes critical. This is important because the regulatory/economic capital of banks and institutions depends on how effectively the risk is measured and managed. Banking institutions, which actively manage their risks, have a decisive competitive advantage which entails extensive statistical analysis/techniques to be used on historical data in order to build robust models which can either be used to measure/quantify risk or for prediction. Also, Financial Institutions requires constant monitoring and measurement of risk in order to conform to prevalent regulatory and supervisory standards.

The OFSAA Infrastructure Modeling Environment is capable of performing statistical analysis using historical data. It relies on pre-built statistical functions to build models. The framework can be used for prediction (using the pre-defined models) and also for validation of the existing models.

The metadata abstraction layer is actively used in the definition of models. Underlying metadata objects such as Measures, Hierarchies, and Datasets are used along with statistical techniques in the definition of models.

An economic capital framework relates the risk of investment to the amount of capital required, thus putting business performance or investment return into a proper perspective relative to risk. The Economic Capital describes the total risk of the bank in a single number as it explains the capability of a bank to withstand unexpected losses.

The Economic Capital feature in the OFSAA Infrastructure Modeling Framework module provides advanced methods of statistical computation needed by a Bank for its operations.

Note: The user must have an in-depth knowledge of the underlying data and statistical techniques. The user is also expected to have a fair understanding of data warehousing and must be familiar with the OFSAA Infrastructure Data Integrator process flow that populates the data warehouse model and OFSAA Infrastructure Unified Metadata Manager that is used in the definition of metadata objects on the data warehouse model.

Working with Modeling Environment

The Advanced Analytics Infrastructure module of Infrastructure comprises of the following sub-sections:

- Sandbox Definition
- Sandbox Data Maintenance
- Application
- Variable
- Modeling
- Stress Testing
 - Only those users mapped with the **Business Analyst** role can access the **Advanced Analytics Infrastructure**.
 - The **Sandbox Definition Screen** will be available only if the user has **SANDBXCR** or **SANDBXAUTH** function mapped.
 - The **Sandbox Data Maintenance Screen** will be available only if the user has **SANDBXMOD** or **SANDBXAUTH** functions mapped.
 - The Modeling link is available if the user has either of **VARDEF** or **VARTRANS** or **MDLDEF** or **MDLEXEC** or **MDLOUTPUT** or **MDLDEPLOY** or **MDLCALIB** or **MDLCHAMP** or **MDLAUTH** functions mapped.
 - Usage of Derived Entity is not supported.

For more information on mapping roles and functions to users, see chapter System

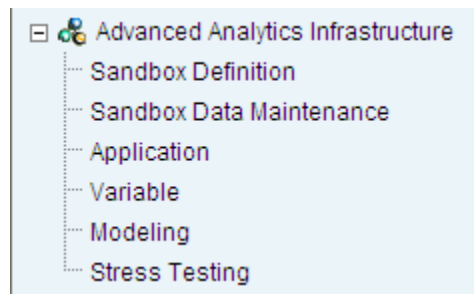
Administration, page 38-1.

Working with the Modeling Framework environment involves the following stages:

1. **Sandbox Creation** involves creating and maintaining the sandbox and creating the variables and populating the sandbox with them.
2. **Model Fitting** stage involves Model Definition, Model Execution/Fitting, checking the adequacy of the model fitting process, and Model validation based on a test or training sample.
3. **Model Implementation** stage involves Model Calibration and Model Deployment.
4. **Model Performance Tracking** stage involves CHAMPION V/S CHALLENGER process and Challenger Model Deployment.

Accessing Advanced Analytics Infrastructure Screen

Log on to OFSAA Infrastructure application. Click + option provided for the *Advanced Analytics Infrastructure* function menu in the LHS pane of the Infrastructure Splash screen to expand the same.



The following sections will explain each of these features such as **Sandbox Definition and Maintenance**, **Variable Management**, and **Model Management** in detail.

Defining a Sandbox

The term '**Sandbox**' can be broadly defined as a restricted modeling environment.

In OFSAA Infrastructure Modeling Framework, Sandbox is implemented as an 'Information Domain' in OFSAA Infrastructure.

A Sandbox can be defined only in a production Information domain where the OFSAA Infrastructure Data model has been uploaded, but no sand box has been defined.

Selecting the Information Domain in LHS Menu

An Information Domain is a logical grouping of information specific to a group or organization. The data that is stored in each information Domain can be accessed only by the group or organization mapped to it.

The first task you need to perform before accessing the options under Advanced

Analytics Infrastructure is to select the Information Domain to connect to.

Click the **Connected to** drop-down list on the top LHS pane of the Infrastructure splash screen to select the Information Domain. The screen will be refreshed to display information pertaining to the Information Domain you have selected.

For defining a Sandbox, you have to select the production Information domain where Infrastructure data model has been uploaded and no sandbox has been defined.

If you select a Sandbox Infodom while defining a Sandbox, a message will be displayed stating, *"This is sandbox infodom, sandbox cannot be defined here."*

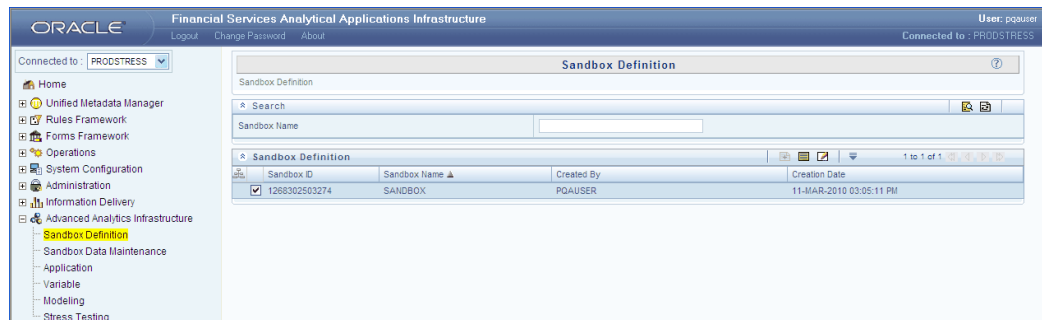
Note: It is mandatory to select the Information Domain.

Sandbox Definition

Expand the Advanced Analytics Infrastructure menu option and click the **Sandbox Definition** sub-menu.

The **Sandbox Definition** screen is displayed.

Note: The Sandbox Definition Screen can be accessed only by users who are mapped to the **SANDBXCR** or **SANDBXAUTH** functions.



The **Sandbox Definition** screen consists of the grid that displays the Sandbox definitions in the selected information domain. Details such as the Sandbox ID, Sandbox name, Created By, and Creation Date are displayed.

The navigation buttons and the number of records available and displayed can be viewed on the top right corner of the display grid.







Click the above icon on the top left corner of the display grid to collapse the display grid. The icon will now change to the below button.



Click the above button to expand the display grid.

Common Buttons

	This button resets/clears the details that you have entered in the fields and returns to the default settings.
	This button initiates the search based on the keyword.
	This button allows you to key in the appropriate word in the field and search the Sandbox Name, Model Name or the Variable Name respective to the screen opened.
	This button opens the screen-specific help.

The Sandbox Definition Toolbar



The following list comprises the buttons in the tool bar provided just above the display grid in the Define Sandbox screen:

- New
- View
- Edit
- Help
- Dropdown [Consisting 10,25 and 50]

The Delete, Export and Transformation button is not active in the **Define Sandbox** screen.

Pagination Options

The number of rows to be displayed at a time can be set by clicking the Pagination Options button in the toolbar. The Pagination Options dropdown will be displayed. The available options are 10, 25 and 50 rows. You can also enter the number of rows to be displayed in the empty field provided, select the check box and click Go.



Defining a New Sandbox

Click Add button in the Sandbox Definition Toolbar to create a new Sandbox definition. The **Sandbox Definition New** screen is displayed.

Sandbox Definition			
Sandbox Definition > Sandbox Definition (New Mode)			
Sandbox Definition			
Sandbox Definition			
Sandbox Name *	<input type="text"/>	Sandbox Description	<input type="text"/>
Source Dataset *	<input type="text"/> ...	Sandbox Location *	<input type="text"/> ...
Scope			
Non Time Hierarchy			
Non Time Hierarchy			
No Element Selected			
Hierarchy Member			
Time Hierarchy			
Time Hierarchy			
No Element Selected			
Hierarchy Member			
Save Cancel			
User Info			
Created By	EPWSSUSER	Creation Date	NA
Last Modified By	NA	Last Modification Date	NA

Entering the Sandbox Name and Description

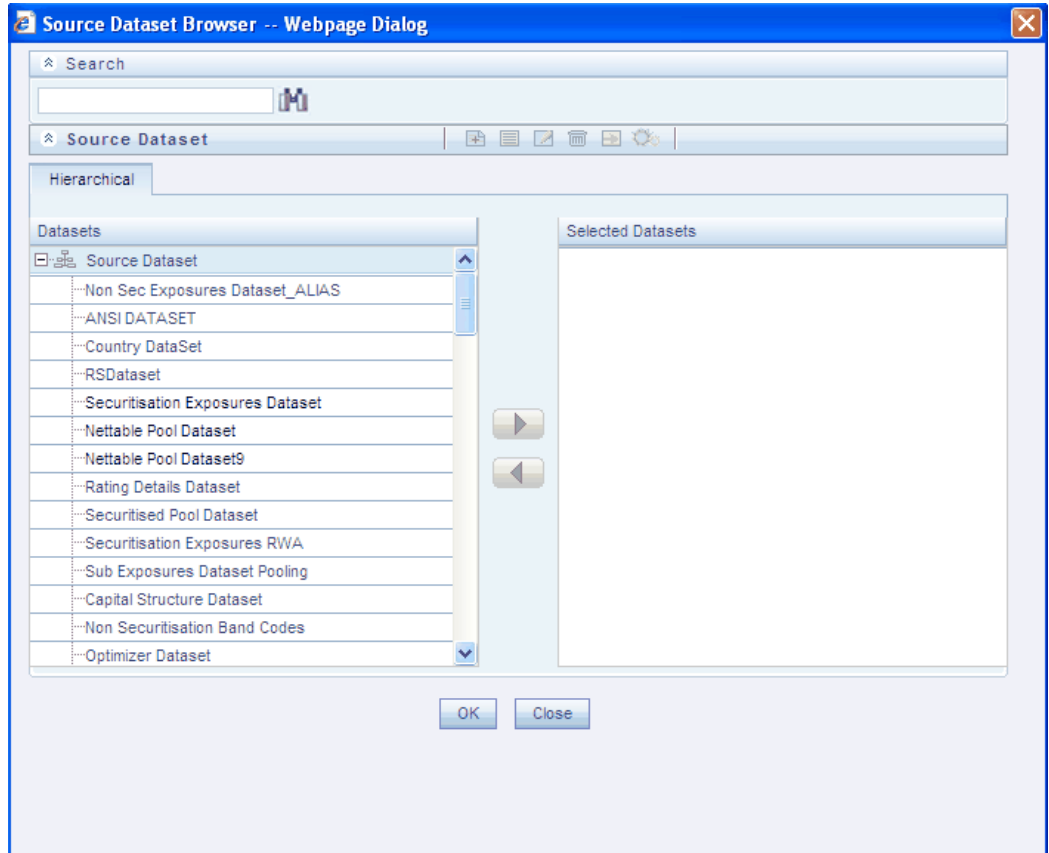
Enter a suitable name for the new Sandbox in the **Sandbox Name** field.

Enter a suitable description for the new Sandbox in the **Sandbox Description** field.

Selecting the Source Dataset



Click the above **Browse** button adjacent to the **Source Dataset** field to open the **Source Dataset Browser**. All the authorized datasets in the selected information domain will be listed in the Hierarchy Browser.



Select the required source dataset for the Sandbox you are creating from the **Members** pane.

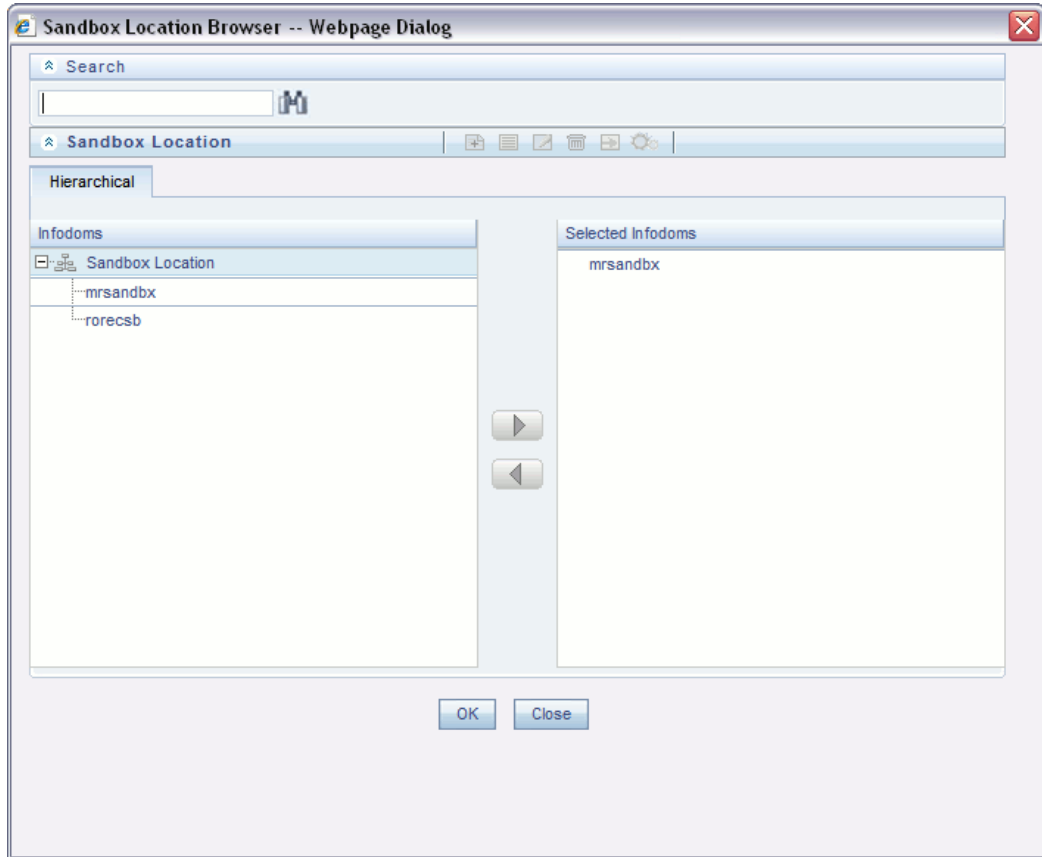
Click > button to move the selected dataset to the **Selected Members** pane. To move a selected dataset from the Selected Members pane back to the Members pane, click the < button. You can also double-click the dataset to move it to the Selected Members pane and vice versa.

To search for a particular dataset, enter the keyword of the dataset you are looking for in the Search field and click **Search** button. If a member containing the keyword is located, the corresponding dataset is highlighted. Click the Search button again to be taken to the next dataset that contains the keyword used in the search field.

Once the required source dataset is selected, click **OK**. The selected dataset will be displayed in the **Source Dataset** field in the **Sandbox Definition** page.

Selecting the Sandbox Location

Click **Browse** button adjacent to the **Sandbox Location** field to select the infodomain where the sandbox is to be created.



The Sandbox Location pane will display the list of Information domains where no sandbox has been defined and data model has not been uploaded. Select the required information domain in which you want to create the sandbox and click > button to move it to the **Selected Members** pane.

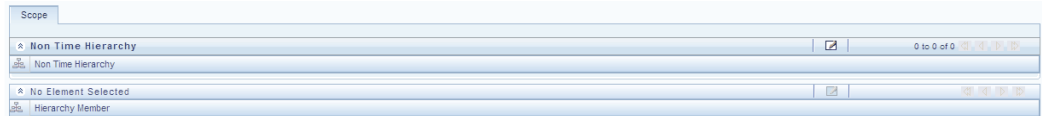
To move a selected information domain from the **Selected Members** pane back to the Members pane, click < button. You can also double-click the infodom to move it to the Selected Members pane and vice versa.

To search for a particular infodom, enter a keyword of the dataset you are looking for in the Search field and click **Search**. If a member containing the keyword is located, the corresponding information domain is highlighted. Click the Search button again to be taken to the next infodom that contains the keyword used in the search field.

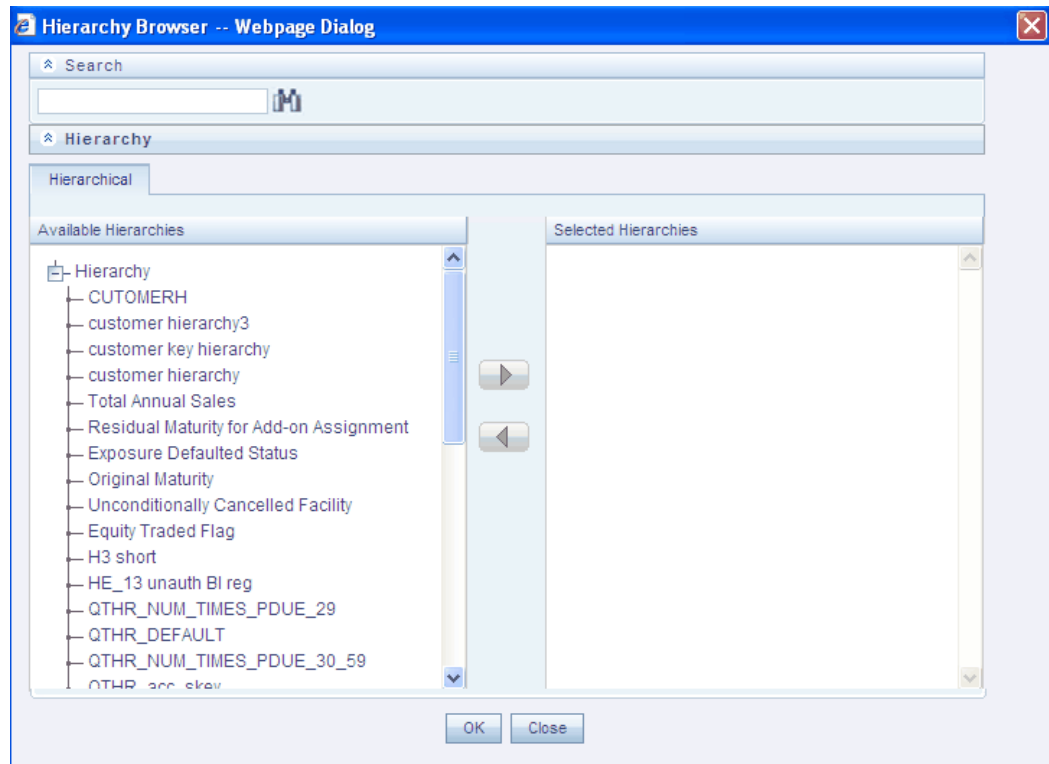
Once the required information domain is selected, click **OK**. The selected information domain will be displayed in the **Sandbox Location** field.

Selecting the Non Time Hierarchy

In the new sandbox definition, you can specify the Non Time and Time Hierarchies. Specifying Non Time Hierarchy is optional.



The **Non Time Hierarchy** collapsible display grid is displayed under the **Scope** tab in the Sandbox Definition New screen. Click **Edit** button in the Non Time Hierarchy toolbar. The Hierarchy Browser is displayed which lists all the available Hierarchies for the selected information domain.

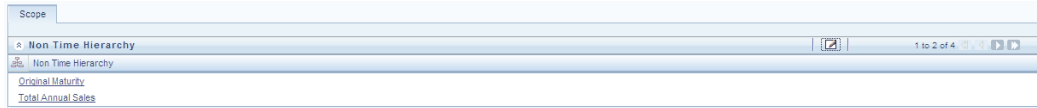


Click + symbol adjacent to Hierarchy label in the **Available Hierarchies** pane to view all the available hierarchies. Select the required hierarchies and click > button to move it to the **Selected Hierarchies** pane.

You can select more than one Non Time Hierarchy for each Sandbox definition.

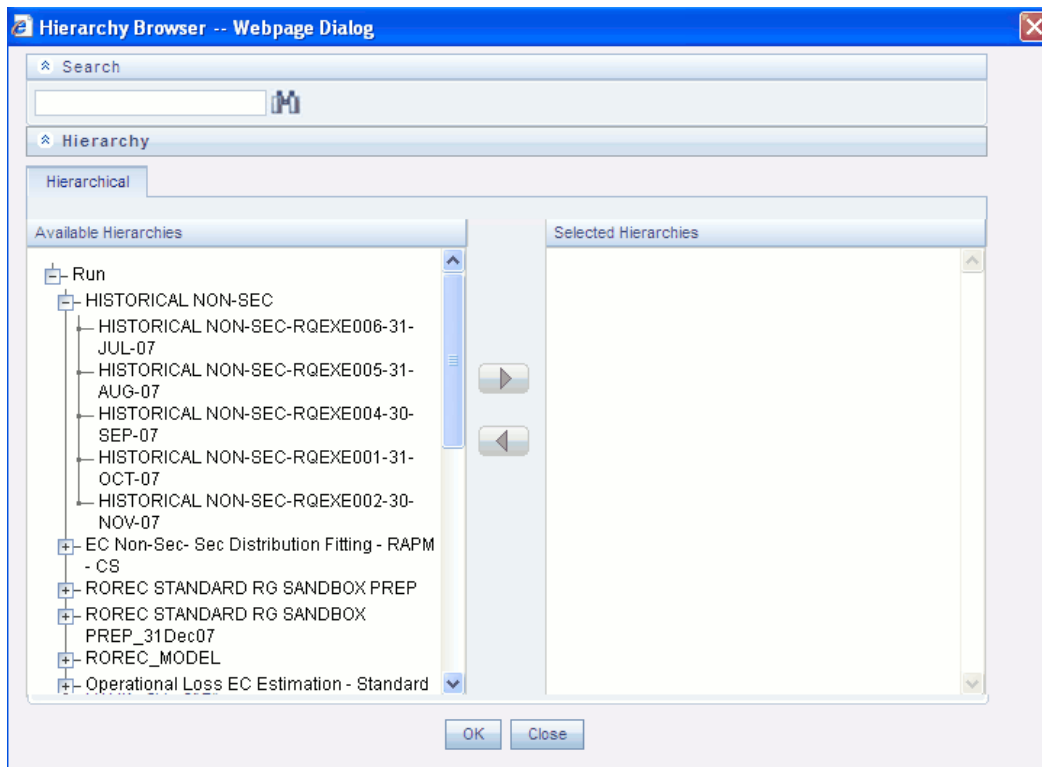
To move a selected hierarchy from the **Selected Hierarchies** pane back to the **Available Hierarchies** pane, click < button.

On selecting the required hierarchies, click **OK**. The **Hierarchy Browser** is closed and the selected Hierarchies will be displayed in the **Non Time Hierarchy** collapsible display grid.



The next step is to select the Hierarchy members. The selected Hierarchy name will be displayed in the Hierarchy Member collapsible display grid. If you have selected multiple hierarchies, the details will be displayed in the Hierarchy Member display grid based on the Hierarchy name you select in the Non Time Hierarchy display grid.

Click **Edit** button in the Non Time Hierarchy Member toolbar. The **Hierarchy Browser** is displayed. The members or nodes of the Selected Hierarchy are listed in the Available Hierarchies pane.

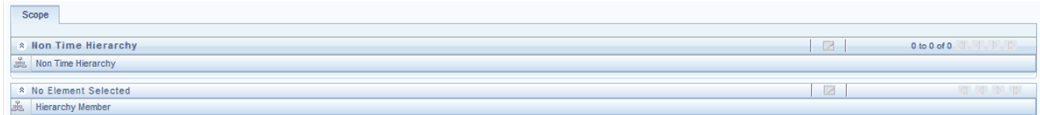


Click + symbol adjacent to Hierarchy Name in the **Available Hierarchies** pane to view the available hierarchy members. Select the required hierarchy members and click > button to move it to the **Selected Hierarchies** pane. You can select more than one hierarchy member for each hierarchy.

To move a selected hierarchy member from the Selected Hierarchies pane back to the Available Hierarchies pane, click < button. On selecting the required hierarchy members, click **OK**.

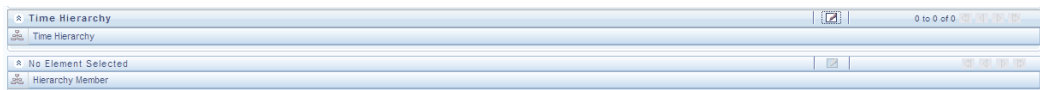
The **Hierarchy Browser** is closed and the selected Hierarchy members will be displayed in the **Hierarchy Members** collapsible display grid.

- If a non time hierarchy is selected, then it is mandatory to select at least one hierarchy member.
- While copying hierarchies from production information domain to sandbox information domain, the hierarchy nodes does not get populated as there is no data in the sandbox. To get the nodes the user needs to manually re-save the hierarchies after sandbox population.



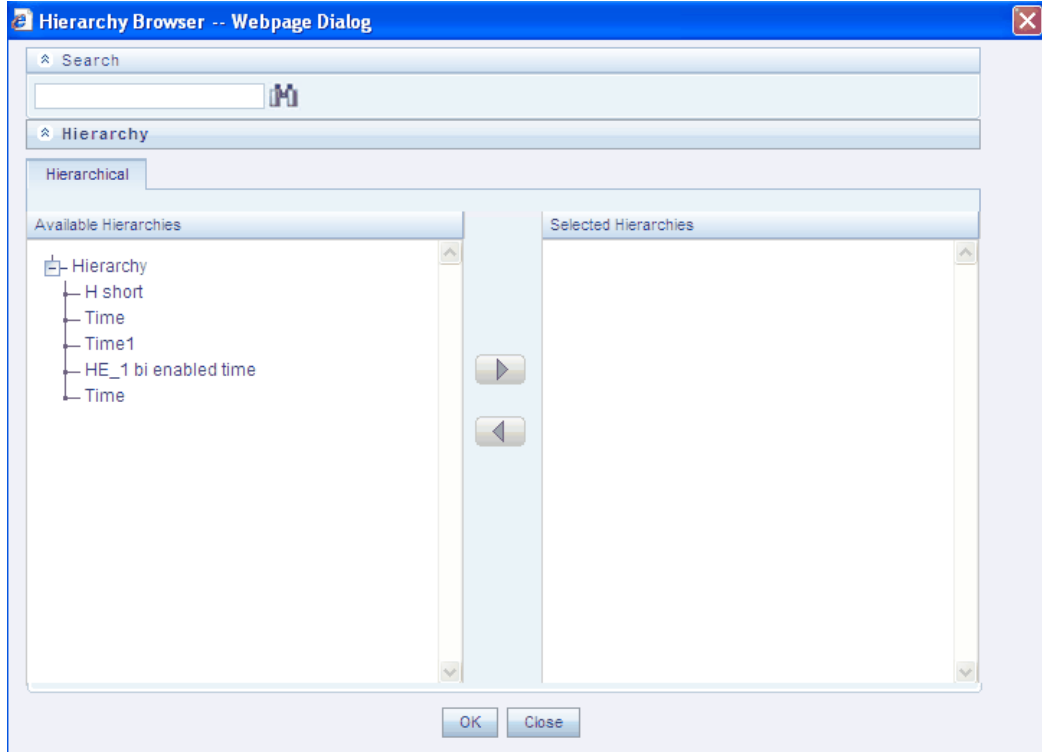
Selecting the Time Hierarchy

While defining a new sandbox, it is mandatory to select a Time Hierarchy.



The **Time Hierarchy** collapsible display grid is displayed under the **Scope** tab below **Non Time Hierarchy** display grid in the **Sandbox Definition New** screen.

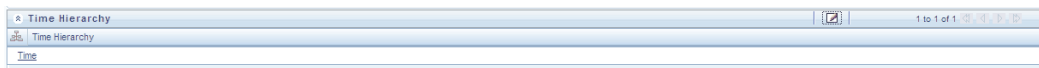
Click **Edit** button in the Time Hierarchy toolbar.. The **Hierarchy Browser** is displayed which lists all the available Time Hierarchies for the selected information domain.



Click the + symbol adjacent to **Hierarchy** label in the **Available Hierarchies** pane to view all the available time hierarchies. Select the required time hierarchy and click > button to move it to the **Selected Hierarchies** pane.

You can select only one time hierarchy for a sandbox definition. To move a selected time hierarchy from the **Selected Hierarchies** pane back to the **Available Hierarchies** pane, click < button.

On selecting the required Time Hierarchy, click **OK**. The **Hierarchy Browser** is closed and the selected Time Hierarchy will be displayed in the **Time Hierarchy** collapsible display grid.



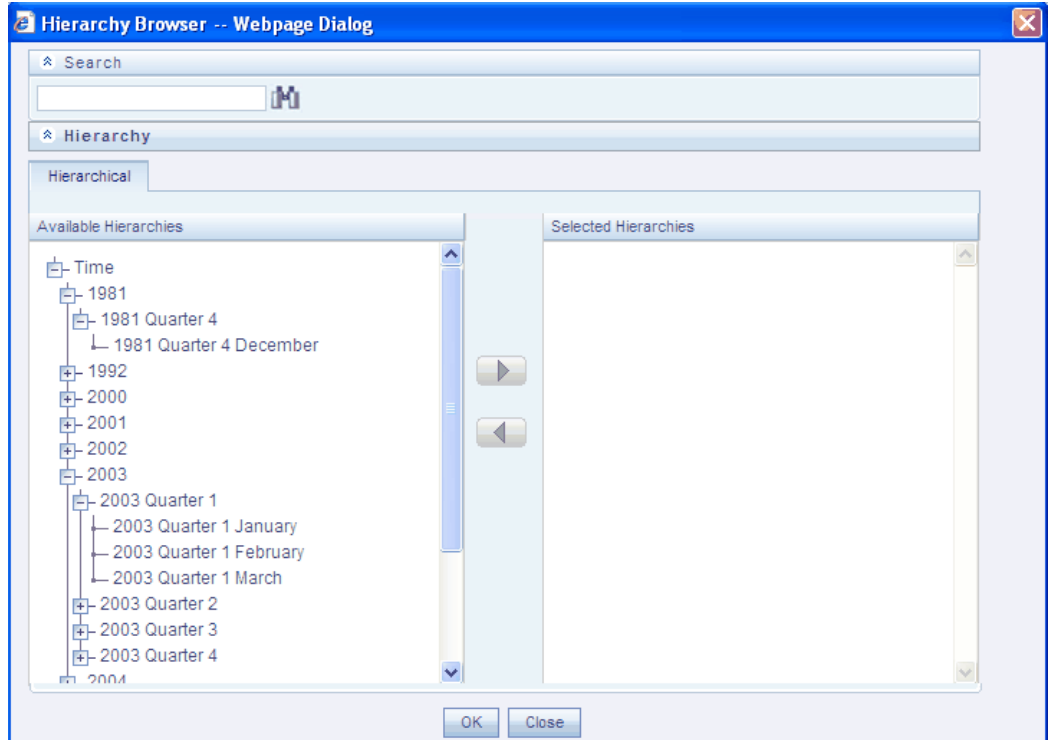
The next step is to select the Time Hierarchy members. The Selected Time Hierarchy name will be displayed in the **Hierarchy Member** collapsible display grid.



Click **Edit** button in the Time Hierarchy Member toolbar. The **Hierarchy Browser** is displayed. The members or nodes of the Selected Time Hierarchy are listed in the

Available Hierarchies pane.

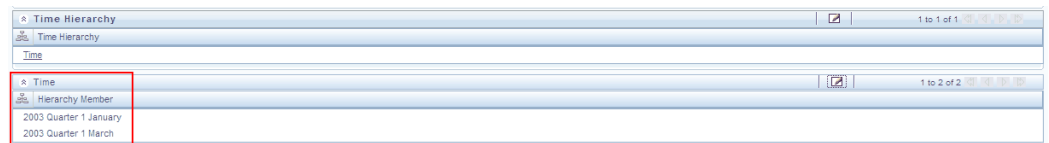
Click + symbol adjacent to the Hierarchy nodes in the **Available Hierarchies** pane to go to the leaf node level. You can select only the leaf nodes for the Sandbox definition. You can select more than one Time Hierarchy member based on your requirements.



Select the required leaf node hierarchy members and click the > button to move it to the **Selected Hierarchies** pane.

To move a selected hierarchy member from the Select Hierarchies pane back to the **Available Hierarchies** pane, click < button.

On selecting the required Time hierarchy members, click **OK**. The **Hierarchy Browser** is closed and the selected Time Hierarchy nodes will be displayed in the Time Hierarchy Members collapsible display grid.

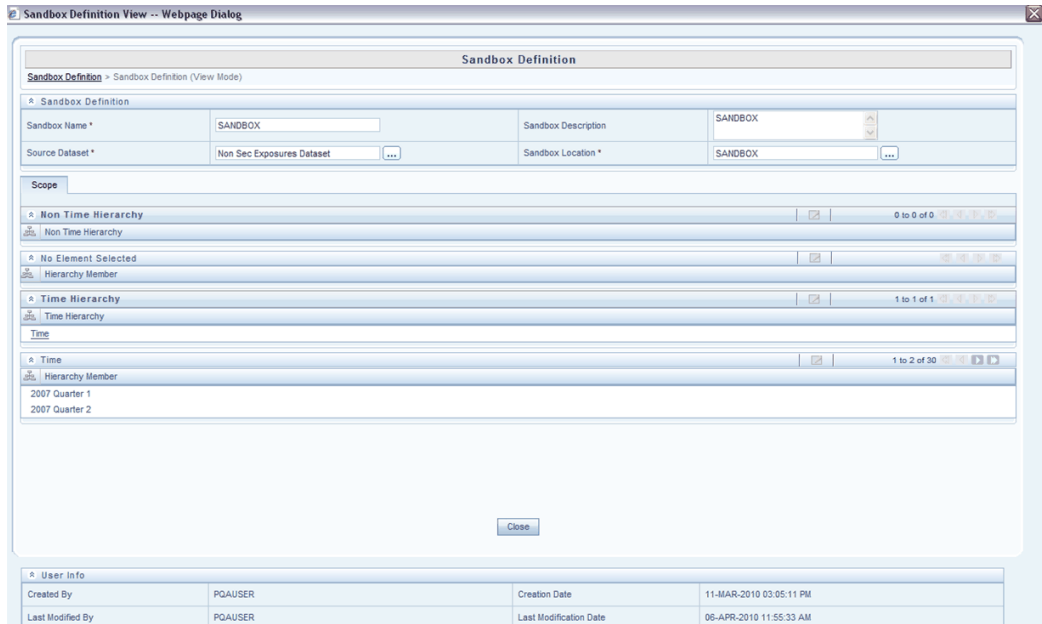


Saving the Sandbox Definition

Click **Save** in the **Sandbox Definition New** screen. Once the Sandbox definition has been uploaded, a confirmation message will be displayed.

Viewing a Sandbox Definition

Select a Sandbox and click **View** in the Sandbox Definition Toolbar to view the details of the selected Sandbox. The **Sandbox Definition View** window is displayed.



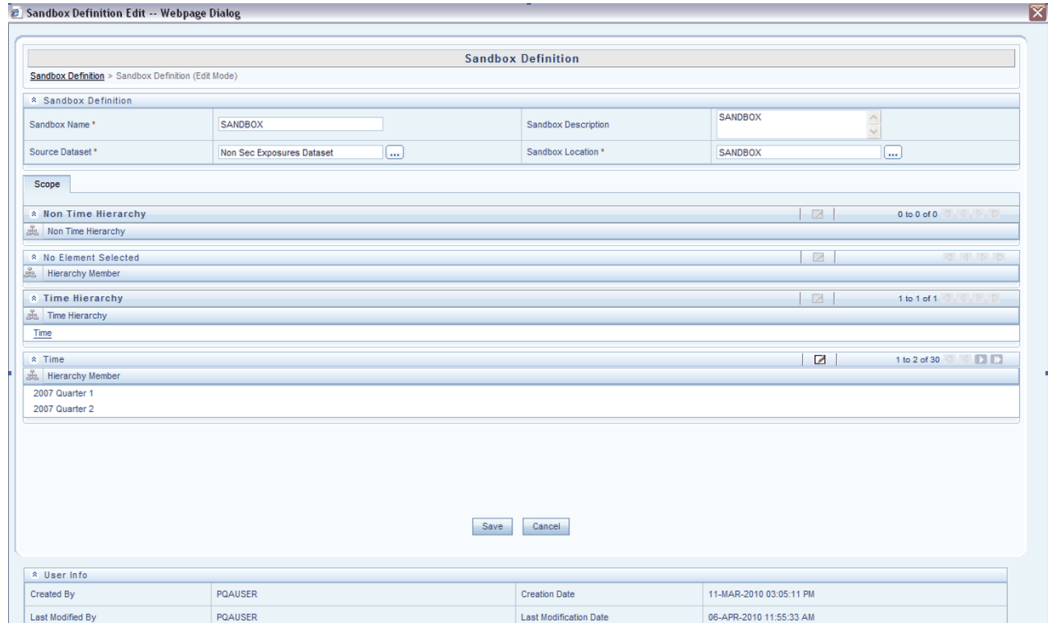
Details such as the Sandbox Name, Sandbox Description, Source Dataset, Sandbox Locations and the Time and Non Time Hierarchy and Hierarchy members are displayed. These details cannot be edited from this window. After viewing the details, click Close to close the window.

Editing a Sandbox Definition

Select a Sandbox and click **Edit** in the Sandbox Definition Toolbar to edit the selected Sandbox. The **Sandbox Definition Edit** window is displayed.

Only Sandbox Description and Time Hierarchy Member can be modified in this window. Make the necessary modifications in the **Sandbox Description** box and click **Save** to save the changes.

The User Information grid displays details such as Created By, Creation Date, Last Modified By and Last Modified Date. The 'Created by' and 'Creation date' fields displays the Creator name and corresponding date. If a user has made any modification for that particular Sandbox Definition, the 'Modified by' and 'Modification date' will reflect the user name and date of modification. If no modifications have been done, 'NA' will be displayed in these fields.



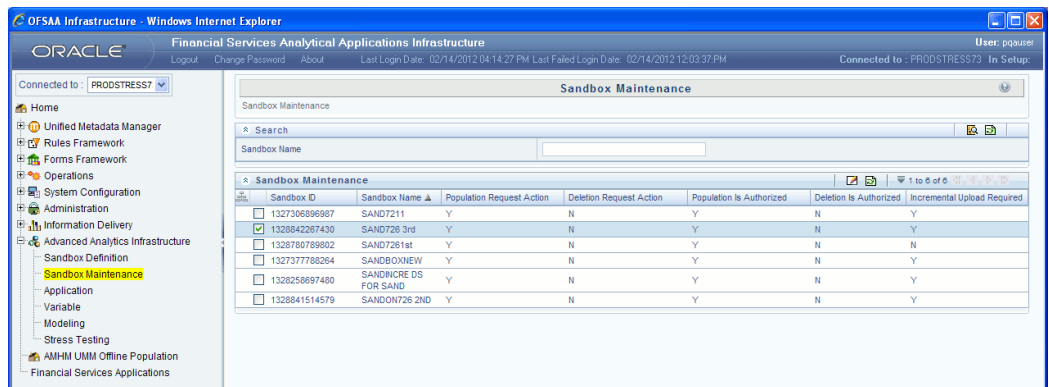
Sandbox Data Maintenance

Once the sandbox definition and variable creation is over, the sandbox needs to be populated with the variables.

In the OFSAA Infrastructure Splash screen, select a Production Information domain in the Connected to drop-down list.

Select Modeling Framework > Sandbox Data Maintenance.

The **Sandbox Data Maintenance** screen is displayed.



This screen displays details such as the Sandbox ID, Sandbox Name, whether the sandbox has been populated or deleted, whether the population or deletion has been authorized, and whether an Incremental Data Model Upload is required or not.

Prerequisites

- User should be mapped to Business Analyst role.
- The Sandbox Data Maintenance Screen will be available only if the user is mapped to the **SANDBXMOD** or **SANDBXAUTH** functions.
- Sandbox definition should be available in the selected Production Infodomain.

Populating Sandbox

Select the checkbox adjacent to the Sandbox which you wish to populate displayed in the **Sandbox Data Maintenance** screen. Click **Edit** button. The Sandbox Maintenance Edit window is displayed.

The Sandbox Maintenance Edit window displays the Sandbox ID and Sandbox description non-editable fields. The Request Action tab will be selected by default.

Select the **Populate Sandbox** check box to populate the selected Sandbox with the variables. Select the Authorize tab and select the Authorize Sandbox Population check box.

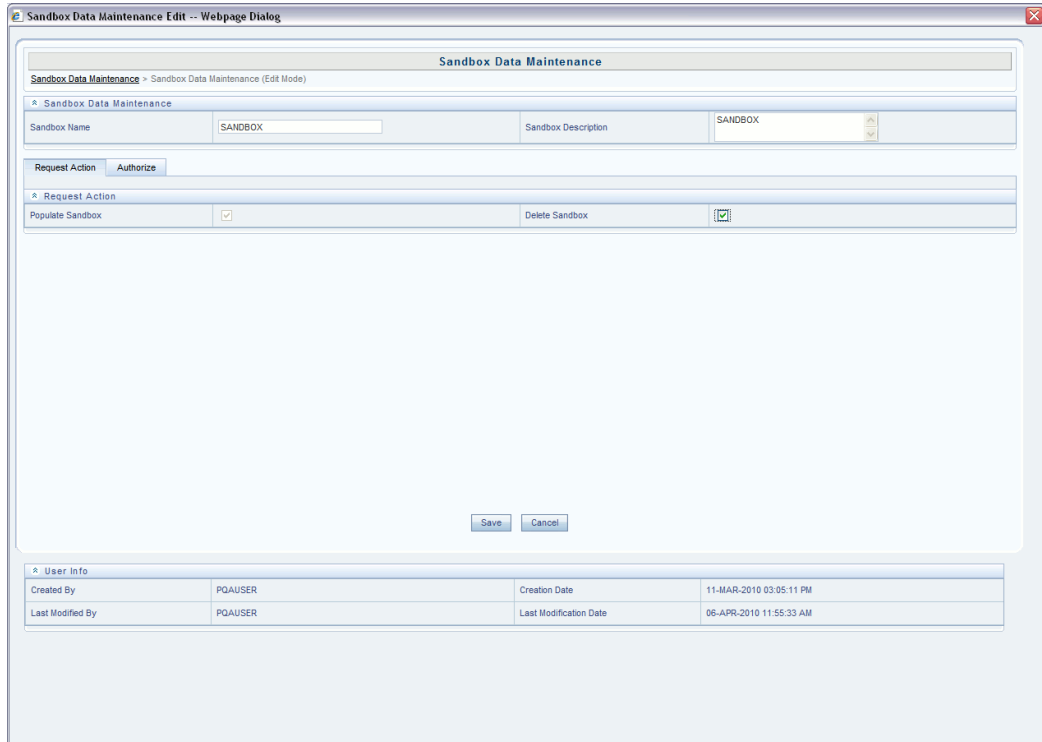
Note: The user should be mapped to the **SANDBXAUTH** role to be able to authorize sandbox population.

Click **Save**. The sandbox population will be authorized and a confirmation message will be displayed.

On authorizing the Sandbox Population, a Sandbox-Populate batch will be registered in the OFSAA Infrastructure ICC framework. A batch will be available in the Batch Scheduling screen with the Sandbox ID. This batch must be triggered from the Batch Scheduling screen of OFSAA Infrastructure for the sandbox should be populated successfully.

Deleting a Sandbox

Select the checkbox adjacent to the Sandbox which you wish to delete. Click **Delete**. The **Sandbox Maintenance Edit** window is displayed. Under **Request Action** tab, select the **Delete Sandbox** check box.



Select the **Authorize** tab and select the **Authorize Sandbox Deletion** checkbox. On Authorizing Sandbox Deletion, all the Modeling Framework metadata (variables and models) will be deleted.

Note: The user should be mapped to the **SANDBXAUTH** role to be able to authorize sandbox deletion.

Click **Save**.

Incremental Data Model Upload

Incremental Data Model Upload facilitates you to synchronize the data difference of a Data Model which exists in Production and Sandbox information Domain. You can refresh the details and fetch the incremental data model changes from Production to Sandbox Information Domain.

Incremental Data Model Upload option is enabled only when there is a difference in the model versions between Production and Sandbox information Domain. The **Increment Upload Required** column in the Sandbox Maintenance screen displays the status as "Y" or "N" depending on the need for Incremental Data Model Upload for a particular Sandbox definition.

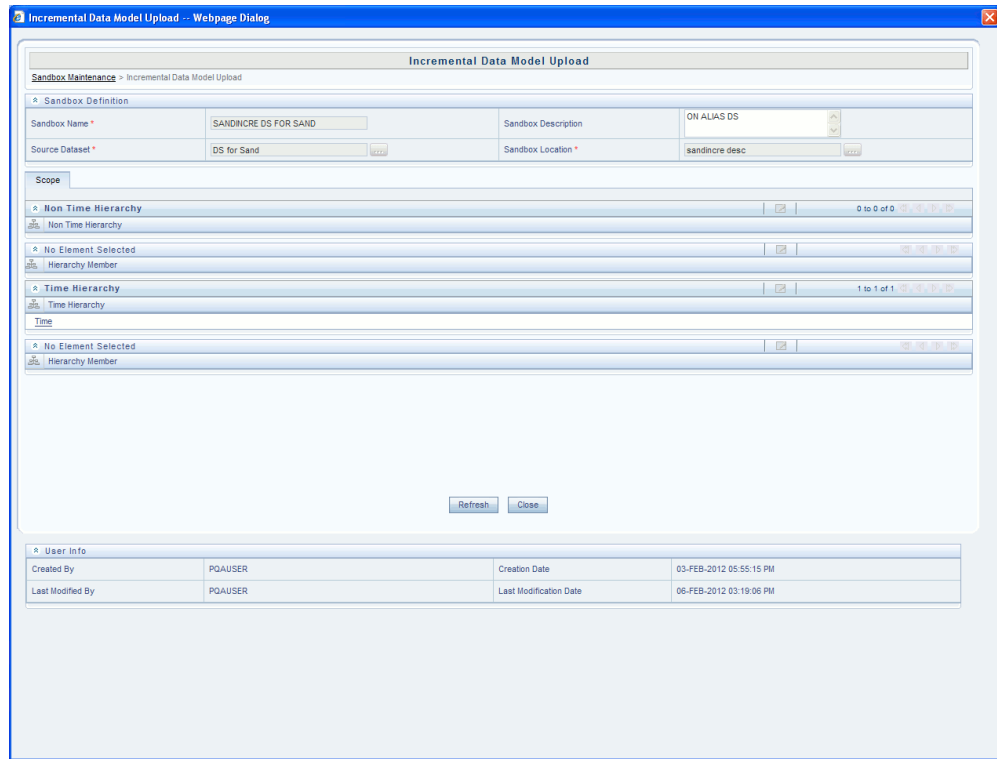
Follow the steps to perform an Incremental Data Model Upload:

1. Select the check box adjacent to the Sandbox ID which has the Increment Upload Required status as "Y".
2. Click the below button from the **Sandbox Maintenance** tool bar.

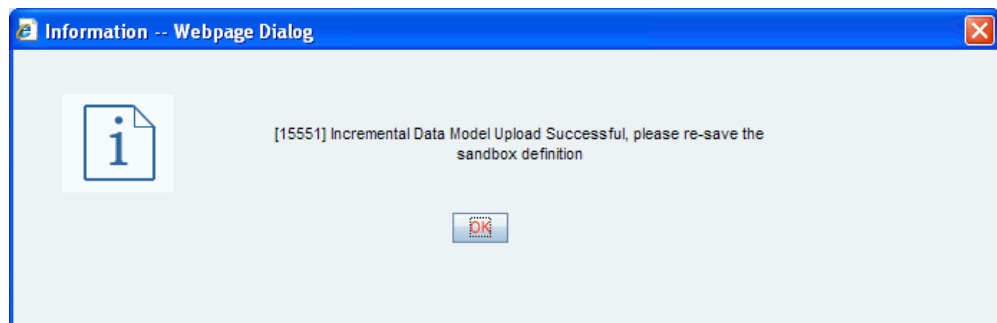


The **Incremental Data Model Upload** screen is displayed with the selected

Sandbox definition details in the View mode.



3. Click **Refresh**. The incremental data model changes are fetched and updated.
4. An information dialog is displayed confirming a successful Incremental Data Model Upload. Click **OK**.



5. Once the Incremental changes are updated to the Data Model in the Sandbox information domain, you need to re-save the details in the **Sandbox Definition** screen.

For more information, see Editing a Sandbox Definition section.

Note: Before saving the details in the **Editing a Sandbox Definition** screen, you need to edit the **Time Hierarchy** section by adding a time node.

The next step after populating the sandbox with the variables is to define a Model and execute it, verify the outputs, and deploy it in the Production Infodomain if required.

Application

Optimizer

The Optimizer feature in OFSAA Infrastructure enables the user to define the objective function and the related constraints to optimize (minimize/maximize) the objective function.

Optimization is a way of finding the optimal or the best solution to an objective function for a given set of constraints and variables. These parameters are obtained by minimizing or maximizing an objective function, subject to equality or inequality constraints and/or parameter bounds. It uses linear programming technique to solve the stated problem for the given constraints.

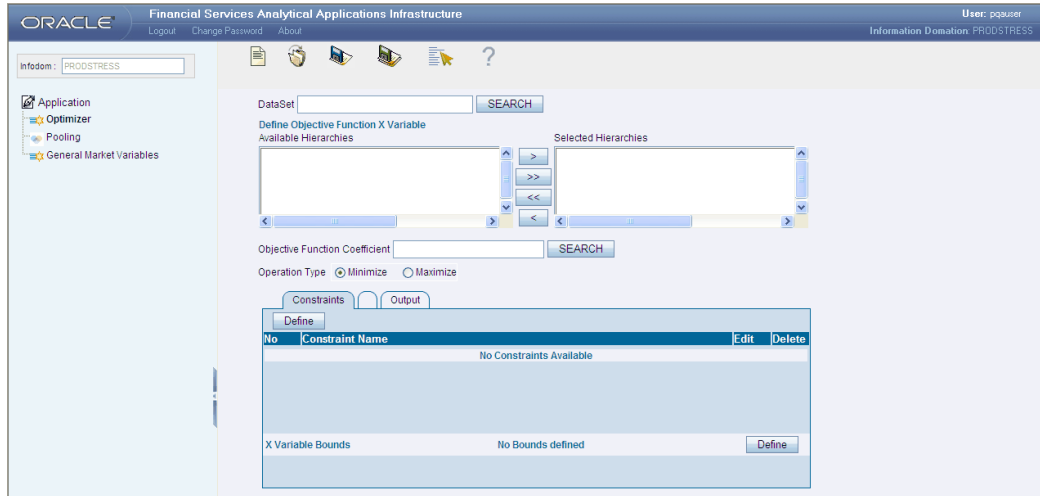
The optimization screen takes compact listing of the constraint coefficients as input and produces as output, which is also a similar compact listing of optimal solution values and related information.

It enables the user to find the optimal value (maximal or minimal value) of a certain number of variables, given a set of constraints on these variables.

Note: Only those users mapped with the **Business Analyst** role, with the OPTDEF and OPTDEL functions mapped to it can access the Optimizer Framework.

Select the Production Information Domain in the OFSAA Infrastructure Splash screen.

Select **Modeling Framework>Application**. The Application screen will be displayed. In the LHS pane, select **Application > Optimizer**. The Optimizer screen is displayed.

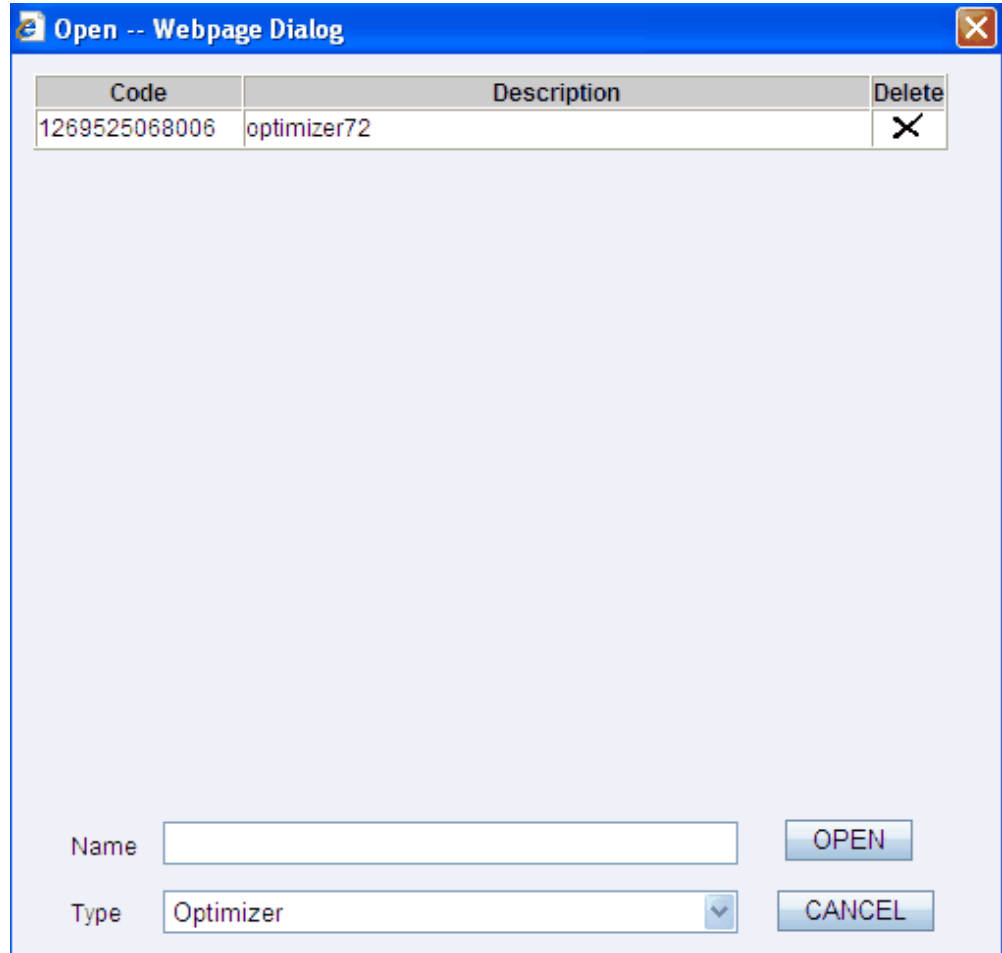


The Optimizer Toolbar



The Optimizer toolbar just above the dataset area in the Optimizer screen displays the following buttons:

- **New** - will help you to define a new optimization objective function. Click New to add a new definition.
- **Open** - helps you to open an existing definition.

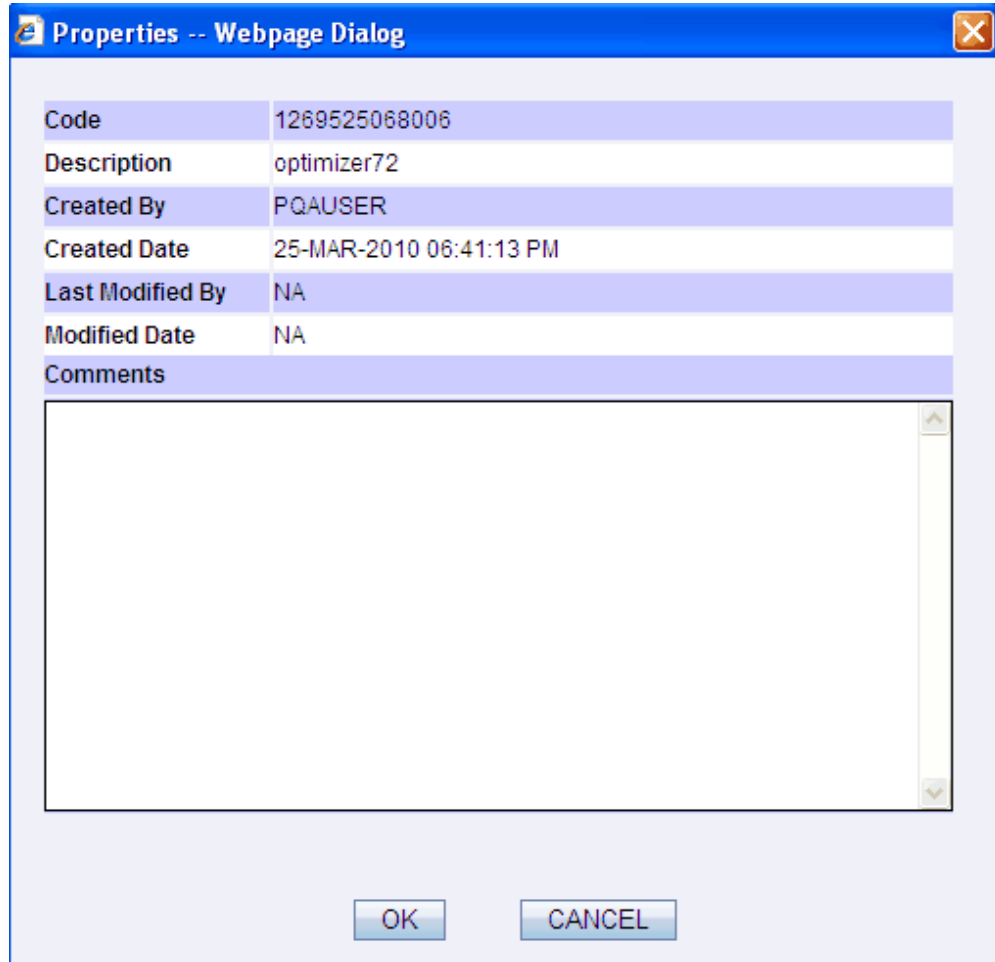


Select the existing definition from the list presented in the window. The name of the selected optimizer definition appears in the **Name** field. Click **Open** to open the optimizer definition or click **Cancel** to exit the window and return to the main screen.

Click **Delete** icon to delete the selected optimizer definition. When you click the delete option, a message will appear requesting the user to confirm the delete operation. Click **Yes** to clear the confirmatory message and delete the selected optimizer definition. Click **No** to cancel the delete operation.

- **Save** - helps you save a new optimizer definition or modified an existing definition. To perform the same, click **Save**. A save window will be displayed. This window displays the existing optimizer definitions available under the selected Information Domain. Enter the name for the new optimizer definition in the **Name** field. Click **Save**. A confirmation message will be displayed.
- **Save As** - If you are working on an existing optimizer definition and wish to save it under a new name, click the **Save As** option. On clicking **Save As**, the save screen is displayed. Enter a name for the optimizer definition in the name field.

- **Properties** - Click the **Properties** option. The **Optimizer Properties** window is displayed. The window displays the code, description, name of the user who has created the application along with the date and time of creation. It also displays the name of the user who has last modified the optimizer definition along with the date and time of the last modification.



The user can enter the comments in the **Comments** pane in the **Properties** window while defining the optimizer definition. Click **OK** to close the **Properties** window.

- **Help** - The **Help** option provides online help for users.

Defining Optimizer

The optimizer definition enables the user to define an objective function and the related constraints to optimize (minimize/maximize) the objective function.

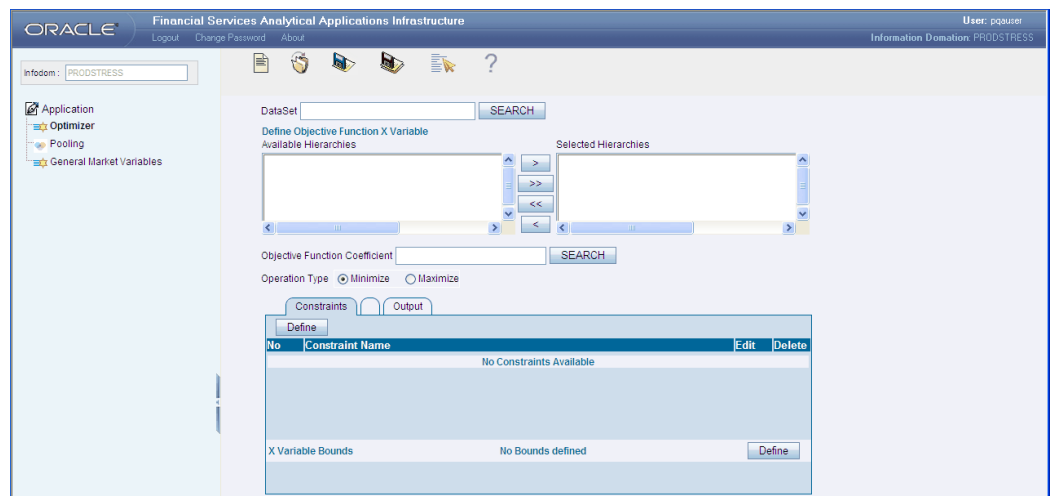
The various components of the optimizer screen are:

- **Dataset** - Logical partition of a set of data based on joins and filters conditions, which suits the business requirement as well as enhances data retrieval. The

creation of data sets enhances query time by pre-defining the names of tables required for an operation like aggregation as well as provides the ability to optimize the execution of multiple queries on the same table set.

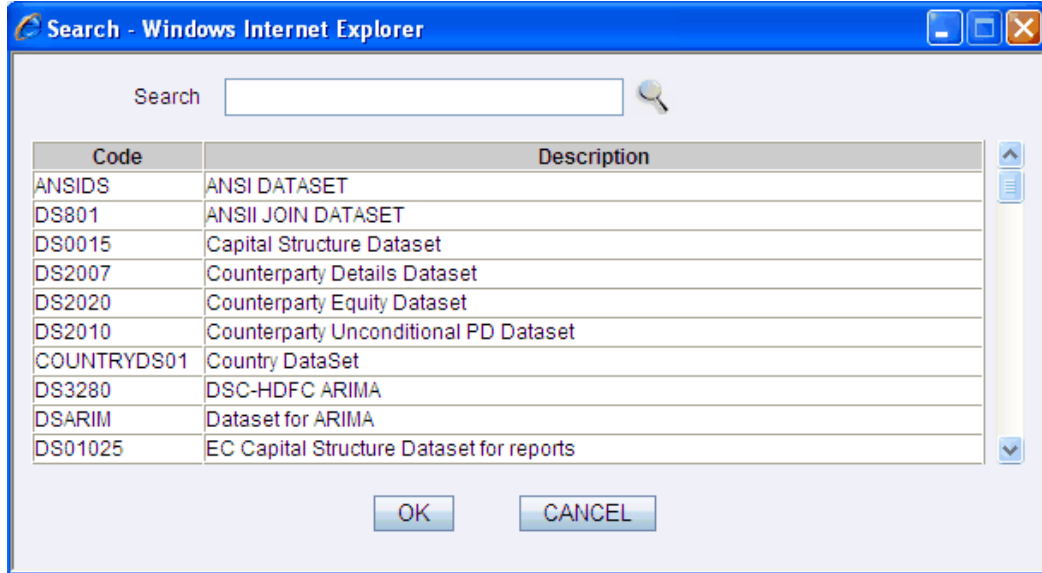
- **Defining Objective Function X Variable** - For each Optimizer definition a set of hierarchies are defined as a result of which the underlying data combination forms the Objective function X variables. Available hierarchies list shows only the regular list type hierarchies based on the selected dataset entities.
- **Objective Function Coefficient** - Select the Business Processor from the search window which will form the Objective function X Variable Coefficients. The search window lists out only the Business Processors created on the entities of the selected dataset.
- **Operation Type** - Operation type is enables the user to Minimize/Maximize the objective function.

Click **New** to define a new application.



Selecting the Dataset

Click the **Search** button adjacent to the **Dataset** field. The **Search** window is displayed. The list of available datasets for the selected **Information Domain** will be displayed in this window.

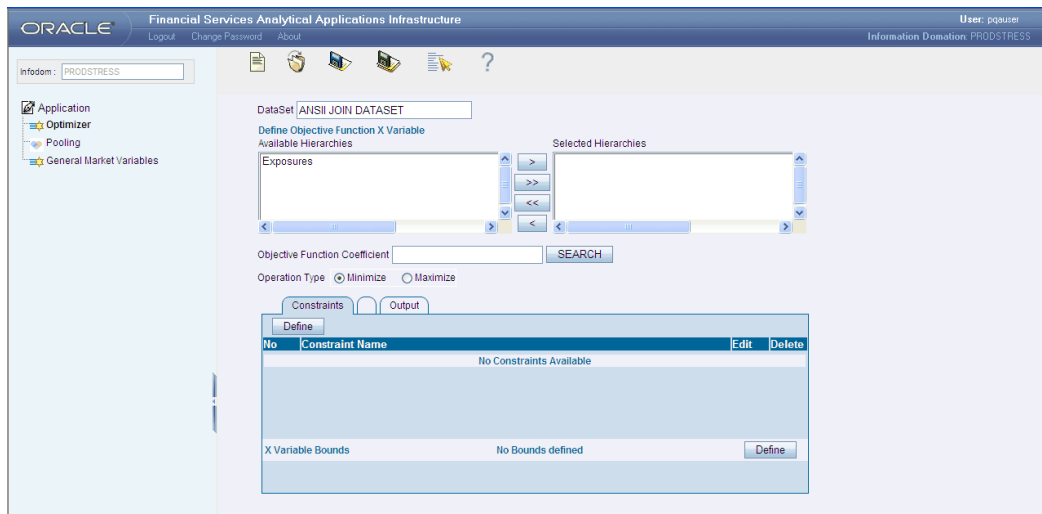


Select a dataset from the available list. Enter the dataset name/code in the **Search** and press **Enter** key to search for the specified dataset.

Note: If the underlying metadata is changed, it will not reflect in the **Optimizer** definition.

Defining Objective Function X

Variable For each Optimizer definition a set of Hierarchies has to be defined, which constitutes the X variables for the objective function.



Select the hierarchy from the **Available Hierarchies** pane and click > button to move the selected hierarchy to the **Selected Hierarchies** pane.

Note: Only the regular list hierarchies will be displayed in the Available Hierarchies pane.

Click the >> button to move all the members from the **Available Hierarchies** pane to the **Selected Hierarchies** pane.

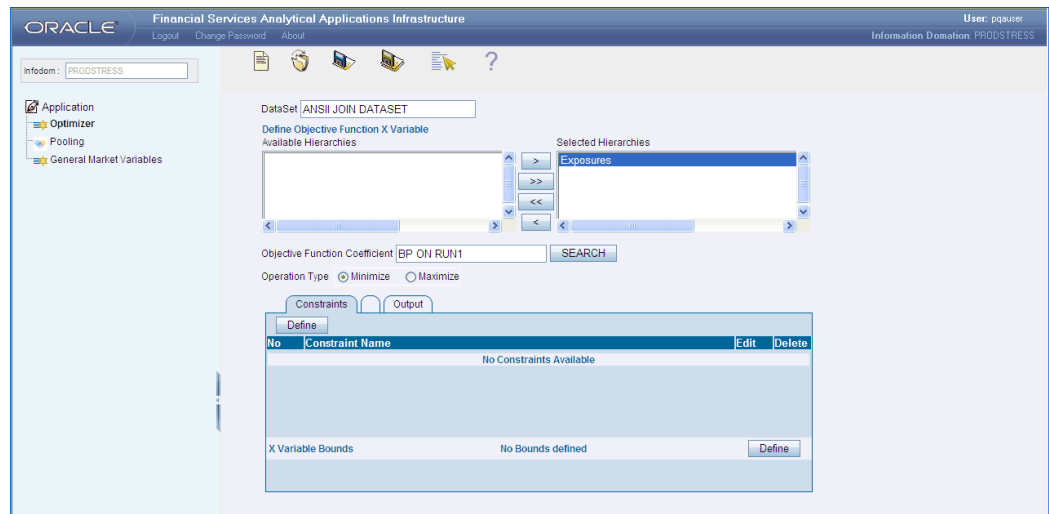
To deselect a hierarchy member from the Selected Hierarchies pane, select the member in the RHS pane and click <.

Click << button to deselect all the members from the RHS pane.

Defining Objective Function Coefficient

Click the Search button adjacent to the **Objective Function Coefficient** field. The Search window is displayed. The list of available business processors for the selected Information Domain will be displayed in this window.

Select a business processor from the available list.



The name of the selected business processor which constitutes the coefficient for the objective function X variables appears in the **Objective Function Coefficient** field.

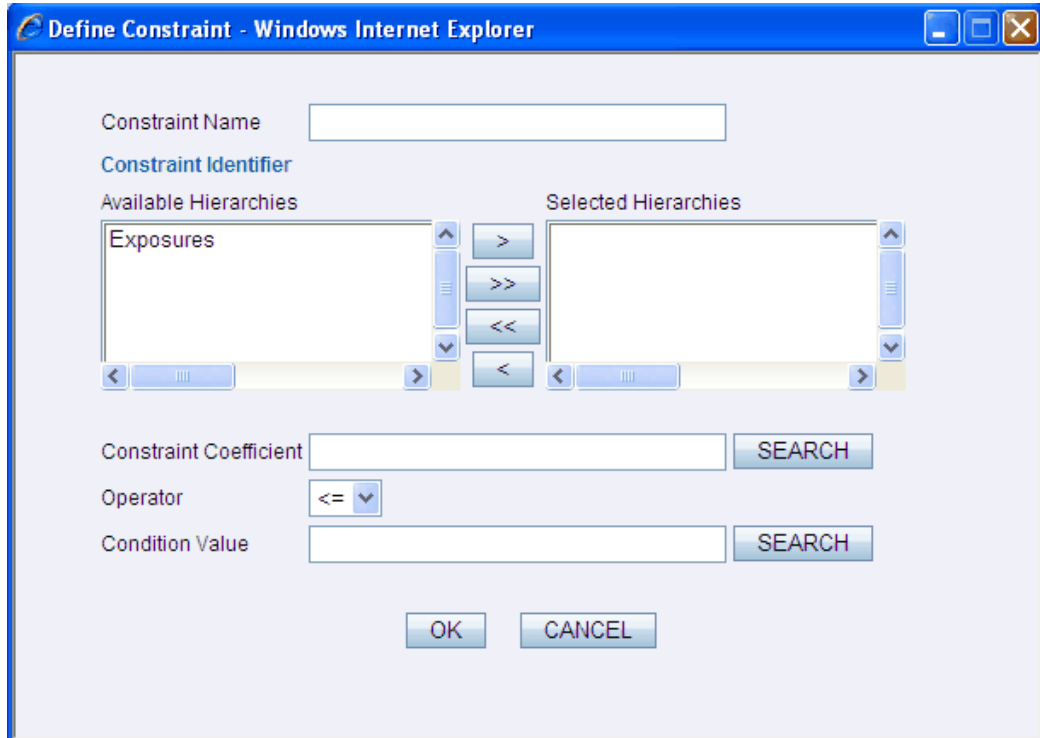
Selecting the Operation Type

The Operation Type option enables the user to Minimize/Maximize the objective function. On selecting the operation type as Minimize or Maximize, the constraint for the same has to be defined.

Defining Constraints

Defining the constraints enables the user to find the optimal value (maximal or minimal value) of a certain number of variables, given a set of constraints on these variables.

Click **Define** to specify the constraints for the optimizer definition. The **Define Constraint** window is displayed.



Enter the constraint name in the **Constraint Name** field.

Select the hierarchy from the **Available Hierarchies** pane and click > button to move the selected hierarchy to the **Selected Hierarchies** pane. The selected hierarchy will be the constraint identifier.

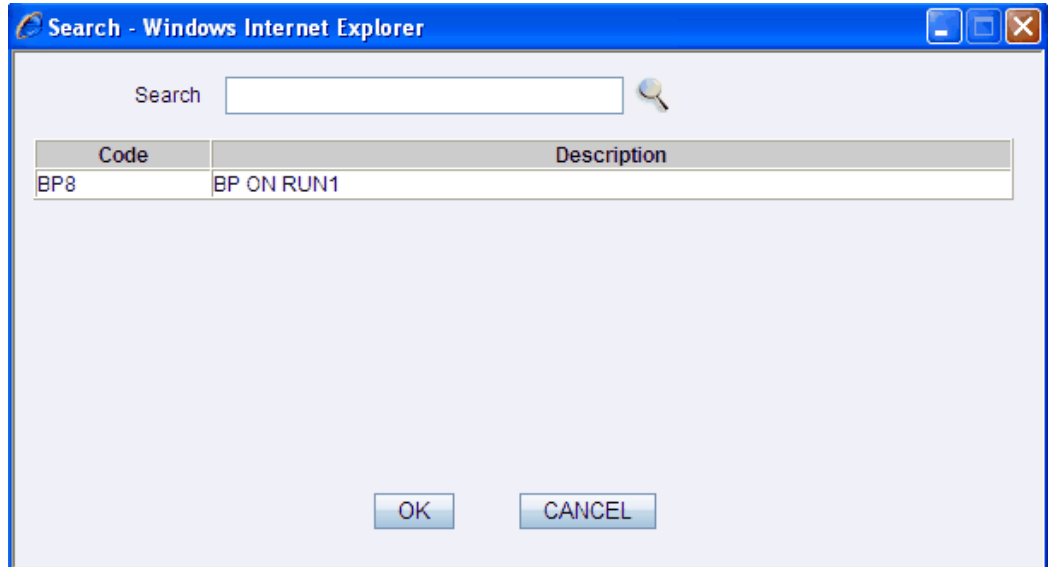
Note: Only Regular List hierarchies of selected Dataset will be displayed in the Available Hierarchies pane. The users can select more than one hierarchy to define the Constraint Identifier.

Click >> button to select all the members from the **Available Hierarchies** pane to the **Selected Hierarchies** pane.

Deselection of Members

To deselect a hierarchy member from the **Selected Hierarchies** pane, select the member in the RHS pane and click < button. Click << button to deselect all the members from the RHS pane.

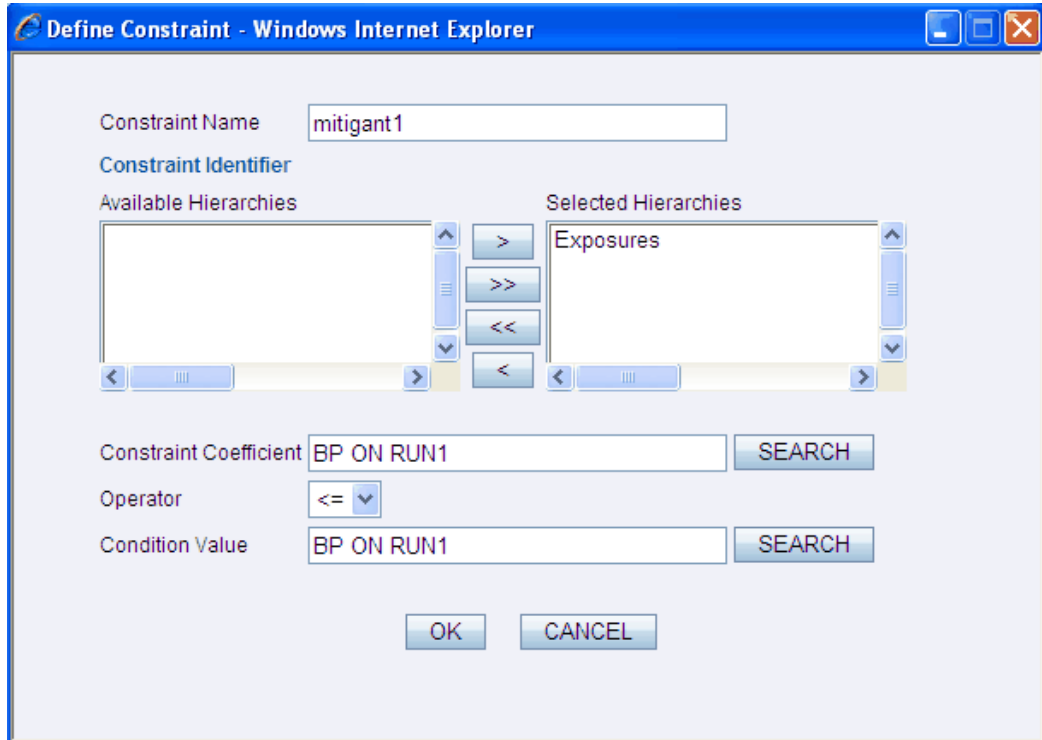
Click **Search** button adjacent to the **Constraint Coefficient** field. The search window is displayed. The list of available business processors for the selected dataset will be displayed in this window. Select a business processor from the available list.



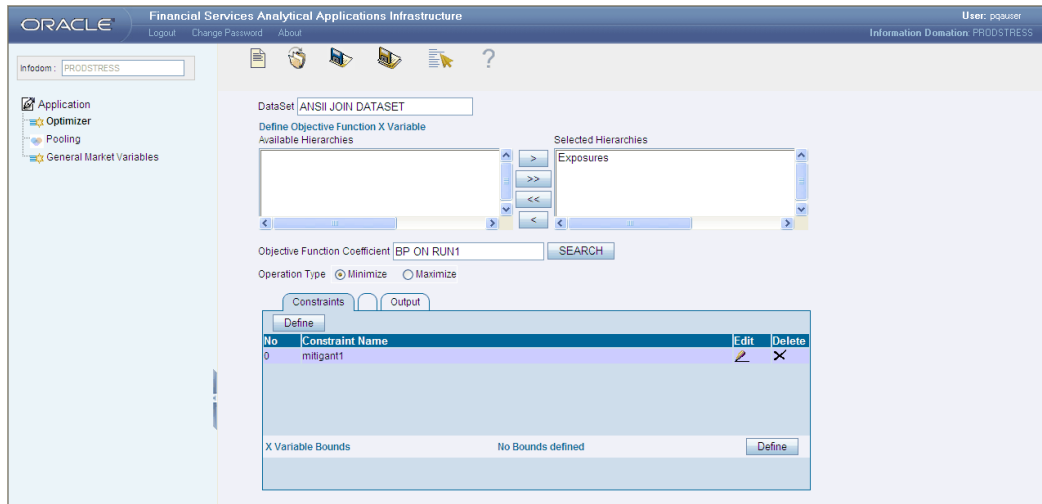
The name of the selected business processor which constitutes the constraint coefficient for the defined constraint appears in the **Constraint Coefficient** field. Enter the business processor name/code in the **Search** and press **Enter** key to search for the specified business processor.

Select the operator for the constraint definition from the **Operator** drop down list. Click **Search** button adjacent to the Condition Value field. The search window will be displayed. The list of available business processors for the selected Dataset will be displayed in this window. Select a business processor from the available list.

The name of the selected business processor which constitutes the constraint coefficient for the defined constraint appears in the **Condition Value** field..



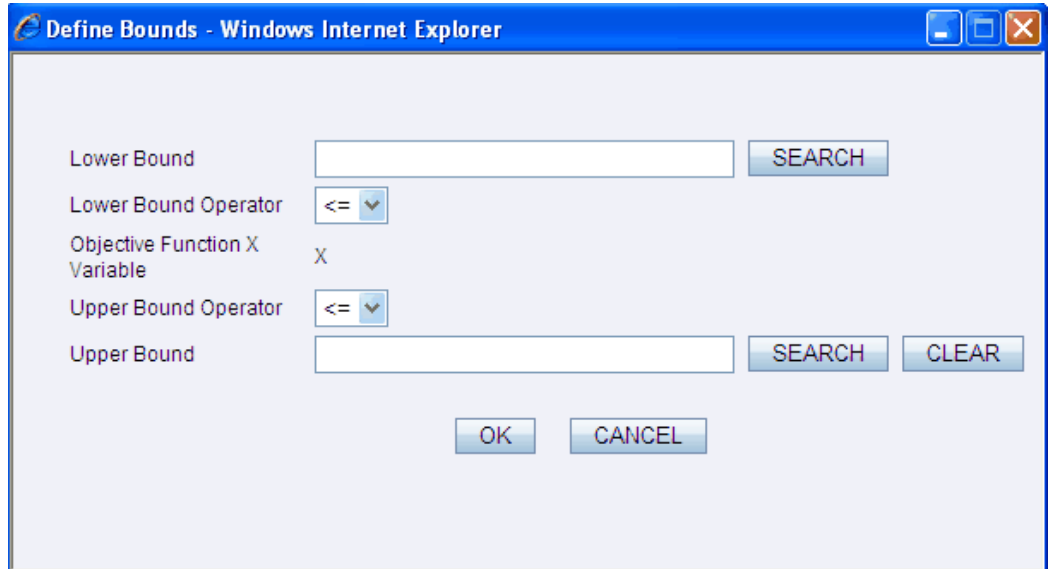
The constraint definition defined will be displayed in the **Constraints** tab pane.



Note: The user can define more than one constraint definition.

Click **Define** provided in the **X variable Bounds** grid in the **Constraints** pane, to define the lower bound and upper bound values for the constraints definition.

The **Define Bounds** window is displayed.



Click **Search** button adjacent to the **Lower Bound** field. The search window is displayed. The list of available business processors for the selected Dataset will be displayed in this window.

Select a business processor from the available list and click **OK**.

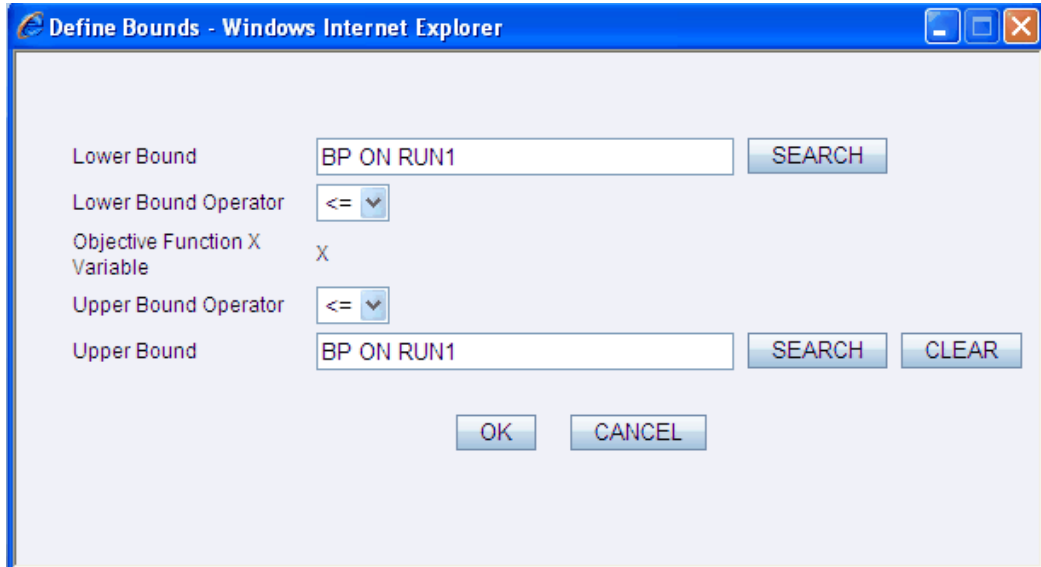
Select the lower bound operator for the constraint definition from the **Lower Bound Operator** drop down list.

Select the upper bound operator for the constraint definition from the **Upper Bound Operator** drop-down list.

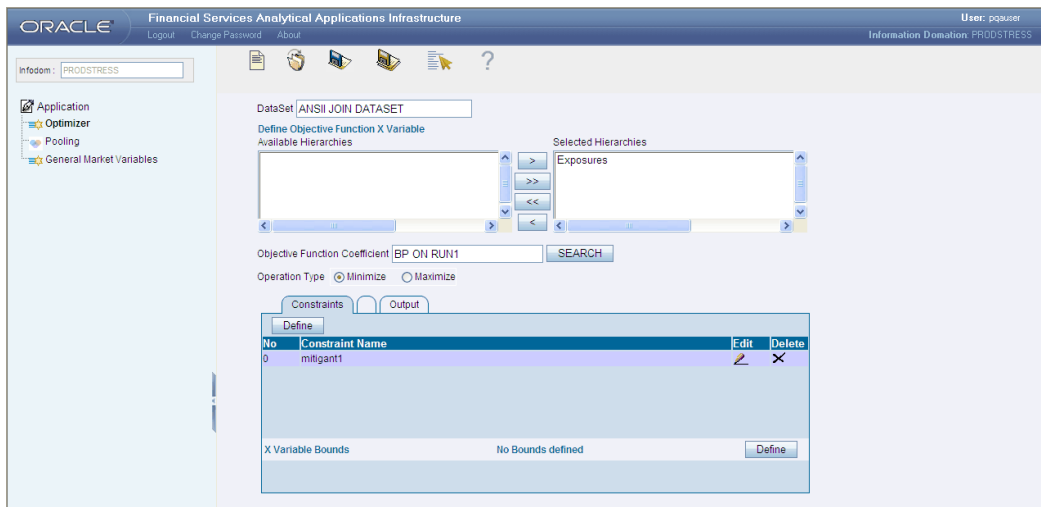
Click **Search** button adjacent to the **Upper Bound** field. The search window is displayed. The list of available business processors for the selected Dataset will be displayed in this window.

Select a business processor from the available list and click **OK**.

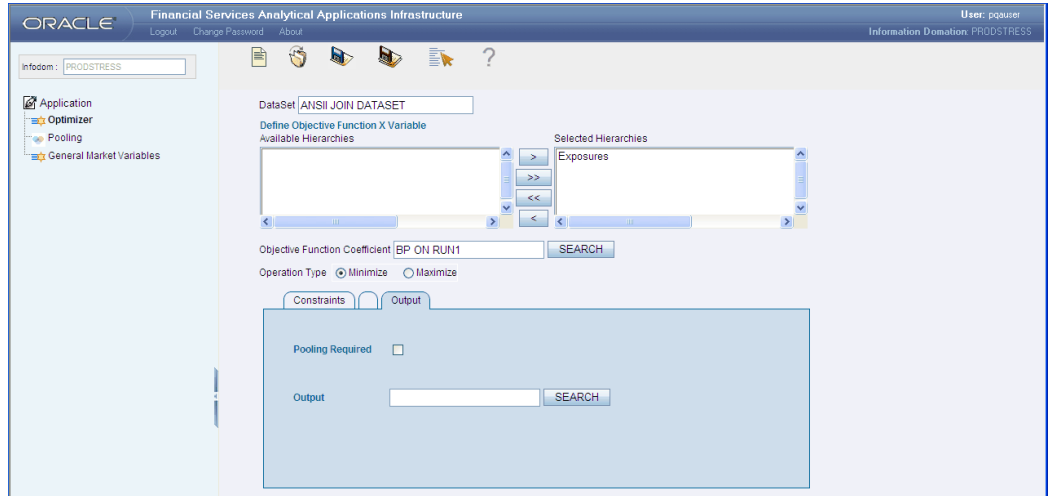
The name of the selected business processors which constitutes the lower bound and upper bound will be displayed in the **Define Bounds** window.



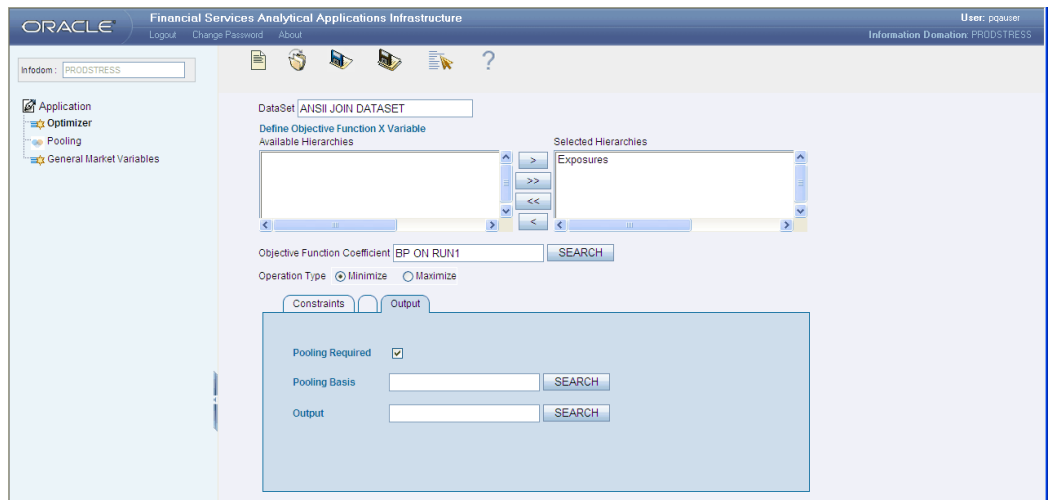
Click **OK** to include the constraints to the optimizer definition. Click **CANCEL** to discard the operation.



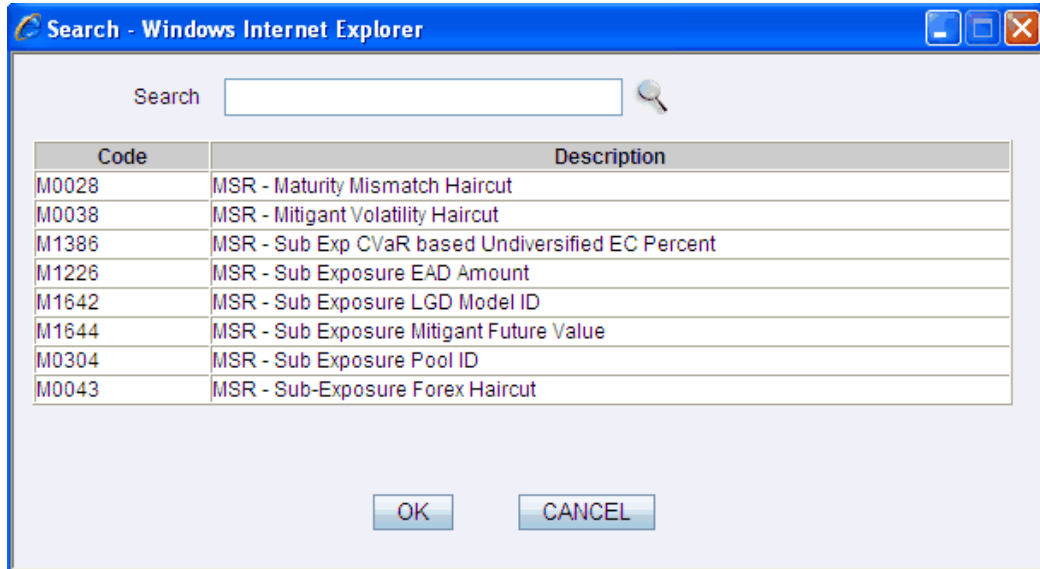
Click the **Output** tab to define the optimized output.



Select the **Pooling Required** checkbox if pooling is required for the optimizer definition. On selecting the Pooling Required check box, the user will be able to define the pooling basis.



Click the **Search** button adjacent to the Pooling Basis field. The search window is displayed. The list of available measures for the selected Dataset will be displayed in this window.



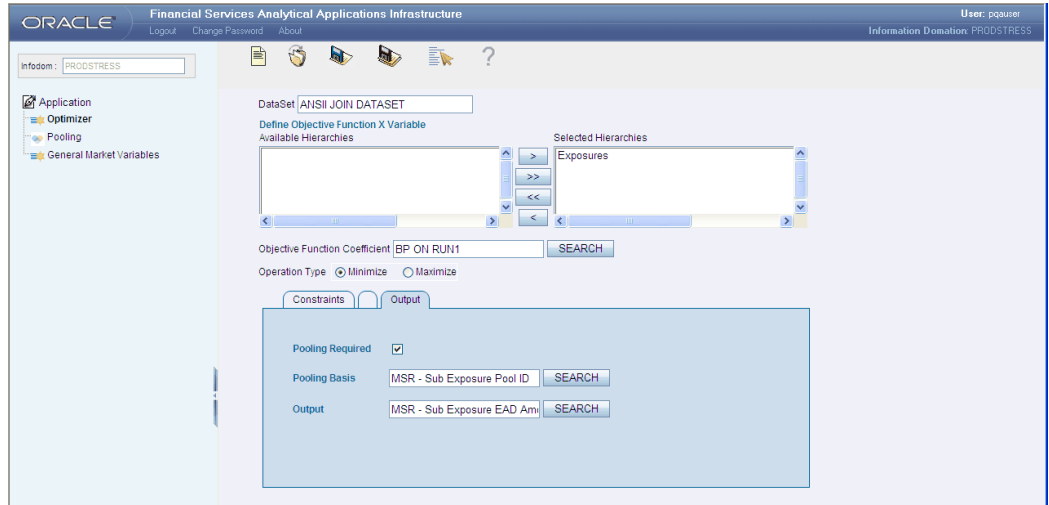
Select a measure from the available list. Click **OK** to add the selected measure as the pooling basis. Click **CANCEL** to discard the operation.

You can also enter the measure name/code in the Search textbox and press the [Enter] key to search for the specified measure. The name of the selected measure will be displayed as the Pooling Basis in the Output tab pane.

Click the **Search** button adjacent to the Output field. The search window is displayed. The list of available measures for the selected dataset will be displayed in this window.

Select a measure from the available list. Click **OK** to add the selected measure as the output. Click **CANCEL** to discard the operation.

Enter the measure name/code in the Search textbox and press the [Enter] key to search for the specified measure. The name of the selected measure will be displayed as the Output in the Output tab pane.



Click **Save** to save the optimizer definition.

Pooling

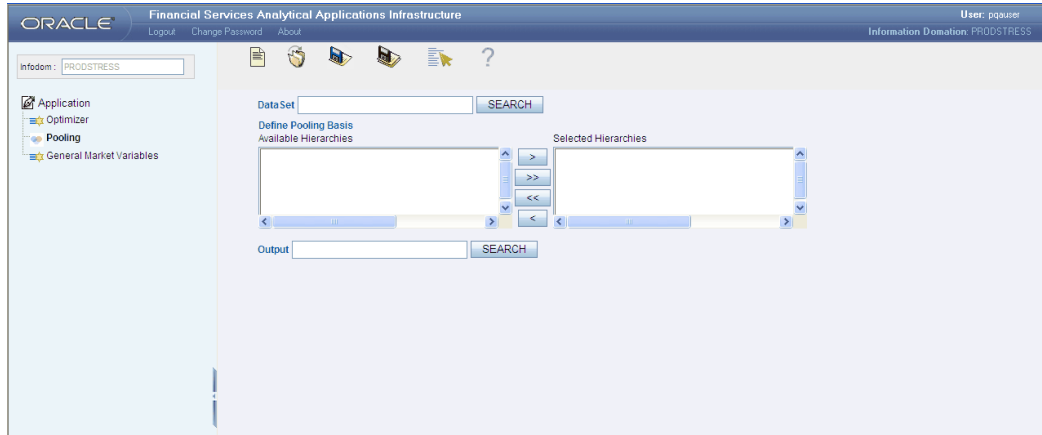
Pooling is the process by which can generate the disjoined records out of larger set with setting unique identifier to each disjoined records set.

The **Pooling** feature enables the user to configure the required mitigants to pool the exposures and browse through them later to view the definitions. All the pooling rules will get into the normal process flow and can be added as tasks for a run.

This Pooling framework enables the user to configure the intended data attributes for which the pooling is needed to be performed and eventually break down to smaller sets for ease of processing. The Pooling definitions can be added as process members in OFSAA Infrastructure PR2 framework.

Select the Production Information Domain in the OFSAA Infrastructure Splash screen. Select **Modeling Framework > Application**. The application screen will be displayed. In the LHS pane, select Application > Pooling. The Pooling screen is displayed.

Note: Only those users mapped with the Business Analyst role, with the POOLADD function mapped to it can access the Pooling screen.

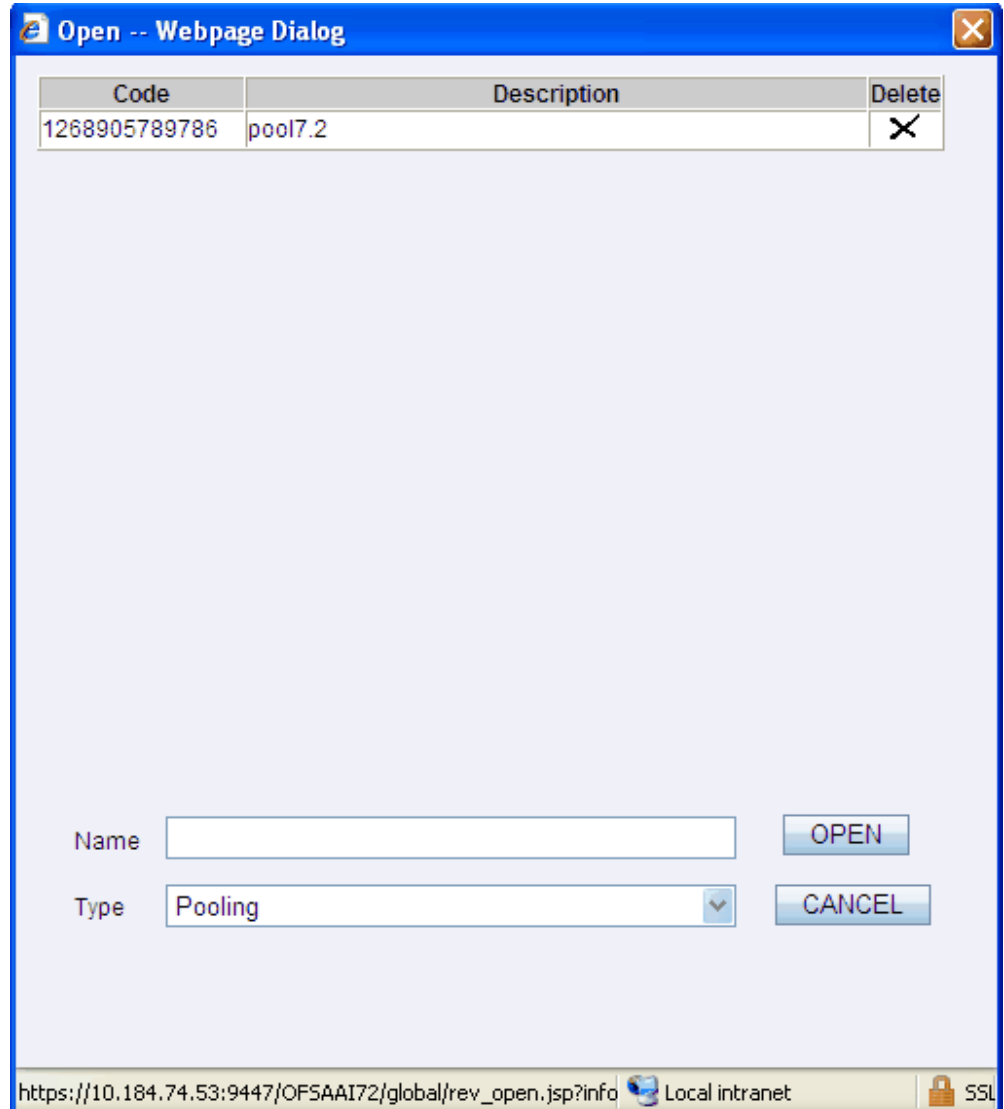


The Pooling Toolbar



The Pooling toolbar provided just above the data area in the Pooling screen displays the following buttons:

- **New** - will help you to define a new pooling definition. Click New to add a new definition.
- **Open** - helps you to open an existing definition.

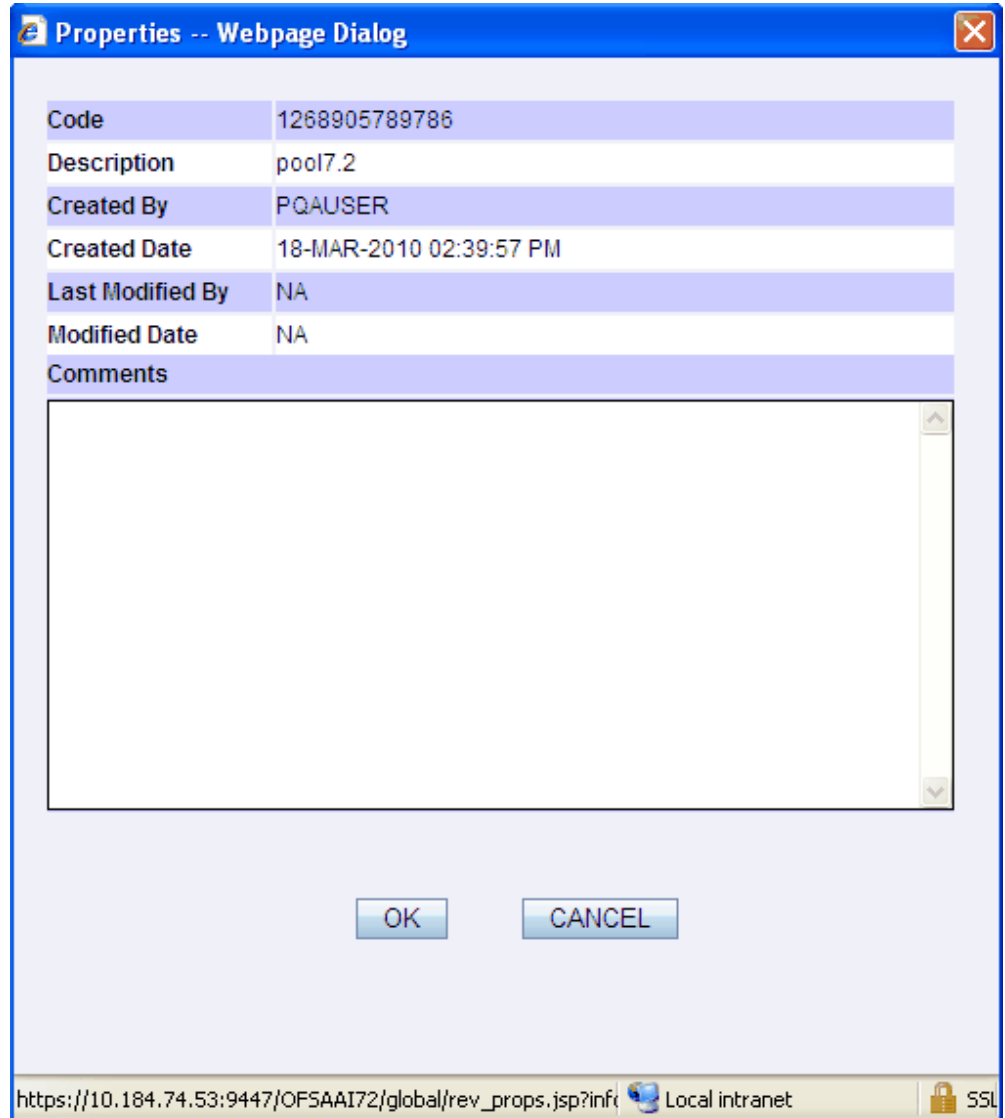


Select the existing definition from the list presented in the window. The name of the selected pooling definition appears in the Name field. Click **Open** to open the pooling definition or click **Cancel** to exit the window and return to the main screen.

Click **Delete** icon to delete the selected pooling definition. When you click the delete option, a message will appear requesting the user to confirm the delete operation. Click **Yes** to clear the confirmatory message and delete the selected pooling definition. Click **No** to cancel the delete operation.

- **Save** - helps you save a new pooling definition or modified an existing definition. To perform the same, click Save. A save window will be displayed. This window displays the existing pooling definitions available under the selected Information Domain. Enter the name for the new pooling definition in the **Name** field. Click Save. A confirmation message will be displayed.

- **Save As** - If you are working on an existing pooling definition and wish to save it under a new Name, click the Save As option. On clicking Save As, the Save Screen is displayed. Enter a name for the pooling definition in the name field.
- **Properties** - Click the Properties option. The **Properties** window is displayed. The window displays the code, description, name of the user who has created the application along with the date and time of creation. It also displays the name of the user who has last modified the pooling definition along with the date and time of the last modification.

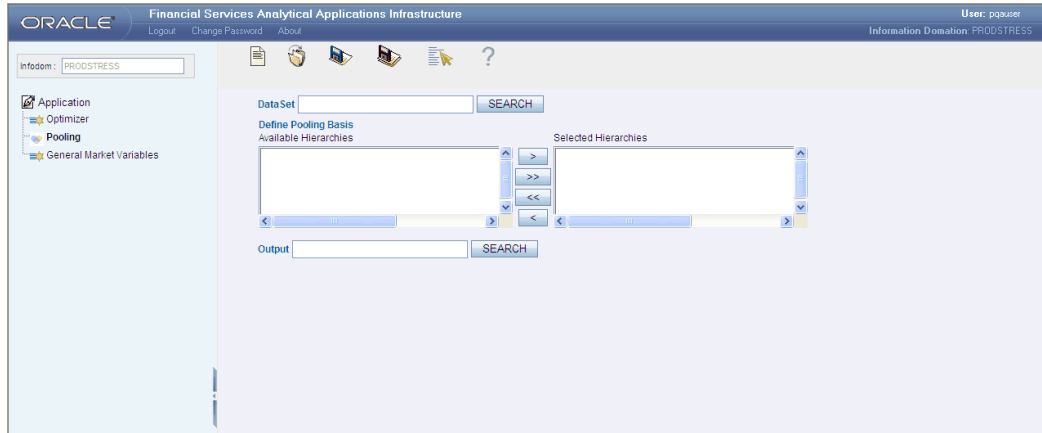


The user can display the comments in the **Comments** pane in the **Properties** window while defining the pooling definition. Click **OK** to close the Properties window.

- **Help** - The Help option provides online help for users.

Defining a Pool

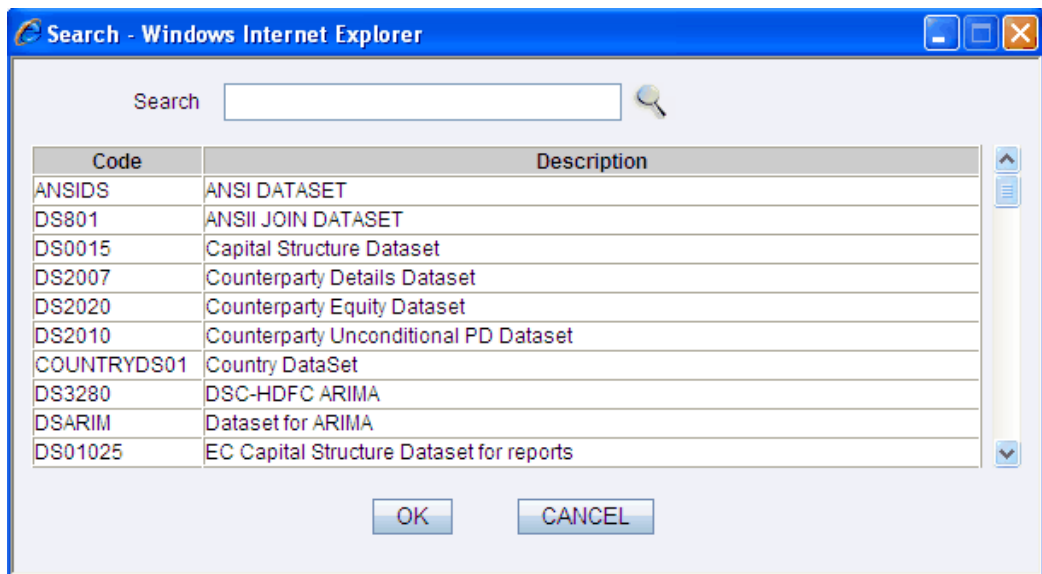
Click **New** to define a new pool definition.



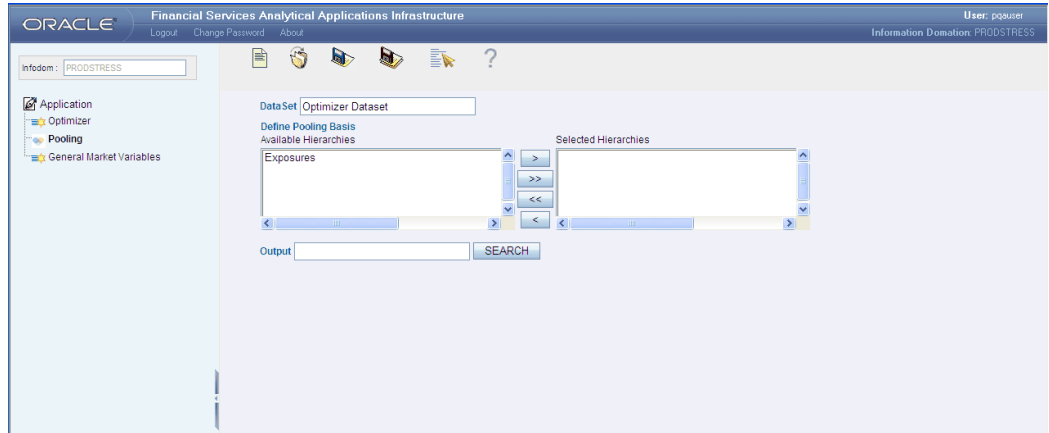
Note: Related Datasets should be defined for the selected infodom. Regular List hierarchies for Pooling Basis and a measure to update the Pool Id should be defined on dataset tables.

Selecting the Dataset

Click **Search** button adjacent to the Dataset field. The search window is displayed. The list of available datasets for the selected information domain will be displayed in the search window.



Select a **Dataset** from the available list and click **OK**.



The selected Dataset name will be displayed in the Dataset field. On selection of the dataset, the hierarchies defined for the selected Dataset will be displayed in the **Available Hierarchies** pane.

Select the hierarchy from the **Available Hierarchies** pane and click > button to move the selected hierarchy to the **Selected Hierarchies** pane.

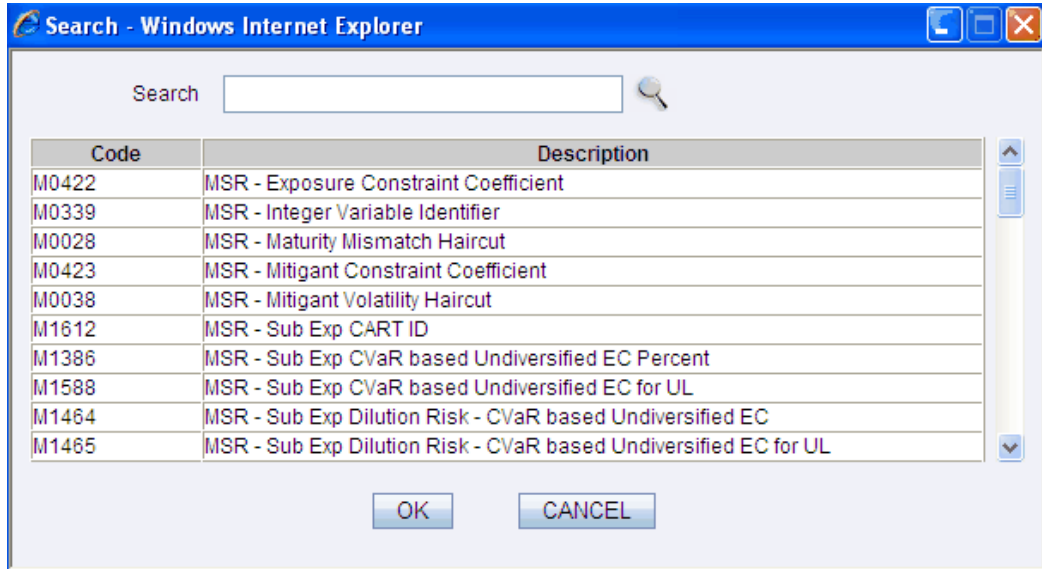
Click >> button to select all the members from the **Available Hierarchies** pane to the **Selected Hierarchies** pane.

Deselection of Members

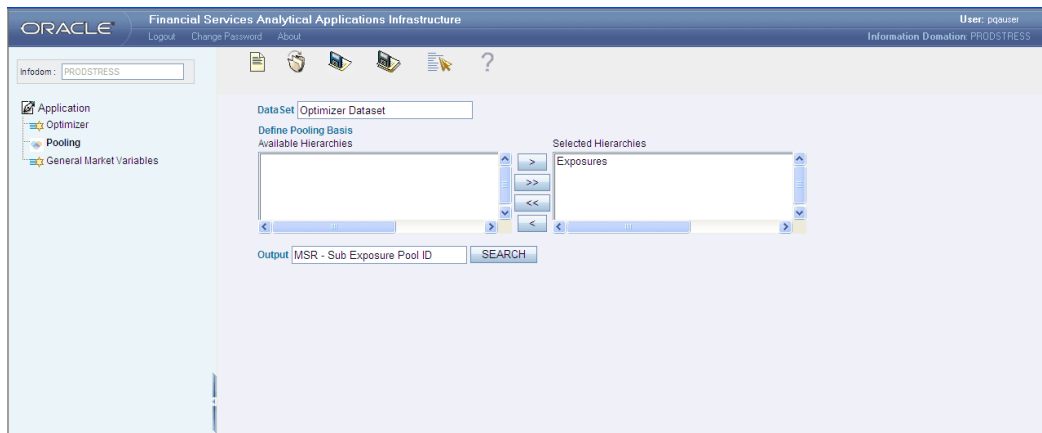
To deselect a hierarchy member from the **Selected Hierarchies** pane, select the member in the RHS pane and click < button. Click << button to deselect all the members from the RHS pane.

Defining the Output

Click **Search** button adjacent to the Output field. The search window is displayed. The list of available measures for the selected dataset will be displayed in the search window.



Select a measure from the available list. Enter the measure name/code in the **Search** field and click Search button to search for the specified measure. Click **OK** to assign the selected measure as the output. Click **CANCEL** to discard the operation.



The name of the selected measure appears in the **Output** field. Click **Save** to save the pool definition.

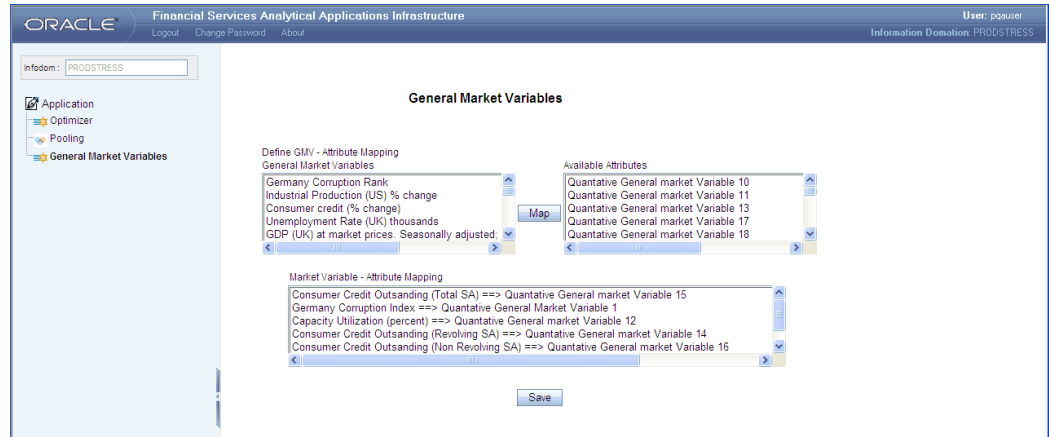
Note: The optimizer and pooling definitions can be added as a process member to the process definition and can be executed from the Manage Run screen of Rules Framework.

General Market Variables

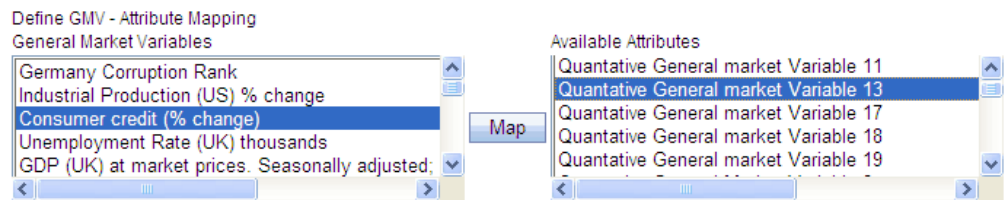
The another application available in the Modeling Framework of OFSAA Infrastructure is the utility that enables you to map the available General Market Variables to the

available Attributes.

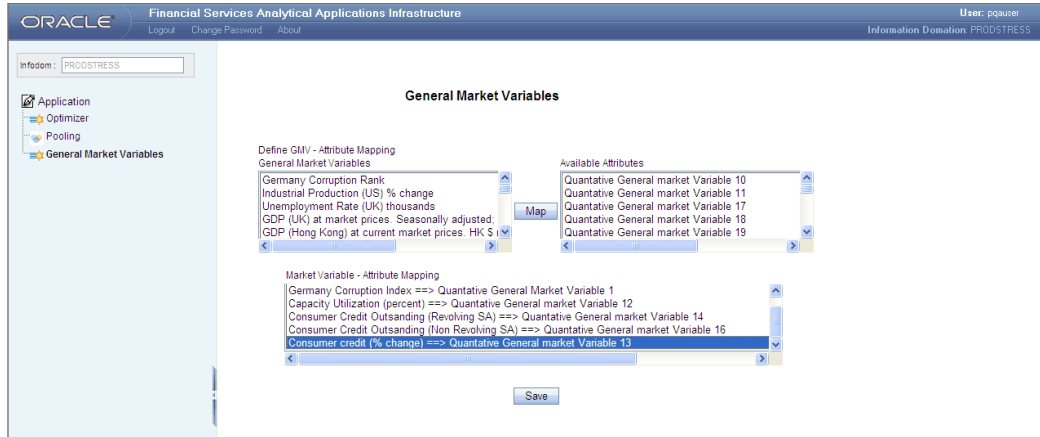
Select the Production Information Domain in the OFSAA Infrastructure Splash screen. Select **Modeling Framework > Application**. The **Application** screen will be displayed. In the LHS pane, select **Application > General market Variables**. The General Market Variables screen is displayed.



In the **General Market Variable** pane, select the Variable to be mapped. Select the Attribute to which you wish to map the selected Variable in the Available Attributes pane.



Click **Map** button. The GMV – Attribute mapping will be displayed in the **Market Variable - Attribute Mapping** pane.



Click **Save** to save the mapping. A message window will be displayed asking if you want to populate the GMV Entity.

Click **Cancel** if you do not wish to populate the General Market Variable table with this mapping. Clicking **OK** in the message window, the GMV table will be populated with this mapping and a confirmation message will be displayed stating that the GMV Entity has been populated successfully.

If you click **OK** in this window, another message window is displayed asking whether you wish to generate Business Metadata based on this mapping. Clicking **OK**, the system creates either a BI hierarchy or a Measure based on the mapped column and a confirmation message will be displayed stating that the Metadata has been generated successfully.

The metadata generation will be dependent on the pre-configuration of the production information domain.

Modeling - Sandbox Infodom

Model Management

The OFSAA Infrastructure Modeling Environment is capable of performing statistical analysis using historical data. It relies on pre-built statistical functions to build models. The framework can be used for prediction (using the pre-defined models) and also for validation of the existing models. Models can also be used to measure/quantify risk.

Through **Model Management**, multiple models can be constructed based on the required set of parameters and output specification.

Models are built based on various Techniques. A technique is associated with the executable and related parameters as per the business purpose have to be input by the user.

The metadata abstraction layer is actively used in the definition of models. Underlying metadata objects such as Measures, Hierarchies, and Datasets are used along with

statistical techniques in the definition of models.

Pre-requisites

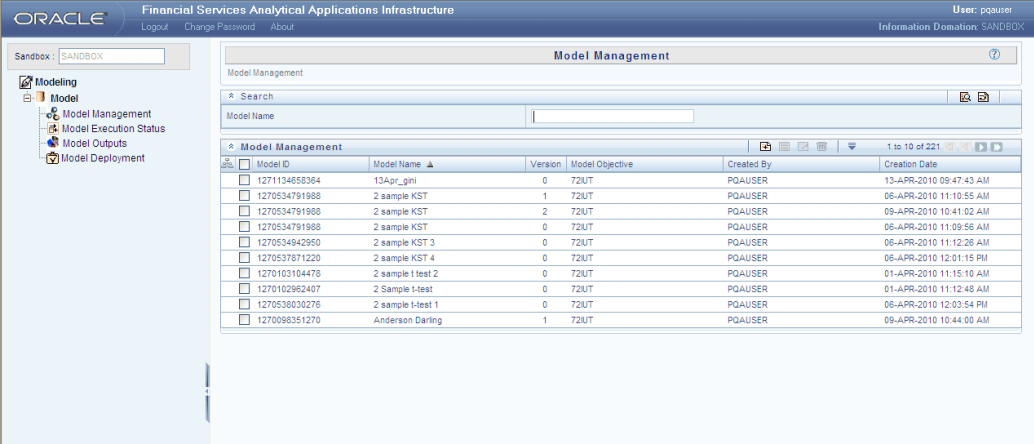
Ensure that the sandbox is populated with the required variables before defining the Model. Please refer to the Sandbox Data Maintenance section for information on populating the sandbox.

Accessing Model Management

In the OFSAA Infrastructure Splash screen, select a **Sandbox Information Domain** in the Connected to field.

In the LHS menu, select **Advanced Analytics Infrastructure > Modeling**. The Modeling Framework screen is displayed. Click Model Management. The **Model Management** screen is displayed.

Note: The Modeling link is available only if the user is mapped to any of the following functions: VARDEF, VARTRANS, MDLDEF, MDLEXEC, MDLOUTPUT, MDLDEPLOY, MDLCALIB or MDLAUTH functions.



Model ID	Model Name	Version	Model Objective	Created By	Creation Date
1271134653364	13Apr_gini	0	72UT	PQAUSER	13-APR-2010 09:47:43 AM
1270534791988	2 sample KST	1	72UT	PQAUSER	06-APR-2010 11:10:55 AM
1270534791988	2 sample KST	2	72UT	PQAUSER	09-APR-2010 10:41:02 AM
1270534791988	2 sample KST	0	72UT	PQAUSER	06-APR-2010 11:09:56 AM
1270534942950	2 sample KST 3	0	72UT	PQAUSER	06-APR-2010 11:12:26 AM
1270537871220	2 sample KST 4	0	72UT	PQAUSER	06-APR-2010 12:01:15 PM
1270103104476	2 sample 1-test 2	0	72UT	PQAUSER	01-APR-2010 11:15:10 AM
1270102962407	2 Sample 1-test	0	72UT	PQAUSER	01-APR-2010 11:12:48 AM
1270536030276	2 sample 1-test 1	0	72UT	PQAUSER	06-APR-2010 12:03:54 PM
1270096351270	Anderson Darling	1	72UT	PQAUSER	09-APR-2010 10:44:00 AM

A display grid with details such as Model ID, Model name, Version, Model Objective and Creation details will be displayed. A toolbar with New, View, Edit, and Delete buttons will be displayed.

Pagination Options

The number of rows to be displayed at a time can be set by clicking the Pagination Options button in the toolbar. The Pagination Options dropdown will be displayed.

The available options are 10, 25 and 50 rows. You can also enter the number of rows to be displayed in the empty field provided, select the check box and click Go.



Creating a Model

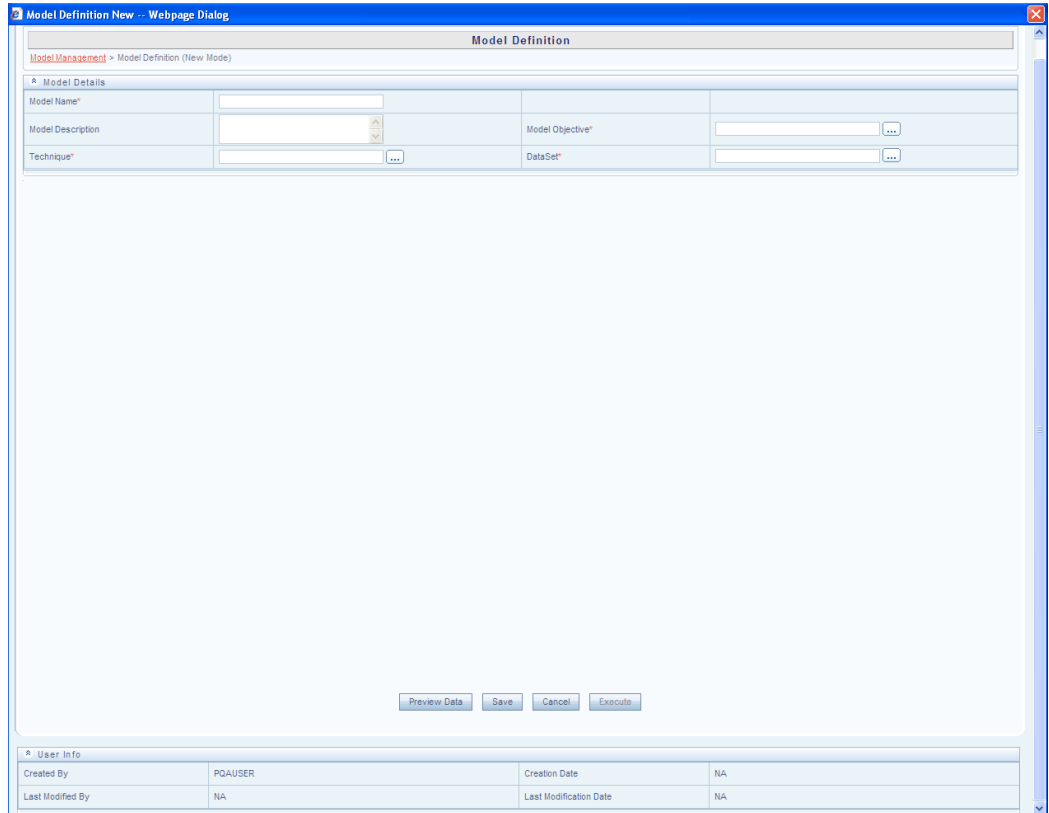
Process of creating a model is same for all the techniques in Economic Capital and Retail Pooling and it differs for OFSAA Infrastructure Operational Risk Economic Capital.

The process is explained separately for the below groups:

- Economic Capital and Retail Pooling
- OFSAA Infrastructure Operational Risk Economic Capital

Economic Capital and Retail Pooling

In the Model Management screen, click the **New** button. The **Model Definition New** window will be displayed. Please enter **Model Name**, **Model Description**, **Technique** and **Dataset** fields. The tabs that are displayed will vary depending on the technique chosen.



Enter an appropriate name for the model in the **Model Name** field.

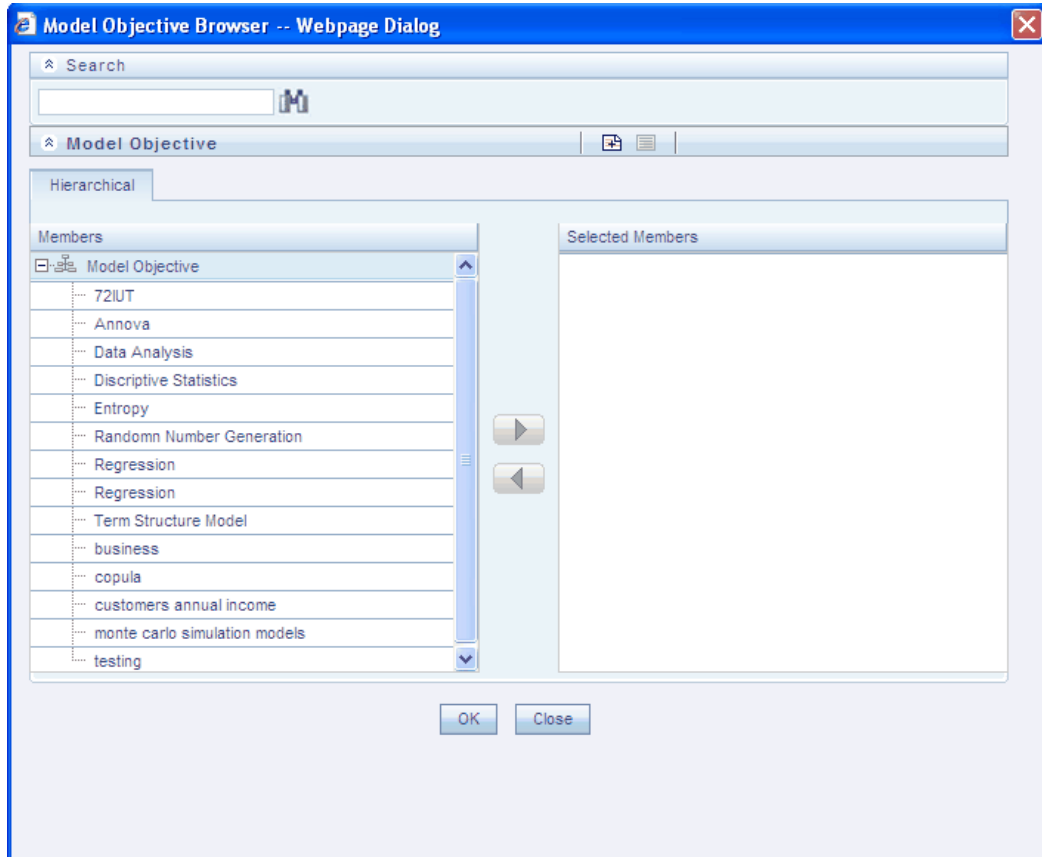
Note: If the model name exists already and the user wants to define the model with same name he will not be able to define as it is case insensitive.

Example

If a Model Name exists as "aaa", he will not be able to define another Model Name as "AAA" Enter an appropriate description for the model in the **Model Description** field.

Selecting the Model Objective

Click **Browse** button adjacent to the Model Objective field. The **Objective Browser** is displayed.



Select the Objective required for the Model definition from the **Members** pane. You can only select one Objective for a Model. You can also search for an Objective by entering the key word in the Search field and click **Search** button.

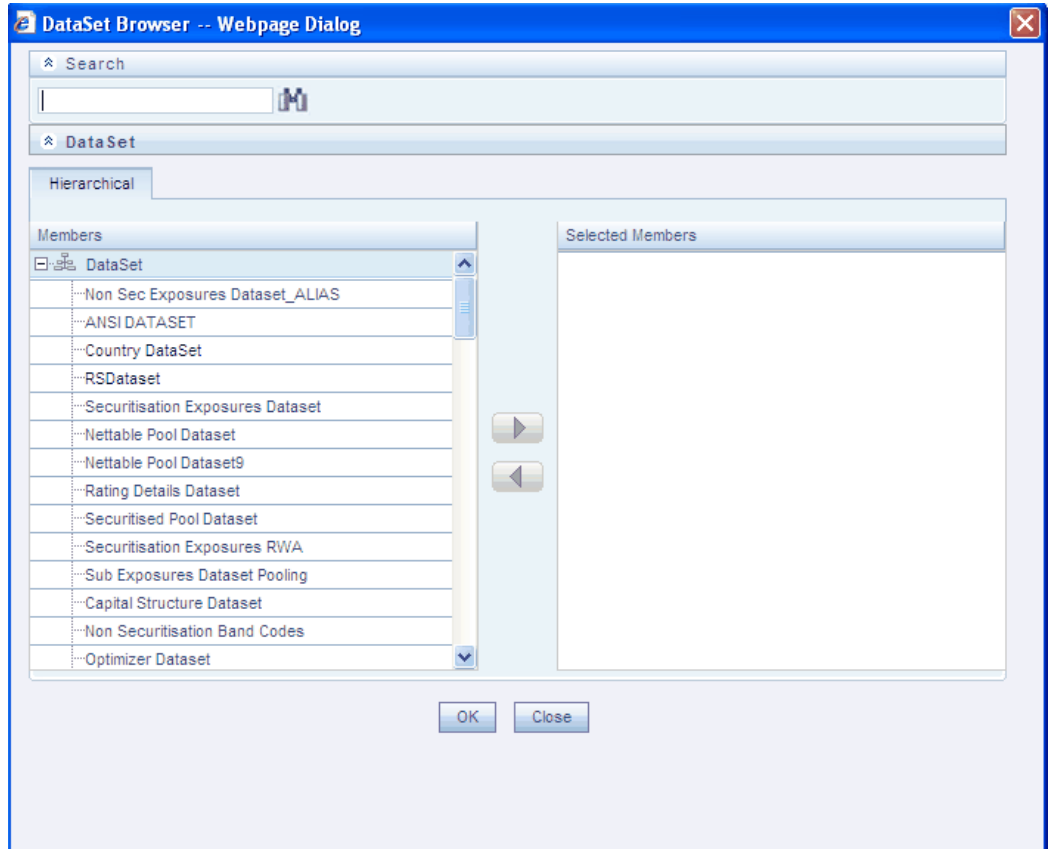
You can create a new Objective by clicking the **New** button. Specify the **Objective Name** and **Description** in the respective fields of **New Model Objective** screen and click **Save** to create a new objective.

To view an existing objective, select the same in the **Objective Browser** and click **View** button. The **New Model Objective** screen will be displayed with the **Objective ID** and **Description**. After viewing the details, click **OK** or **Close**.

Once you have selected an Objective, click **OK**. The selected objective will be displayed in the **Model Objective** field.

Selecting the Dataset

Click the **Browse** button adjacent to the **Dataset** field to select the dataset on which the model is to be based. The **Dataset Browser** is displayed.



Select the dataset in the Members pane and click > button to move it to the **Selected Members** pane. You can also double-click a dataset to move it to the **Selected Members** pane.

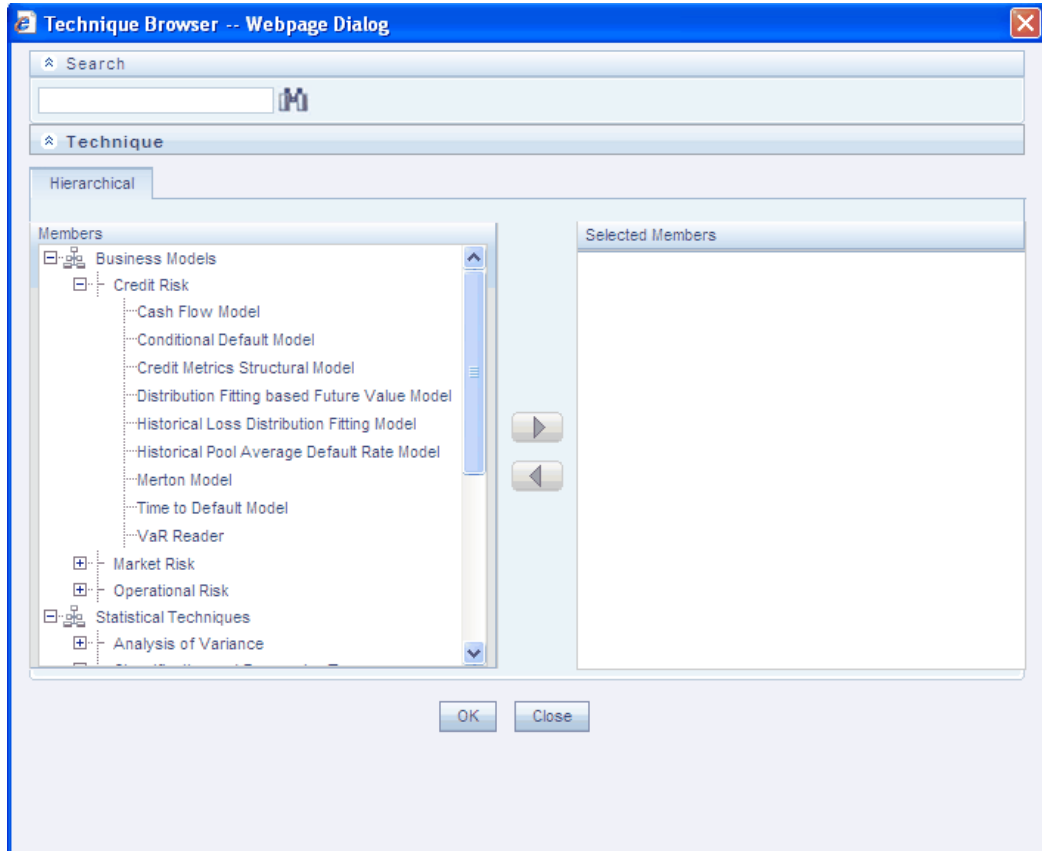
Click **OK**. The selected Dataset will be displayed in the **Dataset** field in the **Model Definition New** screen.

Selecting a Technique

Click the **Browse** button adjacent to the Technique field. The **Technique Browser** is displayed.

The various statistical techniques that are available will be displayed in the Members pane. Click the + sign to view the list of headings grouped under each head.

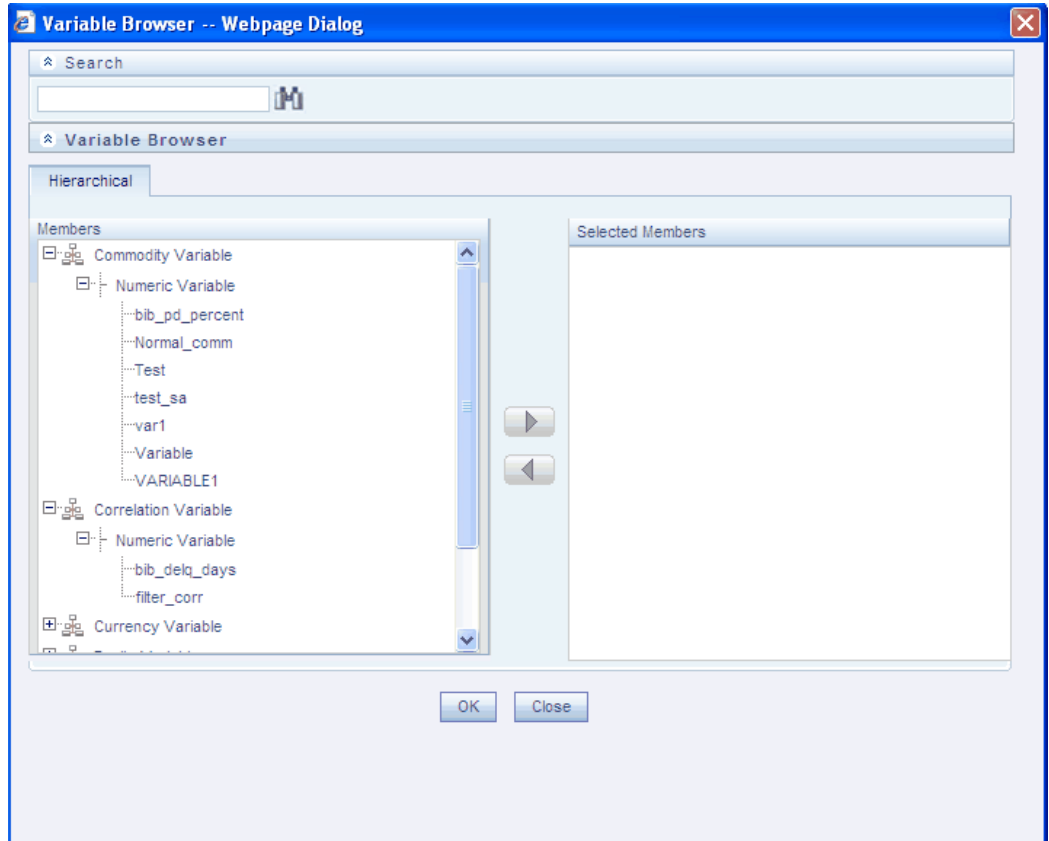
Double-click the technique name or select the technique name and click > button to move it to the **Selected Members** pane.



Click **OK**. The selected Technique will be displayed in the **Technique** field in the **Model Definition New** screen.

Selecting the Variable

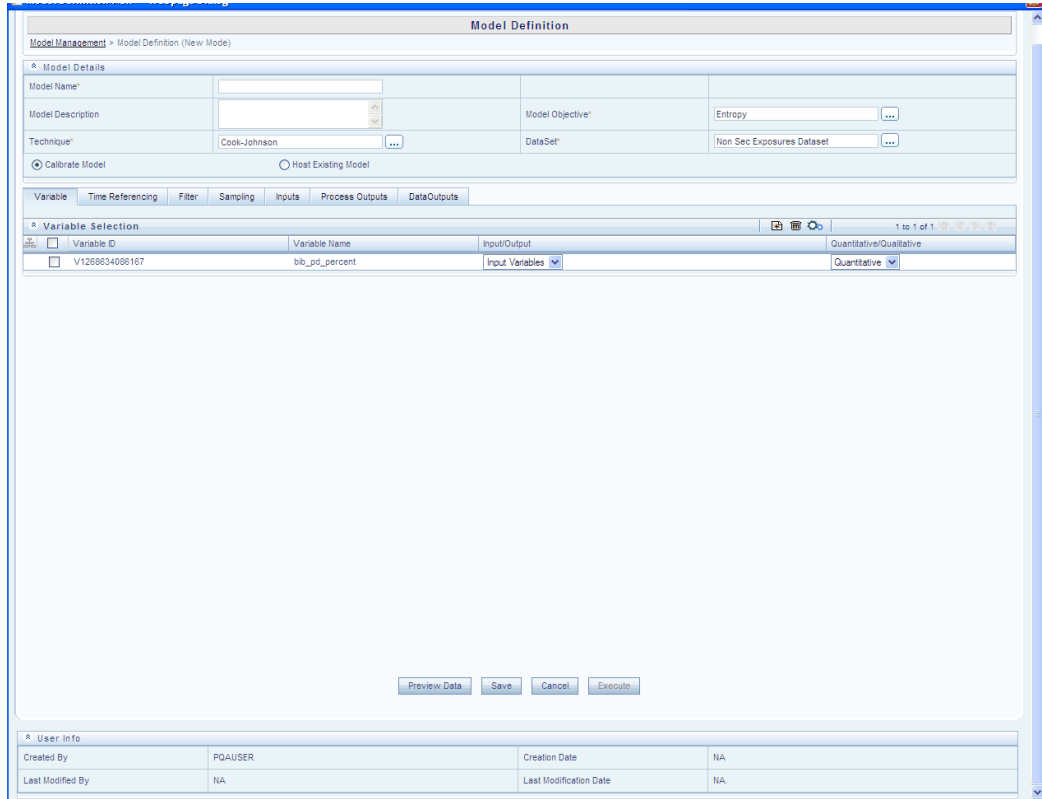
The **Variable** tab will be selected by default in the **Model Definition New** screen. In the Variable Selection tool bar, click **New** button to choose the input variables for the model definition. The **Variable Browser** window is displayed.



Select the Variable you wish to base the model definition on and click > button.

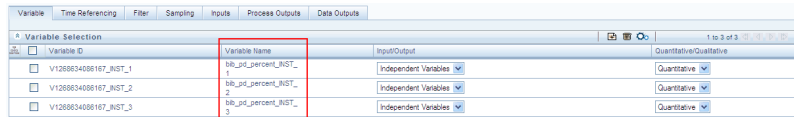
The selected variable moves to the **Selected Members** pane. You can also double-click a variable to move it to the **Selected Members** pane. Click **OK**.

The selected variable will be displayed in the **Variable Name** field in the **Add Variable** screen.



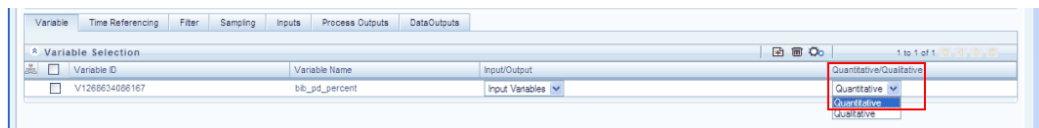
Under the **Variable Parameters** collapsible display grid, enter the variable level parameters for the selected technique.

- Multiple instances of a single variable can be selected. The variable summary grid will show a unique instance id and a corresponding instance name.



- Instances of Dummy variables cannot be created.

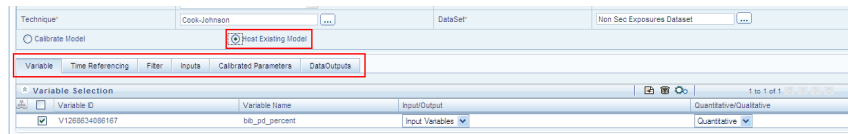
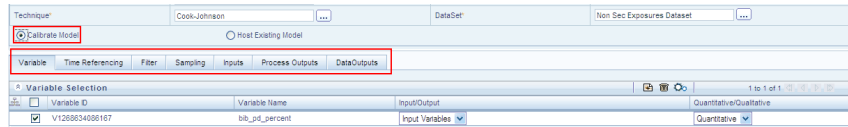
Select **Qualitative** or **Quantitative** from the drop down list depending on the Technique chosen.



Note: In the **Model Definition New** screen, there are two types of Models to select:

- Calibrate Model
- Host Existing Model

Above options are available for some techniques. The underlying tabs will change as per the above option selection. Tab change can vary from technique to technique.

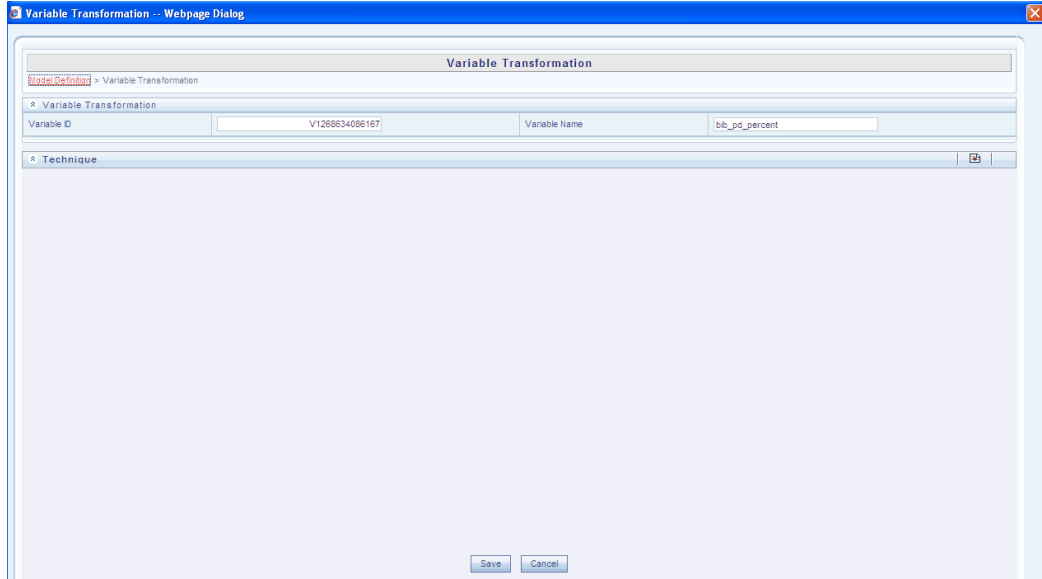


For Calibrate Model

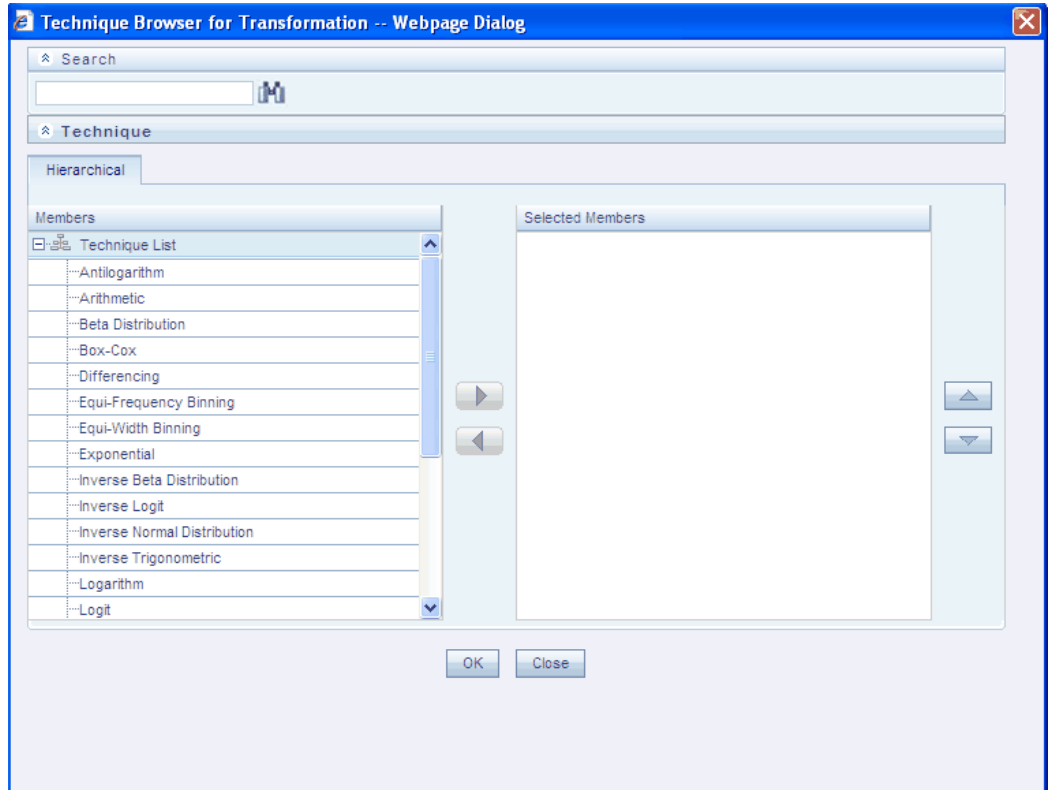
Pre-Model Transformation of Input Variable

Select a variable in the **Model Definition New** screen and click the below button. The **Variable Transformation** window is displayed.

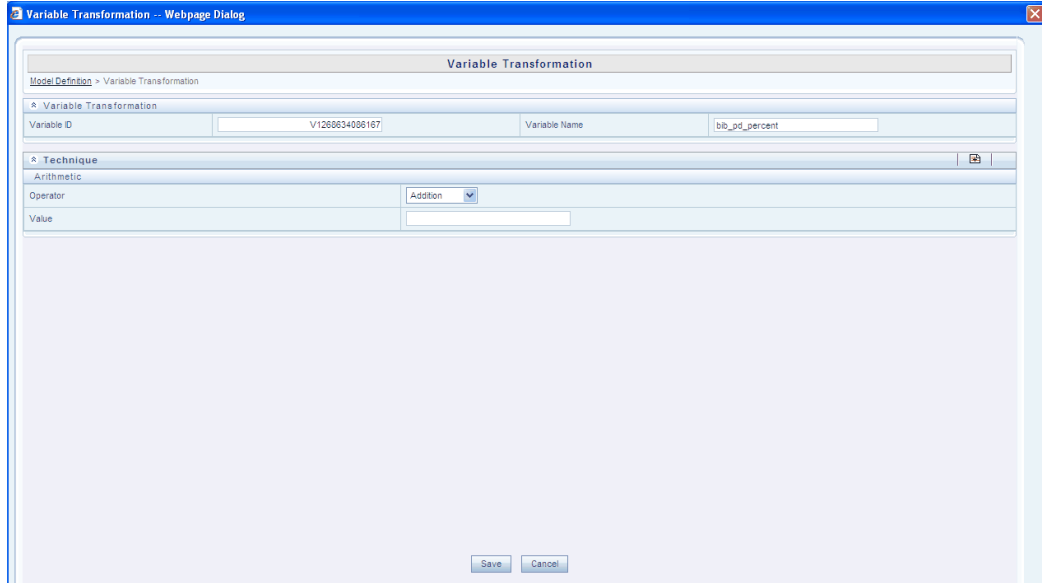




Click **Add** button in the **Techniques** collapsible grid tool bar. The **Technique Browser for Transformation** window is displayed.



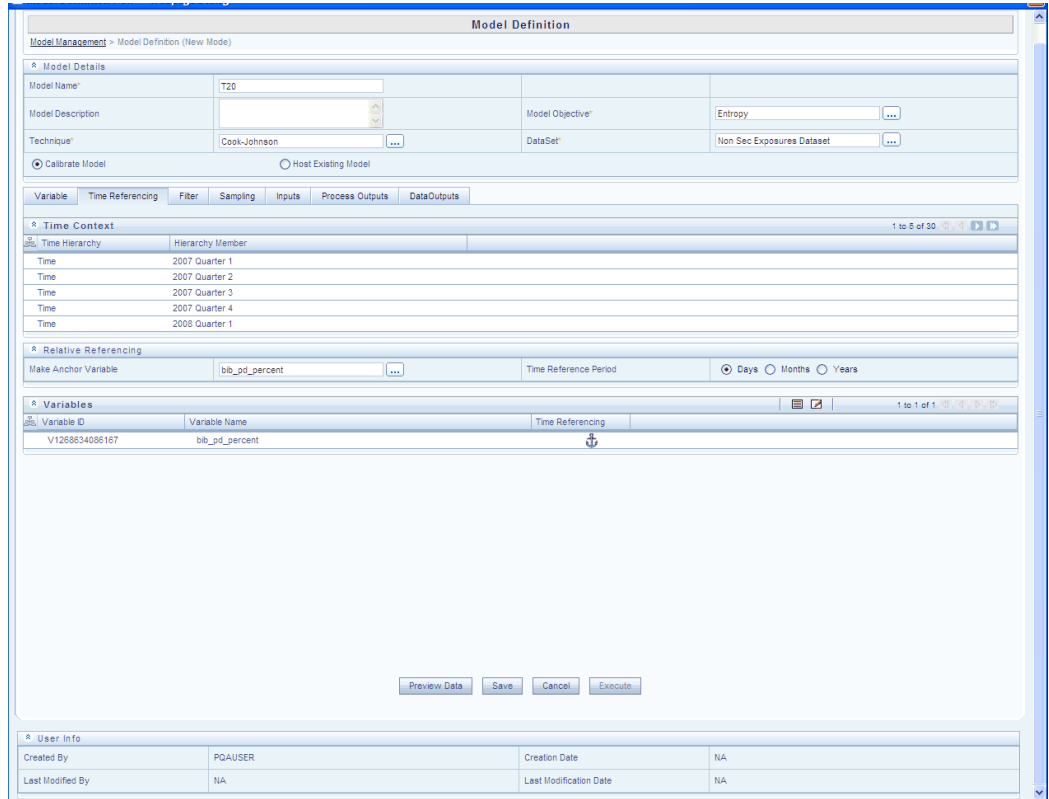
Select the required techniques for the model and click > button. Click **OK**. Depending on the techniques selected, the respective fields are displayed in the **Variable Transformation** screen – Techniques collapsible display grid.



Based on the techniques, enter the required values in the respective fields and click **Save** in the **Variable Transformation** screen.

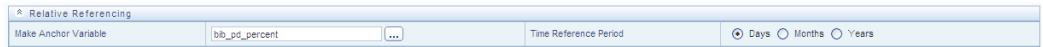
Specifying Time Referencing

The user can specify time referencing while defining a model. Time referencing permits the user to apply another level of filter or enable further slicing of the data (based on time) required for a particular Model. Select the **Time Referencing** tab in the **Model Definition New** screen.

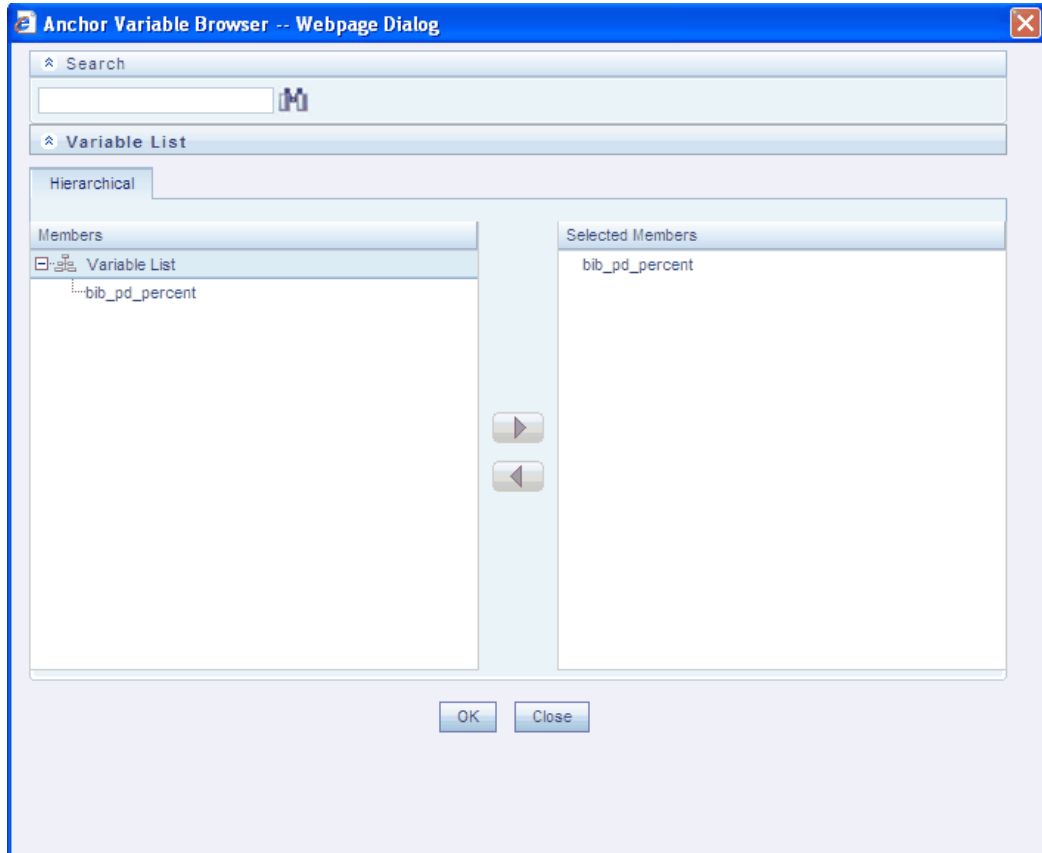


The **Time Context** collapsible display grid is displayed.

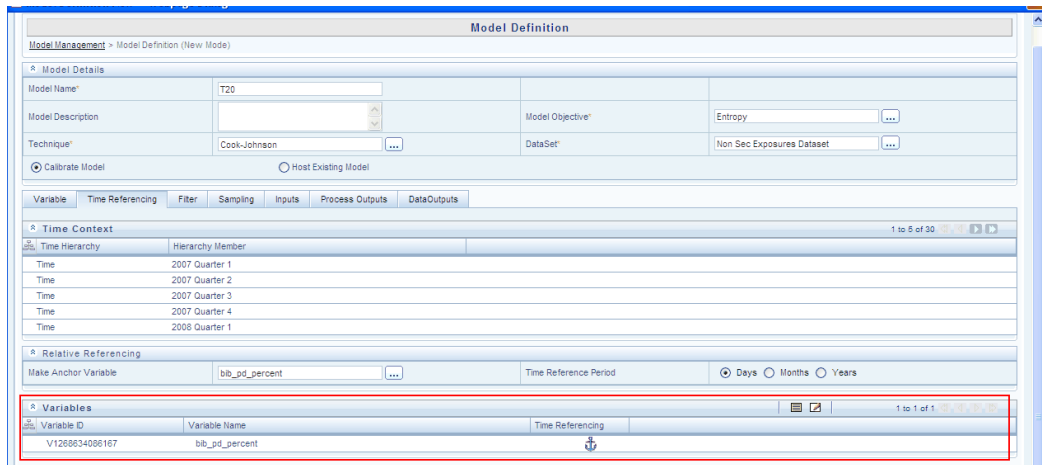
It is possible to specify which Variable is to be specified as the Anchor Variable. On selecting a variable to act as an anchor, all other variables selected for a model are referenced relative to this anchor variable. The time referencing can be in terms of days, months or years.



In the **Relative Referencing** collapsible grid, click **Search** button next to the **Make Anchor Variable** field to see the variable list.



Select the variable from the available variables list and click > button to mark it as the Anchor Variable. Click **OK**. The variables collapsible grid displays the list of variables in the model definition. The anchor variable is denoted with an anchor sign next to it as shown below.



Click **View** button in the **Variables** collapsible grid to view the variables details.
 Click the **Edit** button in the variables collapsible grid. The field adjacent to the other

variables becomes editable. Enter the relative time reference value for these variables.

The screenshot shows two parts of a software interface. The top part is titled 'Relative Referencing' and contains a 'Make Anchor Variable' field with the value 'bib_delq_days' and a 'Time Reference Period' section with radio buttons for 'Days', 'Months', and 'Years'. The bottom part is a table titled 'Variables' with columns for 'Variable ID', 'Variable Name', and 'Time Referencing'.

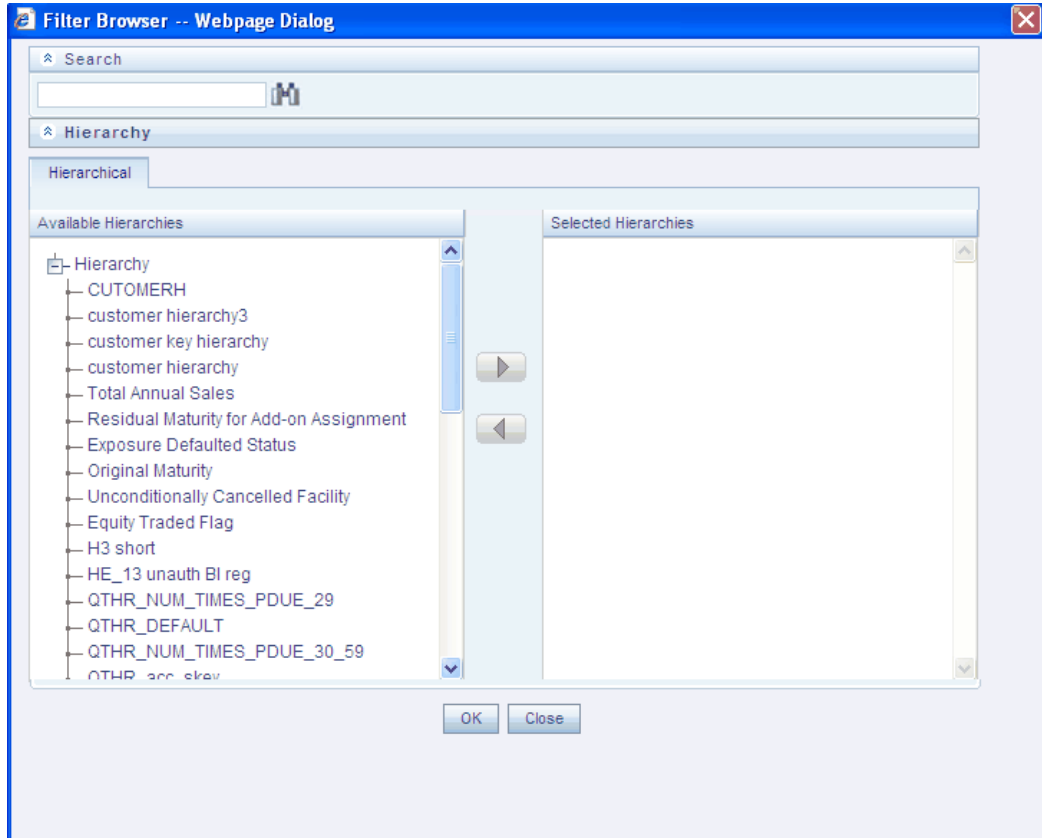
Variable ID	Variable Name	Time Referencing
V1268634086167	bib_pdl_percent	10
V1270100448776	bib_delq_days	12
V1268816327288	bib_exp_amt	12

Specifying the Filter

The user can add multiple non-time hierarchy members as filters in this screen. Select the **Filter** tab in the **Model Definition New** screen.

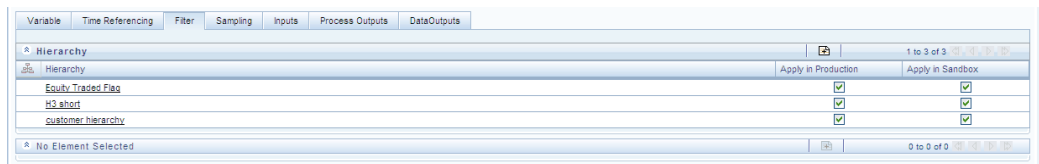
The screenshot shows the 'Model Definition' screen. The 'Filter' tab is selected. The 'Model Details' section includes fields for 'Model Name' (T20), 'Model Description', 'Technique' (Cook-Johnson), 'Model Objective' (Entropy), and 'DataSet' (Non Sec Exposures Dataset). Below the tabs, there is a 'Hierarchy' section with an 'Add' button and a 'No Element Selected' message.

Click **Add** button in the **Hierarchy** collapsible grid. The **Filter Browser** is displayed. All the available non-time hierarchies are displayed in this window.



Select the required hierarchy filter and click > button. Click **OK**. The selected hierarchy will be displayed in the **Hierarchy** collapsible display grid.

The filters can be on Production Infodom and also in Sandbox Infodom. This option can be controlled by using the check box found adjacent to the hierarchies selected.



Specifying Sampling

The user can specify the type of sample on which the model will run in this screen.

There are four options available:

- Training
- Test
- Control

- Stratified

Select the **Sampling** tab in the **Model Definition New** screen. The **Sampling** collapsible display grid is displayed.

The screenshot shows the 'Model Definition' window with the 'Sampling' tab selected. The 'Model Name' is 'T20', 'Model Objective' is 'Entropy', and 'DataSet' is 'Non Sec Exposures Dataset'. The 'Sampling' section is expanded, showing options for 'Basis' (radio buttons for '%', 'Absolute'), 'Replacements' (radio buttons for 'Yes', 'No'), and 'Stratification Basis' (a text field with a browse button). Below this, the 'Training Sample' section shows 'Training Sample' set to '100'. The 'Test Sample' section has a 'Sample Name' field and a 'Sample Size' field. The 'Control Sample' section has 'Control Hierarchy' and 'Control Hierarchy Node' fields, both with browse buttons.

Selecting the Sampling Basis

The sampling can be done either absolutely or on a percentage basis. Select the **%** or the **Absolute** option button.

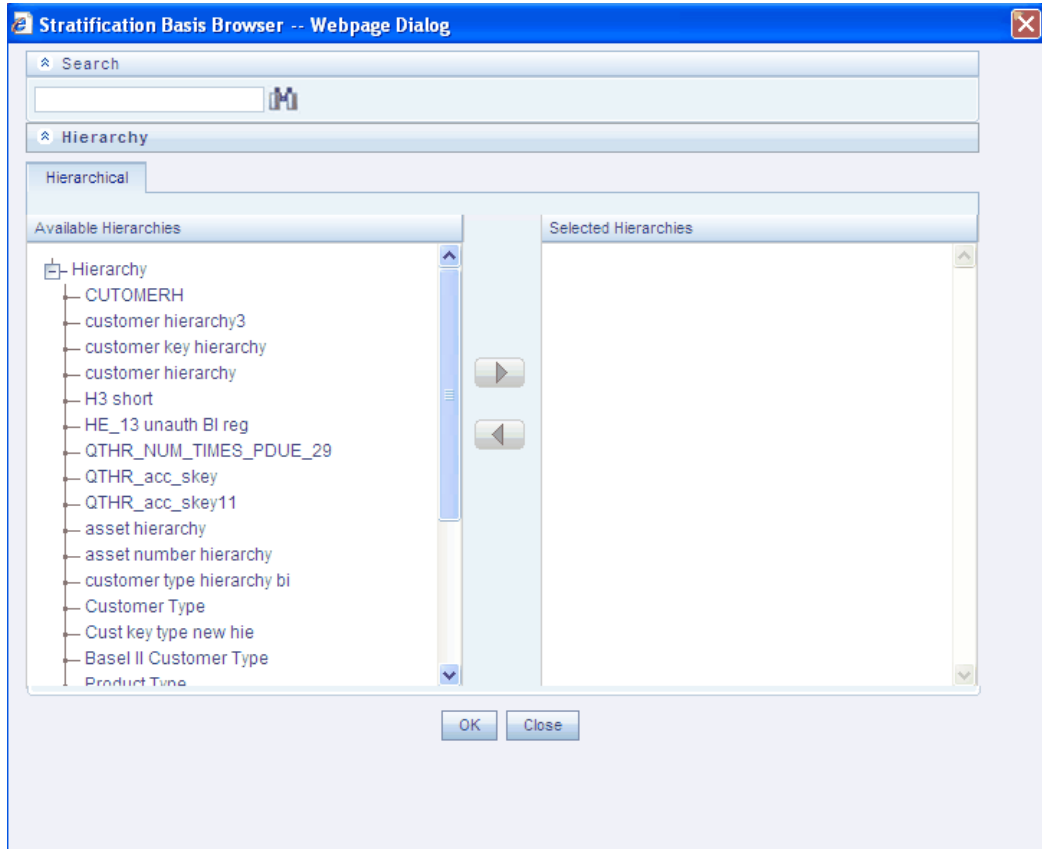
Selecting the Replacements Option

When the user configures samples, he can select with or without replacement option. When the user selects the **Yes** option, it means that a set of records can be repeated with other samples also. When the user selects the **No** option, it means that a set of records that is selected for one sample will not be repeated in another sample.

Selecting the Stratification Basis

For the stratified sampling, the user can set the hierarchy level for the strata. By stratification, we mean grouping or stratifying the records based on distinct values.

Click **Browse** button adjacent to the **Stratification Basis** field. The **Hierarchy Browser** is displayed.



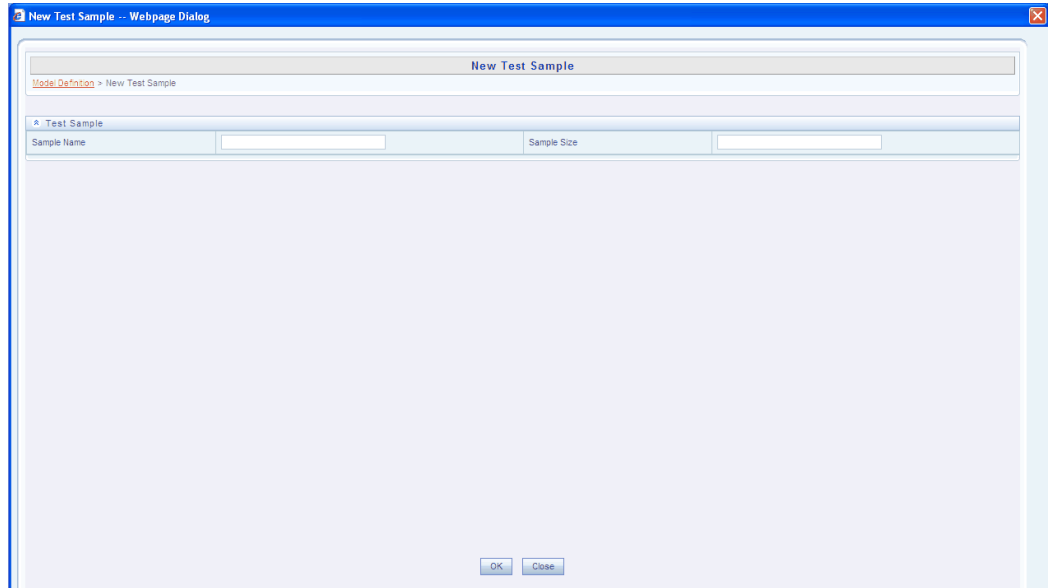
Select the hierarchy on which you wish to group the records from the list of available hierarchies and click >. Click **OK**.

Note: Only Single level BI Hierarchies will be available for stratified sample selection.

Selecting the Test Sample

The user can set the number of samples in this screen. The number of samples will be specified by the user and percentage of total will also be specified. There can be more than one **Test Sample**.

Click **New** button in the **Test Sample** display grid tool bar. The **New Test Sample** window will be displayed.



Enter the **Sample Name** and **Sample Size** in the respective fields and click **OK**. The Test Sample details will be displayed in the Test Sample display grid. Click **View** button to view the details. The fields will be in edit mode on clicking the **Edit** button.

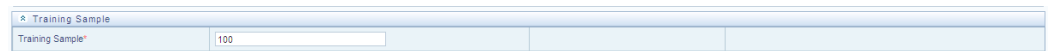


Click **Delete** button to delete the Test Sample.

Specifying the Training Sample

This is the default sample on which model fitting or prediction will be done. It is mandatory to select a training sample or the default 100% record set is assumed as Training Sample.

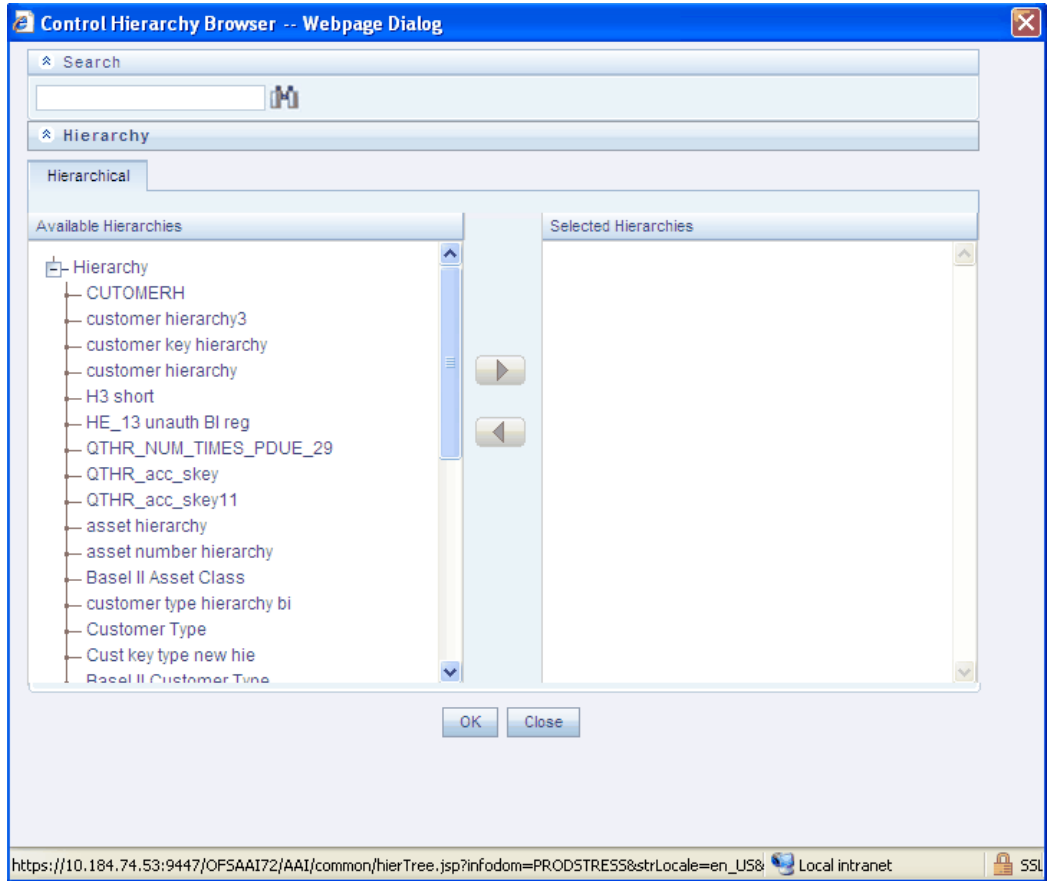
Enter the Training Sample value in the **Training Sample** field.



The sum of Training Sample value and Test Sample values should constitute 100%.

Control Sample

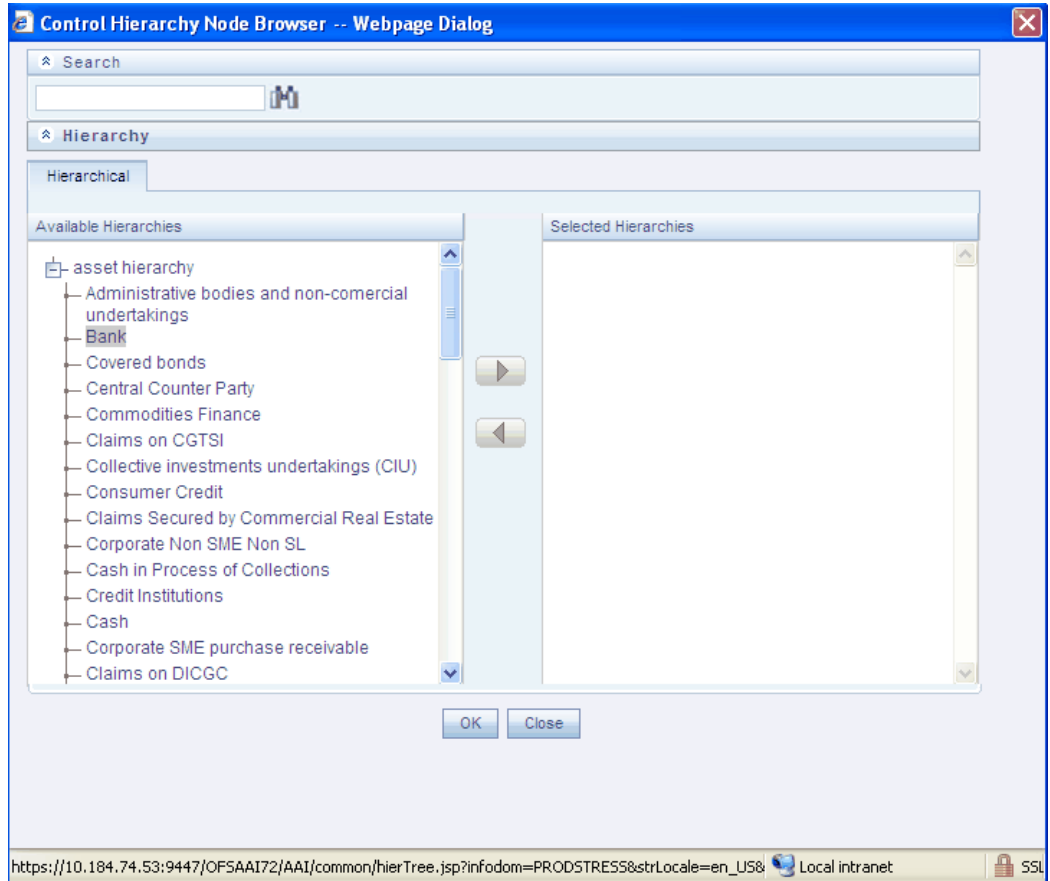
For the control sample, the user should be able to set filter conditions based on the user specific flags set for the records. Click **Browse** button adjacent to the **Control Hierarchy** field. The **Hierarchy Browser** is displayed.



Select the required Hierarchy and click the > button. Click **OK**.

Note: Only BI hierarchies will be available for control sample selection.

If you click the **Browse** button adjacent to the **Control Hierarchy Node** field. The **Hierarchy Browser** is displayed.



Select the leaf nodes of the selected Hierarchy and click the > button. Click **OK**.

The Control Hierarchy and Control Hierarchy Node names will be displayed in the **Model Definition New** window.

The **Sampling** tab of the **Model Definition New** screen with the samples defined is given below:

Model Definition

Model Management > Model Definition (New Mode)

Model Details

Model Name: T20

Model Description: [Empty]

Technique: Cook-Johnson

DataSet: Non Sec Exposures Dataset

Calibrate Model Host Existing Model

Inputs | Variable | Time Referencing | Filter | Sampling | Process Outputs | DataOutputs

Sampling

Basis: % Absolute

Replacements: Yes No

Stratification Basis: customer hierarchy

Training Sample

Training Sample: 100

Test Sample

No	Sample Name	Sample Size
<input checked="" type="checkbox"/>	1 Test	10

Control Sample

Control Hierarchy: asset hierarchy

Control Hierarchy Node: Bank

Buttons: Preview Data, Save, Cancel, Execute

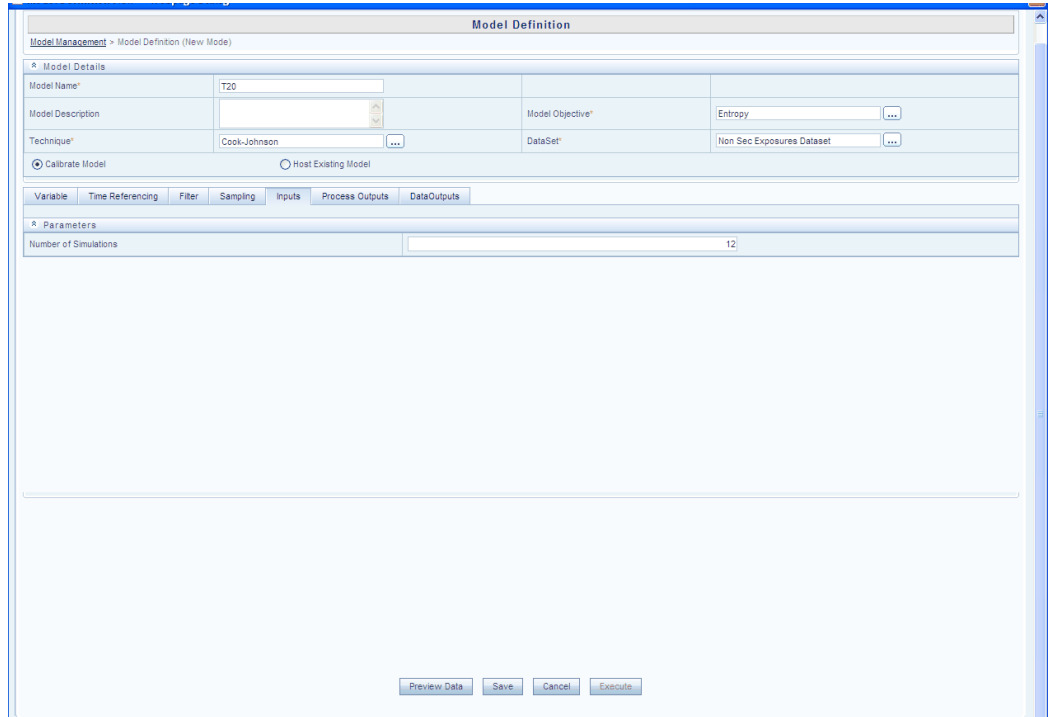
User Info

Created By	PQAUUSER	Creation Date	NA
Last Modified By	NA	Last Modification Date	NA

Specifying Inputs

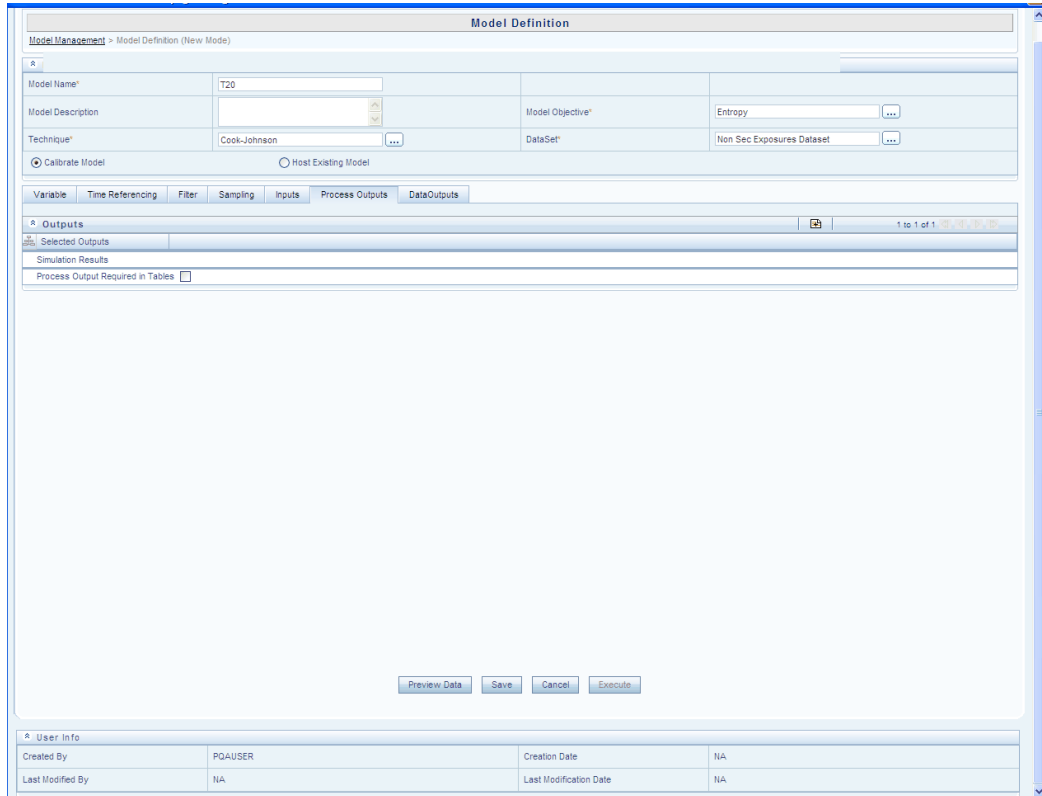
Select the **Inputs** tab in the Model Definition New screen. This tab is technique specific and will be displayed based on the technique chosen for the model.

Enter the number of Simulations required and click **Save**.

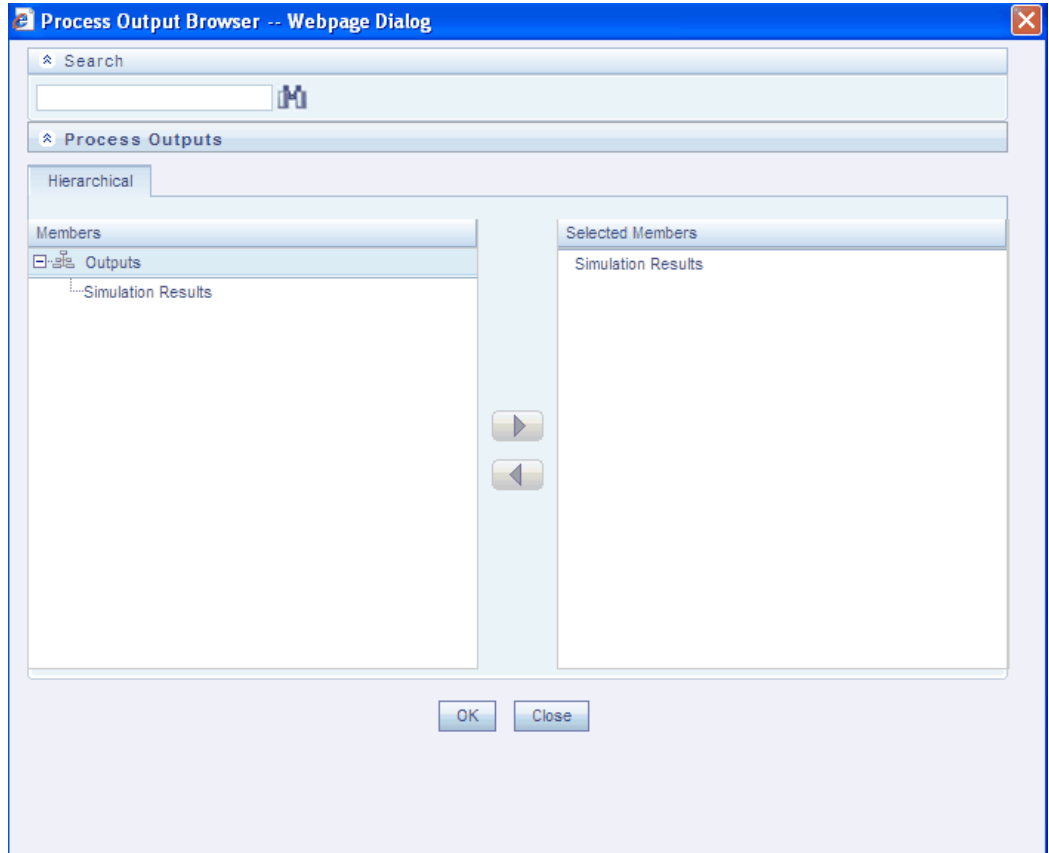


Specifying Process Outputs

Select the **Process Outputs** tab in the **Model Definition New** screen. This tab is technique specific and will be displayed based on the technique chosen for the model.



Click the + button in the Outputs collapsible grid. The **Process Output Browser** window is displayed.



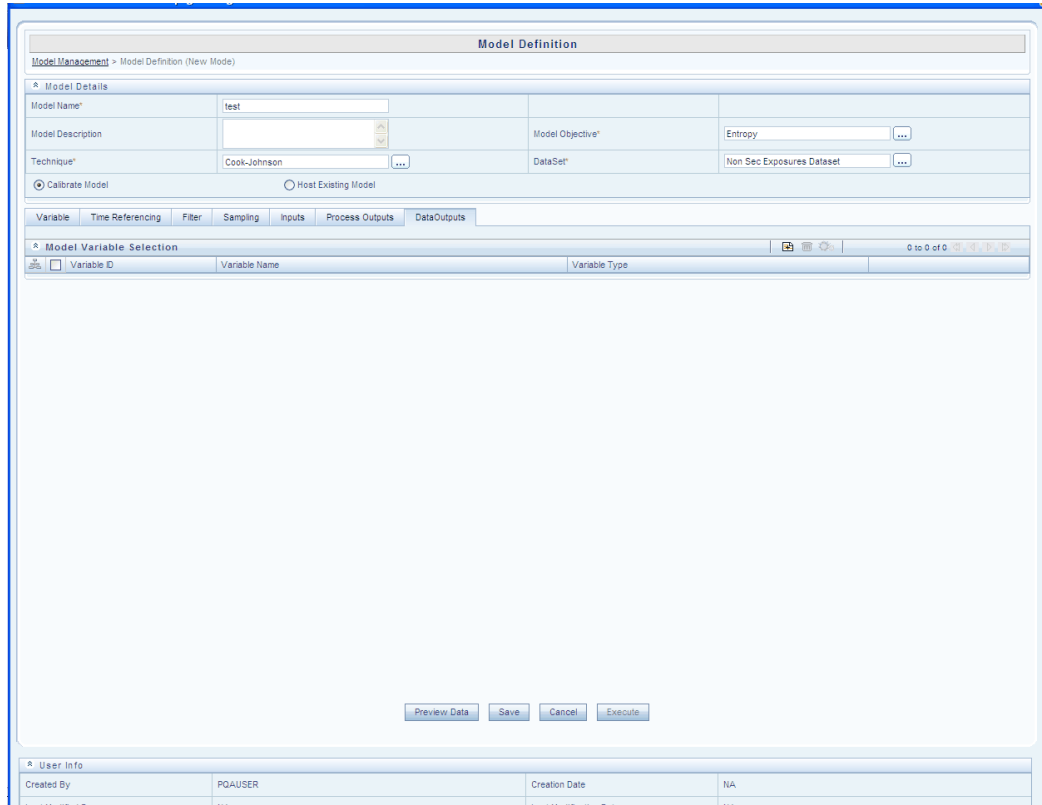
If you want to deselect **Process Output** from the **Selected Members** pane then click < button. Click **OK**.



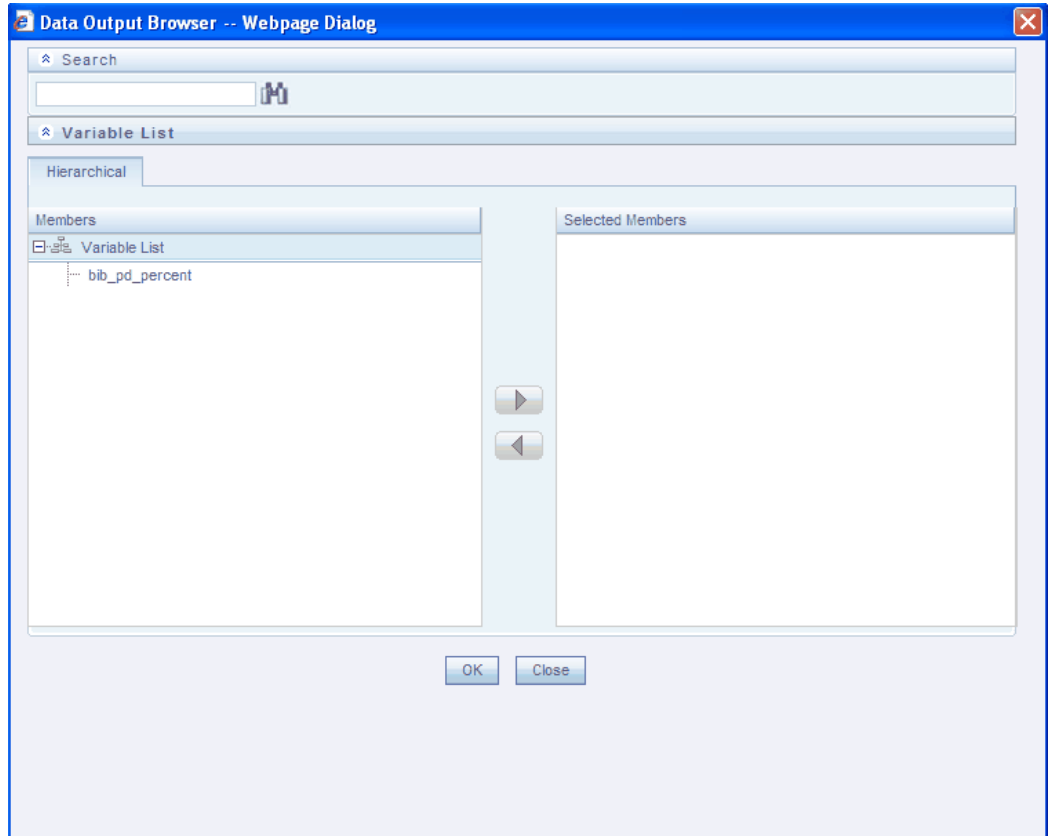
Select the **Process Output Required in Tables** check box if process output should be stored in Database. On selecting this check box, the user will be able to store the process output with labels such as Name and Comments into the database.

Data Outputs

The **Data Outputs** tab is used for populating the variable data into the tables as a further filtering measure. Select the **Data Outputs** tab in the **Model Definition New** window.



Click the + button in the **Model Variables Selection** collapsible grid tool bar.



Select the Variable whose data you wish to populate the table with and click the > button. Click **OK**.

The selected variable will be displayed in the **Model Variables Selection** display grid.



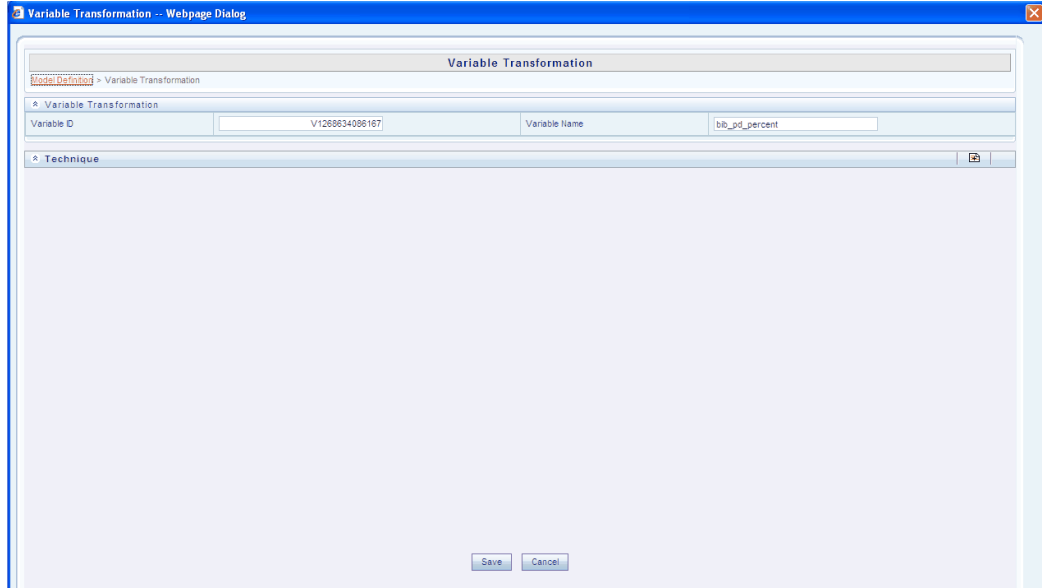
To delete, select the variable and click **Delete** to delete the selected variable.

Post Model Transformation of Data Outputs

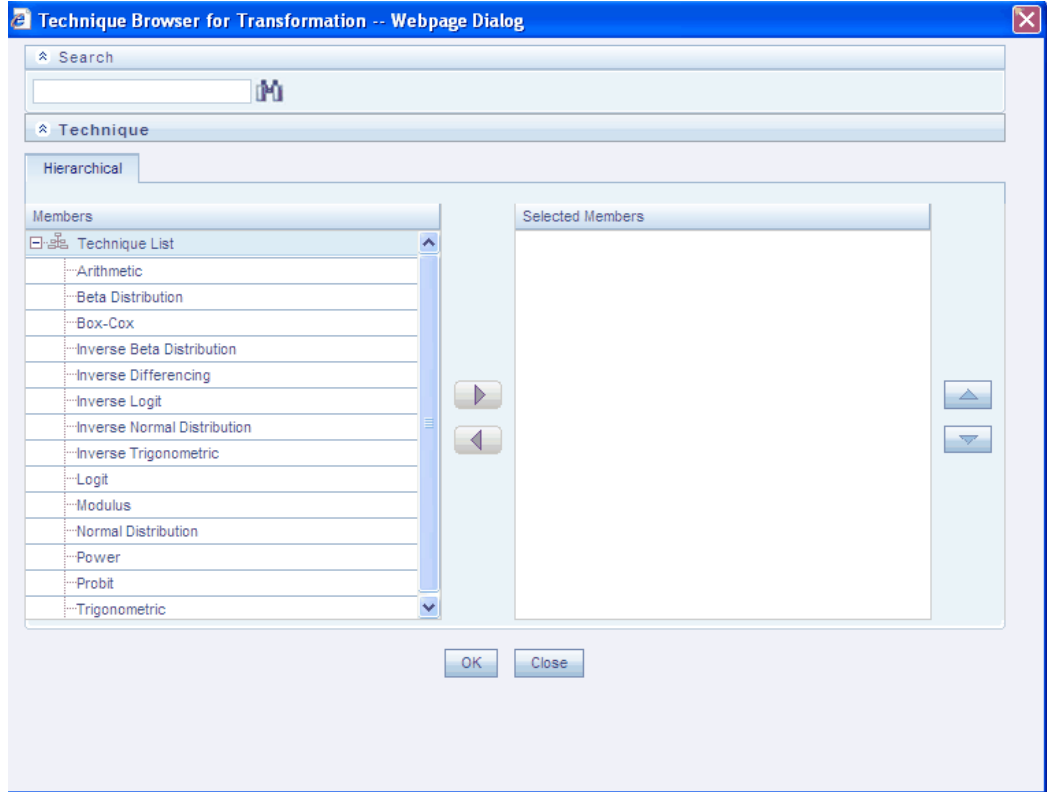
Select a variable in the **Model Definition New** screen and click the below button.



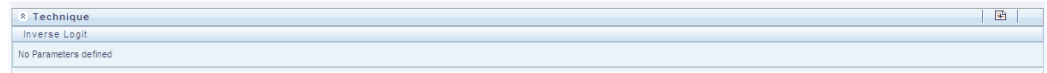
The **Variable Transformation** window is displayed.



Click **Edit** button in the Techniques collapsible grid tool bar. The **Technique Browser for Transformation** window is displayed.



Select the required techniques for the model and click the > button. Click OK. Depending on the techniques selected, the respective fields are displayed in the Variable Transformation screen – Techniques collapsible display grid.



Based on the techniques, enter the required values in the respective fields.

Click **Save** in the **Variable Transformation** screen. Click **Save** in the **Model Definition New** screen to save the model definition.

Previewing Data of a newly defined Model

As the name suggests, this option is to preview the data before saving or executing the model. No changes can be made in this screen.

Data Preview -- Webpage Dialog

Data Preview

Model Execution > Data Preview

Data Preview

Customer Surrogate Key	Run Surrogate Key	Extraction Date	Account Surrogate Key	GAAP Surrogate Key	Basel Asset Class Surrogate Key	Customer Type Skye	Basel Customer Type Surrogate Key	Product Key	Basel Product Type Surrogate Key
14223	313	2007-07-31 00:00:00	100210	226	1		14	829	42
14223	314	2007-07-31 00:00:00	100210	226	1		14	829	42
14223	319	2007-07-31 00:00:00	100210	226	1		14	829	42
14223	320	2007-07-31 00:00:00	100210	226	1		14	829	42
14223	322	2007-07-31 00:00:00	100210	226	1		14	829	42
14223	328	2007-07-31 00:00:00	100210	226	1		14	829	42
14223	330	2007-07-31 00:00:00	100210	226	1		14	829	42
14223	331	2007-07-31 00:00:00	100210	226	1		14	829	42
14223	332	2007-07-31 00:00:00	100210	226	1		14	829	42
14223	333	2007-07-31 00:00:00	100210	226	1		14	829	42
14223	334	2007-07-31 00:00:00	100210	226	1		14	829	42
14223	335	2007-07-31 00:00:00	100210	226	1		14	829	42
14223	336	2007-07-31 00:00:00	100210	226	1		14	829	42
14223	337	2007-07-31 00:00:00	100210	226	1		14	829	42
14223	338	2007-07-31 00:00:00	100210	226	1		14	829	42
14223	340	2007-07-31 00:00:00	100210	226	1		14	829	42
14223	341	2007-07-31 00:00:00	100210	226	1		14	829	42
14223	343	2007-07-31 00:00:00	100210	226	1		14	829	42
14223	344	2007-07-31 00:00:00	100210	226	1		14	829	42
14223	347	2007-07-31 00:00:00	100210	226	1		14	829	42
14223	348	2007-07-31 00:00:00	100210	226	1		14	829	42
14223	350	2007-07-31 00:00:00	100210	226	1		14	829	42
14223	351	2007-07-31 00:00:00	100210	226	1		14	829	42
14223	352	2007-07-31 00:00:00	100210	226	1		14	829	42
14223	353	2007-07-31 00:00:00	100210	226	1		14	829	42

Close

Executing a Model

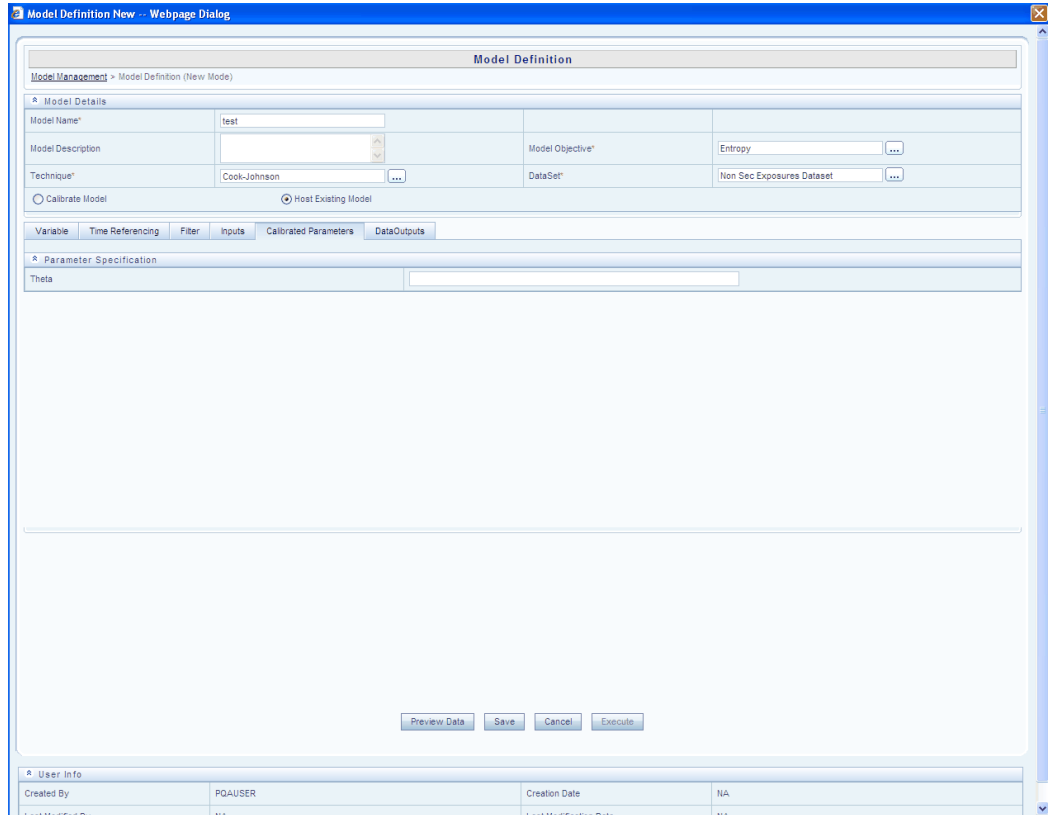
After entering the required values/options, click **Save**. A message comes stating that the model has been saved successfully. After saving, the **Execute** option will be enabled. Click **Execute**. A message is displayed stating 'Successfully triggered the model execution'. Click Ok.

The status of the model execution can be verified by clicking **Model Execution Status** option. To perform the same, go to Advanced Analytics Infrastructure > Modeling > Model > Model Execution Status.

For Host Existing Model

The **Variable**, **Time Referencing**, **Filter**, **Inputs** and **Data Outputs** functionality remains same as of Calibrate Model. Sampling option is not available for Host Existing Model. Only the Calibrated Parameter tab is different. Click on the Calibrated Parameter tab.

This tab is technique specific and will be displayed based on the technique chosen for the model.



OFSAA Infrastructure Operational Risk Economic Capital

In the **Model Management** screen, click the below button.



The **Model Definition New** window will be displayed. This screen contains fields such as **Model Name**, **Description**, and **Technique**.

Model Details			
Model Name*	<input type="text"/>		
Model Description	<input type="text"/>	Model Objective*	<input type="text"/> ...
Technique*	<input type="text"/> ...	DataSet*	<input type="text"/> ...

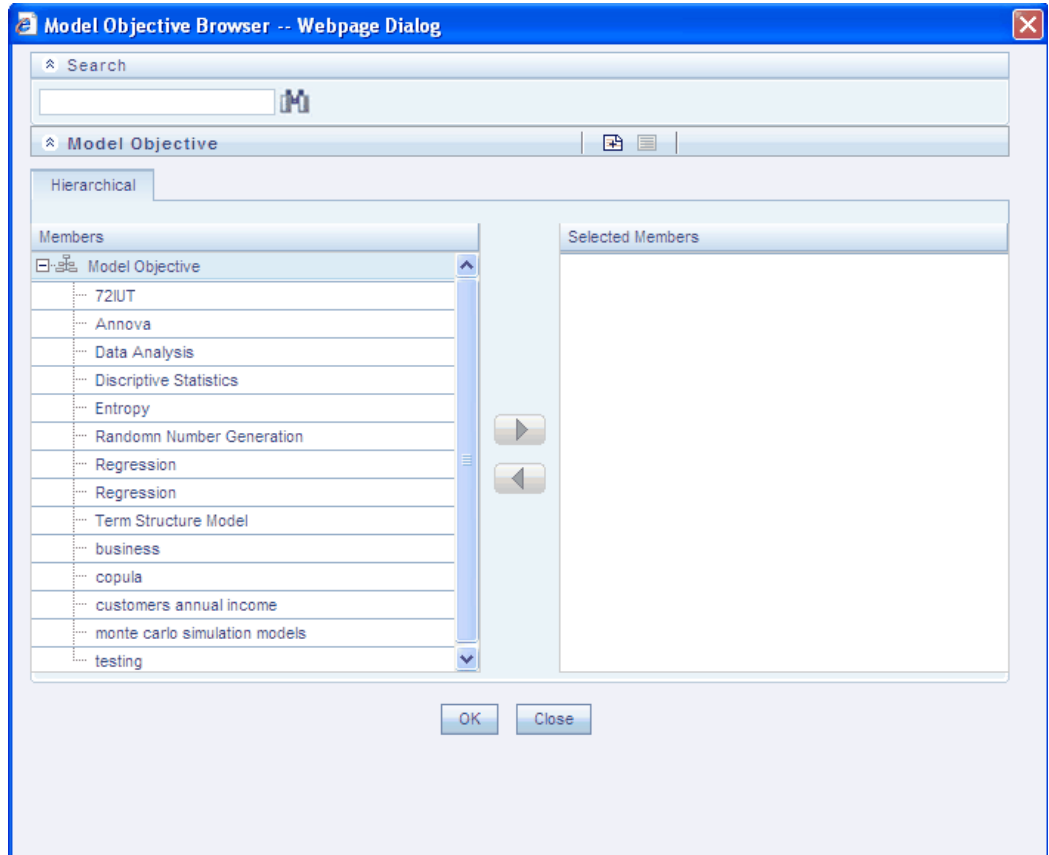
User Info			
Created By	PQAUZER	Creation Date	NA
Last Modified By	NA	Last Modification Date	NA

Enter an appropriate name for the model in the **Model Name** field.

Enter an appropriate description for the model in the **Model Description** field.

Selecting the Model Objective

Click **Browse** button adjacent to the **Model Objective** field. The **Objective Browser** is displayed.



Select the Objective required for the Model definition from the **Members** pane.

You can only select one Objective for a Model. You can also search for an Objective by entering the key word in the **Search** field and click the Search button.

You can create a new Objective by clicking the below button.



Specify the **Objective Name** and **Description** in the respective fields in the **New Model Objective** screen and click **Save** to create a new objective.

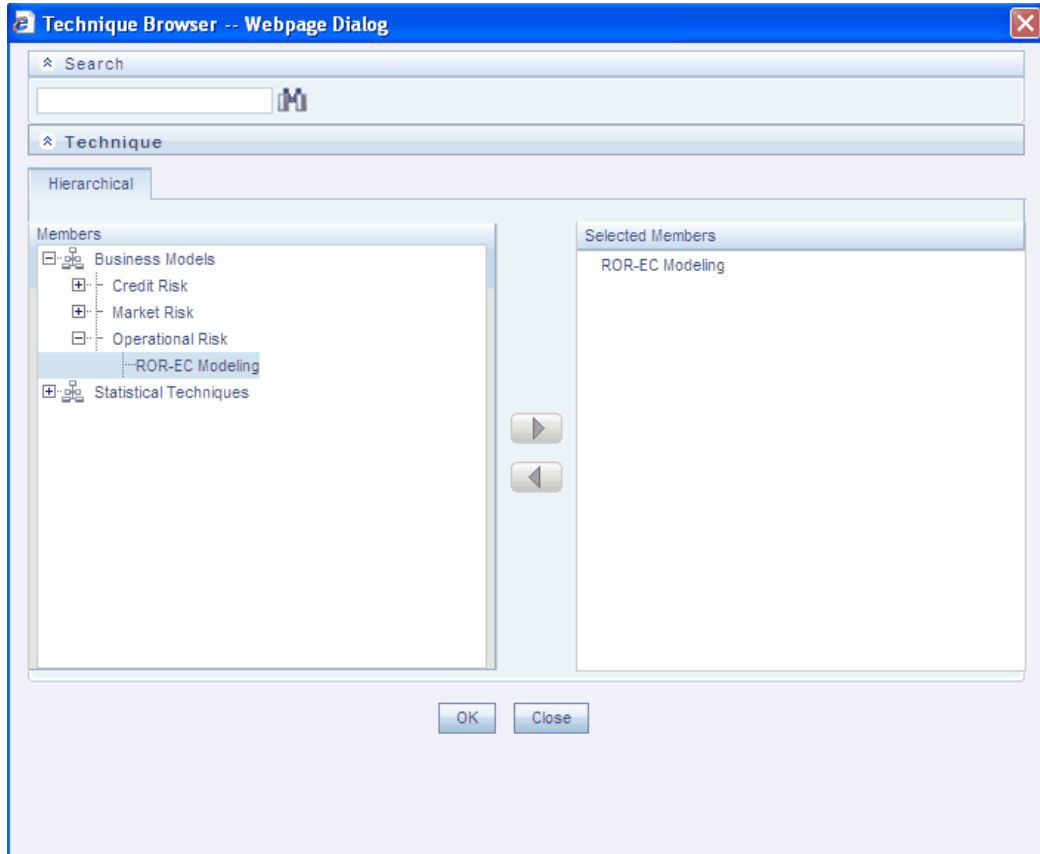
To view an existing objective, select the same in the **Objective Browser** and click **View** button. The **New Model Objective** screen will be displayed with the Objective ID and Description. After viewing the details, click **OK** or **Close**.

You can select the Objective from the **Hierarchy Browser**, click **OK**. The selected objective will be displayed in the **Model Objective** field.

Selecting the ROREC Technique

Click **Browse** button adjacent to the **Technique** field. The **Technique Browser** is displayed.

The various statistical techniques that are available will be displayed in the **Members** pane. **ROREC Modeling Technique** appears the in **Business Models** head. Click + signs to view the list of headings grouped under Business Model head. Double-click the technique name or select the technique name and click the > button to move it to the **Selected Members** pane.



Click **OK**. The **ROREC Modeling Technique** will be displayed in the **Technique** field in the **Model Definition New** screen.

Model Definition

Model Management > Model Definition (New Mode)

Model Details

Model Name* []

Model Description []

Model Objective* Entropy []

Technique* ROR-EC Modeling []

Capital Calculation Settings | Severity Distribution | Frequency Distribution | Scenario Analysis

Reporting Groups

Reporting Group Selection: Standard [v]

Reporting Group Relevance Setting: No [v]

Time Bucket

Start Date: []

End Date: []

Length of Time Bucket (Days): []

Confidence Level

Confidence Level for Regulatory Capital (%): []

Confidence Level for Economic Capital (%): []

Simulation Settings

Number of Simulations: []

Correlation Method: Spearman [v]

Copula: Select [v]

Options

Consider External Data? Yes [v]

Scaled External Data? Yes [v]

Consider Scenario Data? Yes [v]

Default Correlation Value: []

Distribution Fitting Methodology? Maximum Likelihood Estimation [v]

Consider Insurance? Yes [v]

Calculate Allocation EC? Yes [v]

[Preview Data] [Save] [Cancel] [Execute]

User Info

Created By: PQAUSER

Creation Date: NA

Specifying the Capital Calculation Settings

The **Capital Calculation Settings** tab will be selected by default in the **Model Definition New** screen. This Capital Calculation Setting is segregated into 4 different heads and relevant information is collected through each head.

In **Reporting Groups**, select the type of **Reporting Group** required for Modeling and Reporting Group Relevance Setting. Selecting **Internal** for Reporting Group selection fetches the data specific to each bank. Selecting **Standard** for Reporting Group selection fetches the standard data which is applicable for all banks prescribed by New Basel II Accord.

Model Definition

Model Management > Model Definition (New Mode)

Model Details

Model Name:

Model Description:

Model Objective:

Technique: ROR-EC Modeling

Reporting Groups

Reporting Group Selection: **Internal**

Reporting Group Relevance Setting: **No**

Time Bucket

Start Date:

End Date:

Length of Time Bucket (Days):

Confidence Level

Confidence Level for Regulatory Capital (%):

Confidence Level for Economic Capital (%):

Simulation Settings

Number of Simulations:

Correlation Method: **Spearman**

Copula: **Select**

Options

Consider External Data? **Yes**

Consider Scenario Data? **Yes**

Distribution Fitting Methodology? **Maximum Likelihood Estimation**

Calculate Allocation EC? **Yes**

Scaled External Data? **Yes**

Default Correlation Value:

Consider Insurance? **Yes**

The **Reporting Group Relevance Setting** helps the user to select appropriate reporting groups for processing. Choosing **No** implies that all 56 reporting groups will be processed. Choosing **Yes** allows the user to select specific reporting group for processing. If you select **Yes**, click the adjacent icon; it takes you to the next screen wherein you can select the reporting group.

The following image below shows 7 event types (Column) and 8 lines of businesses (Rows). Each unique combination of event type and line of business gives one reporting group.

Reporting Group Relevance Setting							
	Asset Utilisation	Damage	Employment Practices	Execution	External Fraud	Internal Fraud	Systems
Business Unit 1	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Business Unit 2	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Business Unit 3	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Business Unit 4	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Business Unit 5	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Business Unit 6	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Business Unit 7	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Business Unit 8	Yes	Yes	Yes	Yes	Yes	Yes	Yes

In **Time Bucket**, select **Start Date** and **End Date** using the Calendar and specify value for **Length of Time Bucket**.

Enter percentage values for Regulatory Capital and Economic Capital in **Confidence Level**.

In **Simulation Settings**, Enter Number of Simulations and select techniques for Copula and Correlation Method.

Options in **Capital Calculation Settings** tab facilitate you to choose various options. The user can select External Data and Scenario Data for modeling by choosing **Yes** in the options tab. If the external data is selected, you can choose **Scaled External Data** which is otherwise disabled.

For ROREC modeling, the user has an option either to used scaled external data or unscaled external data along with Internal data for Severity modeling. If **Scaled External Data** is **Yes**, then Scaled external data is used for modeling and vice versa. If the scenario data is selected, the user has to input **Default Correlation Value**. If the scenario data is not selected **Default Correlation Value** field is disabled along with the parameters in **Scenario Analysis** tab.

The user can select a **Distribution Fitting Methodology** for Severity and Frequency Distributions. If **Yes** is chosen in the Consider Insurance, the field insurance is applicable before calculating the loss. If **No**, then Insurance is not applied and directly loss is calculated after scenario generation.

Specifying the Severity Distribution

Select a distribution type for Severity Distribution Selection and if the selected parameter is EVT then you are allowed to enter percentage value for Default EVT threshold. If any other parameter is selected other than EVT, the Default EVT threshold is disabled. ROREC supports three distributions for severity modeling – Log Normal (LN), Empirical (Emp), and Extreme Value Theory (EVT).

Note: The value for Default EVT threshold must be more than 50%. But giving value for Default EVT threshold is optional.

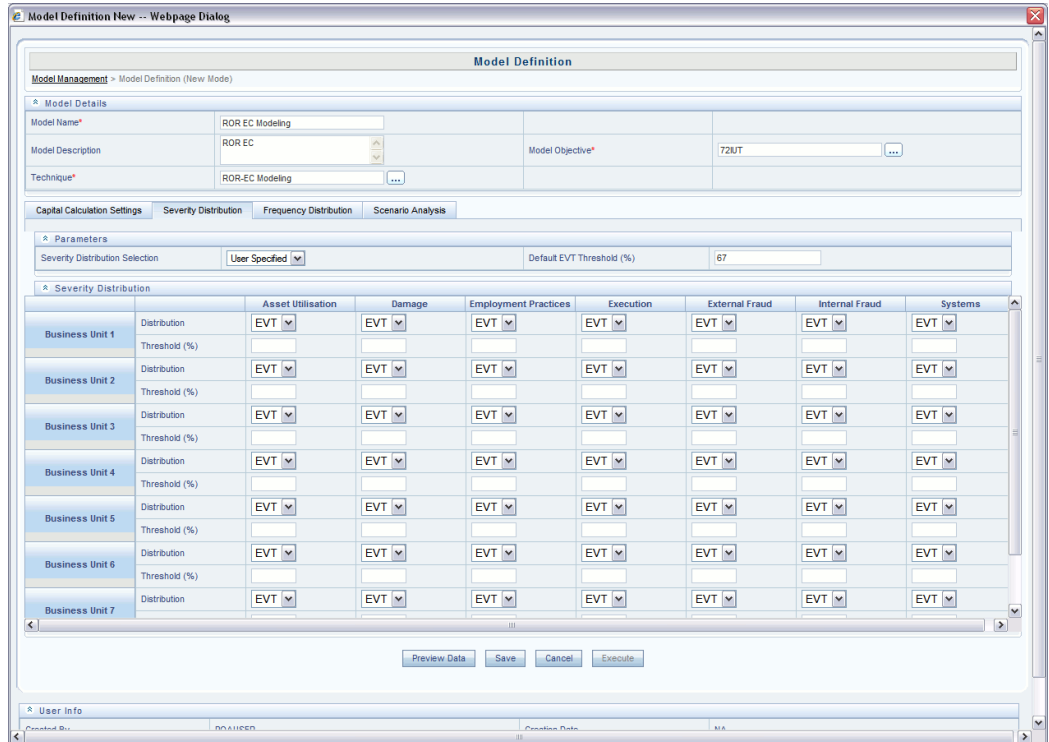
The screenshot shows a web-based dialog box titled "Model Definition New - Webpage Dialog". The main title bar is "Model Definition". Below the title bar, there is a breadcrumb trail: "Model Management > Model Definition (New Mode)".

The dialog is divided into two main sections:

- Model Details:** This section contains four fields:
 - Model Name: A text input field.
 - Model Description: A text input field with a small downward arrow on the right.
 - Technique: A dropdown menu currently showing "ROR-EC Modeling" and a small "..." button to its right.
 - Model Objective: A text input field with a small "..." button to its right.
- Parameters:** This section is currently selected and contains two fields:
 - Severity Distribution Selection: A dropdown menu currently showing "EVT".
 - Default EVT Threshold (%): A text input field.

At the bottom of the dialog, there are four buttons: "Preview Data", "Save", "Cancel", and "Exit".

The selected distribution is applied for all reporting groups. To select distribution for each reporting group individually, select 'User Specified' in **Severity Distribution Selection**. A new grid opens up and allows the user to select distribution for each reporting group.



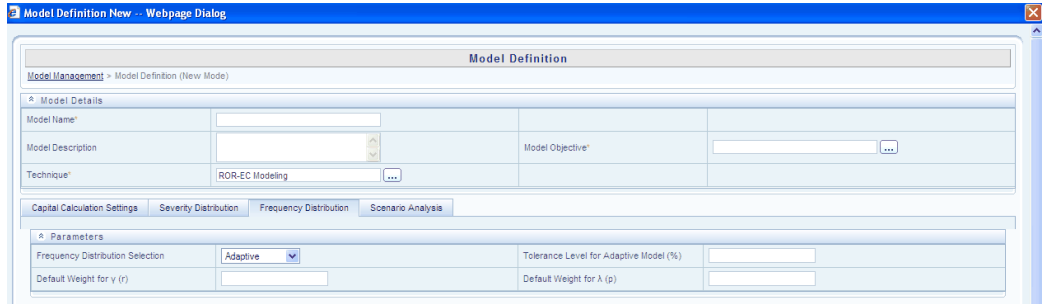
Note: The reporting groups which are not selected for processing from the **Reporting Group Relevance Settings** are disabled for selecting distribution.

Specifying the Frequency Distribution

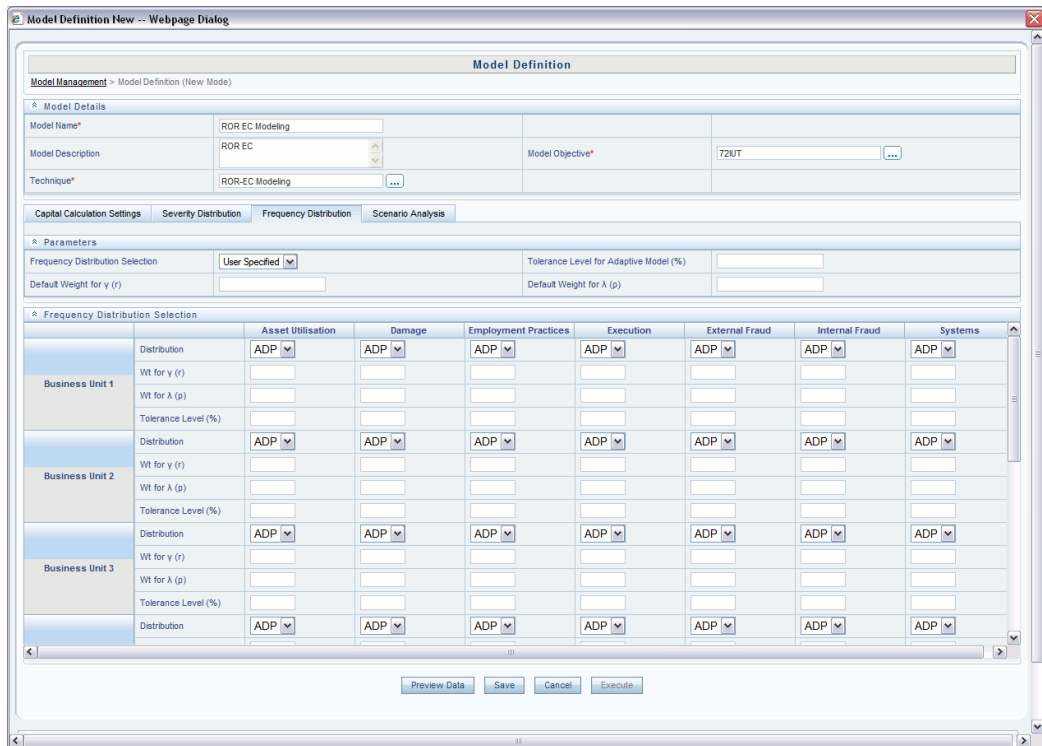
Select a technique for Frequency modeling from **Frequency Distribution Selection**. ROREC supports three distribution type for frequency modeling – Poisson, Binomial, and Negative Binomial. Adaptive is a method where the product chooses the best fit distribution for a RG. If Adaptive technique is selected, specify percentage value for **Tolerance level for Adaptive Model (%)**, for other techniques this field gets disabled.

Enter value for intermediate parameters - **Default Weight for y (r)** and **Default Weight for λ (p)**.

Note: If Adaptive technique is selected, giving value for Tolerance level for Adaptive Model (%) is mandatory. Using this value, frequency distribution type for each Reporting Group is identified.



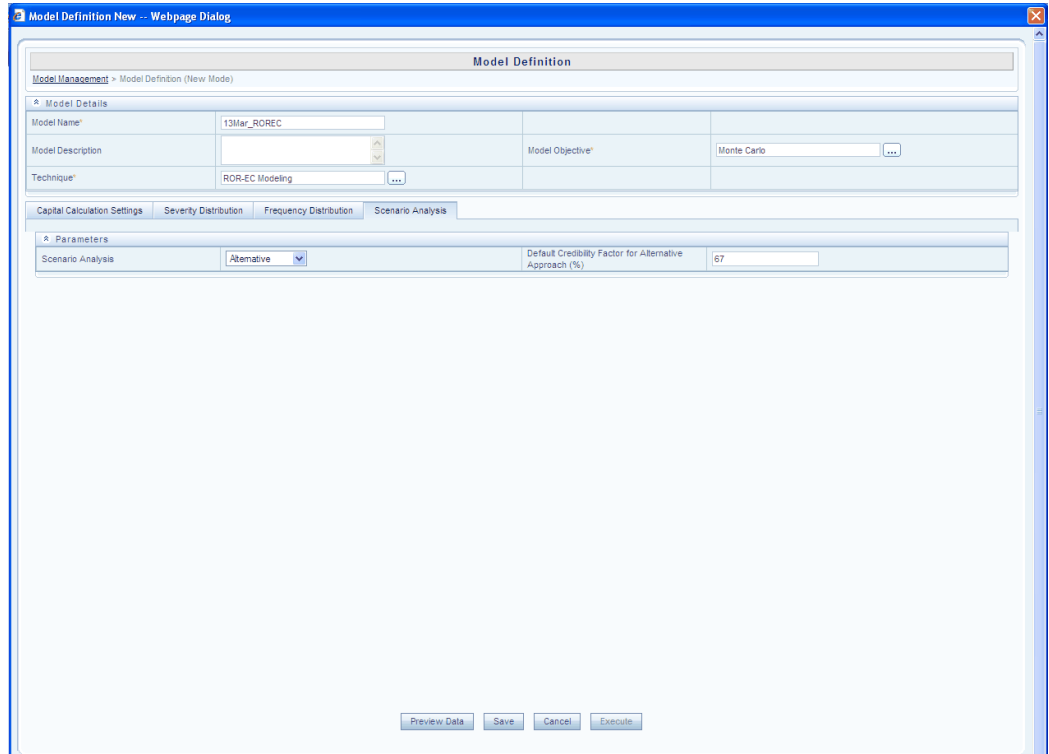
The selected distribution is applied for all reporting groups. To select distribution for each reporting group individually, select **User Specified** in Frequency Distribution Selection. A new grid opens up and allows the user to select distribution for each reporting group.



Note: The Reporting Groups which are not selected for processing from the **Reporting Group Relevance Settings** are disabled for selecting distribution.

Specifying the Scenario Analysis

Select technique for **Scenario Analysis**. If alternative technique is selected, enter value for **Default credibility Factor for Alternative Approach (%)**. For other loss approach like complementary approach, this field gets disabled.



Note: If the value for Scenario Data is selected as **No** (that's Scenario data is not used for ROREC calculation, only Internal data is used) in **Options** tab of **Capital Calculation Settings**, all the parameters are disabled in **Scenario Analysis**.

After giving the relevant values, click **Save** to save the created model. Clicking **Cancel** leads to loss of entered data without saving the model.

The created **Model** can be viewed, edited, and deleted. Click **Edit** button in the **Model Management** screen to edit the selected model, click **View** to view the selected model and click **Delete** to delete the selected model.

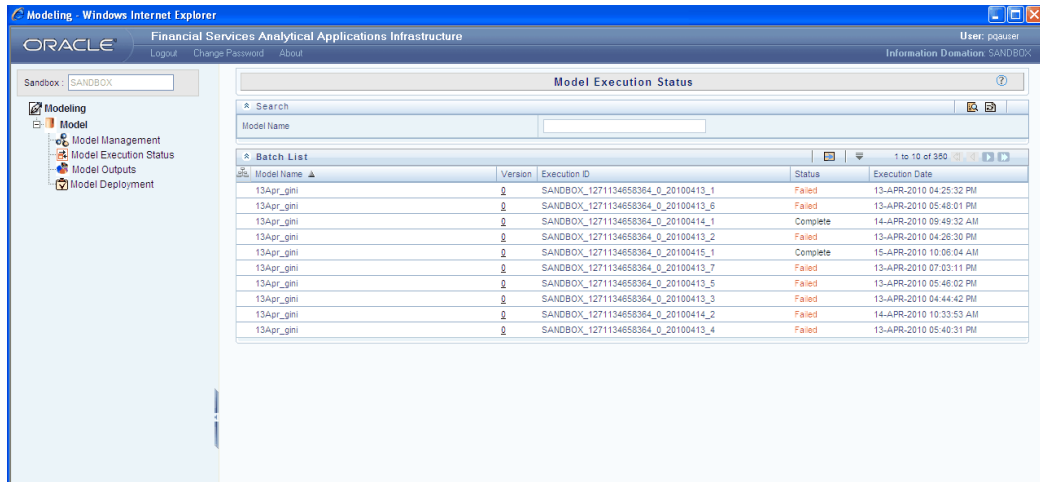
Executing a Model

After entering the required values/options, click **Save**. A message is displayed stating that the model has been saved successfully. After saving, the **Execute** option will be enabled. Click **Execute**. A message is displayed stating 'Successfully triggered the model execution'. Click **OK**.

The status of the model execution can be verified by clicking **Model Execution Status** option. You can go to Advanced Analytics Infrastructure > Modeling > Model > Model Execution Status to perform the same.

Model Execution Status – Sandbox Infodom

Model Execution Status in the *Sandbox information domain* of Infrastructure system facilitates you to verify the status of the executed model at any given point.



You can search for a Model by entering the name corresponding to the **Model Name** and click **Search**.

Click **Refresh** to refresh the Search option.

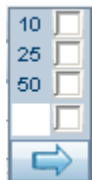
The Batch List panel provides a list of all the Batches. It displays **Model name, Version, Execution ID, Status** and **Execution Date**.

Status provides the status of the Model that is if the model execution has completed successfully or failed. Click ---> button to refresh the batch list.

Pagination Options

The number of rows to be displayed at a time can be set by clicking the **Pagination Options** button in the toolbar.

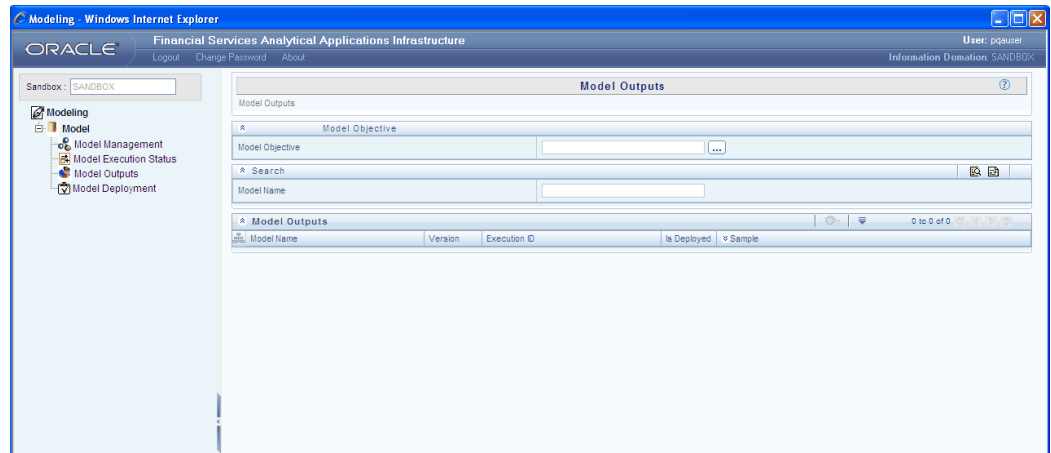
The Pagination Options dropdown will be displayed. The available options are 10, 25 and 50 rows. You can also enter the number of rows to be displayed in the empty field provided, select the check box and click Go.



Model Outputs – Sandbox Infodom

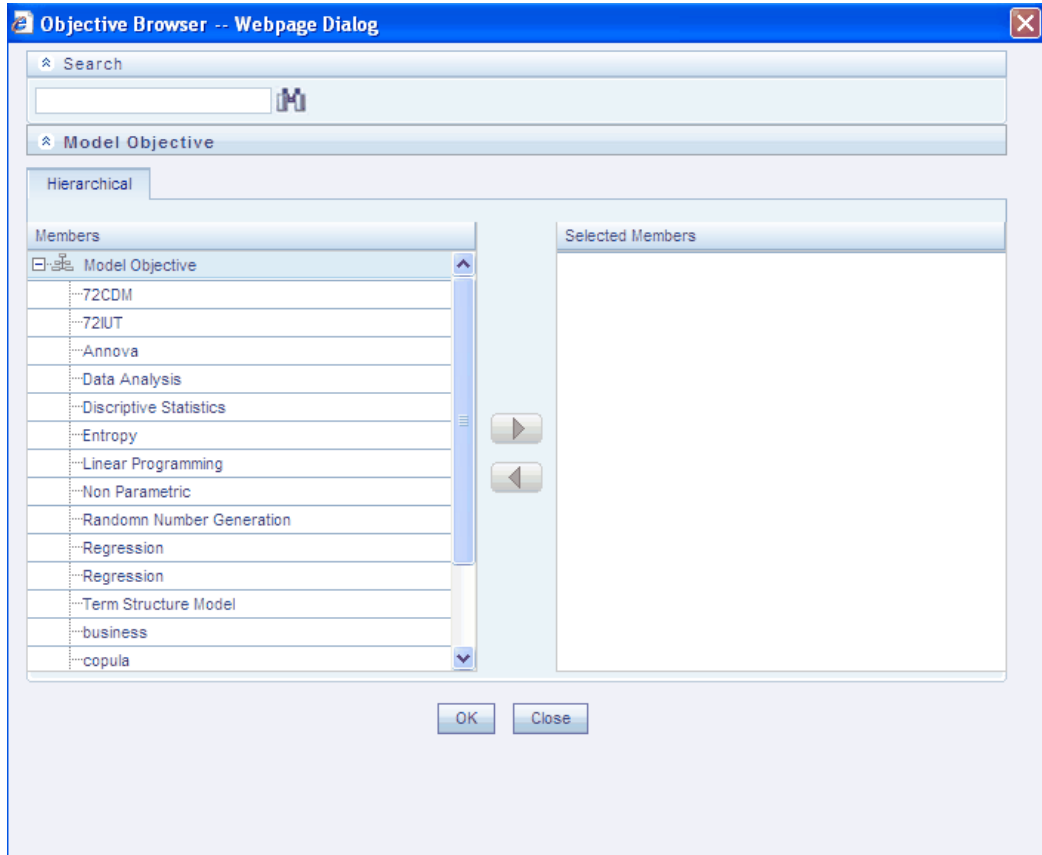
Select the Sandbox Information Domain in the OFSAA Infrastructure Splash screen. Select Advanced Analytics Infrastructure > Modeling. The **Modeling Framework** screen will be displayed.

In the LHS pane, select **Model > Model Outputs**. The **Model Outputs** screen is displayed.

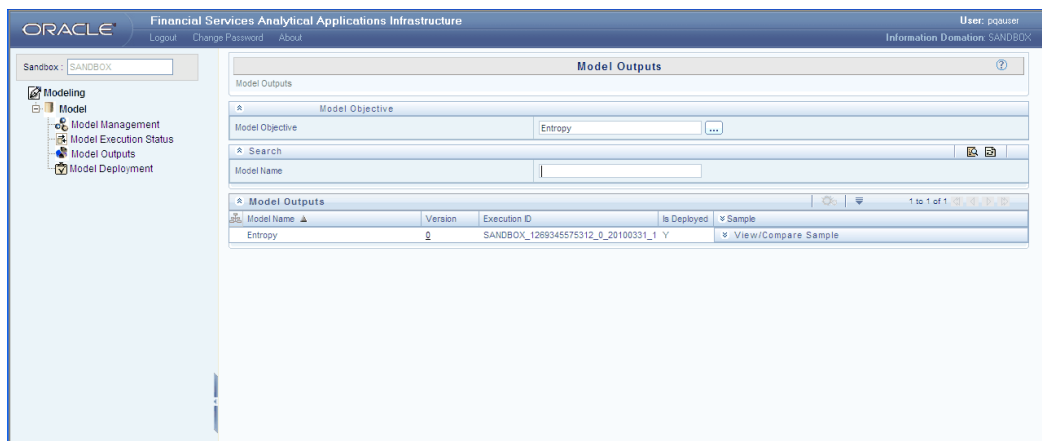


The outputs of models are grouped based on the Objective. Select the Model Objective by clicking **Browse** button.

The **Objective Browser** appears. Select the model object from the list and click >. The model objective will be seen under **Selected Members**.

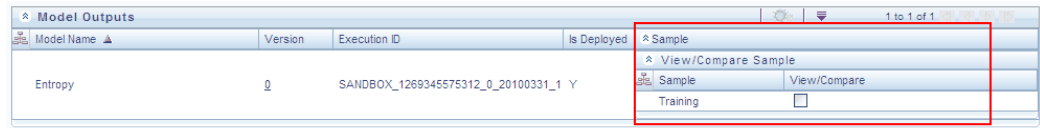


Click **OK** and the corresponding model's name, its versions and deployment details are displayed.



Click the above button next to the **Sample** field for a particular Model. Select the checkbox to compare its output with other samples. Select the **View/Compare** check

boxes for the other models with which you wish to compare the sample.

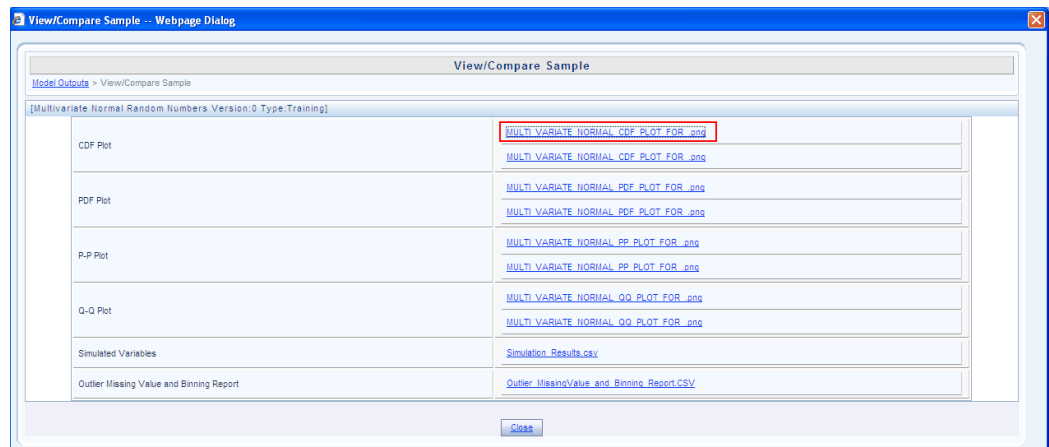


Model Name	Version	Execution ID	Is Deployed	Sample
Entropy	0	SANDBOX_1269345575312_0_20100331_1	Y	<input type="checkbox"/>

Select the **View/Compare** check boxes of the samples which you wish to compare and click the below button.



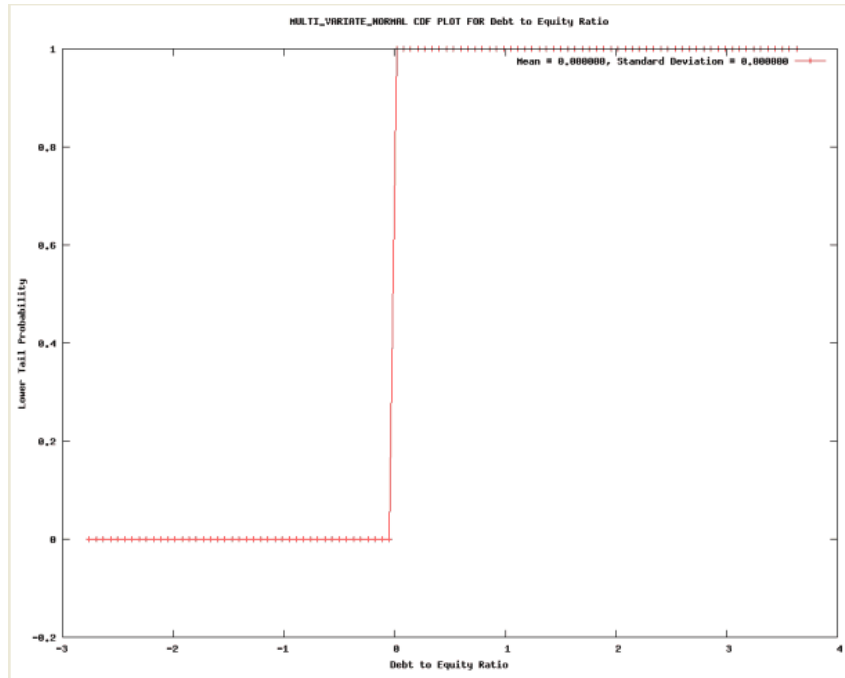
The **View/Compare Sample** window will be displayed.



The **View/Compare Sample** window will display the values of the results that are obtained on executing the model. The details displayed in this screen will be different based on the model and techniques used in the model.

Click **Close** to close the window.

Note: In addition to the existing text file based outputs, models will also now support graphical plots (.png file) as process outputs.



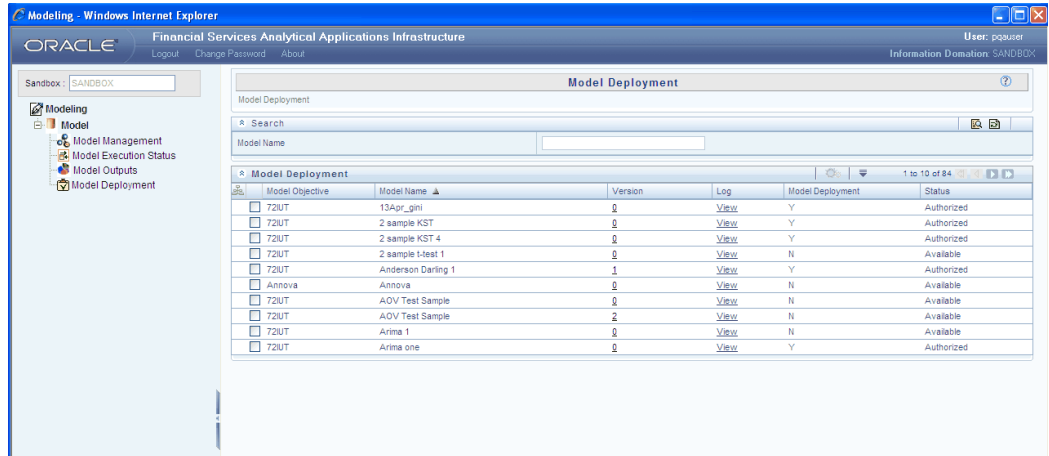
Model Deployment

On executing the model and viewing and comparing the sample, if the user feels that the prediction is as per the requirements, he can choose to deploy the model in the production infodom.

Note: Only Prediction techniques are required to be deployed in the Production Information Domain.

Select the Sandbox Infodom in the Connected to drop-down box in the OFSAA Infrastructure Splash screen. Select **Advanced Analytics Infrastructure > Modeling**. The **Modeling** screen is displayed. Select **Model > Model Deployment**. The **Model Deployment** screen is displayed.

All the models to be deployed will be displayed in this screen.



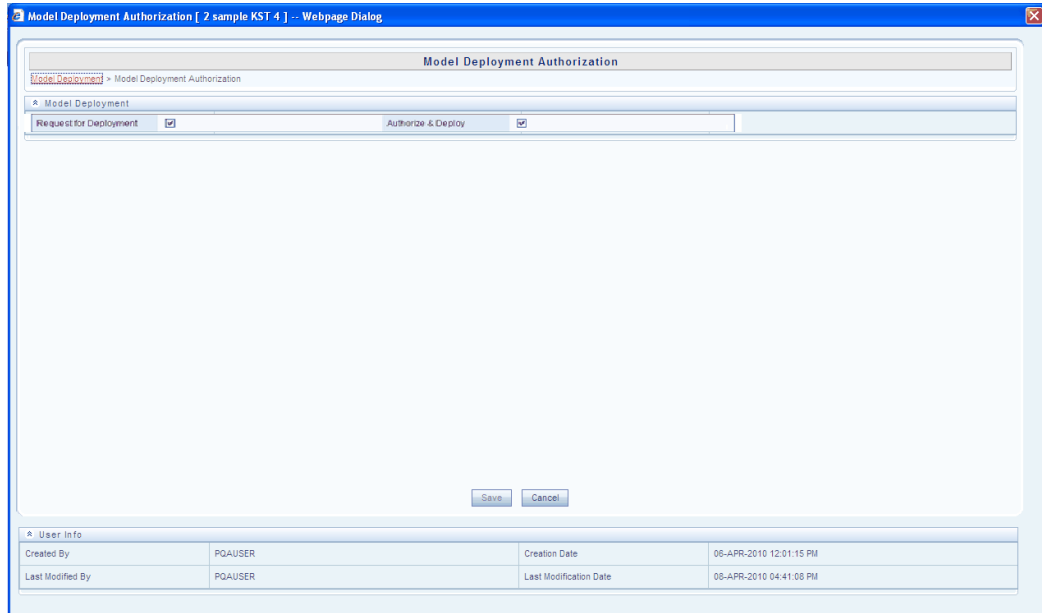
Select the Model to be deployed and click the below button.



The **Model Deployment Authorization** window is displayed. Select the **Request for Deployment** checkbox. Select the **Authorize** check box to authorize the deployment request.

Note: Only a user mapped to MDLAUTH function can authorize model deployment.

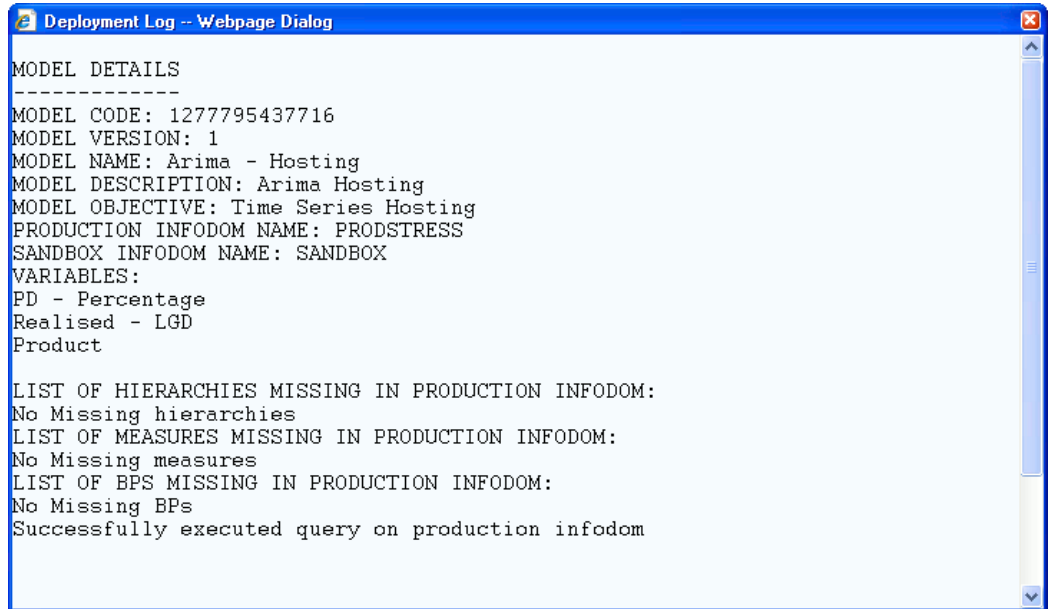
Click **Save**.



On raising the **Request for Deployment** and authorizing it, the data in the sandbox information domain and production information domain will be checked for compatibility.

If the data is found compatible, a request for Model Deployment will be raised and a confirmation message is displayed. The details of the Deployment request can be viewed by clicking the **View** link under **Login** in the **Model Deployment** page.

If the deployment does not succeed, an error message will be displayed and the details can be viewed from the logs by clicking the **View** link.



```
Deployment Log -- Webpage Dialog
MODEL DETAILS
-----
MODEL CODE: 1277795437716
MODEL VERSION: 1
MODEL NAME: Arima - Hosting
MODEL DESCRIPTION: Arima Hosting
MODEL OBJECTIVE: Time Series Hosting
PRODUCTION INFODOM NAME: PRODSTRESS
SANDBOX INFODOM NAME: SANDBOX
VARIABLES:
PD - Percentage
Realised - LGD
Product

LIST OF HIERARCHIES MISSING IN PRODUCTION INFODOM:
No Missing hierarchies
LIST OF MEASURES MISSING IN PRODUCTION INFODOM:
No Missing measures
LIST OF BPS MISSING IN PRODUCTION INFODOM:
No Missing BPs
Successfully executed query on production infodom
```

The next step after the modeling steps in a sandbox information domain is finished is to do the modeling in the production information domain for the prediction techniques.






Modeling– Production Infodom

Techniques in Modeling in Production Infodom

The following sections related to raising the request for **Model Execution**, **Model Outputs**, **Parameter Modification**, and **Champion Challenger** in the Production Information Domain are applicable only to prediction techniques.

Prediction Techniques

The prediction techniques available in the OFSAA Infrastructure Modeling Framework are as follows:

- ☐  Regression Techniques
 - ┆ Generalized Linear Mixed Models with Gamma Errors
 - ┆ Generalized Linear Mixed Models with Gaussian Errors
 - ┆ Linear Regression
 - ┆ Logistic Regression
 - ┆ Linear Regression with Mixed Effects – ML
 - ┆ Linear Regression with Mixed Effects - REML
 - ┆ Monte Carlo Expectation Maximization
 - ┆ Poisson Regression
 - ┆ Stepwise Regression
- ☐  Clustering
 - ┆ K-means and Boundary Based Prediction
 - ┆ Discriminant Analysis
 - ┆ Hierarchical Clustering
- ☐  Classification and Regression Trees
 - ┆ GINI
- ☐  Factor Analysis
 - ┆ Principal Component Extraction Method
- ☐  Time Series
 - ┆ ARIMA

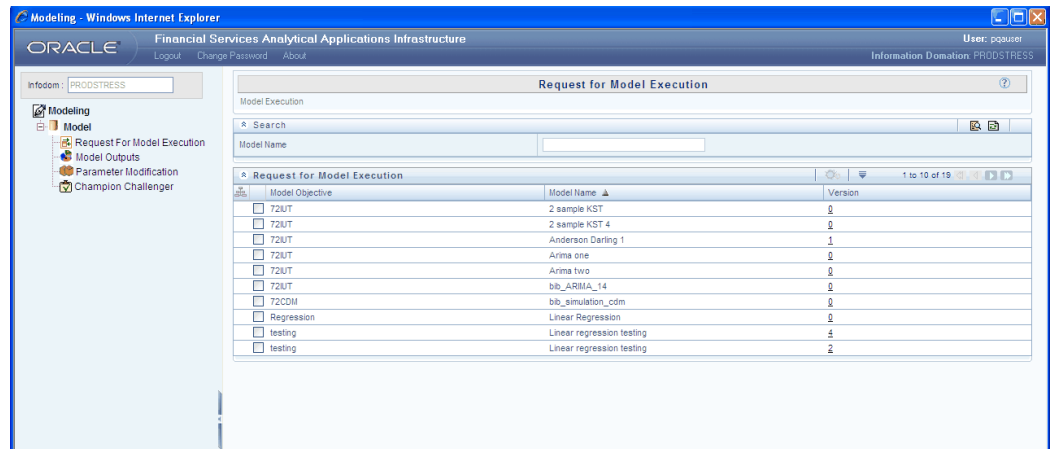
Request for Model Execution – Production Infodomain

Once the model has been deployed from the Sandbox Infodomain to the Production

Infodom, a request for **Model Execution** needs to be raised.

Select the Production Information Domain from the Connected to drop-down list in the LHS menu of the OFSAA Infrastructure Splash screen. Select **Advanced Analytics Infrastructure > Modeling**. The **Modeling Framework** screen is displayed.

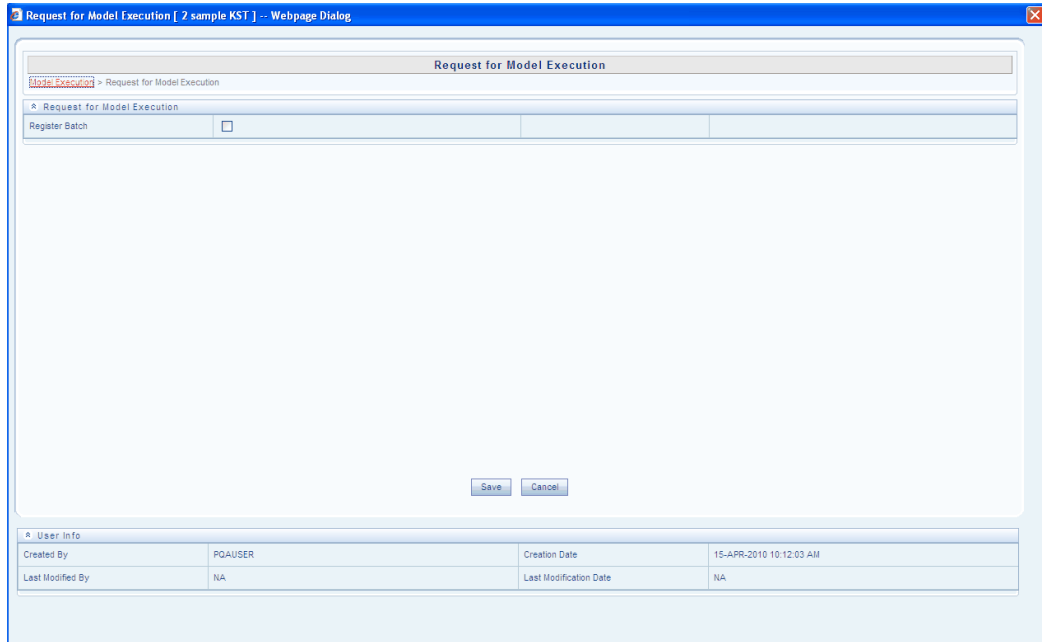
Select **Model > Request for Model Execution** from the LHS menu in the **Modeling Framework** screen. The **Request for Model Execution** screen is displayed.



Select the **Model** to be executed and click the below button.



The **Request for Model Execution** window is displayed. Select the **Register Batch** check box. Click **Save**.



On raising a request for execution of the model, a Batch will be registered in the ICC framework of Infrastructure.

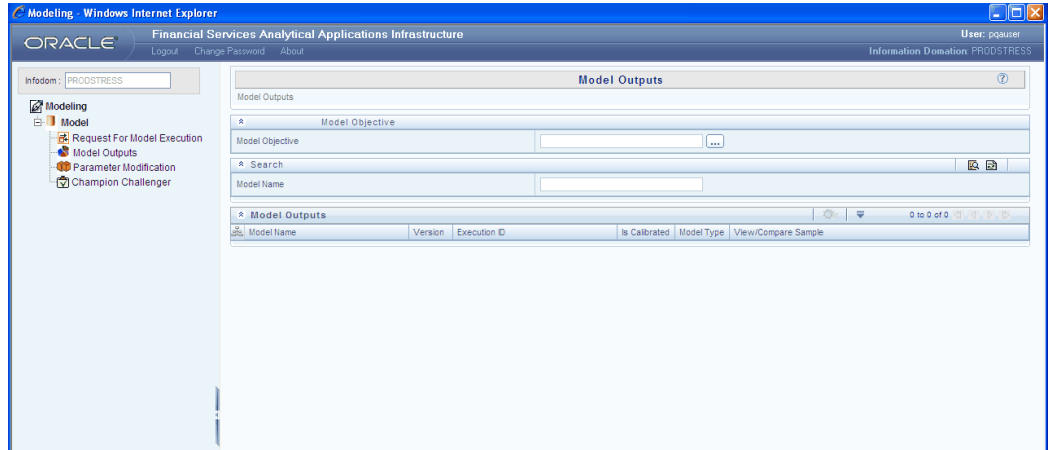
The batch needs to be run from the **Batch Scheduling** screen in OFSAA Infrastructure for the model to be executed.

Model Outputs – Production Infodom

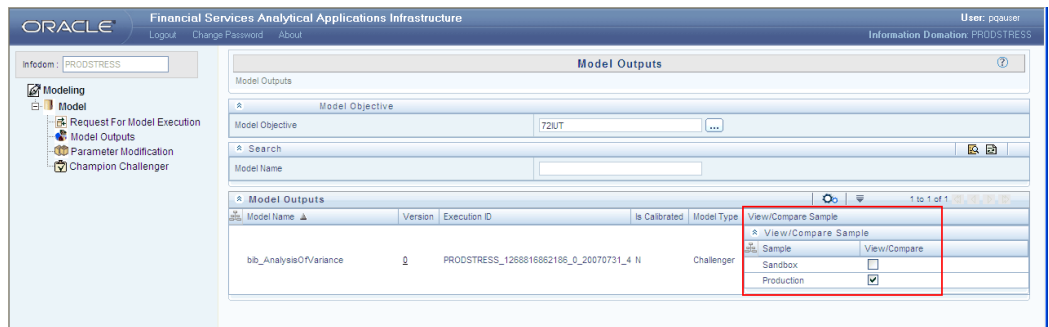
Model Outputs screen displays the result of the Model Execution.

Select the Production Information Domain in the Connected to drop-down list in Infrastructure Splash screen. Select **Advanced Analytics Infrastructure > Modeling**. The **Modeling** screen will be displayed.

In the LHS pane, select **Model > Model Outputs**. The **Model Outputs** screen is displayed. The outputs of models are grouped based on the objective.



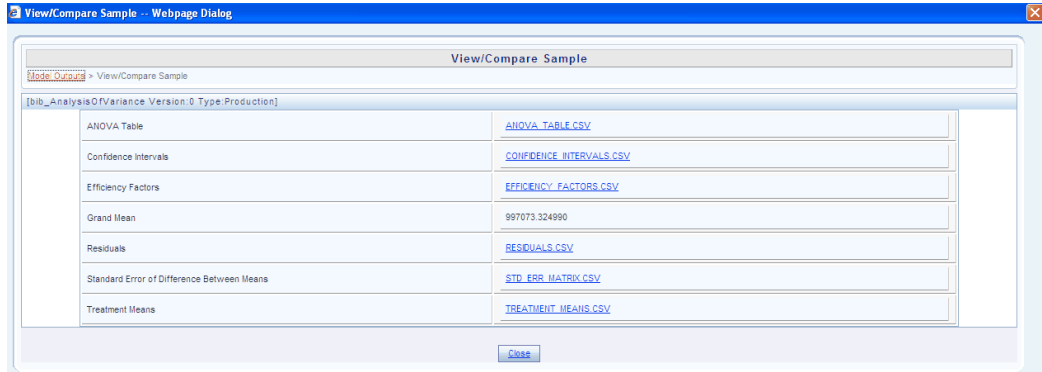
Select an Objective from the **Model Objective** by clicking **Browse** button. On selecting an Objective, the corresponding models, its versions, Execution ID, Calibration details, Model Type, and View/Compare samples are displayed.



Select the **View/Compare Sample** check box for the required Model and click the below button.



The **View/Compare Model** window will be displayed.



The **View/Compare Model** window will display the values of the results that are obtained on executing the model. The details displayed in this screen will be different based on the model and techniques used in the model. The data outputs will also be available as links for downloads.

Click **Close** to close the window.

Parameter Modification

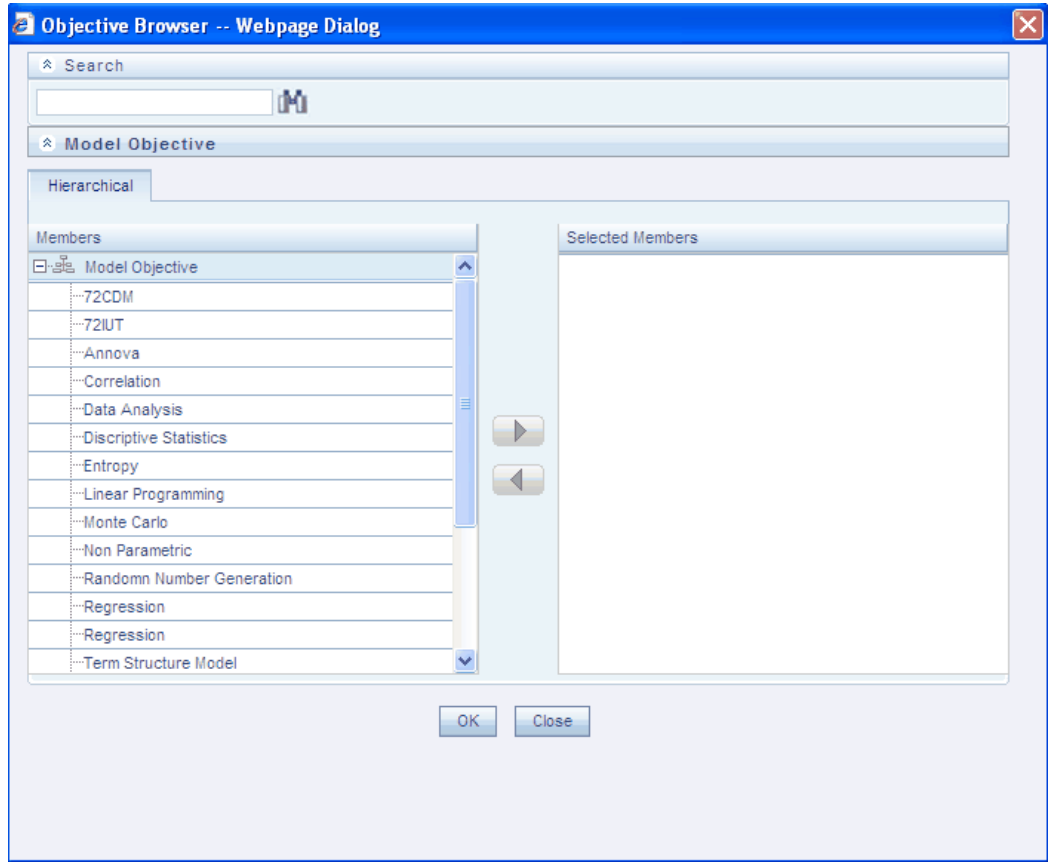
Parameter Modification is the process of adjusting model parameters to known data. It involves the fine tuning of output data. The **Parameter Modification** screen gives the option to the user to actually change the parameters estimated during model fitting. This process is called calibration and the calibrated output will be used during the model run.

Select the Production Information Domain in the Infrastructure Splash screen. Select **Advanced Analytics Infrastructure > Modeling**. The Modeling screen will be displayed. In the LHS pane, select **Model > Parameter Modification**. The Parameter Modification screen is displayed.

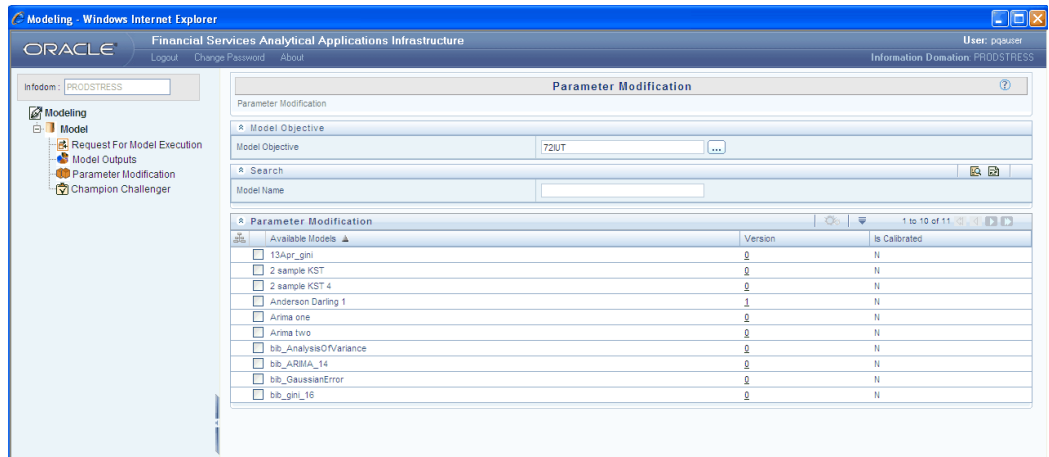


Note: Only **Prediction Techniques** can be calibrated.

Click **Browse** button adjacent to the **Model Objective** field. The **Objective Browser** window is displayed.



Select the **Model Objective** based on which the model to be calibrated is defined and click > button. Click **OK**. The **Models** based on the selected **Model Objective** is displayed in the **Parameter Modification** screen.



The **Available Models**, its versions and calibration details are displayed. Select any available model and click the below button.



The **Parameters for Calibration** window is displayed. The list of Parameters and its Value are displayed.

Parameters	Value
INTERCEPT	61851.83500
bib_ccf_percent	16419.29911

Comments

Save Cancel

User Info

Created By	PQAUSER	Creation Date	15-APR-2010 10:11:55 AM
Last Modified By	PQAUSER	Last Modification Date	15-APR-2010 10:12:43 AM

Click **Edit** button to edit the variable values.

Parameters	Value
INTERCEPT	61851.83500
bib_ccf_percent	16419.29911

Enter a comment for the calibration in the **Comments** field.

Parameters for Calibration

Parameters	Value
INTERCEPT	61851.83500
bib_ccf_percent	16419.29911

Comments

modified

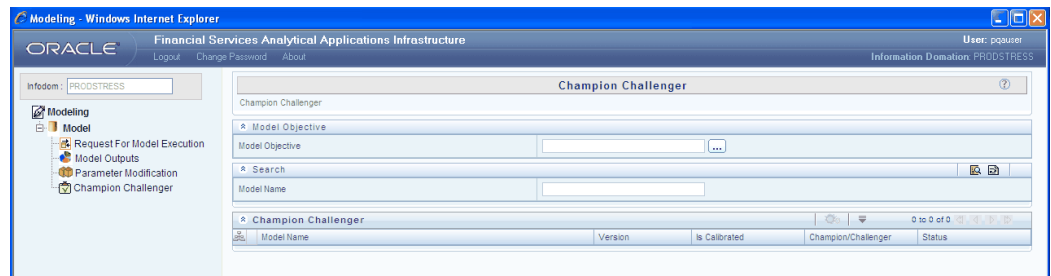
Click **Save**.

A confirmation message will be displayed stating that the model version for calibration has been saved successfully. The calibrated output will be used during the model run.

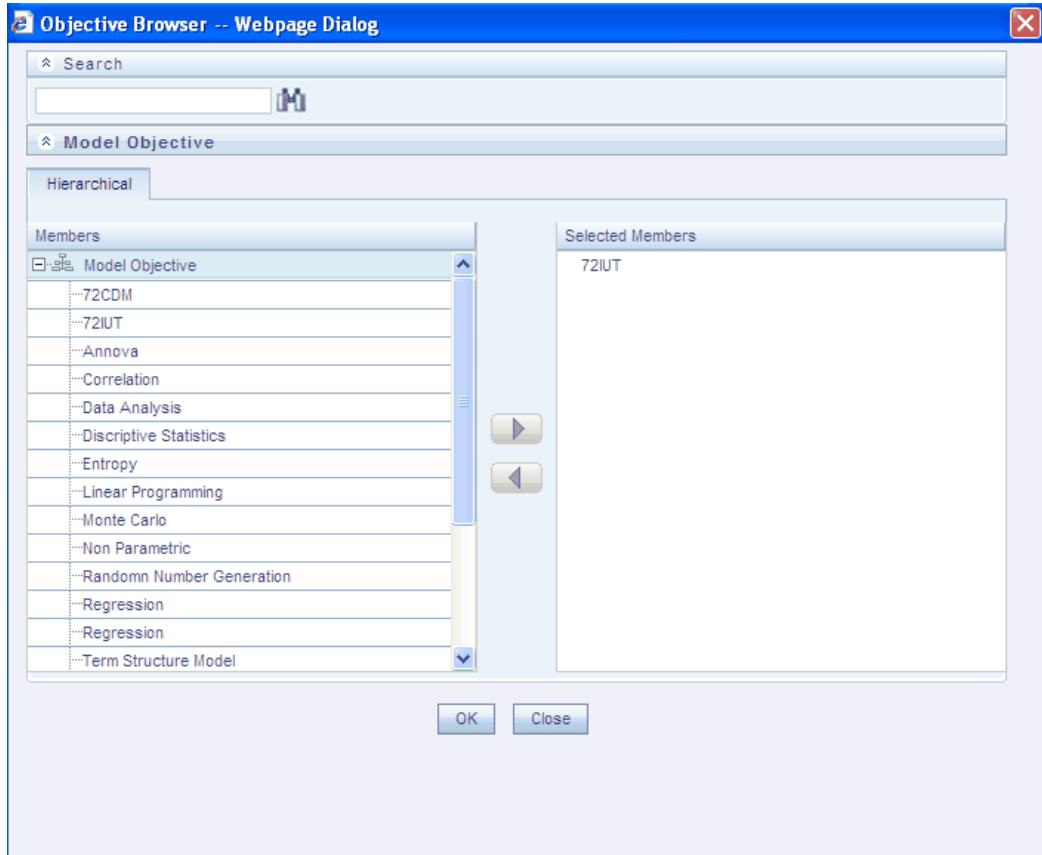
Champion Challenger

Whenever the user redeploys a model to apply the calibration, the first model to be deployed for a given objective is termed as the Champion and the subsequent models deployed for the objective are termed as Challengers. If after deploying several prediction models, the user gets the optimum model meeting his prediction requirements, he can set that model as the Champion.

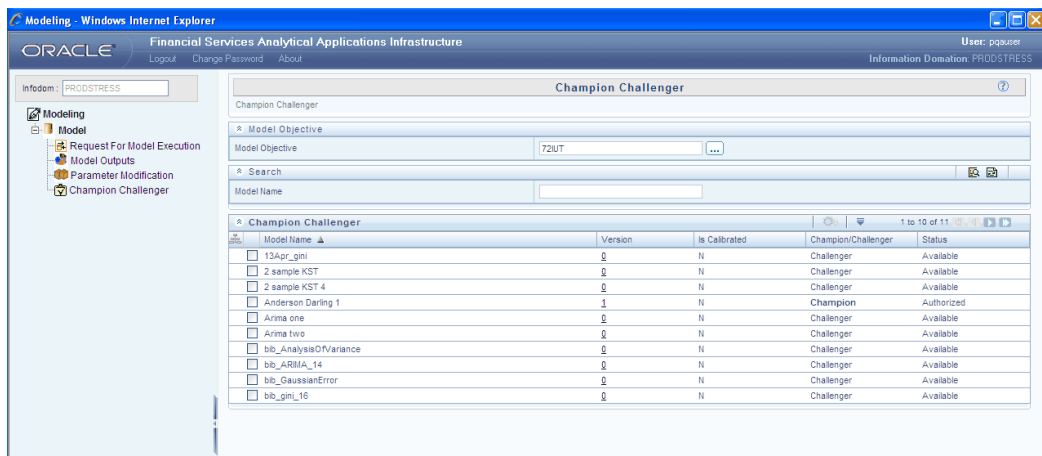
Select the Production Information Domain in the Infrastructure Splash screen. Select **Modeling Framework > Modeling**. The **Modeling Framework** screen will be displayed. In the LHS pane, select **Model > Champion Challenger**. The **Champion Challenger** screen is displayed.



Click **Browse** button adjacent to the **Model Objective** field. The **Hierarchy Champion Objective** window is displayed.



Select the required **Model Objective** and click > button. Click **OK**. All the deployed models in the production infodom for the selected **Model Objective** are displayed along with the **Model Status** as to whether it is **Champion** or **Challenger**.



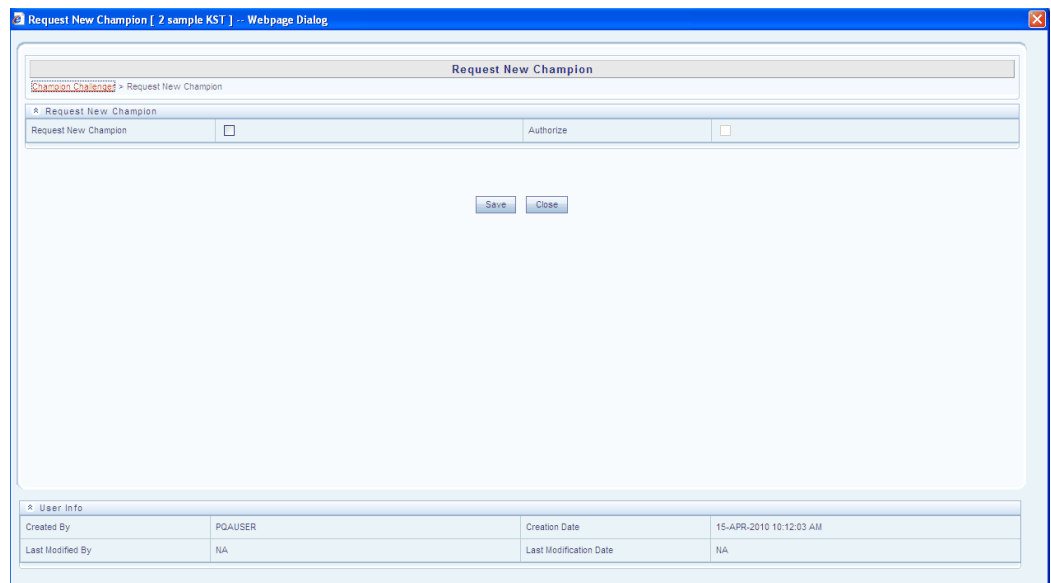
Note: The user should be mapped to the 'MDLCHAMP' (Model Make Champion) function to view this screen.

The user can select the model and change its status to Champion or Challenger in this screen.

Select the **Model** you wish to be made the **Champion** and click the below button.



The **Request New Champion** window is displayed.



Select the **Request New Champion** check box and click **Save**. The request has to be authorized by the user mapped to the authorizer role and saved again. On authorizing the request, this model will be marked as the Champion.

Cash Flow Equations

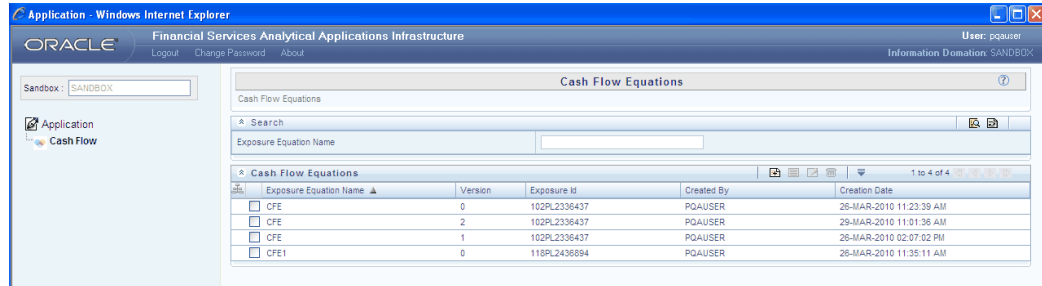
The cash flow model in the OFSAA Infrastructure Modeling Framework is used for computing the Economic Capital for the Specialized Lending exposures of the Non-Securitization portfolio. Economic Capital for each specialized lending exposure is computed by simulating the inflows and outflows of the exposure for the next one year time horizon from the date of processing. The inflows and outflows are represented by linear equations which comprises of the drivers of the cash flow or deterministic values.

The inflow and outflow of the exposure is represented by Cash Flow Equations which comprises of the drivers which affects the cash flow. The drivers could either be the exposure specific variables (Idiosyncratic Variables) and/or the general market variables. The inflow/s and outflow/s are captured at the granularity of monthly, quarterly, half-yearly or yearly bucket. Also, it is possible to capture as many equations as required, starting from the first disbursement date. However, the equations considered for processing at a point of time will be the equations for the next one year from the processing date (MIS Date).

Accessing Cash Flow Equations

Select the Sandbox Information Domain in the Infrastructure Splash screen.

Select **Advanced Analytics Infrastructure > Application**. The Application screen will be displayed. In the LHS pane, select **Application > Cash Flow**. The **Cash Flow Equations** screen is displayed.



This screen will display the existing **Exposure Equation Name**, **Version**, **Exposure Id**, **Created By** and **Creation Date** defined.

You can define new Exposure Equations based on the datasets, hierarchy, and nodes selected in this screen.

You can also choose the time bucket type (monthly/quarterly/half-yearly/yearly), number of buckets you want to provide the equations and select the first disbursement date.

Defining an Exposure Equation

Click **New** button in the **Cash Flow Equations** toolbar. The **Cash Flow Engine – Bucket Definition – New** screen is displayed.

Cash Flow Engine - Bucket Definition

Cash Flow Equations > Cash Flow Engine - Bucket Definition (New Mode)

Exposure Equation Definition

Exposure Equation Name * Exposure Equation Description

Selected Dataset

Data Set ... Hierarchy ...

Exposure Id ...

Bucket Properties

Disbursement Date Time Bucket Type

Total No of Buckets

User Info

Created By	PQAUSER	Creation Date	NA
Last Modified By	NA	Last Modification Date	NA

Specifying the Exposure Equation Name

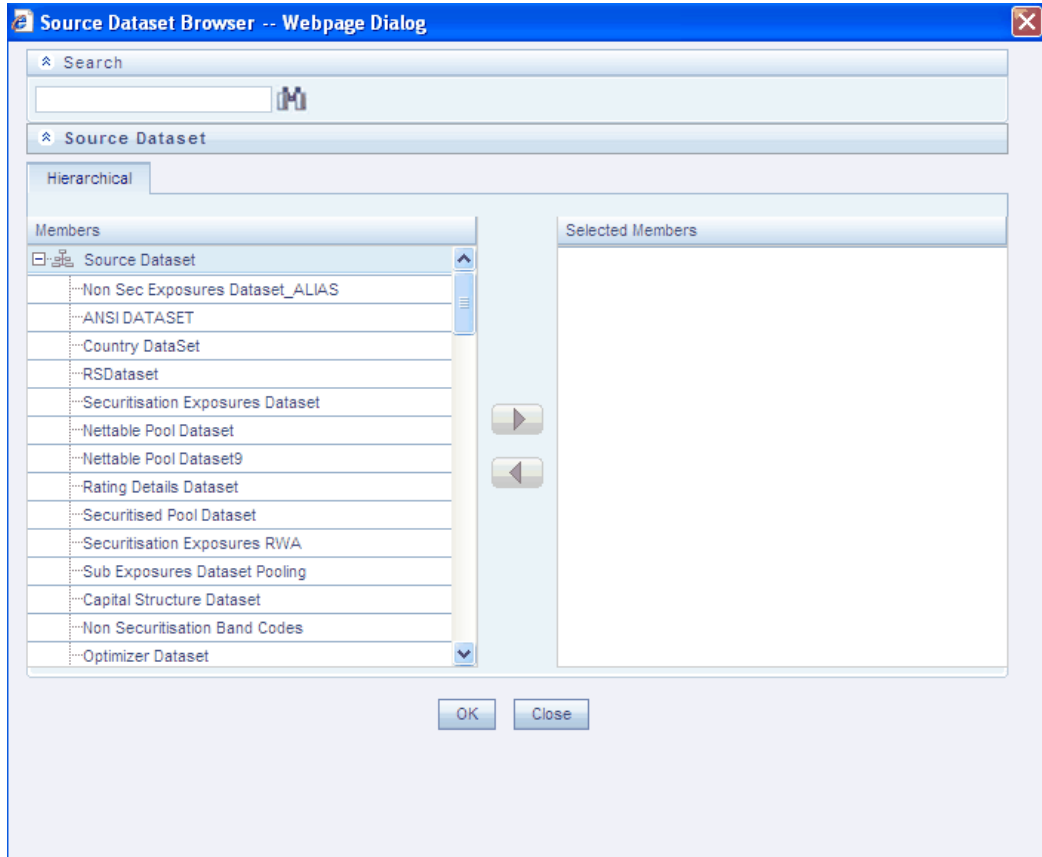
Enter a specific name for the Exposure Equation in the Exposure Equation Name field. It is mandatory to enter a name in this field.

Specifying the Exposure Equation Description

Enter a description for the Exposure Equation you are defining in the Exposure Equation Description field. It is not mandatory to enter a description in this field.

Selecting a Dataset

In the Selected Datasets grid, click **Browse** button adjacent to the **Data Set** field to open the **Source Dataset Browser**. This screen displays the available datasets in the selected information domain.

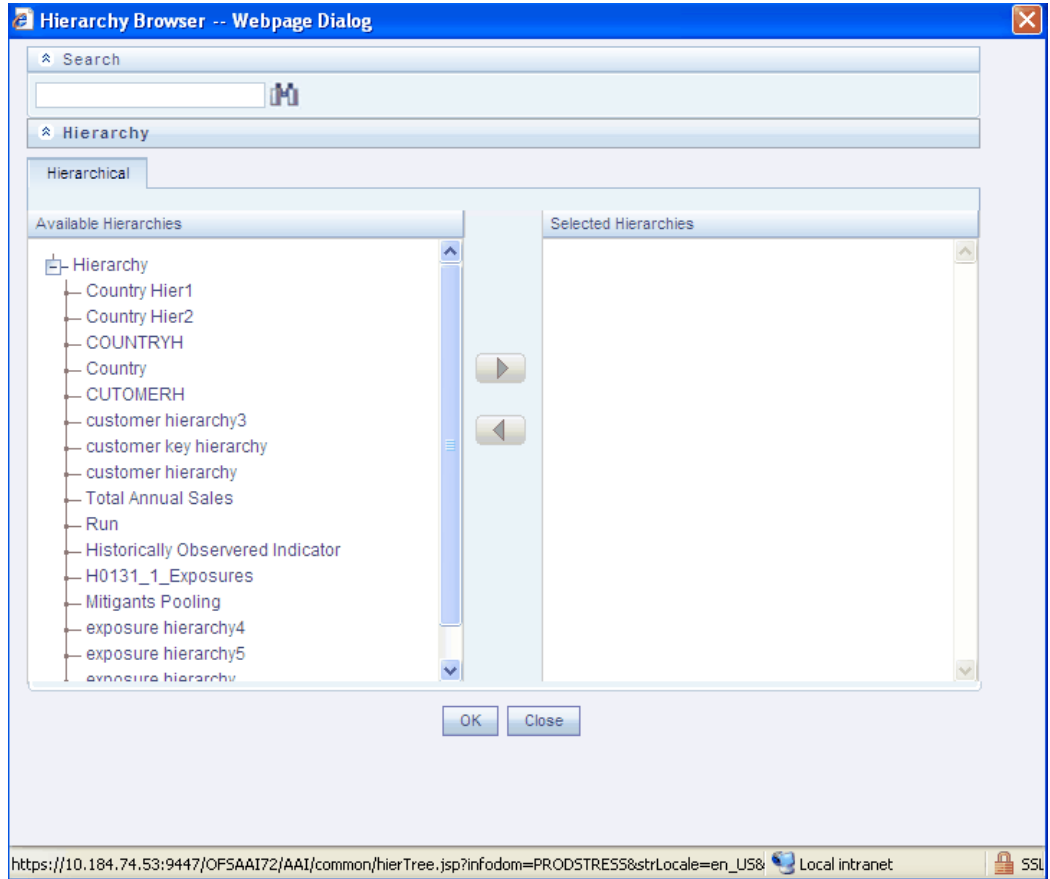


Select the dataset on which the exposure is to be defined and click > button. The exposure hierarchy and nodes will be selected from this dataset.

Click **OK**. The selected data set will be displayed in the Data Set field.

Selecting the Hierarchy

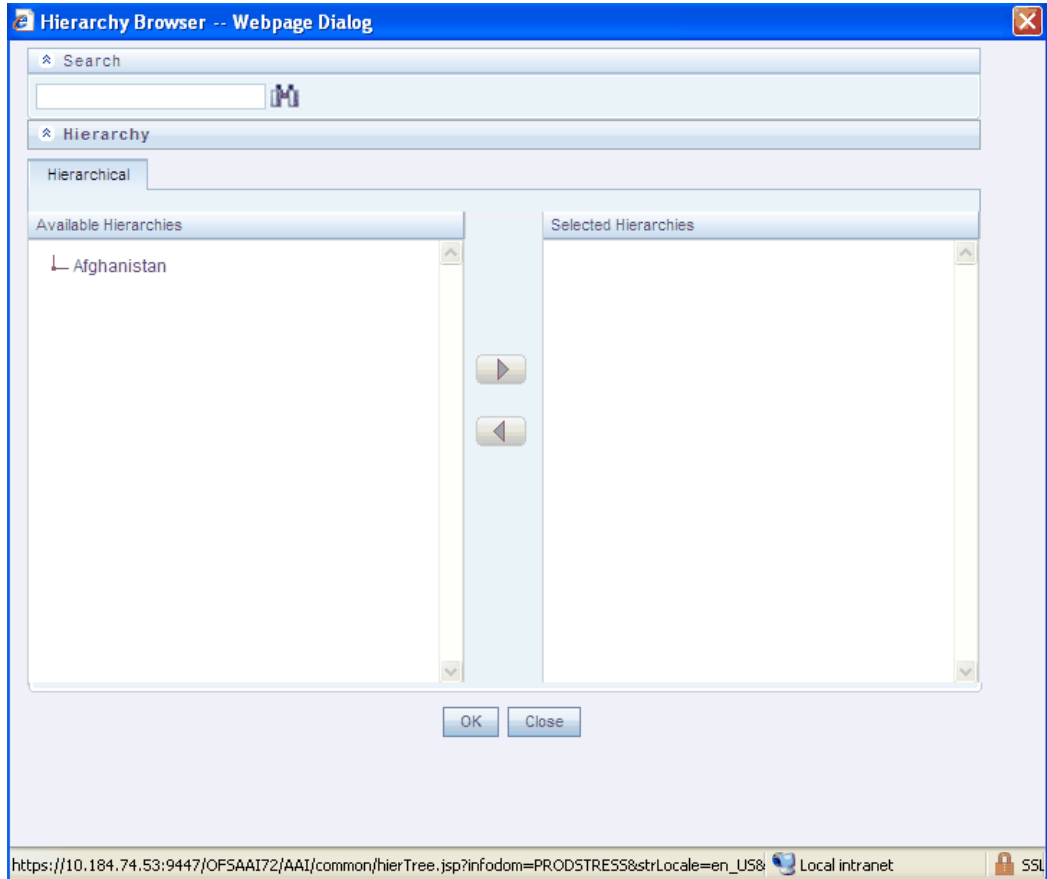
Click **Browse** button adjacent to the **Hierarchy** field to open the **Hierarchy Browser**. This screen displays the available hierarchies in the selected dataset.



Select the Exposure Hierarchy from the **Available Hierarchies** pane and click > button. The selected hierarchy will move to the Selected Hierarchies pane. You can select only one hierarchy for a dataset. Click **OK**. The selected hierarchy name will be displayed in the **Hierarchy** field.

Selecting the Exposure ID

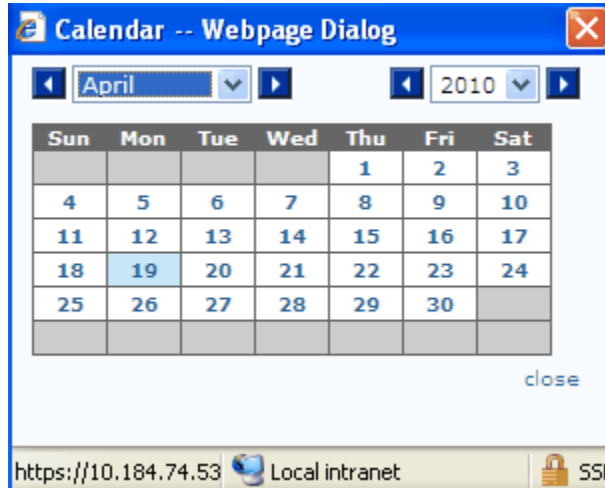
Click **Browse** button adjacent to the **Exposure ID** field to open the **Hierarchy Browser**. This screen displays the available nodes in the selected hierarchy.



Expand the hierarchy in the **Available Hierarchies** pane by clicking + sign which is adjacent to the hierarchy name and select the exposure node for which the equation is defined. Click > button. The selected node moves to the **Selected Hierarchies** pane. Click **OK**. The selected node is displayed in the **Exposure ID** field.

Specifying the Bucket Properties - Disbursement Date

Click Calendar button adjacent to the **Disbursement Date** field to view the Calendar.



Select the date for the first disbursement for the exposure. Choose the year, click < in the left of the year drop-down list to go to the previous year than the one displayed and > on the right of the year list to go to the following year.

Similarly, choose the month. Click the date of the month chosen to be the date of first disbursement. The chosen month, date and year is displayed in the **Disbursement Date** field of the **Cash Flow Engine – Bucket Definition – New** screen.

Specifying the Bucket Properties - Time Bucket Type

Select the time bucket type from the Time Bucket Type drop-down list. The available options are Monthly, Quarterly, Half Yearly, and Yearly.

Specifying the Bucket Properties - Total No. of Buckets

Enter the number of time buckets you want to provide the equations in the **Total No of Buckets** field.

Based on these three inputs of first disbursement date, time bucket type, and number, the time buckets are populated for entering the equations.

Displaying the Time Buckets

Click **Display Time Buckets** button to view the time buckets created based on the specifications entered in the Bucket Properties fields.

Bucket Properties			
Disbursement Date	20-Apr-2010	Time Bucket Type	Monthly
Total No of Buckets	12		

Display Time Buckets

Time Buckets			
Time Buckets	Default Threshold	Asset Value	Exposure Amount
<input type="checkbox"/> 20-APR-2010 TO 19-MAY-2010			
<input type="checkbox"/> 20-MAY-2010 TO 19-JUN-2010			

1 to 2 of 12

Save Cancel

The Time Buckets display grid displays details of two time buckets at a time. The toolbar displays the number of total time buckets available and the count of time buckets that are displayed in the current view.

The navigation buttons are also available. Click > to view the details of the next two time buckets, if any. Click >> to go to the last page. Click < to go to the previous page and << to go to the first page.



Specifying the Default Threshold for the Time Buckets

Enter the Default Threshold for each time bucket in the **Default Threshold** field displayed against it. This is required as the net cash flow is checked against the default threshold for the time bucket. If the net cash flow is less than the default threshold, then the particular scenario is considered to be default.

Specifying the Asset Value for the Time Buckets

Enter the Asset Value for each time bucket in the **Asset Value** field displayed against it.

Specifying the Exposure Amount for the Time Buckets

Enter the Exposure Amount for each time bucket in the **Exposure Amount** field displayed against it.

Time Buckets			
Time Buckets	Default Threshold	Asset Value	Exposure Amount
<input type="checkbox"/> 20-APR-2010 TO 19-MAY-2010	234	12	123
<input type="checkbox"/> 20-MAY-2010 TO 19-JUN-2010	550	650	456

Defining the Equation for a Time Bucket

Select the time bucket for which you wish to define the equation. The Equation display grid is displayed as shown below. While defining the Equation you can specify whether cash flow is inflow or outflow and whether the cash flow is represented by equation or deterministic value.

It is also possible to input the intercept value for the equation and select the drivers of the cash flow. The modeler will also be required to specify whether the variable is an idiosyncratic or a general market variable. For each of the selected variable, the modeler will have to input the co-efficient. It is also possible to define one or more

transformations.

The image shows two screenshots from a software interface. The top screenshot is titled "Time Buckets" and displays a table with columns for "Time Buckets", "Default Therahold", "Asset Value", and "Exposure Amount". The first row is selected and shows values: "20-APR-2010 TO 19-MAY-2010", "234", "12", and "123". The second row shows "20-MAY-2010 TO 19-JUN-2010", "550", "650", and "456". The bottom screenshot is titled "Equation [20-APR-2010 To 19-MAY-2010]" and shows a table with columns for "Equation Name", "Equation Type", and "Equation". Below the table are "Save" and "Cancel" buttons.

Click **New** in the Equation toolbar. The **Cash Flow Engine – Equation – New** screen is displayed.

The image shows a dialog box titled "Cash Flow Engine - Equation - New -- Webpage Dialog". The main area is titled "Cash Flow Engine - Equation" and contains several sections: "Equation Definition" with fields for "Equation Name" and "Equation Description"; "Equation Type" with a dropdown menu set to "Equation"; "Inflow/Outflow" with radio buttons for "Inflow" (selected) and "Outflow"; "Intercept" with a text input field; and "Equation" with a table for defining coefficients. The table has columns for "Driver", "Coefficient", "Transformation", and "Driver Type". At the bottom are "OK" and "Close" buttons.

Specifying the Equation Name

Enter a name for the Equation in the **Equation Name** field.

Specifying the Equation Description

Enter a suitable description for the equation in the **Equation Description** field.

Selecting the Equation Type

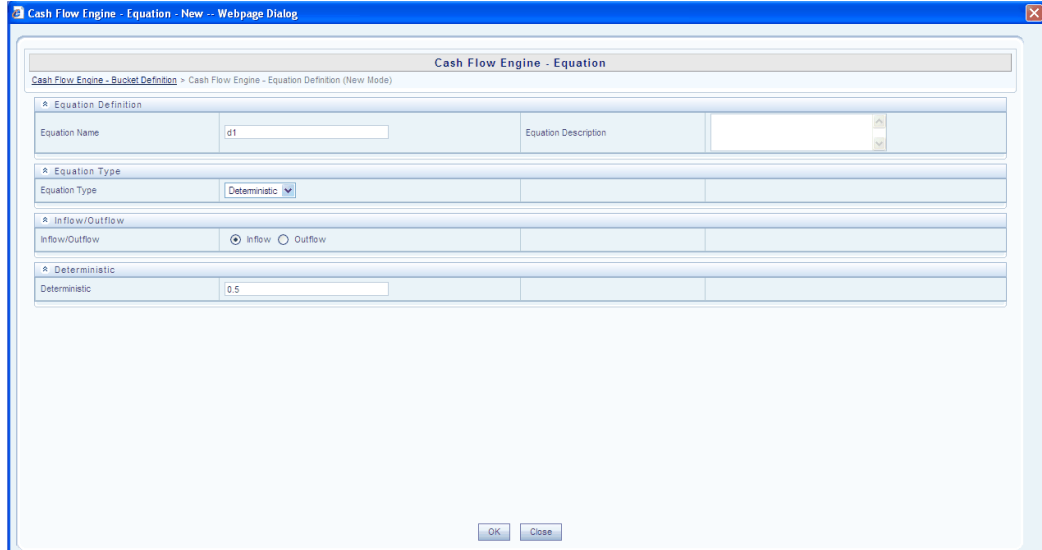
The Cash flow could be represented as deterministic or by equation. Select **Equation** or **Deterministic** from the **Equation Type** drop-down list depending on how the cash flow is to be represented.

Selecting the Cash Flow Type

Select either **Inflow** or **Outflow** options depending on whether the cash flow is inflow or outflow.

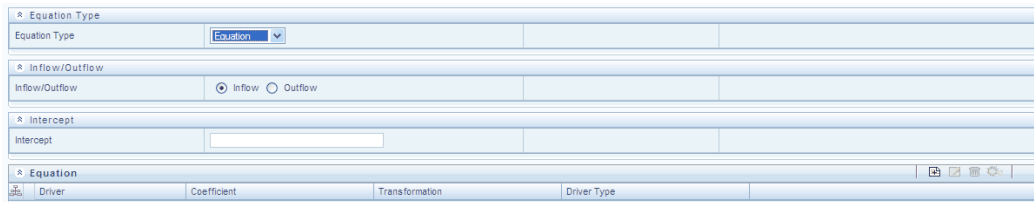
Specifying the Deterministic Value

If the **Equation Type** selected is **Deterministic**, the deterministic display grid is displayed. Enter the Deterministic Value for the cash flow in the **Deterministic** field.



Specifying the Intercept Value

When the cash flow is represented by Equation that is if **Equation** is selected from the **Equation Type** list, it is required to input the intercept value for the equation.

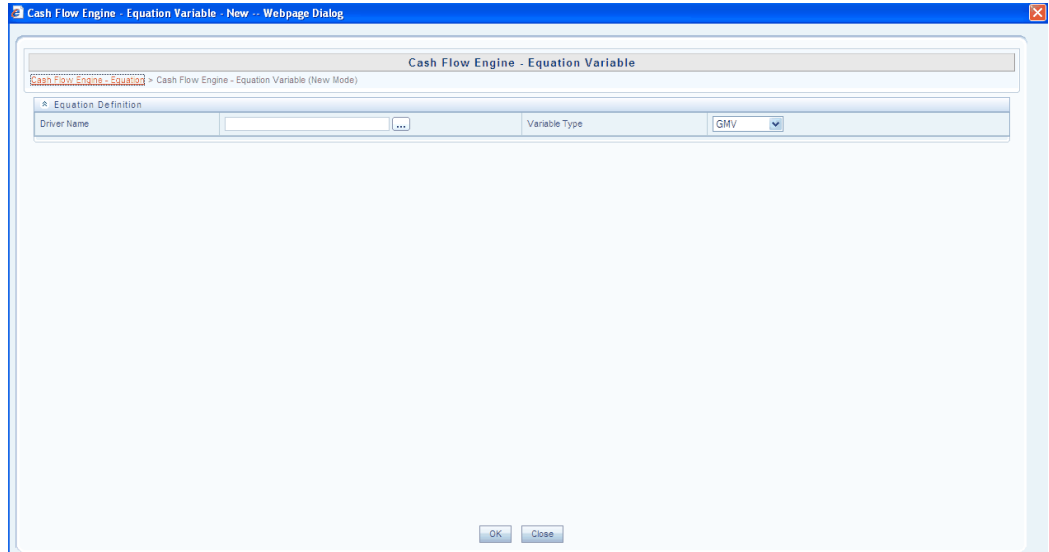


Enter the intercept value for the equation in the Intercept field.

Selecting the Drivers of the Cash Flow Equation

In the **Equation** tool bar that is displayed on selecting the **Equation** option from the **Equation Type** list, click **New** button to specify the various drivers for the Cash Flow Equation.

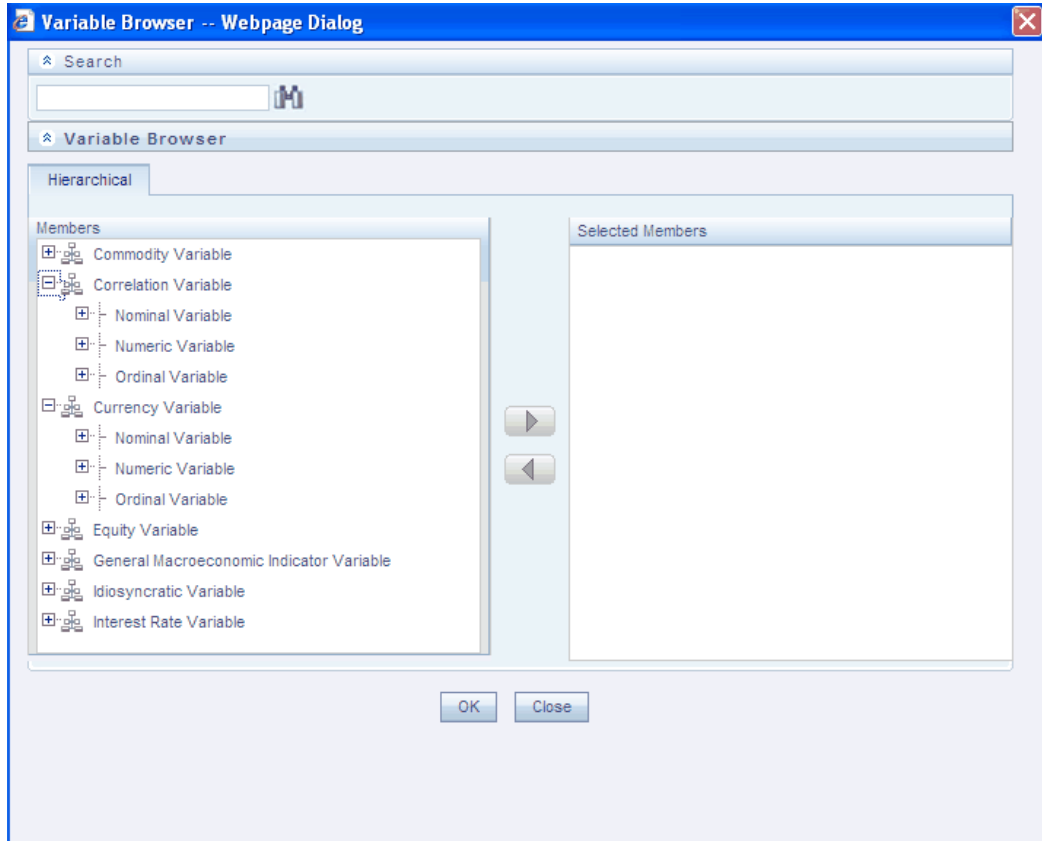
On clicking **New** button, the **Cash Flow Engine - Equation - New** window is displayed.



Selecting the Variable

Click **Browse** button adjacent to the **Driver Name** field. The Variable Browser is displayed.

All the available variables are displayed in the **Members** pane of the Variable Browser. Select the required variable for the Cash Flow Equation from the **Variable List** and click > button to move it to the **Selected Members** pane. Click **OK**.



Specifying the Variable Type

It is required to select whether the variable is an Idiosyncratic variable or a General Market Variable. Idiosyncratic variables are exposure specific variables.

From the **Variable** type drop-down list, select either **GMV** or **Idiosyncratic** and click **OK**. The selected variable will be displayed under **Driver** in the **Cash Flow Engine - Equation - New** window.

Specifying the Coefficient for the Selected Variable

For each selected variable, it is required to input a co-efficient value. Enter the corresponding coefficient value for the selected variable in the **Coefficient** field adjacent to the **Driver**.

Driver	Coefficient	Transformation	Driver Type
<input checked="" type="checkbox"/> var_gen_macro1			GMV

Specifying the Transformation for the Variable

For each selected variable, it is possible to define one or more of the following transformations:

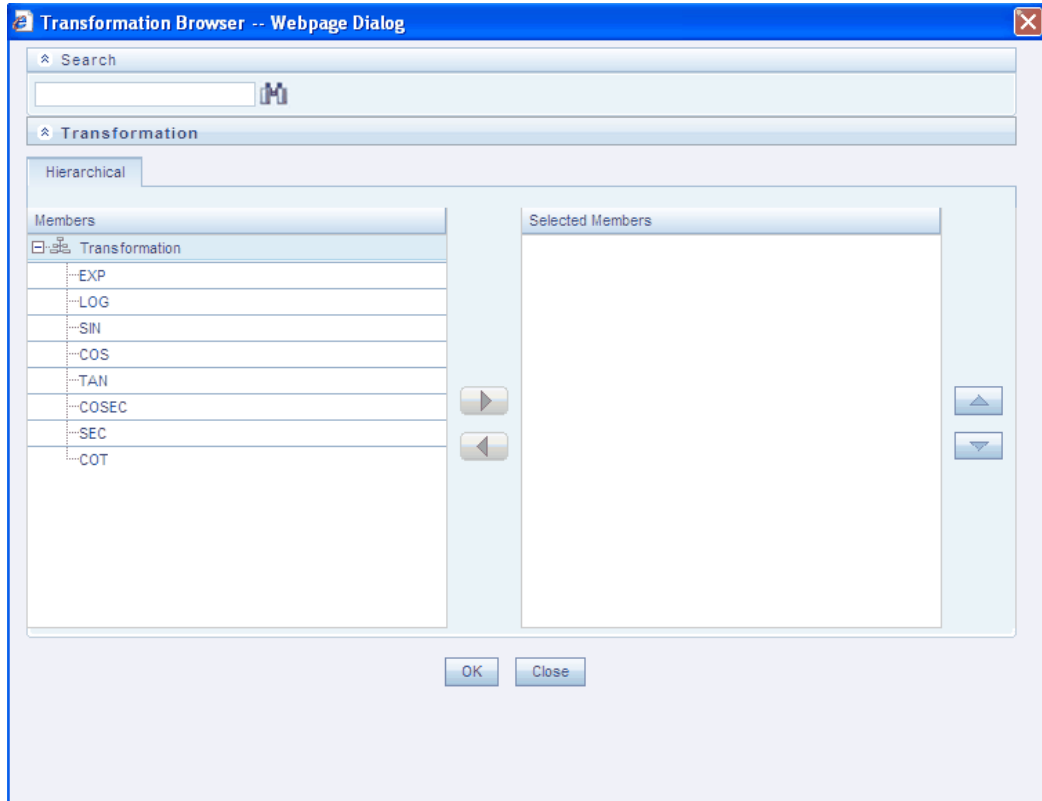
- Log

- Exponential
- Sin
- Cos
- Tan
- Cosec
- Sec
- Cot

In case of multi transformation, the transformations will be done in the order they are defined. Select the checkbox adjacent to the Variable to which you wish to apply the transformation and click the below button.



The **Transformation Browser** is displayed.



Select the required transformations by clicking on each of them and click > button to move it to the **Selected Members** pane. Multiple selections of transformations are possible.

Click up or down buttons to change the order of the selected transformations in the **Selected Members** pane. In case of multi transformations, the transformations will be done in the order in which they are defined.

Click < button to deselect a selected transformation.

Click **OK**. The selected transformations corresponding to the selected variable will be displayed under **Transformation**.

Driver	Coefficient	Transformation	Driver Type
<input checked="" type="checkbox"/> var_gen_macro1	0.5	SIN	GMV

Click **Edit** button to edit the Equation. Click **Delete** button to delete the Equation. Click **OK** in the **Cash Flow Engine - Equation - New** window. The equation details of the selected **Time Bucket** will be displayed in the **Equation** display grid as shown below.

Time Buckets				1 to 2 of 12	
Time Buckets	Default Threshold	Asset Value	Exposure Amount		
<input checked="" type="checkbox"/> 20-APR-2010 TO 19-MAY-2010	234	12	123		
<input type="checkbox"/> 20-MAY-2010 TO 19-JUN-2010	550	650	456		

Equation [20-APR-2010 To 19-MAY-2010]			1 to 1 of 1	
Equation Name	Equation Type	Equation		
<input type="checkbox"/> d1	Inflow	$2 * SIN(var_gen_macro1) * 0.5$		

Click **Save** in the **Cash Flow Engine - Equation - New** window to save the Exposure Equation Definition.

Select the equation and click **View** button to view the Equation details.

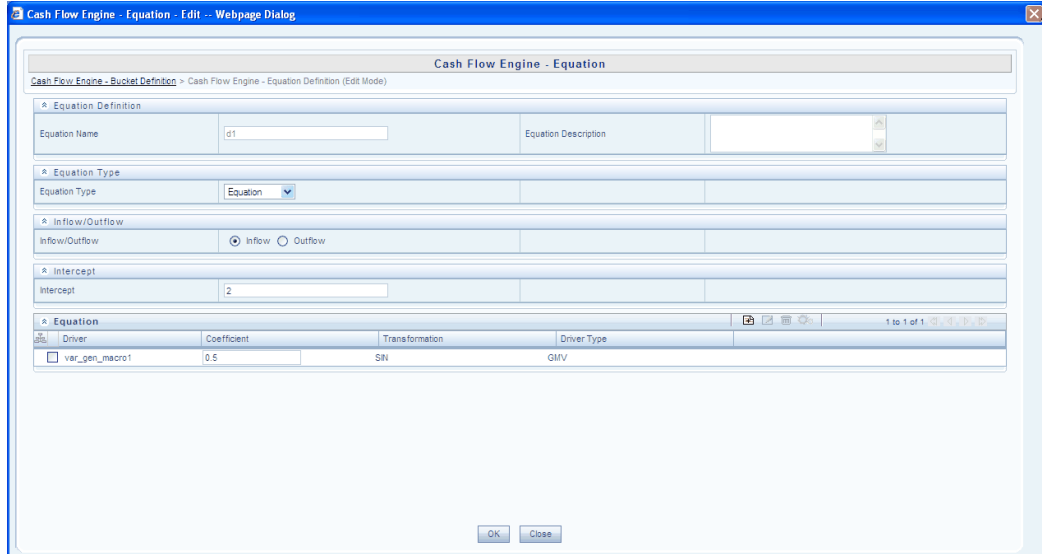
Select the equation and click **Edit** button to edit the Equation. Select the equation and click **Delete** button to delete the Equation.

Viewing an Exposure Equation

Select an Exposure Equation and click **View** button in the **Cash Flow Equations** toolbar to view its details. The **Cash Flow Engine – Bucket Definition – View** window is displayed. Click **Close** button after viewing the details.

Editing an Exposure Equation

Select an Exposure Equation and click **Edit** button in the **Cash Flow Equations** toolbar to edit its details. The **Cash Flow Engine – Bucket Definition – Edit** window is displayed.



You can edit the Bucket Properties including the Disbursement Date, Bucket Type, and Number of Buckets.

It is also possible to click the Equation details for each Time Bucket by selecting the Time Bucket and the Equation displayed to be edited and clicking **Edit** button in the **Equation** toolbar. The **Cash Flow Engine – Equation – Edit** window is displayed.

You can modify the Equation Type from Deterministic to Equation or vice versa and from Inflow to Outflow or vice versa. On changing the Equation Type, fields relevant to the type of equation will be displayed.

Click the **OK** button to save the changes.

Deleting an Exposure Equation

Select an Exposure Equation and click **Delete** button in the **Cash Flow Equations** toolbar to delete a cash flow equation definition.

List of Techniques

The OFSAA Infrastructure aims to address the statistical computation needs of a Bank for its operations. The techniques that are supported including the regression models as well as static variable transformations are as follows:

Business Models

- **Credit Risk**
 - CashFlow Model
 - Conditional Default Model

- Credit Metrics Structural Model
- Distribution Fitting based Future Value Model
- Historical Loss Distribution Fitting Model
- Historical Pool Average Default Rate Model
- Merton Model
- Time to Default Model
- VAR Reader
- **Market Risk**
 - EWMA Model
 - GARCH Model
 - Market Risk VaR Model
- **Operational Risk**
 - Reporting Group Selection

Statistical Techniques

- **Analysis of Variance**
 - Two Factor Without Replication
- **Classification and Regression Trees**
 - Entropy
 - GINI
- **Copula**
 - Cook-Johnson
 - Empirical
 - Gaussian
 - Gumbel - Hougaard

- Student's t
- **Data Analysis**
 - Bivariate Analysis
 - Descriptive Analysis
- **Factor Analysis**
 - Maximum Likelihood Extraction Method
 - Principal Component Extraction Method
- **Goodness of Fit Tests**
 - Anderson – Darling Test
 - Chi-Square Test
 - Kolmogrov-Smirnov Test
- **Monte Carlo Simulation for Continuous Distributor**
 - Beta
 - Burr
 - Chi - Square
 - Empirical
 - Exponential
 - Gamma
 - Generalised Pareto
 - Gumbel
 - Log Gamma
 - Log Logistic
 - Log Normal
 - Log Weibull

- Multivariate Normal
- Pareto Distribution
- Snedecor's F
- Student's t
- Uniform
- Univariate Normal
- Weibull

- **Monte Carlo Simulation for Discrete Distributions**
 - Binomial
 - Negative Binomial
 - Poisson

- **Multivariate Methods**
 - Discriminant Analysis
 - Hierarchical Clustering
 - k-means
 - k-means and Boundary Based Prediction

- **Non-Parametric Tests**
 - Kruskal Wallis
 - Mann Whitney
 - Median Test
 - Run Test
 - Sign Test
 - Two sample t – Test
 - Two sample KS Test

- Wilcoxon Sign Rank
- **Optimization techniques**
 - Linear Programming
 - Quadratic Programming
- **Regression Techniques**
 - Generalized Linear Models - Gamma errors
 - Generalized Linear Models - Gaussian errors
 - Linear Regression
 - Linear Regression with Mixed Effects – ML
 - Linear Regression with Mixed Effects – REML
 - Logistic Regression
 - Monte Carlo Expectation Maximization
 - Poisson Regression
 - Stepwise Regression
- **Simultaneous Equations**
 - Hermitian Linear Equations
 - Simultaneous Linear Equations with Choleskey Factorization
 - Simultaneous Linear Equations with LU Factorization
- **Time Series**
 - ARIMA
 - Autocorrelation
 - Cross Correlation between two Time Series
- **Variance Covariance and Correlation Matrix**
 - Kendall's Rank Correlation

- Pearson's Correlation Coefficient
- Spearman's Rank Correlation

Transformation Techniques

1. Input Variables

- Antilogarithm
- Arithmetic
- Beta Distribution
- Box – Cox
- Differencing
- Equi-Frequency Binning
- Equi-Width Binning
- Exponential
- Inverse Beta Distribution
- Inverse Logit
- Inverse Normal Distribution
- Inverse Trigonometric
- Logarithm
- Logit
- Manual Binning
- Missing Value Treatment
- Modules
- Normal Distribution
- Ordinal Ranking
- Outlier Detection

- Power
- Probit
- Trigonometric
- Weights

2. Data Output

- Arithmetic
- Beta Distribution
- Box – Cox
- Inverse Beta Distribution
- Inverse Differencing
- Inverse Logit
- Inverse Normal Distribution
- Inverse Trigonometric
- Logit
- Modules
- Normal Distribution
- Power
- Probit
- Trigonometric

External Scheduler Interface Component

Introduction

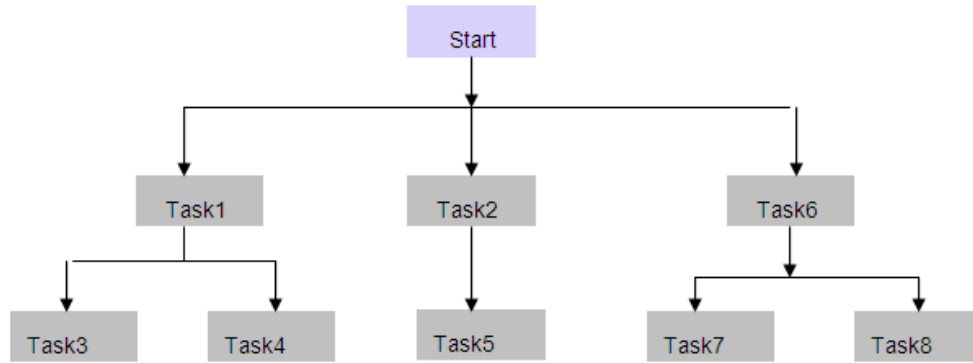
ICC (Information Command Center) is the infrastructure component of OFSAAI, which manages the execution of all components within OFSAAI. It is also responsible for reporting the status of tasks and batch run and prompts for subsequent course of action depending on their success/failure. The concept of batch and task within it is central to the whole product.

A task is an indivisible unit of work that must be executed as one single piece by ICC. A task may have many subtasks internally and their execution mechanism is handled by the component internally.

A collection of these tasks with precedence defined for each task make a batch. The precedence enforces the relative order of execution of the tasks. The task precedence is responsible for the parallelism achieved during the execution of a batch. It is thus essential to take into account, the performance implications while defining task precedence in a batch apart from the logical or functional reasons that primarily define the relative order in which they may be executed.

For example, consider a batch comprising of tasks.

The arrows in the following figure, shows the precedence involved.



The way ICC picks these tasks for execution is as follows:

- Pick up all the tasks that have START as their parent. It essentially means that these tasks (here Task1, Task2 and Task6) can be run independently.
- Subsequently pick all tasks for execution (at that instance of time) whose all parents are successful.
- A Batch is marked as successful if all runnable tasks are successful. Else, it has failed.

BATCH RUN ID

The Batch Run Id is an identifier used to uniquely identify a particular run of a batch. It is as follows:

Infodom_Batchname_Infodate_Run

Where,

<i>Infodom</i>	The Infodom for which the batch is being run
<i>Batchname</i>	The name of the Batch as assigned by the user
<i>Infodate</i>	The date for which the batch is being run
<i>Run</i>	This number denotes the no of times the Batch has been executed. The value is incremented if the Batch is re run for the same MISDATE.

BATCH MONITORING

The Batch Monitoring screen in Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) Operations, allows the static and real time monitoring of the Batch. On choosing a particular batch definition, an Infodate and a batch run ID, it displays the status of tasks.

Scope of Integration

The scope of OFSAAI Integration with an External Scheduler (ES) shall span over providing the ES with the following capabilities:

- ES shall be able to export a Batch Definition from OFSAAI to a specified location in an OFSAAI standard XML format (refer to Appendix I, page A-11). ES may add other ES specific details after importing the Batch Definition to utilize its capability.
- ES would be provided with the capability to execute a task of a Batch.
- ES would be provided with the capability of obtaining a Task status of a Batch Run, the mechanism of which shall be explained in the Batch Execution Mechanism below. It would also be provided with the capability to obtain the status of a Batch run.
- ES would be provided with the capability of altering a status of a Batch run.
- ES shall be provided with the capability to delete Batch definitions, Batch runs as per specifications provided.

Assumptions

- Every Batch run is uniquely identifiable both in ES and OFSAAI. Every task must be executed under the purview of a Batch Run in OFSAAI.
- ES is capable of passing a unique id for a run of a Batch to OFSAAI through an initialization mechanism as discussed in BATCH EXECUTION MECHANISM.
- ES is capable of importing a Batch definition, exported in OFSAAI Standard XML format. Else the Batch needs to be manually defined in exactly the same way as defined in OFSAAI (with the unique Task Ids and so on)
- ES is capable of executing and passing the desired parameters to an executable. Further it should be able to reap its exit status and interpret it as per the specifications in Appendix III, page A-17 .

Restrictions

- Every Task executed by the External Scheduler must have an equivalent in a Batch defined in OFSAAI except for special tasks like Initialization, De-initialization and Status Query/Alter Tasks in the ES.
- Task execution must obey the precedence defined in OFSAAI. The result of a request by ES to execute a task whose predecessor (in OFSAAI) has not succeeded shall result in failure.
- If ES requests to alter the status of a task that has been already requested for execution, an error value specific to such a case would be returned. With Batch Run too the same policy would be followed.
- A request to execute a task of a Batch Run that has been marked as success will result in failure.
- A request to run a Batch whose definition does not exist or is deleted in OFSAAI is failure. An error value specific to such a case would be returned.
- The ES must initialize a batch as prescribed in the BATCH EXECUTION MECHANISM as explained in the document.
- The consequence of an attempt to execute a task without initialization of a Batch would lead to failure of the request.
- Concurrent requests for execution of the same Task for a Batch Run would lead to failure. The same holds good for a Batch Run.

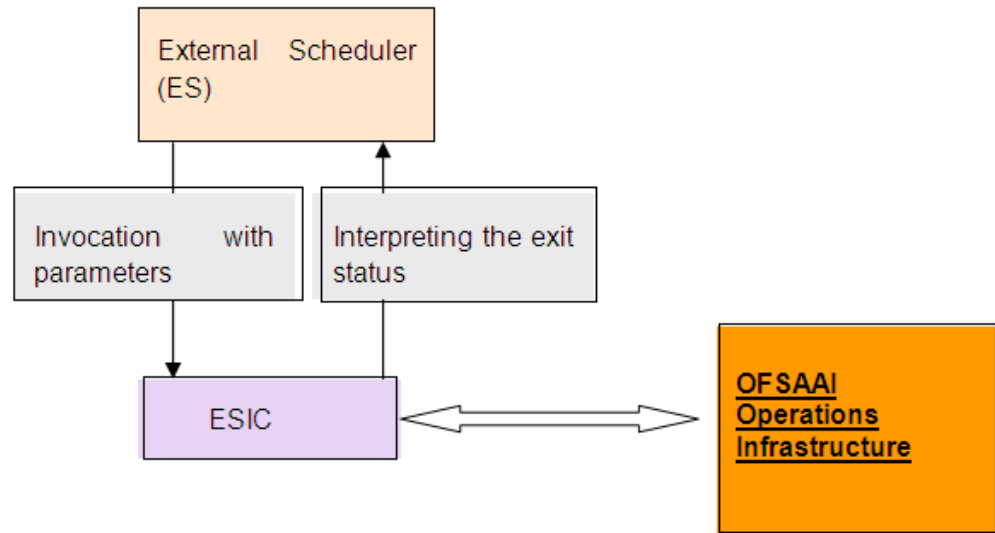
Architecture

The scheme of the integration with an external scheduler is as depicted below. The ES executes a component, named "External Scheduler Interface Component" (ESIC) and passes suitable parameters (refer Appendix II, page A-12). The ESIC in turn passes the request to OFSAAI. The ES finally reaps the exit status of ESIC and should interpret it as per the specifications in Appendix III, page A-17. OFSAAI shall provide the component ESIC.

Details of ESIC Invocations

- ES also should execute an Initialization task and a De-Initialization task - both of which are again invocations of ESIC with specific parameters.
- ES invokes ESIC as a command line executable for each task to be executed. This also includes the initialization and finalization (de-initialization) tasks.

- ESIC can wait (optional) for an invoked task to complete execution. After the task completes execution, ESIC exits with an appropriate exit status that can be reaped by the ES.
- An instance of ESIC exists till the request is completed.
- ESIC handles all exceptions generated during its lifetime. In case of an exception, ESIC logs appropriately and exits with an appropriate exit status that can be reaped by the ES.



For more details of ESIC exit status, refer Appendix III, page A-17 and other miscellaneous information of ESIC, refer Appendix IV, page A-18.

Batch Execution Mechanism

We explain here, the prescription for Batch Execution with an External Scheduler through an example.

Let us say we define a batch in OFSAAI using the Batch Definition screen. We call the Batch 'EXTBATCH'. The information domain in which this Batch is defined is 'AMEXDOM'.

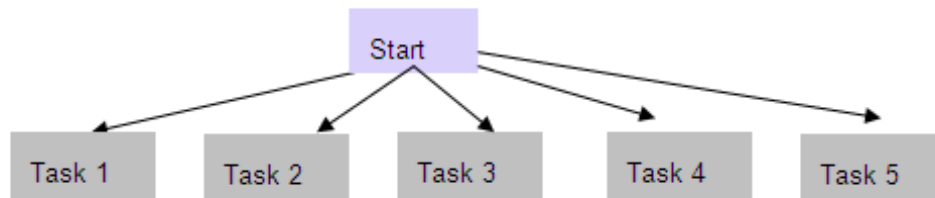
AMEXDOM_EXTBATCH becomes its batch id in OFSAAI. Let us say we want to run the following tasks in this Batch.

- The first task 'Task1' requires us to load data in a warehouse table FCT_CUSTOMER.
- The second task 'Task2' requires us to load data in a warehouse table DIM_GEOGRAPHY.

- The third task 'Task3' is a Data Transformation, uses both the Tables mentioned above. Hence this can run only if both the above tasks -Task1 and Task2 are complete.
- If either Task1 or Task2 have not succeeded then we wish to run Task 4, which does the Data Transformation using the data of the previous load.
- Finally we have 'Task5' which is a Cube building task and may take several hours as it builds a Cube with many dimensions and hierarchies and houses large number of combinations.

The parameters for the Tasks are chosen from the drop down choices provided. OFSAAI provides the choices through its Unified Metadata Management.

Since, the Task 3 or Task 5 is executed based on conditional success/ failure of previous tasks, the conditionality needs to be simulated in the ES, as OFSAAI currently does not support this feature. Thus if the External Scheduler wants to control the order/ conditionality for tasks then it needs to be defined in such a way in OFSAAI that they have the same precedence. Here it would thus be ideal to define it as follows in OFSAAI. The arrows in the following figure, shows the precedence involved.



The export of such a Batch from OFSAAI would look like the following (refer Appendix I), page A-11.

```

<BATCH BATCHID="AMEXDOM_EXTBATCH" NOOFTASKS="5" SYSTEMLOCALE="+5:30 GMT"
INFODOMAIN="AMEXDOM" REVUSER="OPERADMIN" DEFTYPE="DEF">
  <RUNINFO REVUID="" EXTUID="" BATCHSTATUS="" INFODATE="" LAG=""/>
  <TASK TASKID="Task1" COMPONENTID="LOAD DATA" TASKSTATUS="N"
FILTER="N">
    <PARAMETER name="IP Address" value="169.165.63.74">
    <PARAMETER name="Datastore Type" value="EDW">
    <PRECEDENCE>
      <ONSUCCESSOF>
        <TASKID/>
      </ONSUCCESSOF>
      <ONFAILUREOF>
        <TASKID/>
      </ONFAILUREOF>
    </PRECEDENCE>
  </TASK>
  <TASK TASKID="Task2" COMPONENTID="CUBE CREATE" TASKSTATUS="N"
FILTER="N">
    <PARAMETER name="Cube Parameter" value="CC1">
    <PRECEDENCE>
      <ONSUCCESSOF>
        <TASKID/>
      </ONSUCCESSOF>
      <ONFAILUREOF>
        <TASKID/>
      </ONFAILUREOF>
    </PRECEDENCE>
  </TASK>
  <TASK TASKID="Task3" COMPONENTID="RUN EXECUTABLE" TASKSTATUS="N"
FILTER="N">
    <PARAMETER name="EXECUTABLE" value="run.sh">
    <PARAMETER name="WAIT" value="Y">
    <PRECEDENCE>
      <ONSUCCESSOF>
        <TASKID/>
      </ONSUCCESSOF>
      <ONFAILUREOF>
        <TASKID/>
      </ONFAILUREOF>
    </PRECEDENCE>
  </TASK>
  <TASK TASKID="Task4" COMPONENTID="EXTRACT DATA" TASKSTATUS="N"
FILTER="N">
    <PARAMETER name="Source Name" value="CardSrc">
    <PARAMETER name="Extract Name" value="Extract1">
    <PRECEDENCE>
      <ONSUCCESSOF>
        <TASKID/>
      </ONSUCCESSOF>
      <ONFAILUREOF>
        <TASKID/>
      </ONFAILUREOF>
    </PRECEDENCE>
  </TASK>
  <TASK TASKID="Task5" COMPONENTID=" TRANSFORM DATA" TASKSTATUS="N"
FILTER="N">
    <PARAMETER name="Rule Name" value="Trans1">
    <PARAMETER name="Parameter List" value="20030405">
    <PRECEDENCE>
  <ONSUCCESSOF>
    <TASKID/>

```

```
</ONSUCCESSOF>  
    <ONFAILUREOF>  
        <TASKID/>  
    </ONFAILUREOF>  
</PRECEDENCE>  
</TASK>  
</BATCH>
```

Valid Values for Task Status are:

N - Not Started

O - On Going

F - Failure

S - Success

Valid Values for Batch Status are:

N - Not Started

O - On Going

R - For Restart

C - Complete

Valid values for FILTER are:

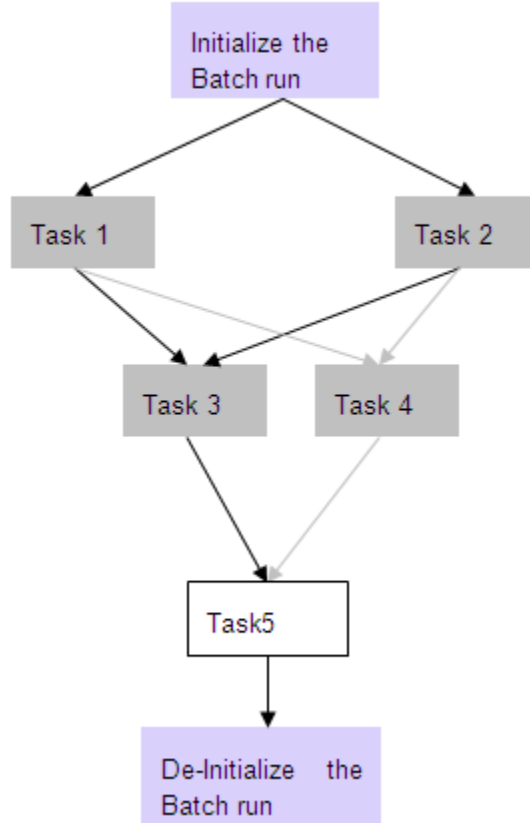
H - Hold

K - Exclude/Skip

N - No Filter

When we are trying to export a definition of a Batch and import it in ES, then the Task Status, the Batch Status and the Filter are quite irrelevant. They become relevant only when one is trying to export a specific run of a Batch, which is not currently supported by OFSAAI. One would do this rarely, but included as a part of the XML for completeness.

After importing it in the ES it is the freedom of the Administrator to decide the order in which the tasks must be executed. He has total control to alter the order of execution without violating the precedence set in OFSAAI. For example, the Administrator might configure it as in the following figure.



The invocation of ESIC by the ES and the command line parameters passed for each task for the above configuration would be as follows. (refer to Appendix II, page A-12). The ES needs to provide the 'Ext Unique ID', which say in this case, is MAESTRO_AMEXDOM_EXTBATCH_20031001_1.

- **Initialize the Batch Run:**

```

esic -JI -Urevuser -Ppassword -RMAESTRO_AMEXDOM_EXTBATCH_20031001_1
      -IAMEXDOM -BEXTBATCH -D20031001 -F/tmp/AMEXDOM
  
```

- **Task 1:**

```

esic -JXT -Urevuser -Ppassword -RMAESTRO_AMEXDOM_EXTBATCH_20031001_1
      -IAMEXDOM -WC -TTask1 -P<paramname1>=<value1>
      -P<paramname2>=<value2>
  
```

- **Task 2:**

```

esic -JXT -Urevuser -Ppassword -RMAESTRO_AMEXDOM_EXTBATCH_20031001_1
      -IAMEXDOM -WC -TTask2 -P<paramname1>=<value1>
      -P<paramname2>=<value2> -P<paramname3>=<value3>
  
```

- **Task 3:**

```
esic -JXT -Urevuser -Ppassword -RMAESTRO_ AMEXDOM_EXTBATCH
_20031001_1
-IAMEXDOM -WC -TTask3 -P<paramname1>=<value1>
```

- **Task 4:**

```
esic -JXT -Urevuser -Ppassword -RMAESTRO_ AMEXDOM_EXTBATCH
_20031001_1
-IAMEXDOM -WC -TTask4 -P<paramname1>=<value1>
-P<paramname2>=<value2>
```

- **Task 5:**

```
esic -JXT -Urevuser -Ppassword -RMAESTRO_ AMEXDOM_EXTBATCH
_20031001_1
-IAMEXDOM -WC -TTask5
```

- **De-initialize :**

```
esic -JD -Urevuser -Ppassword -RMAESTRO_ AMEXDOM_EXTBATCH
_20031001_1
-IAMEXDOM -BAMEXDOM_EXTBATCH -D20031001
```

Appendix I

```
<BATCH BATCHNAME="Name of the Batch" NOOFTASKS="Total no of tasks in the
Batch" SYSTEMLOCALE="The locale of the system where the batch is defined
" INFODOMAIN="The Information domain where the batch is defined"
REVUSER="User who defined the batch" DEFTYPE="To Identify whether the
XML file describes a batch definition or run (can take values 'D' in
case of definition and 'R' in case of run)">
  <RUNINFO REVUID="Batch Run ID" EXTUID="External Unique ID for the
Batch Run" BATCHSTATUS="Status of the Batch Run" INFODATE="The info Date
for the system" LAG="Defines the Lag for the Batch"/>
  <TASK TASKID="Task1" COMPONENTID="LOAD DATA" TASKSTATUS="O"
FILTER="H">
    <PARAMETER name="IP ADDRESS" value="169.165.63.74">
    <PARAMETER name="Source Name" value="RemoteSrc">
    <PRECEDENCE>
      <ONSUCCESSOF>
        <TASKID></TASKID>
      </ONSUCCESSOF>
      <ONFAILUREOF>
        <TASKID/>
      </ONFAILUREOF>
    </PRECEDENCE>
  </TASK>
  <TASK TASKID="Task2" COMPONENTID="RUN EXECUTABLE" TASKSTATUS="O"
FILTER="H">
    <PARAMETER name="EXECUTABLE" value="run.sh">
    <PARAMETER name="WAIT" value="Y">
    <PRECEDENCE>
      <ONSUCCESSOF>
        <TASKID></TASKID>
      </ONSUCCESSOF>
      <ONFAILUREOF>
        <TASKID></TASKID>
      </ONFAILUREOF>
    </PRECEDENCE>
  </TASK>
  <TASK TASKID="Task3" COMPONENTID="EXTRACT DATA" TASKSTATUS="O"
FILTER="N">
    <PARAMETER name="Source Name" value="CardSrc">
    <PARAMETER name="Extract Name" value="Extract1">
    <PRECEDENCE>
      <ONSUCCESSOF>
        <TASKID>TASK1</TASKID>
      </ONSUCCESSOF>
      <ONFAILUREOF>
        <TASKID>Task2</TASKID>
      </ONFAILUREOF>
    </PRECEDENCE>
  </TASK>
</BATCH>
```

The valid values for FILTER are:

H - Held

R - Released

E - Excluded/Skipped

I - Included

Appendix II

ESIC Command Line Parameters:

```
esic -J<Job Type> <Parameters>
```

The type of the Parameters depends on the value of the Job Type.

Job Types

I - Initialize a batch for execution

Usage:

```
-JI -U<User ID> -P<Password> -R<Ext Unique ID> -I<Info Dom> -B<Batch Name> -D<Info Date>-F<Temp Directory Name>
```

The <password> supplied to ESIC is encrypted and the encrypted password is stored in the column v_password in the table CSSMS_USR_PROFILE.

The <Ext Unique ID> can be anything unique against a batch execution. It is the responsibility of the External Scheduler/calling program to supply the unique id to ESIC.

<Temp Directory Name> can be any value chosen by the user.

The <Ext Unique ID> against OFSAAI batch execution id mapping is stored in the table EXT_BATCH_RUN_ID_MAPPING.

The <External Unique ID> and the <Temporary Dir Name> would be stored in a table against a newly generated Batch Run ID. This command would prepare all the run tables and initialize the run of a batch. This command should be executed before any other external API for execution of a batch, as it registers the <External Unique ID> against the Batch Run ID.

D - DeInitialize/Clean up temporary files created for a Batch Execution

Usage:

```
JD -U<User ID> -P<Password> -R<Ext Unique ID> -I<Info Dom> -B<Batch Name> -D<Info Date>
```

This command would DeInitialize the run of a Batch. All temporary resources allocated for that run of a Batch would be reclaimed. An attempt to call an API for a batch for which DeInitialize has been called would return an error. If DeInitialize is called for an ongoing Batch which has no ongoing tasks, the batch status in accordance to the status of the Tasks under this Batch. If any of the Tasks is Ongoing this command will return a failure saying, "batch cannot be de-initialized".

X - Execute a Task/Batch or Restart of Batch

Usage:


```

-JXB -U<ID> -P<Password> -R<Ext Unique ID> -I<Info Dom> -W<Wait Mode>
-JXT -U<User ID> -P<Password> -R<Ext Unique ID> -I<Info Dom> -W<Wait
Mode>-T<Task ID> [-A<Parameter Name>=<Parameter Value>...]
-JXRB -U<User ID> -P<Password> -R<Ext Unique ID> -I<Info Dom>
-W<Wait Mode>-T<Task ID> [-A<Parameter Name>=<Parameter Value>...]

```

Wait Modes:

C - Wait Completion of a Task/Batch

S - Successful Trigger/Relay of Task to OFSAAI

These options can be used to execute a Batch or Task of a Batch in OFSAAI. In the case of a batch, the Batch must have been initialized. In the case of a Task, the batch, of which the task is a member, must have been initialized, by calling the Initialize API. When a Batch is defined in OFSAAI, each task will be assigned with unique id like Task1, Task2 and so on. This task id has to be supplied for <Task ID>. [-A<Parameter Name>=<Parameter Value>...] is an optional parameter for ESIC. If this is not given, ESIC will use the default parameters defined for the Batch otherwise the parameter name-value pairs would override the parameters provided to the task during batch definition in OFSAAI. The parameters and values are stored in BATCH_PARAMETER_MASTER. This command would execute the batch/task as in current system; the return value would depend on the wait mode specified. If the wait mode were 'S', then a call would return success if the task was successfully triggered.

If the wait mode were 'C', then the command would wait for completion of the task/batch and returns the task/batch execution return values.

Only Task/Batch marked as 'N' (not started) can be executed using this API. A task can only be executed if it does not violate the precedence set in OFSAAI batch definition.

W - Get Task/Batch Status

Usage:

```

-JWB -U<User ID> -P<Password> -R<Ext Unique ID> -W<Wait Mode> -I<Info
Dom>
-JWT -U<User ID> -P<Password> -R<Ext Unique ID> -W<Wait Mode> -I<Info
Dom>-T<Task ID>

```

S – Finalize the Batch execution – primarily mark the Batch run as complete

Usage:

```

-JSB -U<User ID> -P<Password> -R<Ext Unique ID> -I<Info Dom> -V<Batch
Status>

```

Valid Values for Batch Status are:

C - Complete

F - Add filter to a Task

Usage:

```

-JFT -U<User ID> -P<Password> -R<Ext Unique ID> -I<Info Dom> -T<Task ID>
-V<Task Filter>

```

Valid values for filter are:

H - Hold

R - Release

E - Exclude/Skip

I - Include

P - Purge Batch Run data between two info dates

Usage:

```
-JP -U<User ID> -P<Password> -I<Info Dom> [-B<Batch Name>] -S<Start Date> -E<End Date>
```

The Start and End Dates must be in the following format: YYYYMMDD.

E - Export a Batch Definition

Usage:

```
-JE -U<User ID> -P<Password> -I<Info Dom> -B<Batch Name> -F<File Name>
```

<File Name> contains the complete file name that would be created overwriting any file that exists with the same name.

BL – View messages logged for a batch run

Usage:

```
-JBL-U<User ID> -P<Password> -R<Ext Unique ID> -I<Info Dom> -F<File Name> [-V<Message Format String>]
```

<File Name> contains the complete file name that would be created overwriting any file that exists with the same name.

<Message Format String> specifies the information that needs to be logged.

Format string can contain parameters that will be replaced with actual values from logs.

Valid values for message parameter are:

msgid

brid

taskid

component

tstatus

severity

tstamp

sysmsg

Each parameter, when passed in a message format string should be enclosed within {}.

Example

A typical message format string would look like:

{msgid}\t{brid}\t{taskid}\t{component}\t{tstatus}\t{severity}\t{tstamp}\t{sysmsg}

If no message format string is supplied, then the log generated will be in the above format, with each value separated by a tab.

XBG – Execute a Batch-Group

Usage:

```
-JXBG-U<User-ID> -P<password> -R< Ext Unique ID> -G<Batch Group Name>-  
I<InfoDOM Name>-D<MIS Date>-W<Wait Mode>
```

This command is used to execute a created batch group with the parameters to be passed in the formats as described below.

1	XBG	Stands for executing Batch Groups
2	User-ID	OFSAAI User
3	Password	OFSAAI password
4	Ext Unique Run-ID	BatchGroupName_RequestForExecutionID_MISDATE_ Run, Run being the number of times batch-group is executed
5	Batch Group Name	INFODOM_BatchGroup-ID (BatchGroup-ID gets generated when batch group is created and this can be seen in batch group execution screen of OFSAAI front-end)
6	InfoDOM Name	Name of the information domain
7	MIS Date	To be in the format 'YYYYMMDD'
8	Wait Mode	C - Wait Completion of the batch-group +S - Successful Triggering of the batch-group

XBG – Execute selected batches in a Batch-Group

Usage:

```
-JXBG -U<User-ID> -P<password> -R< Ext Unique ID> -G<Batch Group Name>-  
-I<Infodom Name> -D<MIS Date> -W<Wait Mode> -BBatchNames
```

This is used to execute selected batches of a batch-group with the names of the batches to be executed to be passed.

BatchNames : List of batch names each separated by a ","...

XBG – Execute batches of a Batch-Group with precedence:

Individual batches of a batch-group can also be assigned with precedence to define the order in which the batches are to be executed.

We can define a batch group containing multiple batches with each one associated with precedence and execute the batch group by passing the usual parameters. In this case, the batch-group execution is successful if all the batches are executed successfully. If there are two batches B1 and B2 in a batch-group and B1 precedes B2, then B2 should get executed only if the execution of B1 is successful.

Batch Groups:

As a part of Rules framework, you create RUN definitions, each of which would result in a unique batch group. Every request for execution of a RUN will become a batch in that batch group. These batches can then be scheduled for execution as if it were any other batch.

The Batch Group feature enables creating batch groups, associating batches to them and executing and monitoring the batch groups. Multiple batches of a batch group can be selected and executed in a parallel sequence at the same time.

BATCH GROUP RUN ID

The Batch Group Run Id is an identifier used to uniquely identify a particular run of a batch group. It is as follows:

BatchGroupName_RequestForExecutionID_MISDATE_**Run**... This is same as the **External Unique Run-ID** passed for the batch-group execution.

BATCH GROUP MONITORING

The batch-group-monitoring screen in OFSAAI Operations allows static and real time monitoring of the Batch Group. On choosing a particular batch-group definition, an Infodate and a batch run ID, it displays the status of batches of the batch group.

Assumptions

- Every Batch Group run is uniquely identifiable both in ES and OFSAAI. Every batch must be executed under the purview of a Batch Group Run in OFSAAI.
- ES is capable of passing a unique id for a run of a Batch Group to OFSAAI.
- ES is capable of importing a Batch Group definition, exported in OFSAAI Standard XML format. Else the Batch Group needs to be manually defined in exactly the same way as defined in OFSAAI.

LogFiles:

ESIC Batch-Group log files will be created in the folder \$FIC_APP_HOME/icc/log and the file-names will be in the format.

ESIC_XBG_DATE_TIME_ExtUniqueRunID.log where DATE and TIME will be the current date and time in the formats "yyyymmdd" and "hhmmss".

Appendix III

The following is the list of exit statuses of the ESIC and their interpretations.

This list is subject to additions in future.

Exit Status	Interpretation
0	Success
-1	Failure
-2	Unable to contact OFSAAI
-3	Unable to query OFSAAI Metadata
-4	Unable to Initialize Batch
-5	Unable to De-Initialize Batch
-6	Failed to Execute a Task because of incorrect parameters passed to the task
-7	Failed to Execute a Task/Batch
-8	Failed to Wait for Task/Batch
-9	Failed to Set Batch as Complete
-10	Failed to Add Filter to Task
-11	Failed to Purge Batch
-12	Failed to Export Batch Definition
-14	Invalid Configuration File
-15	Supplied Parameters Incorrect for Task Execution
-16	Failed to Export Batch Logs

Exit Status	Interpretation
-13, -16 to -31	Reserved
1	Successful Poll of the Task – Task/Batch Ongoing (O)
2	Successful Poll of the Task – Task Excluded (K)
3	Successful Poll of the Task – Task/Batch Held (H)
4	Successful Poll of the Task – Task/Batch Not Started (N)
5-8	Reserved

Appendix IV

The Miscellaneous Details and Dependencies of ESIC are as follows:

1. ESIC would reside on App Layer of OFSAAL.
2. ESIC would expect the environment variable FIC_APP_HOME to be defined for configuration and log paths.
3. In case the environment variable FIC_APP_HOME is not defined, ESIC would exit with an error message on console.
4. ESIC and ICC Server would share a configuration file. The configuration file would be in FIC_APP_HOME/icc/conf.
5. ESIC would reside in FIC_APP_HOME/icc/bin and paths to dependencies (ICC API library in this case) would have to be set to FIC_APP_HOME/icc/lib.

Error Logging for ESIC:

1. ESIC would open a file for logging and the file descriptor for that file is passed to the ICC API library for logging.
2. ESIC would create files in FIC_APP_HOME/icc/log.
3. The log file name for ESIC for each instance would be as follows:

ESIC_<Date>_<Time>_<External Unique ID>_<TaskID>.log

4. ESIC would log messages into a file only in case of the following values of exit status. The values are: -2, -12, -14 and -15 (refer Appendix III, page A-17). In all other cases, ICC Server would log the errors and the cause(s) and ESIC would only return the error value as an exit status.

Note: < External Unique ID> and <Task ID> would be used wherever applicable.

