

**Oracle Utilities Energy Information
Platform**

User's Guide

Release 1.6.1.17 for Windows

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Index

What's New

New Features in the Oracle Utilities Energy Information Platform User's Guide

This chapter outlines the new features of the 1.6.0.0 release of the Oracle Utilities Energy Information Platform that are documented in this guide.

New Features for Release 1.6.0.0

Feature	Description	For more information, refer to...
MDM Process Control Interface Clip	The MDM Process Control Interface Clip displays statistics related to usage import processes performed by the Oracle Utilities Meter Data Management. Available with Oracle Utilities Meter Data Management only .	Dashboard Clips on page 3-3
Query Lists	Query lists are structured query language (SQL) queries that can be used by Oracle Utilities Rules Language to access records stored in the Oracle Utilities Data Repository. Query lists are created using the Lists function available through the Energy Information Platform user interface.	Query Lists on page 7-66
Support for Oracle Business Intelligence Publisher	This release includes support for publishing reports using Oracle Business Intelligence Publisher version 10.1.3.4 or version 11.1.1 (as of v1.6.1.7).	Report Administration on page 7-55 Run Reports on page 7-74 View Reports on page 7-77

New Features for Release 1.6.1.0

Feature	Description	For more information, refer to...
Support for securing Adapter Server and Adapter Monitor communications	Communications between the Adapter Server and Adapter Monitor can now be secured and encrypted. This is enabled through settings on the Server record on which the Adapter Server and/or Monitor are running.	Viewing and Editing Servers on page 11-3 Adding Servers on page 11-3

Chapter 1

Oracle Utilities Energy Information Platform Overview

This chapter provides an overview of the Oracle Utilities Energy Information Platform web interface, including:

- **What is the Oracle Utilities Energy Information Platform?**
- **What is this book?**
- **Energy Information Platform Components and Documentation**
- **International and Multiple Currency Support**
- **Working with the Oracle Utilities Energy Information Platform**

What is the Oracle Utilities Energy Information Platform?

The Oracle Utilities Energy Information Platform is a web-enabled framework that provides access to common functionality via an Intranet/Internet using Microsoft Internet Explorer. Because several applications use the Energy Information Platform as a common framework, users can switch between different Oracle Utilities web applications (such as Oracle Utilities Billing Component and Oracle Utilities Quotations Management) without having to open multiple applications.

Important Note

Before you can use this version of Oracle Utilities Energy Information Platform, you must ensure that appropriate data and records have been created in the Oracle Utilities Data Repository. The instructions in this user guide assume that these records exist. For more information about creating, updating, or editing records, see the *Oracle Utilities Energy Information Platform Configuration Guide* and the *Data Manager User's Guide*.

What is this book?

The *Oracle Utilities Energy Information Platform User's Guide* describes the functionality of the Oracle Utilities Energy Information Platform, including the following:

- **Chapter 1: Oracle Utilities Energy Information Platform Overview** provides an overview of the Oracle Utilities Energy Information Platform application and the documentation provided with it.
- **Chapter 2: Working with the Oracle Utilities Energy Information Platform** describes how users work with the Energy Information Platform web interface, including information about general navigation and common controls.
- **Chapter 3: User Settings** describes the user settings available for the Energy Information Platform.
- **Chapter 4: Searching and Viewing Customer and Account Data** describes how users search and view customer and account data.
- **Chapter 5: Searching and Viewing Market Participants and Service Points** describes how users search and view market participant and service point data.
- **Chapter 6: Searching and Viewing Usage and Interval Data** describes how users search and view meter and recorder data.
- **Chapter 7: Tools** describes the functions available from the Tools and Utilities menu of the Energy Information Platform.
- **Chapter 8: Searching and Viewing Data in the Oracle Utilities Data Repository** describes how users search, view, and editing data in the Oracle Utilities Data Repository using the Energy Information Platform Data Navigator.
- **Chapter 9: Working with Interval Data Manager** describes how users work with Interval Data Manager.
- **Chapter 10: Working with Work Queues** describes how users work with work queues.
- **Chapter 11: Setting Up and Configuring the Energy Information Platform Adapter** describes how to set up and configure the Adapter.

Energy Information Platform Components and Documentation

The Oracle Utilities Energy Information Platform comprises the following application components and documentation.

Oracle Utilities Energy Information Platform

This is the web-enabled Energy Information Platform application.

The *Oracle Utilities Energy Information Platform User's Guide* (this book) describes how to use this application.

The *Oracle Utilities Energy Information Platform Installation Guide* describes how to install the Energy Information Platform, including setting up the network environment, database installation, and software installation.

The *Oracle Utilities Energy Information Platform Configuration Guide* describes how to configure the Energy Information Platform, including setting up database records and configuring the various components and features of the Energy Information Platform.

Data Manager

Data Manager is the tool you use to view, edit, and update records in the Oracle Utilities Data Repository.

The *Data Manager User's Guide* explains how to use Data Manager to view and maintain data in the Oracle Utilities Data Repository.

Oracle Utilities Rules Language

The Oracle Utilities Rules Language is a powerful command language that defines business rules and specific items such as rate tariffs.

The *Oracle Utilities Rules Language User's Guide* and *Oracle Utilities Rules Language Reference Guide* describe the Oracle Utilities Rules Language and how it is used with Oracle Utilities products.

Batch Executables

Your installation comes with a set of command line programs that can be used to process records and data used in the billing process in batch mode.

The *Oracle Utilities Energy Information Platform Configuration Guide* describes the various batch files that are used with the Energy Information Platform.

International and Multiple Currency Support

This section outlines international and multiple currency support in the Oracle Utilities Energy Information Platform, including:

- **Locales and Languages**
- **Date and Numeric Presentation**
- **Currency Presentation**
- **Multiple Currency Support**
- **File Formats**
- **Database Support**

Locales and Languages

Two fundamental concepts underlying international support in Oracle Utilities applications are **languages and locales**. Languages determine the specific language in which text labels and controls of an application appear. Locales determine the specific region or country in which the user is working. Specifically, locales are used to specify display and input formatting for:

- Date/time and numeric presentation, and
- Currency presentation

How a user selects a language and/or locale is determined by the type of application being used.

Web-enabled Products

For web-enabled products, a user's locale and language are selected from the **Locales** tab of the **Set Preferences** screen. The selected locale and language are stored in the user's security properties. The available locales on this screen are specified in the LOCALES.CFG.XML configuration file (see **Chapter 2: Configuration Files** in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information). Locales included in the LOCALES.CFG.XML file must also be installed on the web server and be accessible from the Regional Settings Control Panel. If a selected locale is not installed on the web server, currency formatting and presentation may be incorrect.

If a user does not select a locale (or selects a locale of "None"), the default locale is the Server System Locale (defined by the operating system installed on the web server). Oracle Utilities recommends that all users specify a locale before using internationalized applications.

Client/Server Products

For client/server products, the user's locale is determined by the Regional Settings of the client and/or application server machine.

Languages

The language for client/server products is specified using a command line switch and/or a parameter in the LODESTAR.CFG file. See **Oracle Utilities Application Command Line Parameters** on page 4-10 in the *Oracle Utilities Energy Information Platform Installation Guide* for more information about command line parameters. See **LODESTAR.CFG** on page 2-2 in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about the LODESTAR.CFG file. At this time, available languages include English, French, German, and Italian.

Reports

For client/server applications, the locale for reports is determined by the Regional Settings of the machine on which the report is run.

For web-enabled applications, the locale for reports is based on the Server System Locale (defined by the operating system installed on the web server)

Languages

For client/server applications, the language that appears on reports is determined by the language of the application that generated the report, specified either by a command line parameter or a configuration file parameter.

For web-enabled applications, the language is specified by the Regional Settings of the machine on which the report is run, unless overridden by the LANGUAGE parameter in the LODESTAR.CFG file.

Date and Numeric Presentation

The display and input of dates and numbers is based on the selected locale.

Web-enabled products

Display formatting of both numbers and date/times is based on the user's selected locale.

Copy, cut, and paste operations are supported for all input controls. Required fields are identified by asterisks. Null values are represented by blank (empty) controls. Moving the mouse pointer over an input area displays sample formatting for that field.

Number input controls only accept formatting based on the user's selected locale. The only allowable characters include digits, decimal separator, and minus sign. Any other characters are filtered from input.

Date input controls only accept formatting based on the user's selected locale. Dates can either be keyed in or selected from a pop-up calendar control. All times are keyed in and based on 24 hour format (no AM or PM indicator).

Input validation occurs upon data entry.

Client/Server Products

Formatting for numbers and date/times is based on the locale determined by the regional settings of the client and/or application server machine. Date/time formatting can be overridden from the General Options tab of the Default Options dialog.

Reports

Display formatting of both numbers and date/times for reports is based on the Server System Locale on the machine on which the reports are run.

Currency Presentation

Currency information is stored in the LSCurrency table in the Oracle Utilities Data Repository. This table contains one or more currencies, each defined by a currency code, currency symbol, and formatting rules (such as the number of decimal places). Currency codes in this table use ISO-4217 codes. The LSCurrency table also indicates the Default currency for the database. See **LSCurrency** on page 3-3 in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about setting up the LSCurrency table.

Note: Although records in the LSCurrency table are not required, Oracle Utilities strongly recommends that at least one record with all properties specified be created and set as "Default". This will ensure consistent display of currency information.

Currency Presentation in Oracle Utilities Receivables Component and Oracle Utilities Quotations Management

Currency input and display is identical to that for numbers with two exceptions:

- A currency indicator is also displayed next to currency input controls and currency displays. The specific currency symbol displayed and the manner in which currency is formatted are determined in the following order:
 - a. The currency associated with the account being viewed (from the LSCurrency field in the Account table).
 - b. The default currency in the LSCurrency table. If there is no default currency, the first record in the LSCurrency table (sorted alpha-numerically by Currency Code).
 - b. If the LSCurrency table is not present or does not contain any records, the currency and formatting of the Server System Locale (defined by the operating system installed on the web server), specified in the **HKEY_USERS\DEFAULT\Control Panel\International** key in the Windows Registry on the web server.
- Currency formatting rules for the user's selected locale are overridden if specific formatting rules for the currency are stored in the LSCurrency table. Typically, the only formatting rules that would be overridden at the currency level would be the ISO code, symbol, and number of decimal places. This applies to Oracle Utilities Receivables Component reports as well, except that the initial locale formatting rules come from the regional settings of the machine on which the report is run.

Currency Presentation in Other Web-enabled Products

Currently, other web-enabled products do not require input of currency values.

Display of currencies is based on the formatting of the selected locale and of the default currency in the database (currency specific formatting always overrides locale specific formatting).

Enabling Display of International Currency Symbols

Display of international currency symbols requires the appropriate Encoding option is selected on Internet Explorer.

How to select encoding options:

1. Select **View→Encoding** from the Internet Explorer menu bar.
2. Select the appropriate option from the list. For example, to enable displaying of the Euro symbol and other Western European currency symbols, select the **Western European (Windows)** option.

Currency Presentation in Client/Server Products

Client/server products do not require input of currency values.

Display of currencies is based on the formatting of the client machine's regional settings and of the default currency in the database. Currency specific formatting always overrides locale specific formatting. If the default currency in the database does not specify any formatting, the currency symbol is used for formatting. If the currency table does not exist or does not contain any records then the default currency is determined by the Regional Settings on the client/server machine. This applies to reports as well.

Multiple Currency Support

Multiple Currency Support allows for accounts with different associated currencies. This is accomplished through the presence of the Currency Code column on the Account, Journal Account, and Checking Account tables in the Oracle Utilities Data Repository. This column references records in the LSCurrency table

Multiple Currency and Oracle Utilities Receivables Component

All input screens which have amount fields on them indicate what currency type is expected as input.

All elements that represent a currency in Oracle Utilities Receivables Component XML structures have a CURRENCY attribute that indicates the corresponding currency type for the amount. The string values used for this attribute are the same as the Currency Code values in the LSCurrency table. On output, the CURRENCY attribute is set for the account as specified in the database. If the account's currency type is not specified in the database, the default currency is used.

A CURRENCY attribute (using the standard stem.tail notation) is supported for Oracle Utilities Receivables Component transaction identifiers to specify the currency type for the account.

On input, the CURRENCY attribute of all Oracle Utilities Receivables Component transactions is checked against the currency value of the account against which the transaction is being posted using the following rules:

1. If a currency type is specified for the account in the database, the transaction must indicate the same currency type or it is an error.
2. If a currency type is not specified for the account in the database, the transaction must indicate either no specific currency type or the default currency type for the database or it is an error.

All transactions that involve two or more accounts (such as Payment and Balance Transfers) validate that the currency types are the same for each account (no currency translation will occur). The credit/debit account pairs for each journal translation record are validated to ensure that they both have the same currency type. Only journal translation records that have credit/debit accounts with the same currency type as the account against which the transaction is being posted are used. Additional currency validations occur for payment files and refund checks.

Multiple Currency and Oracle Utilities Receivables Component Reports

Where applicable, Oracle Utilities Receivables Component reports are grouped by Currency Code.

Multiple Currency and Other Oracle Utilities Products

Oracle Utilities Billing Component, Oracle Utilities Rate Management and Data Manager reports display the Currency Code associated with each account where applicable. Reports that contain multiple currency types do not include the Summary Results page.

In Oracle Utilities Rate Management - Revenue Forecasting, the default currency type is used for all presentation of currency amounts, regardless of whether or not a specific currency has been indicated in the database for any accounts.

File Formats

Input/Output File Formats

Numbers and date/times in input and output files (such as files used with the PLIMPORT program) are independent from locale settings.

Non-English characters are supported in input/output files.

XML Formats

All dates, times, and numbers contained in XML files are represented using the standard formatting rules as defined by the W3C XML Schema Recommendation. For backward compatibility, previously accepted formats for dates and times will continue to be accepted on input, however, all output will use the XML Schema representation.

Note: XML files created by the SAVE TO XML Rules Language statement are an exception. The date, time, and number formats in Rules Language generated XML files are based on the Rules Language configuration used to create them.

Non-English characters are supported in XML files

Database Support

In addition to the LSCurrency table and related columns in the Account, Journal Account, and Checking Account tables, database support for internationalization includes the addition of the COUNTRY column in the Address table and the change from ZIP Code to Postal Code on user interfaces.

Working with the Oracle Utilities Energy Information Platform

This section describes how you work with some of the features of the Energy Information Platform, including:

- **Working with Work Queues**

Working with Work Queues

This section describes how you work with Work Queues, describing a typical process for searching, viewing, and working with work queue items and/or approvals.

Working with the Work Queues application can involve one or more of the following:

- **Viewing and working with My Work Queue Items and Approvals**
- **Searching, viewing, and working with Work Queue Items and Approvals**
- **Searching closed work queue items**
- **Generating Work Queue Reports**

Viewing and working with My Work Queue Items and Approvals

Work queue items can be assigned to individual users who are responsible for resolving and/or approving the item. These are called “My Work Queue Items” and “My Work Queue Approvals”.

My Work Queue Items

Resolving open work queue items involves taking some sort of action based on the item. For exceptions or errors, this usually involves determining the cause of the exception and taking corrective measures. For messages or actions, this usually involves performing an action specified by the work queue item. When working with “My Work Queue Items”, you can perform the following actions:

- Unassign an Item
- Resolve an Item
- Close an Item
- Modify an Item

See **Viewing and Working with My Work Queue Items** on page 10-2 for more information about working with “My Work Queue Items”.

My Work Queue Approvals

Approving work queue items involves reviewing and approving any actions taken on the item. Items that require approval have an approval procedure that represents the number of approval steps and the level of each step that must be taken before the item is considered approved. When working with “My Work Queue Approval”, you can perform the following actions:

- Approve an Item
- Reject an Item
- Close an Item
- Modify an Item

See **Viewing and Working with My Work Queue Approvals** on page 10-7 for more information about working with “My Work Queue Approvals”.

Searching, viewing, and working with Work Queue Items and Approvals

You can also search and view work queue items and approvals based on specified criteria. This allows users to view and work with items that are not assigned to them. This is useful for supervisors or managers to assign items to users, and also allows users to assign work queue approvals to other users when appropriate.

Work Queue Items

When working with work queue items, you can perform the following actions:

- Assign an Item to a User
- Unassign an Item
- Resolve an Item
- Close an Item
- Modify an Item

See **Searching Work Queue Items** on page 10-12 and **Viewing and Working with Work Queue Items** on page 10-14 for more information about searching, viewing, and working with work queue items.

Work Queue Approvals

When working with work queue approvals, you can perform the following actions:

- Assign an Item to a User
- Unassign an Item
- Approve an Item
- Reject an Item
- Close an Item
- Modify an Item

See **Searching Work Queue Approvals** on page 10-19 and **Viewing and Working with Work Queue Approvals** on page 10-21 for more information about searching, viewing, and working with work queue approvals.

Searching closed work queue items

You can also search and view closed work queue items based on specified criteria. This allows users to review closed items and if necessary, reopen the items.

See **Searching Closed Work Queue Items** on page 10-27 and **Viewing and Working with Closed Work Queue Items** on page 10-29 for more information about searching, viewing, and working with closed work queue items.

Generating Work Queue Reports

You can also generate a number of work queue item reports, including:

- Aging
- Open Items
- Productivity

See **Work Queues Reports** on page 10-32 for more information about generating and viewing work queue reports.

Chapter 2

Working with the Oracle Utilities Energy Information Platform

This chapter describes how you work with the Oracle Utilities Energy Information Platform. This includes:

- **Starting the Application and Logging In**
- **Navigating the Oracle Utilities Energy Information Platform**
- **Searching, Viewing, and Entering Data in the Oracle Utilities Energy Information Platform**

Starting the Application and Logging In

You log on to Energy Information Platform using Microsoft Internet Explorer.

How to log in:

1. Start the application by double-clicking the shortcut icon, or entering the URL for the Oracle Utilities Energy Information Platform in the **Address** field on the Internet Explorer window.

Note: Contact your system administrator for the URL for the Oracle Utilities Energy Information Platform.

2. The Login screen appears.
3. Enter your user ID in the **User ID** field, enter your password in the **Password** field, and click **Login**. The Energy Information Platform home dashboard screen appears in the browser.

Navigating the Oracle Utilities Energy Information Platform

This section describes the framework of the Oracle Utilities Energy Information Platform and how to use the menus and icons to navigate between functions, including:

- **Framework**
- **Menus**
- **Navigation**

Framework

The Energy Information Platform is a web-based framework, consisting of the Top menu, the Left menu, and the Main Workspace.

Top Menu

The Top menu displays a number of menu items, including:

- **Home:** Returns the user to the home dashboard screen.
- **Help:** Expands to display the following:
 - **Content and Index:** Opens **Online Help** window for the current option or function (if applicable).
 - **Online Support:** Opens the Oracle Utilities website in the Main Workspace.
 - **About:** Opens the About dialog, which displays the user's current preferences and the software version installed.
- **Logout:** Logs the user out of the Energy Information Platform, ends the current session, and returns the user to the Login screen.

Left Menu

The Left menu displays menu options available to the user. This menu can be set to one of two modes: the Main menu or the Data menu. The bottom of the Left menu displays a number of icons. The meanings of these icons are as follows:

Icon	Description
	Default Menu: Changes the Left menu from the Main Menu to the Data Menu .
	Default Menu: Changes the Left menu from the Data Menu to the Main Menu .
	Current Data Base: Opens the Set Preferences screen. When you hover the mouse over this icon, a tool tip opens, displaying currently selected data source.
	Security Administration: Opens the Security Administration screen.
	Home: Returns the user to the home dashboard screen.
	Change Theme: Opens the Change Theme dialog.

Main Menu

The Main menu opens by default, and lists the functions available from the Energy Information Platform. Clicking on a menu item displays the corresponding screen in the Main Workspace on the right. A down-pointing arrow at the left of a menu choice indicates that the choice has associated submenu items below it. To open the submenu list, click on the arrow. The arrow becomes a right-pointing arrow, and the submenu options are displayed below the menu item.

Note: The options that appear on the Main menu are dependent on the specific set of products licensed and installed.

Data Menu

The Data menu lists database tables accessible via the Data Navigator, which allows users to search, add, view, and edit database records and tables in the Oracle Utilities Data Repository. See **Chapter 8: Searching and Viewing Data in the Oracle Utilities Data Repository** in the *Oracle Utilities Energy Information Platform User's Guide* for more information about Data Navigator.

Main Workspace

The center of the window is occupied by the Main Workspace, which holds the screen corresponding to the selected function.

Menus

As noted above, the Main menu includes a number of submenus, each relating to a specific activity or installed product. The menus described here are shared by several Oracle Utilities applications, including Oracle Utilities Billing Component, Oracle Utilities Load Profiling and Settlement, Oracle Utilities Meter Data Management, Oracle Utilities Quotations Management, and Oracle Utilities Transaction Management. Product-specific menus are described in separate user guides.

Note: The exact appearance of these menus is dependent on the specific set of products licensed/installed.

Entity Management Menu

The Entity Management menu includes the following options:

- **Customers:** Opens the **Customers** screen.
- **Accounts:** Opens the **Accounts** screen.
- **Market Participants:** Opens the **Market Participant** screen.
- **Service Points:** Opens the **Service Points** screen.

Tools and Utilities Menu

The Tools and Utilities menu includes the following options:

- **Configure Adapter Business Rules:** Expands to display the following options:
 - **Business Rules:** Opens the **Business Rules** screen.
 - **Rule Description Language:** Opens the **Rule Description Language** screen.
 - **Global Functions:** Opens the **Global Function** screen.
 - **Commands:** Opens the **Commands** screen.
- **Adapter Components:** Expands to display the following options:
 - **Business Rule:** Opens the **Business Rule** screen.
 - **Servers:** Opens the **Servers** screen.
 - **JMS Servers:** Opens the **JMS Server** screen.
 - **JMS Queues:** Opens the **JMS Queues** screen.

- **Payload Types:** Opens the **Payload Types** screen.
- **Exception Types:** Opens the **Exception Types** screen.
- **Origination Systems:** Opens the **Origination Systems** screen.
- **System Properties:** Opens the **System Properties** screen.
- **Runtime Services:** Opens the **Runtime Services** screen.
- **Service Activation:** Opens the **Service Activation** screen.
- **XSLT Map Names:** Opens the **XSLT Map Names** screen.
- **XSLT Map Versions:** Opens the **XSLT Map Versions** screen.
- **XSLT Maps:** Opens the **XSLT Maps** screen.
- **Web Services:** Opens the **Web Services** screen.
- **Adapter Runtime:** Expands to display the following options:
 - **Search:** Opens the **Inbound** search screen.
- **Options:** Expands to display the following options:
 - **General Options:** Opens the **General Options** screen.
 - **Billing Options:** Opens the **Billing Options** screen.
 - **Report Options:** Opens the **Report Options** screen.
- **Address Book:** Expands to display the following options:
 - **Contacts:** Opens the **Contacts** screen.
 - **Groups:** Opens the **Groups** screen.
 - **Email Aliases:** Opens the **From Addresses** screen.
- **Security Admin:** Opens the **Security Administration** screen.
- **Report Admin:** Opens the **Report Administration** screen.
- **Lists:** Opens the **Lists** screen.
- **Run Reports:** Opens the **Run Reports** screen, displaying reports associated with Tools and Utilities (Product code “TU”).
- **View Reports:** Opens the **View Reports** screen listing previously run reports associated with Tools and Utilities (Product code “TU”).
- **Configuration:** Expands to display the following options:
 - **Season Schedule:** Opens the **Season Schedules** screen.
 - **TOU Period Name:** Opens the **Time of Use Period Names** screen.
 - **TOU Schedule:** Opens the **Time of Use Schedules** screen.

Usage Menu

The Usage menu includes the following options:

- **Center:** Opens the **Interval Data Center** screen.
- **Workset:** Opens the Workset screen.
- **Interval Data:** Opens the Usage screen.
- **Scalar Data:** Expands to display the following options:
 - **Meters:** Opens the **Meters** screen.

- **Meter Values:** Opens the **Usage Input** screen.
- **Import/Export:** Expands to display the following options:
 - **Import Data:** Opens the **Upload Usage** screen.
 - **Export Data:** Opens the **Account Interval Export** screen.
- **Setup:** Expands to display the following options:
 - **Export Entity:** Opens the **Entity Interval Data** screen.
 - **Export Purpose:** Opens the **Export Purpose** screen.
- **Upload Data:** Opens the **Upload Files** screen.
- **WQ Items:** Opens the **WQ Items** screen.
- **My WQ Items:** Opens the **My WQ Items** screen.
- **Run Reports:** Opens the **Run Reports** screen, displaying reports associated with Usage (Product code “UE”).
- **View Reports:** Opens the **View Reports** screen listing previously run reports associated with Usage (Product code “UE”).

Work Queues Menu

The Work Queues menu includes the following options:

- **My WQ Items:** Opens the **My Work Queue** screen, which lists all the work queue items assigned to the user.
- **My WQ Approvals:** Opens the **My Work Queue Approvals** screen, which lists all the work queue approvals assigned to the user.
- **Search WQ Items:** Opens the **Work Queue Search** screen.
- **Search WQ Approvals:** Opens the **Work Queue Approval Search** screen.
- **Search WQ Closed:** Opens the **Work Queue Closed Item Search** screen.
- **Run Reports:** Opens the **Run Reports** screen, displaying reports associated with Work Queues (Product code “WQ”).
- **View Reports:** Opens the **View Reports** screen listing previously run reports associated with Work Queues (Product code “WQ”).

Navigation

Oracle Utilities recommends using links and menu options when moving between screens in the Energy Information Platform. Use of the Internet Explorer **Forward** and **Back** buttons can produce unexpected results.

Searching, Viewing, and Entering Data in the Oracle Utilities Energy Information Platform

This section describes how users search, view, and enter data in the Energy Information Platform, and includes:

- **Searching and Viewing Data**
- **Entering Data**

Searching and Viewing Data

This section provides specific information about searching and viewing data in the Energy Information Platform, including:

Searching

When searching records, users enter data in each of the fields they wish to use in their search. See **Entering Data** below for more information about how to enter specific types of data. If a search returns only one record, the record itself is displayed instead of the list screen.

Specifying How Results are Sorted

To specify how search results are sorted, click the **Sort by** plus (“+”) sign. This opens a pop-up window that lists the fields that can be used to sort the search results.

To sort by a specific field(s), check the corresponding checkbox(s). By default, records are sorted in ascending order (denoted by the  arrow). To sort records in descending order, click the arrow. The  arrow will be replaced by the  arrow.

To change the order by which the search results are sorted, click on the  area and move the field to the appropriate position in the list.

After specifying how the results are to be sorted, click the **Sort by** minus (“-”) sign to close the list.

For example, if a user were searching accounts and wanted to sort the results first by Customer ID in ascending order, and then by Start Time in descending order, the user would first check the Customer ID checkbox, then check the Start Time checkbox and click the  arrow.

Note that sorting settings are reset each time you perform a search.

Viewing Search Results

Search results appear on a list screen that displays the records that match the search criteria. Each item on the list contains the entire record. Use the horizontal scroll bar to view columns that appear to the right of the list screen.

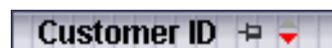
Sorting Search Results

Search results are sorted as specified by the user (see **Specifying How Results are Sorted** above). The direction (ascending or descending) in which each column is sorted is displayed at the top of each column.

Columns sorted in ascending order display a blue arrow pointing up.



Columns sorted in descending order display a red arrow pointing down.



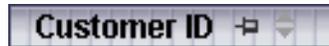
To change the direction in which the results are sorted, click the up (ascending) or down (descending) arrow at the top of the appropriate column on the list screen.

To continue the above example, if a user had searched accounts and sorted the results first by Customer ID in ascending order, and then by Start Time in descending order, the Customer ID column would display a blue arrow pointing up (▲) and the Start Time column would display a red arrow pointing down (▼).

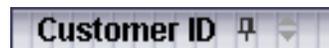
Locking Columns

Some columns on search results list screens can be locked, or “pinned” in place, keeping the identity of the search results visible at all times. As the user scrolls to the right using the horizontal scroll bar, locked columns remain in place, while non locked columns scroll “beneath” the locked column(s).

Columns that can be locked have a pin button (📌) on them.



To lock a column, click the pin button (📌). This rotates the pin button, indicating that the column is locked.



To unlock a column, click the pin button (📌) again.

Entering Data

This section provides specific information about entering data in the Energy Information Platform screens, including:

- **Entering Date and Date/Time Values**
- **Entering Lookup Values**
- **Selecting Values from Drop-Down Lists**
- **Specific Data Formats**

Entering Date and Date/Time Values

Date and Date/Time fields store dates and/or datetimes, such as Start Date, Start Time, and Bill Month values. To enter date/time values, either type the date and time manually, or click the arrow button (▼) to the right of the field and select the date using the calendar control.

The calendar control displays the current month when opened. Click the appropriate day to select it. To change the month, click the arrows on either side of the month displayed. To change the year, click the arrows on either side of the year displayed. To select the current date, click **Today**. To clear the date value, click **Clear**.

Note: When entering dates manually, use the four digit format (i.e. “2004”).

Note: When you select a date using the calendar control, the time defaults to 00:00:00.

Entering Lookup Values

Lookup values are references to records in other tables in the Oracle Utilities Data Repository, including both lookup records such as Operating Company and Jurisdiction records, and parent records such as Customer or Account records. When populated, lookup fields display the identity of the referenced record. To select a lookup, click the **Browse** button (...). This opens a dialog window that lists all the records in the corresponding table in the Oracle Utilities Data Repository.

If there is more than one page of records, you can move between pages using the ◀ and ▶ buttons. Use the ⏪ button to return the first page, and the ⏩ button to navigate to the last

page. To change the number of results that appears on each page, enter the number in the **Rows** field and press the **Enter** key.

To search for a specific record, click **Search**. The dialog displays a search screen.

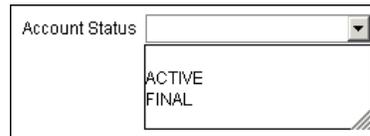
Enter the appropriate parameters for your search and click **Search**. The dialog will display a list of records that match the search criteria.

Click the [...] link to select the appropriate record. The lookup field is automatically populated.

Selecting Values from Drop-Down Lists

Drop-down lists allow users to select a value from a pre-populated list, and can contain either pre-set values or values from tables in the Oracle Utilities Data Repository.

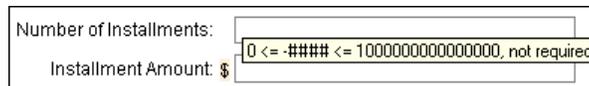
To select a value from a drop-down list, click the arrow next to the field. This opens a lists that includes all the values available.



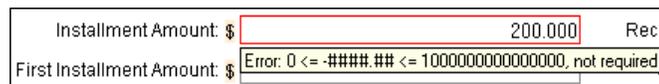
If one or more of the values is longer than the default size of the list, click the lower right corner of the list and resize the list as necessary.

Specific Data Formats

Some fields on some screens of the Energy Information Platform require that data be entered in a specific format. This most often applies to currency and date fields, but can also apply to other number fields and other types of data. Moving the mouse pointer over the icon displays a tooltip that contains the correct format for the field.



If data is entered in an incorrect format, the border of the field turns red indicating that there is an error in the data in the field. Moving the mouse pointer over the field displays a tooltip that describes the correct format for the field.



Required Fields

Fields that are required are indicated by an asterisk (*).

Currency Fields

Currency fields are indicated by a currency symbol to the left of the field.

Chapter 3

User Settings

This chapter describes the Energy Information Platform dashboard, user preferences, online help, and other options, including:

- **Dashboard**
- **Set Preferences**
- **Online Help**
- **Options**
 - **General Options**
 - **Billing Options**
 - **Report Options**

Dashboard

When a user first logs on to the Oracle Utilities Energy Information Platform, a customizable dashboard is displayed in the Main Workspace. The Energy Information Platform dashboard displays a user-defined set of windows (known as “clips”) that can display information related to specific Oracle Utilities processes, or other information.

This section describes how users define the look and content of the dashboard, including:

- **Working with the Dashboard**
- **Dashboard Clips**

Working with the Dashboard

You can change the theme (the “skin” displayed on the Energy Information Platform) as well as the content of the dashboard. The dashboard displays two tabs, the Browse tab, used when viewing clips, and the Catalog tab, used to specify the content and layout of the dashboard.

How to set the theme of the Energy Information Platform and dashboard:

1. Click the **Change Theme** icon on the Left menu. The **Change Theme** dialog opens.
2. Select the desired theme on the Theme tab.
3. Select the desired color scheme on the Color tab (optional).
4. Click **Apply**. The color and theme of the Energy Information Platform, including the dashboard change to the selected theme/color. To close the **Change Theme** dialog without changing the theme, click **Cancel**.

How to specify the content of the dashboard:

1. Click the Catalog tab on the dashboard. The Catalog screen opens.

The top of the Catalog screen displays the currently selected clips. The dashboard screen contains 2 columns, referred to as “Zones.” The left column is Zone 1, the right column is Zone 2.

The bottom of the Catalog screen displays the Catalog Part pane, which you use to select clips to display on the dashboard.

2. Select the clips you want to add to the dashboard in the **Catalog Part** pane.
3. Select the zone in which you want the selected clips to appear from the **Add to** drop-down list, and click **Add**.

The selected clips appear in the selected zone on the dashboard.

4. Repeat steps 2 and 3 for each clip you wish to add to the dashboard.
5. To delete a clip from the dashboard, click the down arrow in the top right corner of the clip you wish to delete, and select **Delete**.
6. To return to the dashboard and save your changes, click the **Browse** tab.

How to change the layout of the dashboard:

1. Click the **Catalog** tab. The **Catalog** screen opens.
2. Move the individual clips between zones by dragging and dropping the clip you wish to move.

To move a clip in this manner, position the cursor over the title bar of the clip you wish to move, click the right mouse button, and drag the clip towards its desired location. A grey line indicates the position the clip will move to when you release the mouse button.

When the clip is in the desired location, release the mouse button. The clip is now located in that position.

- To return to the dashboard and save your changes, click the **Browse** tab.

Dashboard Clips

This section describes some of the clips available with the Energy Information Platform dashboard.

Dashboard Clip Options

Each dashboard clip provides a set of options for how the clip is displayed, including options to

- **Minimize/ Restore Clips**
- **Close Clips**
- **Edit Clip Content**

These options are accessed via icons in the upper right corner of each clip.

Minimize/ Restore Clips

This option allows users to minimize the clip content and display only the title bar.

To minimize a clip, click the down arrow in the top right corner of the clip you wish to minimize, and select **Minimize**. To restore the clip, click the down arrow in the top right corner of the clip and select **Restore**.

Close Clips

This option allows users to remove a clip from the dashboard. To remove a clip, click the down arrow in the top right corner of the clip you wish to remove, and select **Close**. To restore a removed clip to the dashboard, click the **Catalog** tab on the dashboard. See **How to specify the content of the dashboard:** for more information.

Edit Clip Content

This option allows users to edit the contents of a clip. When the user selects this option, a screen opens that allows the user to specify the content of the clip. To edit a clip's content, click **Edit** and make the appropriate changes on the screen that opens. See **Pre-Defined Clips** for more information about editing specific clips.

Note: The Edit option is not available on all clips.

Pre-Defined Clips

The Oracle Utilities Energy Information Platform includes the following pre-defined clips. Individual Oracle Utilities products (such as the Oracle Utilities Load Profiling and Settlement) also include product-specific clips.

Account Clips

The Energy Information Platform includes the following account-related pre-defined clips:

Favorite Accounts: Lists up to 10 selected accounts. This allows the user to quickly view an account.

To view one of the accounts listed on the clip, click the **Account ID**.

How to set the contents of the Accounts clip:

- Click **Edit** on the Favorite Accounts clip. The **Favorite Accounts** screen opens.
- For each account (up to 10) that you wish to display on the clip, click the **Browse** button (). The **Accounts** dialog opens, listing all the accounts in the Oracle Utilities Data Repository.

If there is more than one page of records, you can move to a specific page of results by clicking the page number at the bottom of the dialog.

To search for a specific record, click **Search**. The Accounts dialog displays a search screen.

Enter the appropriate parameters for your search and click **Search**. The Accounts dialog will display a list of account records that match the search criteria.

3. To select an account, click **Select**. The selected account appears on the Favorite Accounts screen.
4. Repeat steps 2 and 3 for each account you wish to add to the Accounts clip.
5. To remove an account from the Favorite Accounts screen, click the Select button () and click **Clear** on the Accounts dialog.
6. When you're finished adding or removing accounts, click **Save**. The selected accounts will appear on the Accounts clip on the dashboard. To return to the dashboard without saving your changes, click **Cancel**.

Current Messages: Lists current messages from the Splash Message table in the Oracle Utilities Data Repository.

Work Queues Clips

The Energy Information Platform includes the following work queue-related pre-defined clips:

Work Queues: Displays the number of open work queue items and work queue approvals assigned to the current user.

Work Queue Type Code: Displays a graph showing the number of open work queue items by work queue type code

Work Queue Assigned Load: Displays a graph showing the number of assigned work queue items to each user.

Work Queue Unassigned: Displays a graph showing the number of unassigned work queue items based on user-defined groupings (known as buckets).

How to set the content of the Work Queue Unassigned clip:

1. Click **Edit** on the Work Queue Unassigned clip. The **Edit Work Queue Buckets** screen opens.
2. Define the range for each "bucket" (in terms of number of days) by enter the appropriate numbers in the "From" and "To" columns for each. You can define up to five (5) buckets. For example, to set the first bucket to include those unassigned items that are up to 5 days old, you would enter 0 (zero) in the "From" column and 5 (five) in the "To" column on the first line.
3. Click **Save** to save your settings. The data on the Work Queue Unassigned clip will be based on the buckets you defined. To return to the dashboard without saving your changes, click **Cancel**.

Other Clips

The Energy Information Platform includes the following additional pre-defined clips:

Server Time: Displays the current date and time on the web server. To automatically refresh the content, check the **Auto Refresh** checkbox. To manually update the date/time, click **Get Date**.

Quote of the Day: Displays an informative or inspiring quote.

Adapter File Loading Statistics: Displays statistics related to files and payloads processed by the Energy Information Platform Adapter.

To filter the data displayed based on a time frame, selected the desired time frame from the **Select Time Frame** drop-down list

For each process listed, this clip displays the following:

- **Process Source:** The name of the Runtime Service which processed the file or payload.

- **Total Files:** The total number of files processed.
- **File Status:** The status (Complete, Error, or Processing) of the file or payload, including:
 - **Subtotal:** The number of records of the displayed status
 - **Percentage:** The percent of records for the displayed status
 - **Description:** A description of the status

MDM Process Control Interface: Displays statistics related to usage import processes performed by Oracle Utilities Meter Data Management. Available with Oracle Utilities Meter Data Management **only**.

For each process listed, this clip displays the following:

- **Source:** The name of the Runtime Service which processed the file or payload.
- **Transactions per Minute:** The number of transactions processed per minute
- **Transactions:** Details concerning the number of transactions processed, including:
 - **Total:** The total number of transactions processed. A number in **red** indicates a discrepancy between the total number of transactions stored in the Inbound table (one per process), and the sum of the transactions in the children Inbound Transaction records.
 - **Rejected:** The number of rejected transactions
 - **Loaded:** The number of transactions successfully loaded
 - **% Loaded:** The percentage of transactions that were successfully loaded

To view statistics for a specific process on the Process Control Interface, click the **Source**.

To filter the data displayed based on a time frame, selected the desired time frame from the **Select Time Frame** drop-down list. Options include:

- **Today Only** (default): Displays results as of midnight on the current day.
- **Previous Day:** Displays results since midnight on the previous day.
- **Last 7 Days:** Displays results since midnight seven days minus the current day.
- **Current Month:** Displays results for the time period beginning at midnight on the first day of the current month.
- **Previous Month:** Displays results for the previous month. The start time for the month is midnight of the first day of the previous month, and the stop time is 23:59:59 of the last day of the previous month.

Settlement: displays links to the settlement and aggregation results for the most recent settlement performed by Oracle Utilities Load Profiling and Settlement. Available with Oracle Utilities Load Profiling and Settlement **only**.

Clicking on the **Settlements** link opens the **Settlement List** screen.

Clicking the **Aggregations** link opens the **Settlement Aggregation Results** screen.

Custom Clips

In addition to the pre-defined clips supplied by Oracle, custom clip libraries and clips can be developed and added to the dashboard.

Set Preferences

The **Set Preferences** option (accessed by clicking the **Current Data Base** icon at the bottom of the Left menu) allows users to specify user-defined settings used when working with Oracle Utilities applications, including:

- **Data Sources**
- **User Context**
- **Profiles**
- **Locales**
- **Reset Password**

Data Sources

The Data Source tab allows users to switch between data sources while logged into the Energy Information Platform. The data sources available are those associated with the user via the **Users Security** function.

Note: New users must set their data source the first time they logon.

How to change Data Sources:

1. Click the **Current Data Base** icon on the Left menu. The Set Preferences screen opens.
2. Select the **Data Sources** tab (if not currently selected). The Data Sources screen opens.
3. Select the new data source from the 'New:' drop-down list and click **Set Data Source**.

User Context

The User Context tab allows users to apply user-specific configuration parameters to applications in the Oracle Utilities. These are the same parameters found in the LODESTAR.CFG file. See **Oracle Utilities Application Configuration and Command Line Parameters** for more information.

How to set user configuration settings:

1. Click the **Current Data Base** icon on the Left menu. The Set Preferences screen opens.
2. Select the **User Context** tab. The User Context screen opens. The first time you open this screen, it opens blank.
3. Type in the configuration parameters as appropriate. You can also paste text from existing *.CFG files into this window.
4. Click **Save** to save your settings. To clear the window, click **Refresh**.

How to edit user configuration settings:

1. Click the **Current Data Base** icon on the Left menu. The Set Preferences screen opens.
2. Select the **User Context** tab. The User Context screen opens, displaying your current settings.
3. Edit your configuration parameters as appropriate. You can also paste text from existing *.CFG files into this window.
4. Click **Save** to save your settings. To restore your settings to the previously saved version, click **Refresh**.

Profiles

The Profiles tab allows users to switch between user profiles while logged into the Energy Information Platform. The profiles available are those associated with the user via the **Users Security** function.

How to change Profiles:

1. Click the **Current Data Base** icon on the Left menu. The Set Preferences screen opens.
2. Select the **Profiles** tab. The Profiles screen opens.
3. Select the new profile from the 'New:' drop-down list and click **Set Profile**.

Locales

The Locales tab allows users to switch between locales and languages while logged into the Energy Information Platform. Locales are used to define regional settings such as number and currency formats when using Oracle Utilities applications in nations outside the United States. Selecting a language causes the text on the application to appear in the selected language. The locales available are those defined in the LOCALES.CFG.XML configuration file. See **Chapter Six: Configuration Files** in the *Oracle Utilities Energy Information Platform Installation and Configuration Guide* for more information.

Note: The default locale for new users is **None**. Users who require a specific locale must set it the first time they logon.

How to change Locales and/or Languages:

1. Click the **Current Data Base** icon on the Left menu. The Set Preferences screen opens.
2. Select the **Locales** tab. The Locales screen opens.
3. Select the locale from the **Locale** drop-down list and the language from the **Set Language** drop-down list and click **Set Locale**.

Reset Password

The **Reset Password** tab allows users to change the password they use when logging in to the Oracle Utilities Energy Information Platform.

Note: This option is not available when running Security in LDAP mode.

How to change your password:

1. Click the **Current Data Base** icon on the Left menu. The Set Preferences screen opens.
2. Select the **Reset Password** tab. The Reset Password screen opens.
3. Enter the new password in the **Password** field. By default, passwords can be from 1 to 64 characters in length, can include upper and lower case letters as well as numbers, and are **case-sensitive**. For example, there is a difference between "Password" and "password". Password-related requirements can override these defaults. See your system administrator for more information.
4. Enter the new password again in the **Confirm Password** field.
5. Click the **Save** link to save the new password. To close the screen without changing the password, click **Cancel**.

The next time you login, your new password will be in effect.

Online Help

The Online Help option opens online help for the Energy Information Platform. The online help appears in a new browser window, allowing users to switch back and forth between the application and help.

How to open online help:

1. Select **Help→Contents and Index** in the Top menu. The online help opens in a new browser window.
2. Locate the topic you need help about via the Contents tab, Index tab, or Search tab.
 - The **Contents** tab allows users to expand/collapse sections of the table of contents as needed to find a particular topic. Click on the book icons ( and ) to open/close headings. Click on the topic icon () to open it.
 - The **Index** tab allows the user to browse an index for the online help. Click on the index entry for the topic to open it.
 - The **Search** tab allows the user to search the online help for specific words. Enter the word(s) for the search in the text box and click **Go!** The search results appear beneath the text box. Click on the topic to open it.
3. The selected topic will appear in the right pane of the online help window.

Help Icons

A number of icons appear along the top of the online help window. These icons are used for navigating the online help and other functions. These icons perform the following functions:

Icon	Description
	Show Navigation: Open the navigation frame. Used after opening a single help topic.
	Previous: Display the previous help topic.
	Next: Display the next help topic.
	Show in Contents: Expand the Contents tab to display the current topic.
	Print: Print the current topic.

Context-Sensitive Help

Users can also get online help based on a specific function or screen. This is referred to as context-sensitive help.

How to open context-sensitive help:

1. Open the function or screen you wish to find help about.
2. Select **Help→Contents and Index** in the Top menu.
3. An online help window opens displaying the corresponding topic.
4. *Optional.* Open the navigation frame by clicking the “Show Navigation” icon ().

Options

This section describes how to set different types of options for use with the Oracle Utilities Energy Information Platform, including:

- **General Options**
- **Billing Options**
- **Report Options**

General Options

The General Options feature allows you to set your own default values for several frequently used parameters. These defaults are stored in the Oracle Utilities Data Repository. Whenever you start an application from the Energy Information Platform, these values are automatically supplied—saving you the time and effort of defining them each and every time.

Available General Options include:

- **Scope Options**
- **Report Formatting Options**
- **Interval Data Options**
- **Error Handling Options**
- **User Files Options**
- **Rate Analysis Options**

How to set general options:

1. Select **Tools and Utilities->Options->General Options**.

General options can be viewed and saved at two different levels:

- **Default:** Settings used as default settings unless specifically overridden for a Session.
- **Session:** Settings used for the current user session.

2. Select the level you wish to view and/or edit from the **View** drop-down list.



3. Set your options on each tab as desired.
4. To set the current settings as the settings for the DEFAULTUSER (the default settings for all new users), check the **Set DEFAULTUSER Options** checkbox.
5. When you have completed the tabs as desired, select the level at which you wish to save your settings from the **Save as** drop-down list and click **Save**. To reset the values to the previously saved settings, click **Reset**.

The next several pages contain detailed information about the General Options tabs.

Scope Options

The Scope tab specifies a number of default values used by the system.

Operating Company: The default operating company used when searching accounts.

Jurisdiction: The default jurisdiction used when searching accounts.

Account ID: The default account ID for bill calculations and rate analyses.

Report Formatting Options

The Report Formatting tab specifies formatting preferences used by the system.

Printer:

Default to landscape printing after this many characters: If a single line in a report contains this many characters, the report will default to landscape printing. The default setting is 133 characters.

Minimum printed line width: The minimum number of characters to be presented on a single line. The default setting is 80 characters.

Decimal Places:

Round Revenue ID to X: Specifies the precision of revenue values in reports. *This setting affects only values that have been assigned to revenue identifiers via an Assignment, All, or Block statement in the applicable rate form.* A value of **0** (zero) means don't round, **-1** means round to dollars, **-2** means round to tens of dollars, **1** to tens of cents, **2** to cents, and so on. The default setting is 0.

Currency displayed to X: Specifies the number of decimal places shown in reports for dollar values. It is usually set to be consistent with your choice for Round Revenue. A value of **0** (zero) means use the default (display cents), **1** means display tens of cents, **2** means display cents, **3** means display tenths of cents, **4** means display hundredths of cents, and so on. The default setting is 2.

Display Format:

Display calculation time/date on each page: The date is displayed on every page of every report. If this option is checked, the time is also displayed with the date.

Display midnight as 00:00:00 rather than blank: Specifies whether or not a value (00:00:00) is displayed and printed when the time is midnight.

Interval Data Options

The Interval Data tab specifies the source of interval data used by the system, and how interval data is loaded and processed by the system.

Source:

File: Specify a Btrieve file with a fully justified path. The Browse button below becomes active when this option is selected. This is the default setting.

Default: Specifies that the default Interval Data Database identified in the LODESTAR.CFG file be used. See the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about setting a default Interval Data Database.

Customer Database: Specifies that interval data stored in the Oracle Utilities Data Repository be used. When this button is selected, a drop-down list appears listing all available interval data header tables. The default table is the Channel Cut Header (LSCHANNELCUTHEADER) table. This the default setting.

Export:

Records Overwritten by SAVE to File: This option saves interval data cuts to an export file before they are overwritten by new cuts created by a Rules Language SAVE Statement. The full path and name of the file (including a valid extension) must be specified. This option appends new cuts to the same file without overwriting previously exported cuts.

Intervals:

Exclude intervals with quality less than: Specify a quality level that the interval data must meet or exceed in order to be included in calculations. All interval values with a code less than your selection will be ignored by the applications.

The meaning of the codes is utility-specific. If your utility uses the Oracle Utilities Load Analysis, the quality is expressed using the Oracle Utilities Load Analysis status codes shown below (Oracle Utilities Load Analysis automatically attaches one of these codes to each interval in a cut). The codes are listed in order of decreasing quality—alpha codes generally indicate that the data is acceptable; numeric codes indicate that the data is suspect and should be corrected. Along with the Oracle Utilities Load Analysis codes, your facility may add its own codes.

Status Code	Classification of interval data
(blank)	Normal
A	Normal, alternate-recorded (e.g., hand-entered)
J	Data inserted by Oracle Utilities Load Analysis to correct outage
L	Default for data modified by Oracle Utilities Load Analysis Load Data Editor
M	Splice peak interval (estimated value)
N	Interruptible or curtailable load
P	Inserted outage
Q	Corrected outage
X	Cuts resulting from merging invalid data or from unrecognized status codes
Y	Reserved
1	Uncorrected outage
2	Non-normal (usually timing-pulse defects)
5	Aggregated interval used in rolling format with partially missing or unavailable data
7	Merged, aggregated, or transformed interval with partially missing data
9	Missing

Use in all day calculations: Check this box if you want the Day Start time to apply to all date calculations that round to a full day or higher.

Day Start: Specify the time that your facility considers the beginning of the day—8:00 am or midnight. This setting pertains to the ROUNDATE Rules Language function.

Display interval end time: Specifies whether the start- or end-times of intervals are displayed for the MAXDATE values in INTDVALUE and INTDTOUVALUE functions. If checked, the end-time is displayed. If unchecked, the start-time is displayed.

Add Fall DST (Daylight Savings Time) value to Energy requests: The Oracle Utilities Data Repository stores energy in a 24-hour format. As such, the system must compensate for the extra hour of interval data that is left over on the day in October when the clocks are turned back for Daylight Savings Time. To do this, the system automatically takes each account's interval data values for the two 2:00 a.m. hours and averages them together for a single hour. This option enables you to specify how applications handle the “leftover” hour when calculating energy from interval data. If this option is checked, the system doubles the averaged value. If the option is unchecked, it uses just the single, averaged value.

Error Handling Options

The Error Handling tab specifies how errors are handled by the system.

Upon Rules Language Interval Data Error:

- **Stop:** Stop processing bill in any billing mode.
- **Log Message:** Complete processing of bill; include warning message in error log, but not in bill report.
- **Continue:** Complete processing of bill; do not issue any messages.
- **Issue Warning Message:** In the Automatic Billing mode, stop processing the bill. In the Automatic or Approval Required modes, complete processing, but issue a warning message in the bill report.
- **Issue Information Message:** Complete processing of bill; include informational message in bill report.

Info Errors:

Display error messages: If checked, the program will display the number of errors (if any) it encountered during the job run.

Stop analysis after ## errors: The number of errors to allow when running an analysis or bill.

User Files Options

The User Files tab specifies where files created by the user are stored by the system.

Default User Directory: If there is a value in this field it will override the USERDIR setting in the configuration file (after the database is opened). Files put in the user directory before the database is opened - such as .log files - will still be placed in the USERDIR directory.

Use last path as default in next browse: If this checkbox is checked, the path used in the last open or save operation will be the default path for the next open and save operation. When the application starts it uses the Default User Directory/USERDIR path in the first open or save.

Rate Analysis Options

The Rate Analysis tab specifies default values for processing rate schedules.

Default:

Rate Schedule: The default rate schedule for calculations.

Season Schedule: The default season schedule for calculations.

Note: If when running an analysis or calculation, the input rate form includes a statement that assigns a value to the SEASON_SCHEDULE_NAME identifier, the value in the rate form takes precedence over the Options selection.

Analysis:

Test Period: Can be any period, one month or greater.

Billing Options

Billing Options allow users to specify default global options that apply to all accounts in the system. These options apply to all billing types (Approval Required, Automatic Billing, etc.) and to all Oracle Utilities Billing Component users, unlike the user-specific General Options. However, you can override any of these settings for specific rate schedules, rate codes, or accounts in the Oracle Utilities Data Repository.

Available Billing Options include:

- **Billing Options**
- **Billing Rules**
- **Report Options**
- **Summary Options**
- **Multiple Bill History Records**
- **Check Options**

Note: Some tabs and/or options are only available if Oracle Utilities Billing Component is installed on the web server. If a tab/ option is not available, it is not displayed or greyed out.

How to set and save billing options:

1. Select **Tools and Utilities->Options->Billing Options**.
The **Billing Options** screen appears.
2. Set options as appropriate on the **Billing Options**, **Billing Rules**, **Report Options**, **Summary Options**, **Multiple Bill History Records**, and **Check Options** tabs.
3. To set the current settings as the settings for the DEFAULTUSER (the default settings for all new users), check the **Set DEFAULTUSER Options** checkbox.
4. Click **Save** to save the changes. To reset the options, click **Reset**.

Billing Options

The Billing Options tab is used to define global defaults that apply to all accounts for all users.

Default Billing Mode

The Default Billing Mode specifies the mode that Oracle Utilities Billing Component applies to accounts that have not otherwise been assigned a billing mode. If you select **Automatic Billing**, Oracle Utilities Billing Component calculates the bills, updates the Oracle Utilities Data Repository, and issues transaction records—all without review and approval by a user. If you select **Approval Required**, Oracle Utilities Billing Component puts the results of its bill calculations in a bill report which you must approve before the software issues any transaction records or updates the bill history record in the Oracle Utilities Data Repository.

Note: Any billing mode flags set for individual rate schedules, rate codes, or accounts in the Oracle Utilities Data Repository records automatically override this setting.

Default Eligibility Pre- and Post-Windows

Pre- and Post-Windows specify the number of days before an account's scheduled read date (the Pre-Window) and the number of days after an account's scheduled read date (the Post-Window) that defines the "eligibility" window. You can supply any value from 0 to 28 for either. In the Automatic Billing and Approval Required modes, Oracle Utilities Billing Component uses this window to identify "eligible" accounts. That is, if today's date falls within this window, Oracle Utilities Billing Component begins scanning for the data required to bill the account and continues scanning until it comes in or the window for the account passes today.

Note: If you set the Post Window to 0, the data must be available by the end of the read date, or it is considered missing. You can override the eligibility window setting for individual accounts and recorder types.

Special Event Pre Window

The Special Event Pre Window specifies the number of days prior to the billing date within which a Billing Analyst must approve an account's Special Events information in order for the account to be billed. You can enter any value from 0 to 28.

This feature is designed to ensure that all Special Events are included in a bill. For example, suppose that the Billing Analyst approved an account's Special Event information on schedule, but for some reason the account's meter could not be read until seven days after the scheduled date. That would mean there would be seven days during which a Special Event could occur but not be included in the current bill. However, if you set the Special Event Pre Window to some number less than 7, Oracle Utilities Billing Component would flag the account as "ineligible" and the billing analyst would have to update the special events information.

Billing Rules

The Billing Rules tab defines specific rules that are applied to billing.

Effective Date is

The Effective Date is the date used to determine Rate Form versions, factor values, and the default for determining the season. There are five options:

- Bill Stop
- Bill Start
- 1st of Bill Month
- Scheduled Read Date
- Governing Date.

Allow Saves without SAVE TO CIS statement

Normally output records are created as part of a bill calculation. These records are used with non-Oracle Utilities Billing Component systems such as printing, accounts receivable, and so on. Oracle Utilities Billing Component verifies that at least one output record has been created before saving any data to the Oracle Utilities Data Repository. Check this box to turn this verification off, allowing you to save to the database without creating an output record.

You must Approve a bill to save it to the Oracle Utilities Data Repository. When you Approve the bill, data is saved and the Bill Time (BILLTIME) column in the Bill History is set.

Retrieve all Account Determinants

Normally, to improve performance, Oracle Utilities Billing Component loads only the determinants that are explicitly used in the Rate Schedule. However, if your rate schedules use indirect identifiers (the @ operator) to retrieve determinant values you need to turn this option on. Oracle Utilities Billing Component then loads all determinants in the account's Bill History records.

Report Options

The Report Options tab is used to define global defaults for report options. These defaults apply to all reports generated by Oracle Utilities Billing Component. These can be overridden for a single report by selecting **Options: Report** from the report window. See **Report Options** on page 3-18 for more information.

Print Detail

The Print Detail option determines the level of detail included in the bill reports, transaction records, and bill faxes or E-mail. Select one of the following:

- **None:** Effective revenue only.
- **Normal:** Effective revenue, plus any charges assigned to a revenue identifier and any values assigned to a Report Statement in the applicable rate form.
- **All:** Effective revenue, plus revenue identifiers, plus the values associated with the Rules Language Label and Report statements in the rate form.

Show Bill History Problems/Resolutions in Bill Reports

If checked, this option specifies that any problems or resolutions that a Billing Analyst has entered into the Bill History Problem record for the current bill period appear near the top of the bill report (in the header section, just after the customer and account information). This option applies to all bill reports produced by Oracle Utilities Billing Component.

Summary Options

The Summary Options tab is used to define how accounts with multiple rates and customer summary rate schedules are processed.

Compute Multiple Rates per Account

This option specifies whether all effective rates, or only the most recent rate is used for billing. The options available include:

- **No:** Oracle Utilities Billing Component calculates each account's bill using just the most recent rate specified in the Account Rate Code History Table for that account.
- **Throughout Bill Period:** Compute multiple rates using all rates in effect for that account throughout the Bill Period, as specified in the Account Rate Code History Table. When computing multiple rates, Oracle Utilities Billing Component executes the rates in reverse order starting with the record with the most recent Start Time.
- **On Effective Date:** Compute multiple rates using all rates in effect for that account on the Effective Date, as specified in the Account Rate Code History Table.

Note: If you use either of the latter two options, be sure that all inactive rate codes have a stop time in the Account Rate Code History Table; otherwise they will be included in the calculations.

Enable Customer SUMMARY Rate Schedules

If this is checked, Oracle Utilities Billing Component can process Summary rate schedules.

Multiple Bill History Records

The Multiple Bill History Records tab is used to define how accounts with multiple Bill History records per bill period are processed.

Allow Multiple Bill History Records per Bill Period/Read Date

Normally, Oracle Utilities Billing Component uses the billing cycle's scheduled meter read dates to match an account's Bill History records with the correct bill periods. However, this may not suffice in all cases, either because the metered data does not come in from the field on a reliable schedule, or because the metering and billing schedule at your company is more complex. This tab enables you to choose the action that Oracle Utilities Billing Component takes when it encounters two or more account Bill History records associated with the same read date. The option you choose depends upon the metering and billing policies of your company. This setting applies to Automatic Billing, Approval Required, and Current/Final Bill.

- **No:** Oracle Utilities Billing Component rejects all Bill History records for the specified account that have the same read date. It does not process the bills, and issues an error message instead.
- **Bill Individually - Allow Out of Order Bill Periods:** This option is designed primarily for situations in which metered data comes in from the field irregularly—for example, readings for bill periods arrive out of sequence, and/or scheduled read dates are missed altogether.

If you select this option, Oracle Utilities Billing Component treats any account Bill History records that have the same read date as valid records, and processes them as separate and complete bills. It retrieves and bills the previously unbilled Bill History records for the account (Bill Time value equals NULL), in sequence, from oldest to most recent. To determine the bill period that the Bill History record actually belongs to, it looks at the Bill History record's Start Date/Time for the metered data and processes the bill accordingly. If the applicable rate form includes any SAVE statements, the computed values are saved to the Bill History record for the correct bill period.

- **Bill Individually - Monthly Merge Historical Values:** This option is designed primarily for companies whose bill calculations require determinant values for sub-periods within the current bill period (e.g., weekly kWh), as well as values for entire historical bill periods (e.g., maximum kW for the past 12 bill months). In this case, multiple sub-period records (e.g., records with different start- and stop-dates) may be associated with a single scheduled read date.

If you select this option, Oracle Utilities Billing Component assumes that multiple bill history records with the same read date for one account are in fact sub-period records. To perform the calculations (depending upon the rate schedule), Oracle Utilities Billing Component first aggregates historical sub-period values and start- and stop-dates to find values for entire historical bill periods. It then bills each sub-period for the bill period (same scheduled read date), from oldest through most recent.

Check Options

The Check Options tab is used to define how Oracle Utilities Billing Component performs several checks before billing an account. In some billing systems, some of these checks are unnecessary. Use these options to turn off the unneeded checks, to improve performance.

Do not use Interval Data

This option turns off all support for Interval Data during billing.

Do not use Interval Data to Compute Start/Stop

This option disables use of interval data cuts to compute the bill start and stop, and do not verify that all the account's interval data is ready. If neither Interval Data check is turned off and Multiple Bill History Records are allowed, only the verification is performed.

Do not check for Interval Data gaps

This option turns off checking for gaps between cuts. The rate schedule should then check for missing data (status code '9') to validate the data. If this is not checked, a Warning will be reported if there are gaps between the interval data cuts.

Do not check Account Notes

This option disables checks for Account Notes/Work Queue Items that stop billing in Automatic Billing or Approval Required. Do not write Account Notes/Work Queue Items from Automatic Billing or Approval Required.

Do not check Override Ready

This option disables checks that Special Events or Overrides are Ready.

Do not check Bill Determinant Use

This option disables checks of the account's Bill Determinants' Use.

Do not check Account's Meter Values

This option disables verification that an account's scalar data is in the Meter Value Table.

Do not check Rate Code Flags

This option disables use of the BILLINGMODEFLAG, PRINTDETAIL or FULLDAYBILL values in the RATECODE Table. If this is checked, it also turns off the same flags in the Rate Forms (RATEFORM) Table.

Do not check Rate Schedule Flags

This option disables use of the BILLINGMODEFLAG, PRINTDETAIL or FULLDAYBILL values in the RATEFORM Table, independent of the RATECODE Table.

Use MDM schema

When this option is checked, Oracle Utilities Billing Component checks the Oracle Utilities Meter Data Management (Oracle Utilities Meter Data Management) tables, specifically the Meter Data Channel Cut table, for interval data when billing accounts.

Checking this option also automatically checks the following other options:

- Do not check for Interval Data Gaps
- Do not check Account's Meter Values

It also disables the following options:

- Do not use Interval Data
- Do not use Interval Data to compute Start/Stop

Use earliest unbilled bill history

This option is used with bill determinant processing performed by Oracle Utilities Meter Data Management. This option works in conjunction with the "Allow Multiple Bill History Records per Bill Period/Read Date" option (see **Multiple Bill History Records** on page 3-16).

When the "Allow Multiple Bill History Records per Bill Period/Read Date" option is set to "No", this option has the following effect in the bill determinant processing:

- If unchecked (off), the most recent billed history is used to compute the next bill period start and stop dates.
- If checked (on), the earliest unbilled bill history is used; this will allow out-of-order bill history read dates in the recalculation processing but will not affect the initiation of bill determinant calculations.

Report Options

Report options allow users to customize the contents of a report, including the report presentation, the print detail level, and the problem determination options.

Note: Changes to report options as described in this section apply only to the report currently being run.

Available Report Options include:

- **Presentation**
- **Print Detail**
- **Problem Determination**
- **Results Columns**

Note: Not all tabs and/or report options are available for all reports. If a tab/option is not available, it is not displayed or greyed out.

How to set and save report options:

1. Select **Tools and Utilities->Options->Report Options**.

The **Report Options** screen appears.

2. Make any appropriate changes on the **Presentation, Print Detail, Problem Determination,** and **Results Columns** tabs.
3. Click **Save** to save the changes. To reset the Print Options, click **Reset**.

Presentation

The Presentation tab allows users to customize the presentation of a report.

Report Titles

To add optional titles to a report, enter the title in one of the three optional title fields.

Other Options

To disable graphing for the report, check the “Disable graphing of data” checkbox.

To display only summaries for the report, check the “Display summaries only” checkbox.

To keep the report data for CSV/XML exporting, check the “Keep data” checkbox.

Print Detail

The Print Detail tab allow users to specify the level of detail included in both a bill report and transaction record. The information computed and available for reporting is determined by the statements used in the applicable rate form. The **Print Detail** tab enables you to specify how much of that available data is included in the reports and transaction records.

Print Detail Options

Default: This option means the program will use the **Print Detail** setting normally applied to the account (via the Account, Rate Code, Rate Schedule, or Global options specified). Alternately, you can override the usual setting for just this job by selecting one of the following:

None: This option displays effective revenue only.

Normal Detail: This option displays effective revenue, plus any charges assigned to a revenue identifier and any values assigned to a Report Statement in the applicable rate form.

All Detail: This option displays effective revenue, plus revenue identifiers, plus the values associated with the Rules Language Label and Report statements in the rate form.

The table below details how these options apply to specific components of a report and transaction record.

Report Component	None	Normal	All
Customer/Account Detail	X	X	X
Input Values		X	X
LABELed Identifier Values			X
Simple Report Values		X	X
Compound Report Values		X	X

To override the **Print Detail Options** setting for specific components of a bill report and transaction record, select the specific options for each component. For each report component type, select one of the following:

- **On** - Include the component in the report and transaction record.
- **Off** - Exclude the component from the report and transaction record.
- **Print Detail Option** - Apply the setting specified under **Print Detail Options**. The specific manner in which these settings affect individual report components is detailed in the table above. For example, if you had selected “None” under **Print Detail Options**, and selected **Print Detail Option** here for **Input Values**, the input values would not appear in the report.

Following is a brief description of each of the report components.

Customer/Account Detail. Date activated, billing mode, number of days specified for the eligibility pre- and post-windows.

Input values. This option reports the parameters specified for the bill calculations: bill start and end date; date that the account's meter was scheduled to be read; rate code applied to the account; number of days in bill period, and the bill month.

LABELed Identifier Values. This option reports the any identifier values and text strings specified using a LABEL Statement in the rate form. LABEL statements are typically used to substitute meaningful labels for bill determinant names or other brief and sometimes-cryptic identifiers (e.g., LABEL LF "LOAD FACTOR" displays LOAD FACTOR and its value in the report). They are often used for column headings or report subtitles.

Note: If a report component type is designated to appear in a report, and it is assigned a name using a LABEL Statement, its values will automatically appear in the report, with the new label. In other words, it is not necessary in that case to apply the **LABELed identifier values** option to get the label and value to appear. For example, the applicable rate form might have the statement LABEL \$EFFECTIVE_REVENUE "Total Charges". Because Effective Revenue is automatically included in all report types, "Total Charges" will appear, no matter what print details options you choose.

Simple report values. This option reports any values that were assigned to an identifier using a REPORT Statement in the rate form. REPORT statements are typically used to report values of interest that are calculated and/or drawn from the database, such as peak times.

Compound report values. This option reports any values associated with a stem identifier using a REPORT Statement in the rate form.

Problem Determination

The Problem Determination tab allows users to specify the level of problem determination detail included in both a bill report and a transaction record.

When problems occur during the processing of a bill, error messages and other information useful in determining the cause of the problem are created. The **Problem Determination tab** option enables you to specify how much of that data is included in the reports and transaction records.

Problem Determination Options

Show All Error Messages: This option reports all error messages that occur while processing the bill.

Show All Input Options: This option reports all input options used in processing the bill.

Show Bill records to Save (BillHistory, CSS, etc). This option includes the Bill History records in the Bill Report. *It is typically only used for testing.* If you turn this option off, the records are still output when you approve a bill, but they are not displayed or printed in the bill report.

Show Rate Schedule Used in Bill Calculation: This option includes the rate schedule used in processing the bill on the bill report.

Results Columns

The Results Columns tab allows users to specify the labels of the Bill Calculation Results section of a bill report.

The Bill Calculation Results section displays the number of billing units, the distribution of those billing units, the charge rate, and revenue for each revenue identifier used in a rate schedule.

Results Columns Options

To change one or more of the Bill Calculation labels, check the **Show all input options** checkbox and edit the labels as appropriate.

To omit one or more of the columns from the bill report (except the Revenue column), check the **Change Bill Calculation Label** checkbox and delete the appropriate label.

- **Billing Units:** The label for the Billing Units column. If blank, the column is omitted.
- **Distribution:** The label for the Distribution column. If blank, the column is omitted.
- **Charge Rate:** The label for the Charge Rate column. If blank, the column is omitted.
- **Revenue:** The label for the Revenue column. This column cannot be omitted. If blank, the column label is Revenue.

Chapter 4

Searching and Viewing Customer and Account Data

The Oracle Utilities Energy Information Platform allows users to search for and view information about selected customers and accounts. This chapter describes how to search and view customer and account data, and includes the following:

- **Searching and Adding Customers**
- **Viewing Customer Data**
- **Searching Accounts**
- **Viewing Account Data**

Searching and Adding Customers

The **Customers** option on the Entity Management menu allows users to search for customers in the Oracle Utilities Data Repository based on various search criteria and to add new customers. Once added to the database, Contacts and Accounts can then be associated to the customer.

How to search customers:

1. Select **Entity Management->Customers**.

The Customers screen opens.

2. Enter the search criteria in the appropriate field.

You can search based on the Customer Name, Customer ID, or an Account ID associated with the customer. You can also search based on contact information such as phone number, address, city/state, etc.

You can use the percent sign (“%”) as a wildcard character when entering values in any of the fields. For instance, if you want to search for all customers whose name begins with the letter G, you could enter “G%” in the Name field. You can use this wildcard before or after specified letters or numbers (i.e. you would use %t to search for all customers whose names end with the letter t, etc.).

Note that customer Names, IDs, and Account IDs are **case-insensitive**. For example, there is no difference between the “Cust_1” and “cust_1” customer IDs.

3. Specify how the search results are displayed.
 - Select the manner in which the results are sorted by clicking the **Sort by** plus (“+”) sign. See **Specifying How Results are Sorted** on page 2-7 for more information.
 - Specify how many results should appear on each page in the **Page Length** field.
4. Click **Search** to perform the search. To clear all the search fields, click **Reset**.
5. The search results appear on the Customers screen.

The Search Results window displays the following information for each customer:

- Customer Name
 - Customer ID
 - Summary Billing Flag
 - Contact Information (includes Contact Type, Name, Address, City, and State).
6. To sort the results by one of the columns, click the appropriate arrow on the column heading. For example, to sort the results in ascending order by Customer Name, click the “up” arrow on the Customer Name column heading. See **Sorting Search Results** on page 2-7 for more information.

If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field and press the **Enter** key.

7. To view a customer, click on the Customer ID. Customer data for the selected customer will appear in the Customer screen.
8. To perform another search, click **New Search**. To refresh the contents of the Customers screen, click the **Refresh** icon.

How to add a customer:

1. Select **Add Customer** on the Customers screen. The Add Customer screen opens.
2. Enter the **ID** and **Name** for the new customer.
3. Set the **Summary Bill** flag for the customer using the drop-down list. This flag indicates if Oracle Utilities Billing Component should produce a summary bill for the customer, or bill the customer's account individually.
4. Select the **Directory - Account Manager** and **Directory - Contact** for the customer.

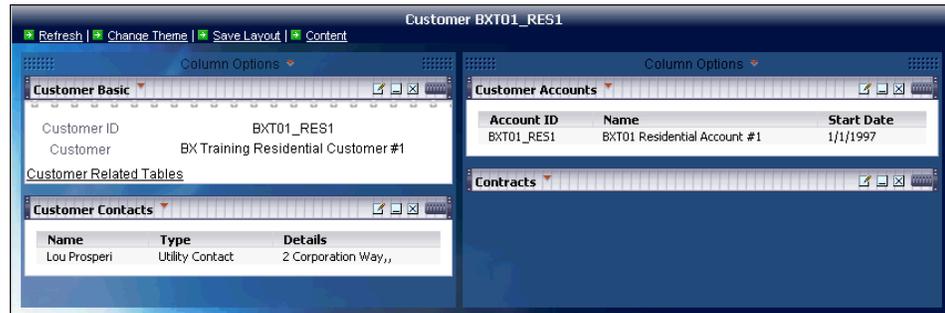
For each of these, click the **Browse** button (**...**). This button opens a dialog window that lists all the options available for the selected field. Click the **[...]** next to the appropriate Directory or Contact. The field on the Create Customer window is automatically populated.

5. Select the **Account Manager Fax Flag** and the **Contact Fax Flag** for the customer using the drop-down lists. These flags indicate if bills created for this customer should be sent via email or fax.
6. Click **Save** to save your changes. To close the window without making any changes, click **Cancel**.
7. The newly created customer appears on the Basics clip of the Customer window.

Note: If you have added custom fields to your Customer table in the Oracle Utilities Data Repository, you may have to enter additional information than that described here.

Viewing Customer Data

Customer data is viewed from the Customer dashboard. This window opens when you select a Customer ID from the Customer search results screen or other screen.



The Customer dashboard provides access to the following customer-related information:

- **Customer Basics**
- **Customer Contacts**
- **Customer Accounts**
- **Customer Contracts (available with Oracle Utilities Billing Component and Oracle Utilities Quotations Management only)**

See **Working with the Dashboard** on page 3-2 for more information about working with the dashboard.

Customer Basics

The Customer Basics clip on the Customer dashboard displays the Customer ID and Name.

To view basic customer data, click **Details**. The Customers screen opens.

The Customers screen displays basic information about the customer, including:

- **UID:** The unique ID of the customer record in the Oracle Utilities Data Repository (read-only)
- **ID:** The customer ID.
- **Name:** The name of the customer.
- **Summary Bill:** A flag that indicates if Oracle Utilities Billing Component should produce a summary bill for the customer, or bill the customer's account individually.
- **Directory - Account Manager:** The account manager for the customer, from the Directory table.
- **Directory - Contact:** The contact for the customer, from the Directory table.
- **Account Manager Fax Flag:** A flag that indicates if Oracle Utilities Billing Component should send billing results to the Account Manager via email or fax.
- **Contact Fax Flag:** A flag that indicates if Oracle Utilities Billing Component should send billing results to the Contact via email or fax.
- **Credit Score:** A score that represents the payment performance history of the customer (used by the Collections Management Extension).

Note: If you have added customized fields to the Customer table in the Oracle Utilities Data Repository, they may also appear on this tab.

- **Owner:** The user ID of the user who last updated the customer record.

To search for a different customer, click **Search**. To delete the customer, click **Delete**. To return to the Customer dashboard, click **Customer Summary**.

How to edit customer records:

1. Update the **Customer ID** and **Customer Name** for the customer as appropriate.
2. Set the **Summary Bill** flag for the customer using the drop-down list. This flag indicates if Oracle Utilities Billing Component should produce a summary bill for the customer, or bill the customer's account individually.
3. Select the Directory - Account Manager and Directory - Contact by clicking the **Browse** button (**...**). This button opens a dialog window that lists all the options available for the selected field. Select the appropriate record. The field is automatically populated.
4. Set the Account Manager Fax Flag and Contact Fax Flag by selecting the appropriate option from the drop-down lists.
5. *Optional.* Enter a Credit Score for the customer.
6. Click **Save** to save your changes. To save the updates as a new customer, click **Save As New** (note that this option is only available if you change the ID field).

How to view Customer related tables:

1. Click **Customer Related Tables** on the Basics clip. The Customer screen opens, displaying the customer record, but also links to related tables.

To view records in one of the related tables, click the name of the table in the **Children** section of the screen. A list of records associated with the customer will be displayed. If there is only one record in the selected table, that record will be displayed.

Customer Contacts

The Customer Contacts clip on the Customer dashboard displays the Name, Type, and Details for a number of contacts associated with the customer.

To view a list of all customer contacts, click the number in parentheses. The Contacts screen opens.

The Contacts screen displays the following information about each contact:

- **Contact Type:** The type of contact (Billing, Legal, etc.).
- **Name:** The name of the contact.
- **Phone:** The contact's phone number.
- **Fax:** The contact's FAX number.
- **Email:** The contact's email address.
- **Address:** The contact's address (street address, City, State, Country, Postal Code).

Additional contact information for each contact can be viewed and/or edited by clicking the **[...]** link for the contact. **Note:** The listed contacts come from the Customer Contact table. Those without a **[...]** link are missing either the Type on the Customer Contact record, or the Address on the related Directory record. You can update these using either the Data Manager application or Data Navigator.

How to edit customer contacts:

1. Click on the **[...]** link of the contact to edit. The Contact Information window opens.
2. Edit the contact information as appropriate.
3. Click **Save** to save your changes. To reset the contact information to the previously saved version, click **Reset**. To close the window without making any changes, click **Cancel**.

How to remove customer contacts:

1. Check the checkbox for the contact to remove.
2. Click **Delete** to remove the contact.

How to add an existing contact to a customer:

1. Click the **Add Existing** link on the Contacts screen. The Contact Search window opens.
2. Enter the search criteria in the appropriate field.

You can search based on the Type, Company Name, First/Last name, or address, city/state, etc.

You can use the percent sign (“%”) as a wildcard character when entering values in any of the fields. For instance, if you want to search for all contacts whose name begins with the letter G, you could enter “G%” in the Name field. You can use this wildcard before or after specified letters or numbers (i.e. you would use %t to search for all contacts whose names end with the letter t, etc.).

Note that company names are **case-insensitive**. For example, there is no difference between the “Thomas” and “thomas” names.

3. Click **Search** to perform the search. To clear all the search fields, click **Reset**. To close the window without making any changes, click **Cancel**.
4. The search results appear in the Search Results window.

The Search Results window displays the following information for each customer:

- Contact Type
- Contact Name
- Phone Number, Fax, Email, and Address for the contact

5. To view a contact, click on the [...] link of the contact. Contact data for the selected contact will appear in the Contact Window.
6. To perform another search, click **New Search**. To refresh the contents of the Search Results window, click **Refresh**. To close the window, click **Cancel**.

How to create new customer contacts:

1. Click the **Add** link on the Contacts window. A blank Contact Information window opens.
2. Enter the contact information as appropriate. Be sure to enter the required fields (Address 1).
3. Click **Save** to save your changes. To clear all the fields, click **Reset**. To close the window without making any changes, click **Cancel**.

Customer Accounts

The Customer Accounts clip on the Customer dashboard displays the ID and Name for a number of accounts associated with the customer.

To view a single account of those listed, click the Account ID on the clip. The Account Summary screen opens displaying the selected account. See **Viewing Account Data** for more information.

To view a list of all accounts associated with the customer, click the number in parentheses. The Accounts screen opens.

The Accounts screen displays a list of accounts associated with the Customer. To view a specific account, click the **Account ID**. The Account Summary screen opens displaying the selected account. See **Viewing Account Data** for more information.

How to add an account to a customer:

1. Click **Add Account** in the upper left corner of the Accounts screen. A blank Accounts screen opens.
2. Enter the **ID** and **Name** for the new account.

Enter the **Start Time** for the account. You can enter the date either by typing the date manually or clicking the drop-down arrow to the right of the date field. This opens a calendar dialog that you can use to select the start date. You can enter the time either by typing the time manually, or by using the default time of 00:00:00. If appropriate, enter a Stop Time for the account in the same manner.

3. Enter an optional **Operating Company, Jurisdiction, SIC, Account Status, Revenue Code, Region, and Currency Code** for the Account.

For each of these, click the **Browse** button (...). This button opens a dialog window that lists all the options available for the selected field. Click the Code of the appropriate Operating Company, Jurisdiction, SIC, Account Status, Revenue Code, Region, and Currency Code. The fields on the Accounts tab are automatically populated.

4. Select the **Billing Mode Flag, Print Detail, Full Day Bill, and EDI** flags for the account from the drop-down lists.
5. Set the **Prewindow** and **Postwindow** for the account as appropriate.
6. Click **Save** to save the account. To close the window without making any changes, click **Cancel**.

Note: If you have added customized fields to the Account table in the Oracle Utilities Data Repository, they may also appear on this tab.

Customer Contracts (available with Oracle Utilities Billing Component and Oracle Utilities Quotations Management only)

The Contracts clip on the Customer dashboard displays the Contract ID, Start Time, Contract Type, and Contract Status for contracts associated with the customer.

To view a single contract of those listed, click the Contract ID on the clip. The Contracts screen opens displaying the selected contract. See the *Oracle Utilities Billing Component User's Guide* or *Oracle Utilities Quotations Management User's Guide* for more information about viewing contracts.

To view a list of all contracts associated with the customer, click the number in parentheses. The Contract Search Result screen opens.

This screen displays a list of contract associated with the Customer. To view a contract, click the Contract ID. See the *Oracle Utilities Billing Component User's Guide* or *Oracle Utilities Quotations Management User's Guide* for more information about viewing contracts.

Searching Accounts

The **Accounts** option on the Entity Management menu allows users to search for accounts in the Oracle Utilities Data Repository based on various search criteria.

How to search accounts:

1. Select **Entity Management->Accounts**.

The Accounts screen opens.

2. Enter the search criteria in the appropriate field.

You can search based on the Customer Name, Customer ID, or an Account ID associated with the account. You can also search based on Account Status, Operating Company, and/or Jurisdiction. To search on one of these, select it from the drop-down lists. In addition, you can search based on contact information such as phone number, address, city/state, etc.

You can use the percent sign (“%”) as a wildcard character when entering values in any of the fields. For instance, if you want to search for all accounts whose name begins with the letter G, you could enter “G%” in the Name field. You can use this wildcard before or after specified letters or numbers (i.e. you would use %t to search for all accounts whose names end with the letter t, etc.).

Note that account Names, Customer IDs, and Account IDs are **case-insensitive**. For example, there is no difference between the “Acct_1” and “acct_1” account IDs.

3. Specify how the search results are displayed.
 - Select the manner in which the results are sorted by clicking the **Sort by** plus (“+”) sign. See **Specifying How Results are Sorted** on page 2-7 for more information.
 - Specify how many results should appear on each page in the **Page Length** field.
4. Click **Search** to perform the search. To clear all the search fields, click **Reset**.
5. The search results appear on the Accounts screen.

The Accounts window displays the following information for each account:

- Customer ID
 - Account ID
 - Account Name
 - Account Status
 - Start Date/Stop Date
 - Contact Information (includes Contact Type, Name, Address, City, and State).
6. To sort the results by one of the columns, click the appropriate arrow on the column heading. For example, to sort the results in ascending order by Account Name, click the “up” arrow on the Account Name column heading. See **Sorting Search Results** on page 2-7 for more information.

If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field and press the Enter key.

7. To view an account, click on the Account ID. Account data for the selected account will appear in the Account dashboard.
8. To perform another search, click **New Search**. To refresh the contents of the Accounts screen, click the refresh icon.

Viewing Account Data

Account data is viewed from the Account dashboard. This window opens when you select an Account ID from the Account search results screen or other screen.

The Account dashboard provides access to the following account-related information:

- **Account Basics**
- **Account Contacts**
- **Account Reports**
- **Recorders**
- **Meters**
- **Service Points**
- **Related Accounts**
- **Account Billing (available with Oracle Utilities Billing Component only)**
- **Account Contracts (available with Oracle Utilities Billing Component and Oracle Utilities Quotations Management only)**
- **Financials (available with Oracle Utilities Billing Component only)**
- **Collections (available with Oracle Utilities Billing Component only)**
- **Aggregation (available with Oracle Utilities Load Profiling and Settlement only)**
- **Meter Data Management (available with Oracle Utilities Meter Data Management only)**

See **Working with the Dashboard** on page 3-2 for more information about working with the Energy Information Platform dashboard.

Account Basics

The Account Basics clip on the Account dashboard displays the Start Date, Customer ID, and Status of the Account.

To view basic account data, click **Details**. The Accounts screen opens.

The Account displays basic information about the account, including:

- **UID:** The unique ID of the account.
- **Customer:** The customer ID.
- **Account ID:** The account ID.
- **Start Time:** Start time for the account.
- **Stop Time:** Stop time for the account. Accounts with a non-Null stop date are no longer active accounts, and cannot be billed.
- **Operating Company:** Operating company associated with the account.
- **Jurisdiction:** Jurisdiction associated with the account.
- **Name:** The name of the account.
- **SIC:** The Standard Industrial Classification (SIC) code for the account.
- **Account Status:** The current status of the account.
- **Revenue Code:** Revenue code for the account.
- **Billing Mode:** Billing mode for the account. This can be one of the following:
 - **Use Default:** Uses the default billing mode set in Billing Options.
 - **Fully Automatic:** The account is billed using Automatic billing.
 - **Approval Required:** The account is billed using Approval Required billing.
 - **Manual Start:** The account is billed using manual (Current/Final) billing.
- **Print Detail:** Specifies the level of information provided on billing reports and transaction records. This can be one of the following:
 - **Use Default:** Use the print detail specified in either the rate code, rate schedule, or Billing Options (in that order).
 - **None:** Effective revenue only.
 - **Normal:** Effective revenue, other revenue identifiers and REPORT statements in the rate form used to calculate the report.
 - **All Detail:** Effective revenue, other revenue identifiers and LABEL and REPORT statements in the rate form used to calculate the report.
- **Full Day Bill:** A flag that specifies how the end of a billing period is recorded. This can be one of the following:
 - **Yes:** Use midnight of the last full day of the billing period.
 - **No:** Use the actual read date and time.
 - **Use Default:** Use the flag specified in either the rate code or rate schedule (in that order). If neither is available, use the actual read date and time.
- **Pre Window:** The number of days prior to the scheduled read date when an account becomes eligible for billing. This can be any value from 0 to 28.
- **Post Window:** The number of days after the scheduled read date when an account remains eligible for billing. This can be any value from 0 to 28.

- **EDI:** A flag that indicates if the account supports EDI format.
- **Region:** Region for the account.
- **LS Currency:** The currency code for the account, from the LSCurrency table.
- **Owner:** The owner of the account.
- **LS Account Type:** The account type.
- **Market Participant ID:** ID of the market participant associated with the account.
- **Organization:** Organization associated with the account.
- **Industrial Classification Code:** The Industrial Classification code for the account.
- **Special Handling Code:** Handling code for the account.

To search for a different account, click **Search**. To delete the account, click **Delete**. To return to the Account dashboard, click **Account Summary**.

How to edit an account record:

1. Update the information for the account as appropriate.

Select the appropriate flags for Billing Mode, Full Day Bill, EDI, and Print Detail using the drop-down lists.

Enter the Start Date and Stop Date either by typing the date manually, or by clicking the drop-down arrow to the right of the date field. This opens a calendar dialog that you can use to select the appropriate date. Edit the Start Time and Stop Time by typing the time manually.

Enter the appropriate codes for Operating Company, Jurisdiction, SIC, Account Status, Revenue, Region, LS Currency, and LS Account Type using the **Browse** button (...) next to them. This button opens a dialog window that lists all the options available for the selected field. Click the [...] link for the appropriate Code. The field is automatically populated.

2. Click **Save** to save your changes. To save your changes as a new account, click **Save New** (note that this option is only available if you change the ID field). To close the window without making any changes, click **Cancel**.

How to view Account related tables:

1. Click **Account Related Tables** on the Basics clip. The Accounts screen opens, displaying the account record, but also links to related tables.

To view records in one of the related tables, click the name of the table in the **Children** section of the screen. A list of records associated with the account will be displayed. If there is only one record in the selected table, that record will be displayed.

Account Contacts

The Account Contacts clip on the Account dashboard displays the Name, Type, and Details for a number of contacts associated with the account.

To view a list of all account contacts, click the number in parentheses. The Contacts screen opens.

The Contacts screen displays the following information about each contact:

- **Contact Type:** The type of contact (Billing, Legal, etc.).
- **Name:** The name of the contact.
- **Phone:** The contact's phone number.
- **Fax:** The contact's FAX number.
- **Email:** The contact's email address.
- **Address:** The contact's address (street address, City, State, Country, Postal Code).

Additional contact information for each contact can be viewed and/or edited by clicking the [...] link for the contact. **Note:** The listed contacts come from the Account Directory table. Those without a [...] link are missing either the Type on the Account Directory record, or the Address on the related Directory record. You can update these using the Data Manager application or Data Navigator.

How to edit account contacts:

1. Click on the [...] link of the contact to edit. The Contact Information window opens.
2. Edit the contact information as appropriate.
3. Click **Save** to save your changes. To reset the contact information to the previously saved version, click **Reset**. To close the window without making any changes, click **Cancel**.

How to remove account contacts:

1. Check the checkbox of the contact to remove.
2. Click **Delete** to remove the contact.

How to add an existing contact to an account:

1. Click the **Add Existing** link on the Contacts screen. The Contact Search window opens.
2. Enter the search criteria in the appropriate field.

You can search based on the Type, Company Name, First/Last name, or address, city/state, etc.

You can use the percent sign (“%”) as a wildcard character when entering values in any of the fields. For instance, if you want to search for all contacts whose name begins with the letter G, you could enter “G%” in the Name field. You can use this wildcard before or after specified letters or numbers (i.e. you would use %t to search for all contacts whose names end with the letter t, etc.).

Note that company names are **case-insensitive**. For example, there is no difference between the “Thomas” and “thomas” names.

3. Click **Search** to perform the search. To clear all the search fields, click **Reset**. To close the window without making any changes, click **Cancel**.
4. The search results appear in the Search Results window.

The Search Results window displays the following information for each customer:

- Contact Type
- Contact Name
- Phone Number, Fax, Email, and Address for the contact

5. To view a contact, click on the [...] link of the contact. Contact data for the selected contact will appear in the Contact Window.
6. To perform another search, click **New Search**. To refresh the contents of the Search Results window, click **Refresh**. To close the window, click **Cancel**.

How to create new account contacts:

1. Click the **Create** link on the Contacts window. A blank Contact Information window opens.
2. Enter the contact information as appropriate. Be sure to enter the required field (Address 1).
3. Click **Save** to save your changes. To clear all the fields, click **Reset**. To close the window without making any changes, click **Cancel**.

Account Reports

The Account Reports clip on the Account dashboard displays the 5 most recent reports processed for the account.

Reports listed on this clip are from the Account Reports table, and are one of the following:

- Oracle BI Publisher or Crystal Reports run for the account, where ACCOUNTID is one of the parameters used when running the report.
- Rules Language reports run for the account, where UIDACCOUNT is one of the parameters used when running the report.
- Oracle Utilities Billing Component reports and calculations run for the account, where the report or calculation was run for the current account only. If the report or calculation was run for a list of accounts that includes the current account or for all accounts, it will not appear on this clip.

To view a specific report, click the Report Title. The selected report will open in the appropriate viewer (based on the report Type). To view a list of all reports for the account, click the number in parentheses. The View Reports screen opens, displaying all reports run for the account. See **View Reports** on page 7-77 for more information about viewing reports.

Recorders

The Recorders clip on the Account dashboard displays the Recorder ID, Channel Number, and Start Time for the first 10 interval data recorders associated with the account.

To view a list of all recorders, click the number in parentheses. The Recorders screen opens.

The Recorders screen displays channel history records associated with the account. Each channel history record listed on the tab includes the same information.

- **Recorder ID:** The ID of the recorder.
- **Channel Number:** The channel number.
- **Start Time:** The start time for the recorder.
- **Stop Time:** The stop time for the recorder. Recorders with a non-Null stop time earlier than the current date are no longer active.
- **Name:** The name of the Unit-of-Measure (UOM) measured by the channel.

To view cuts series associated with the channel history record, click the **Recorder ID** link. The Interval Data Results window opens.

See **Viewing and Exporting Interval Data** on page 6-5 for more information about viewing recorder data.

Meters

The Meters clip on the Account dashboard displays the Meter ID and Start Time for the first 10 meters associated with the account.

To view a list of all meters associated with the account, click the number in parentheses. The Meters screen opens.

The Meters screen displays meter history records associated with the account. Each meter history record listed on the screen includes the same information.

- **Meter ID:** The ID for the meter.
- **Start Date:** The start date and time for the meter.

- **Stop Date:** The stop date and time for the meter. Meters with a non-Null stop time are no longer active.
- **Service Type:** The service type associated with the meter (electric, gas, water, etc.)
- **Address:** The premise associated with the meter.
- **Service Plan:** The service plan associated with the meter.
- **Number of Dials:** The number of dials on the meter.
- **Meter Multiplier:** The meter's meter multiplier.
- **Meter Offset:** The meter's meter offset.
- **End Use Code:** Code that represents the end use measured by the meter.

How to edit meter history records:

1. Click the [...] link for the meter history record you wish to edit. The Edit screen opens displaying the selected record.
2. Update the information for the record as appropriate.

Update the **Start Time** and **Stop Time** either by typing the date manually, or by clicking the drop-down arrow to the right of the date field. This opens a calendar dialog that you can use to select the appropriate date. Update the time for both the Start Time and Stop Time by typing the time manually.

Some fields have a **Browse** button (...) next to them. This button opens a dialog window that lists all the options available for the selected field. Click the [...] link for the appropriate Code. The field is automatically populated.

3. Click **Save** to save your changes. To delete the record, click **Delete**. To close the window without making any changes, click **Cancel**.

How to add meter history records:

1. Click **Add**. A blank record opens on the Meters tab.
2. Enter the information for the record as appropriate. Be sure to fill the required fields (Meter ID and Start Time).

Select the **Start Time** either by typing the date manually, or by clicking the drop-down arrow to the right of the date field. This opens a calendar dialog that you can use to select the appropriate date. Enter the time by typing the time manually.

Some fields have a **Browse** button (...) next to them. This button opens a dialog window that lists all the options available for the selected field. Click the [...] link for the appropriate Code. The field is automatically populated.

3. Click **Save** to save your changes. To clear all the fields, click **Reset**. To close the window without making any changes, click **Cancel**.
4. To view meter reads for a meter, click the <...> link. The Meters screen opens, displaying a list of meter reads. See **Viewing Meter Data** on page 6-18 for more information.

Service Points

The Service Points clip on the Account dashboard displays the number of service points associated with the account.

To view a list of all related service points, click the number in parentheses. The Service Points screen opens.

The Service Points screen displays service points associated with the account. Each record listed includes the same information.

- **Service Point ID:** The ID of the service point.
- **Service Point Name:** The name of the service point.
- **Account ID:** The Account ID related to the service point.
- **Market Participant Name:** The name of the market participant related to the service point.
- **Market Participant ID:** The ID of the market participant related to the service point.
- **Market ID:** The market ID of the market in which the service point is located.
- **Invoice ID:** Invoice ID related to the service point.
- **Recorder ID:** Recorder ID for the interval data recorder related to the service point. If more than one record is associated with the service point, this column is blank.
- **Meter ID:** Meter ID for the meter related to the service point. If more than one meter is associated with the service point, this column is blank.
- **Address:** Address of the service point.

To view the service point associated with the account, click the **Service Point ID** link. See **Viewing Market Participant Data** on page 5-4 for more information about viewing service point data.

Related Accounts

The Related Accounts clip on the Account dashboard displays the Account ID and Name for the current account and the first four accounts related to the current account.

To view the Related Accounts screen, click the number in parentheses.

The Related Accounts screen displays a tree diagram that illustrates the relationship between the current and any related accounts. The Account ID and Account Name are displayed for each related account:

The Related Accounts screen is read-only.

How to view a related account:

1. Click the **Account ID** link of the related account you wish to view.
2. The selected account appears on the Account dashboard.

Account Billing (available with Oracle Utilities Billing Component only)

The Account Billing clip on the Account dashboard displays the Bill Month, Start time, and Stop Time for the five earliest bill periods associated with the account. If there are more than five billing periods for the account, the number of pages (each comprising five records) appears at the bottom of the clip. To view the 2nd (or other page), click the page number.

To view more detailed billing data, click the number in parentheses. The Billing screen opens, displaying billing data for the most recent bill period. To view a specific billing period, click the Bill Month link for billing period you wish to view. The Billing screen opens for the selected billing period.

The Billing screen allows users to view Bill History, Bill History Value, Override History records, and financial transactions for the account. The Billing screen displays the following information for each bill period:

- **Bill Period:** A drop-down list containing all bill periods for the account. To change the record being displayed, select the bill period from the drop-down list.
- **Start Time:** Start time for the bill period.
- **Stop Time:** Stop time for the bill period.
- **Bill Month:** The bill month for the bill period.
- **Bill Time:** The time at which the account was billed for this bill period.
- **Read Date:** The date of the meter read for the bill period.
- **User Specified Stop:** A flag that indicates if the stop time for the bill period is user-specified or calculated.
- **Billing Code:** Billing code associated with this account for this bill period.
- **KWH:** The energy usage, in kilowatt hours, for the bill period.
- **Bill Determinants:** A list of Bill Determinants (Bill History Value records) for the selected bill period. You can choose to display either Bill Determinants (Bill History Value records) or Special Events (Account Override History records). When the Bill View tab opens, it initially displays Bill Determinants.
- **Special Events:** A list of Special Events (Override History records) for the selected bill period. To view all Override History records for the account, check the **Show All Records** checkbox.
- **Transactions:** A list of financial transactions (Transaction records) for the selected bill period.

How to edit a bill period:

1. Select the bill period to edit from the Bill Period drop-down list. The selected bill period (and related Bill Determinants and Special Events) will display on the Billing screen.
2. Click the **Edit** link. The edit screen opens displaying the selected bill period.
3. Update the **Start Time**, **Stop Time**, **Bill Month**, **Bill Time**, and **Read Date** either by typing the date manually, or by clicking the drop-down arrow to the right of the date field. This opens a calendar dialog that you can use to select the appropriate date. Update the time for the Start Time, Stop Time, and Bill Time by typing the time manually.
4. Select the **User Specified Stop** flag from the drop-down list.
5. Update the **KWH** value as appropriate.
6. Update the (optional) **Bill Code** by clicking the **Browse** button (...). This button opens a dialog window that lists all the Bill Codes available. Click the [...] link for the appropriate Bill Code. The field is automatically populated.

7. Select the **Profile Status** flag from the drop-down list.
8. Click **Save** to save your changes. To delete the record, click **Delete**. To close the window without making any changes, click **Cancel**.

How to add a bill period:

1. Click the **Add** link. A blank screen opens.
2. Enter the **Start Time**, **Stop Time**, **Bill Month**, **Bill Time**, and **Read Date** either by typing the date manually, or by clicking the drop-down arrow to the right of the date field. This opens a calendar dialog that you can use to select the appropriate date. Update the time for the Start Time, Stop Time, and Bill Time by typing the time manually.
3. Select the **User Specified Stop** flag from the drop-down list.
4. Enter the **KWH** value as appropriate.
5. Enter the (optional) **Bill Code** by clicking the **Browse** button (...). This button opens a dialog window that lists all the Bill Codes available. Click the [...] link for the appropriate Bill Code. The field is automatically populated.
6. Select the **Profile Status** flag from the drop-down list.
7. Click **Save** to save your changes. To close the window without making any changes, click **Cancel**.

How to edit Bill Determinants (Bill History Value records):

1. Click the [...] link for the record you wish to edit in the Bill Determinants section. The edit screen opens displaying the selected record.
2. Select the **Bill Determinant** by clicking the **Browse** button (...). This button opens a dialog window that lists all the Bill Determinants available. Click the [...] link for the appropriate Bill Determinant. The field is automatically populated.
3. Update the **Value** field for the record as appropriate.
4. Click **Save** to save your changes. To delete the record, click **Delete**. To close the window without making any changes, click **Cancel**.

How to add Bill Determinants (Bill History Value records):

1. Click the **Add** link. A blank record opens.
2. Select the **Bill Determinant** by clicking the **Browse** button (...). This button opens a dialog window that lists all the Bill Determinants available. Click the [...] link for the appropriate Bill Determinant. The field is automatically populated.
3. Enter the **Value** in the Value field.
4. Click **Save** to save your changes. To close the window without making any changes, click **Cancel**.

How to edit Special Events (Account Override History records):

1. Click the [...] link for the record you wish to edit in the Special Events section. The Edit screen opens displaying the selected record.
2. Select the **Override Code** by clicking the **Browse** button (...). This button opens a dialog window that lists all the Override codes available. Click the [...] link for the appropriate Override. The field is automatically populated.
3. Update the **Start Time** and **Stop Time** either by typing the date manually, or by clicking the drop-down arrow to the right of the date field. This opens a calendar dialog that you can use to select the appropriate date. Update the time for the Start Time and Stop Time by typing the time manually.

4. Update the **Value** and **String Value** as appropriate.
5. Click **Save** to save your changes. To delete the record, click **Delete**. To close the window without making any changes, click **Cancel**.

How to add Special Events (Account Override History records):

1. Click the **Add** link. A blank record opens.
2. Enter the information for the record as appropriate. Be sure to fill the two required fields (**Override Code** and **Start Time**).
3. Select the **Override Code** by clicking the **Browse** button (...). This button opens a dialog window that lists all the Override codes available. Click the [...] link for the appropriate Override. The field is automatically populated.
4. Enter the **Start Time** and **Stop Time** either by typing the date manually, or by clicking the drop-down arrow to the right of the date field. This opens a calendar dialog that you can use to select the appropriate date. Update the time for the Start Time and Stop Time by typing the time manually.
5. Enter the **Value** in the Value field.
6. Enter the **String Value** in the String Value field.
7. Click **Save** to save your changes. To close the window without making any changes, click **Cancel**.

Account Contracts (available with Oracle Utilities Billing Component and Oracle Utilities Quotations Management only)

The Account Contracts clip on the Account dashboard displays the Contract ID, Start Time, Contract Type, and Contract Status for contracts associated with the account.

To view a single contract of those listed, click the Contract ID on the clip. The Contracts screen opens displaying the selected contract. See the *Oracle Utilities Billing Component User's Guide* or *Oracle Utilities Quotations Management User's Guide* for more information about viewing contracts.

To view a list of all contracts associated with the account, click the number in parentheses. The Contract Search Result screen opens.

This screen displays a list of contracts associated with the account. To view a contract, click the Contract ID. See the *Oracle Utilities Billing Component User's Guide* or the *Oracle Utilities Quotations Management User's Guide* for more information about viewing contracts.

Financials (available with Oracle Utilities Billing Component only)

The Financials clip on the Account dashboard displays the account's Receivable Status, Current Balance, Past Due Balance, and Deferred Balance.

To view more detailed financial data, click **Details**. The Financials screen opens.

The Financials screen displays financial information about the account on three panes: the Account Balance pane, the Financial Profile pane, and the Detailed View pane.

Note: The information displayed on the Financials screen is *View-only*. You cannot change, update, delete, or modify this data in any way.

Account Balance Pane

The Account Balance pane contains account balance information about the account, including:

- **Receivable Status:** the account's receivable status, including Current, Past Due, Collections, Uncollectible, or Unrefundable
- **Current Balance:** the account's current balance
- **Past Due Balance:** any past due amount
- **Deferred Balance:** the amount of the variance on the Budget Plan, if any.

Financial Profile Pane

The Financial Profile pane displays records associated with the account in a "tree" format. This includes any service plans, autopayment plans, transactions or other financial records associated with the account.

Each of the sections below the account (such as Service Plans) can be expanded to display specific records by clicking the arrow. To collapse the tree so that fewer levels of detail are shown, click the arrow next to individual item.

When you click on an item in the tree (Service Plans, Autopay Plans, Transactions, etc), detailed information about the selected item appears in the Detailed View pane.

Detailed View Pane

The Detailed View pane displays information based on selected items in the Financial Profile pane. The default view is AR aging information, listing balances for different receivable types grouped by a number of day ranges. The specific contents of the Detailed View pane are determined by the item(s) selected in the Financial Profile pane, and include the following:

Aging

The Aging pane displays balances for different receivable types grouped by day ranges (0-15, 16-30, 31-45, etc.). The information in this pane is based on the Invoice Date on the account's transaction records. Transactions that have an Invoice Date of NULL are grouped in the 0-15 range.

Service Plans

The Service Plans pane displays records identifying individual service plans from the Service Plan Table including:

- **Type:** the service plan type.
- **LDC Acc:** the local distribution company (LDC) account number.
- **Start/Stop:** the start/stop dates of the service plan. A future stop date is allowed. A blank Stop date indicates that there is no known date when the service plan is to terminate.
- **Op. Co:** the operating company associated with the service plan.
- **Juris:** the jurisdiction associated with the service plan.

Service Plan

The Service Plan pane displays data concerning individual service plans, including:

- **Service Type:** the service plan type.
- **LDC Account:** the local distribution company (LDC) account number.
- **Service Address:** the address associated with the service plan.
- **Start Date/Stop Date:** the start/stop dates of the service plan. A future stop date is allowed. A blank Stop date indicates that there is no known date when the service plan is to terminate.
- **Operating Company:** the operating company associated with the service plan.
- **Jurisdiction:** the jurisdiction associated with the service plan.

Budget Plan

The Budget Plan section displays records from the Budget Plan Table related to the Service Plan, including:

- **Type:** the budget plan type,
- **Amount:** the amount associated with the budget plan,
- **Variance:** the variance of the budget plan,
- **Start Date/Stop Date:** the start/stop dates of the budget plan. A future stop date is allowed. A blank Stop date indicates that there is no known date when the service plan is to terminate,
- **True-up Date:** the date on which the next budget bill true-up transaction should occur.

Deposits

The Deposits pane displays records from the Deposits Table in the Oracle Utilities Data Repository, including:

- **Date:** the date of the deposit.
- **Amount:** the amount of the deposit.
- **Principal Bal:** the current balance of the deposit, less any accrued interest.
- **Interest Bal:** the amount of interest earned on the deposit.
- **Last Paid Date:** the last date a payment was made against the deposit
- **Last Int Date:** the last date interest was accrued against the deposit
- **Last App Date:** the last date any portion of the deposit balance was applied to the account's balance.
- **Interest Rate:** the interest rate for the deposit.

Deposit

The Deposit pane displays data concerning individual deposits, including:

- **Date:** the date of the deposit.
- **Amount:** the amount of the deposit.
- **Principal Balance:** the current balance of the deposit, less any accrued interest.
- **Interest Balance:** the amount of interest earned on the deposit.
- **Interest Rate:** the interest rate for the deposit.
- **Last Paid Date:** the last paid date of the deposit.
- **Last Int Date:** the last date on which interest accrued for the deposit.
- **Last App Date:** the date on which the deposit was last applied.

Installment Plans

The Installment Plan pane displays records from the Installment Plans Table in the Oracle Utilities Data Repository, including:

- **Date:** the start date of the installment plan.
- **Total # Insts:** the total number of installments in the plan.
- **Remaining # Insts:** the remaining number of installments in the plan.
- **Total Amt:** the total amount of the installment plan.
- **Remaining Amt:** the remaining amount of the installment plan.
- **1st Inst Amount:** the amount of the first installment in the plan (if different than the Installment Amount).
- **Inst Amount:** the amount of the installment in the plan.

Installment Plan

The Plan pane displays data concerning individual installment plans, including:

- **Date:** the start date of the installment plan.
- **Total # Insts:** the total number of installments in the plan.
- **Remaining # Insts:** the remaining number of installments in the plan.
- **Total Amt:** the total amount of the installment plan.
- **Remaining Amt:** the remaining amount of the installment plan.
- **1st Inst Amt:** the amount of the first installment in the plan (if different than the Installment Amount).
- **Inst Amt:** the installment amount
- **Stop Date:** the stop date of the installment plan.
- **Receivable Type:** The receivable type associated with the installment plan.
- **Charge Type:** The charge type associated with the installment plan.
- **Operating Company:** The operating company associated with the installment plan.
- **Jurisdiction:** The jurisdiction associated with the installment plan.

AutoPay Plans

The AutoPay Plans pane displays records from the Auto Payment Plan Table including:

- **Payment Method:** the payment method associated with the autopayment plan.
- **Institution:** the name of the financial institution used for direct debit automatic payment or the name of the institution that issued the Visa or MasterCard being used for automatic payment.
- **Account Name:** the name on the bank or credit card account used for automatic payment.
- **Acc No:** the account number for the bank or credit card account used for automatic payment.
- **Postal Code:** the postal code associated with the account.
- **Start Date/Stop Date:** the start/stop dates of the autopayment plan. A future stop date is allowed. A blank Stop date indicates that there is no known date when the service plan is to terminate.
- **Exp Date:** the expiration date for credit card accounts.
- **RTN:** the routing transit number used for direct debit from checking accounts.

AutoPay Plan

The AutoPay Plan pane displays data about specific automatic payment plans, including:

- **Payment Method:** the payment method associated with the autopayment plan.
- **Institution:** the name of the financial institution used for direct debit automatic payment or the name of the institution that issued the Visa or MasterCard being used for automatic payment.
- **Account Name:** the name on the financial institution or credit card account used for automatic payment.
- **Account No:** the account number for the financial institution or credit card account used for automatic payment.
- **Postal Code:** the postal code associated with the account.
- **Start Date/Stop Date:** the start/stop dates of the autopayment plan. A future stop date is allowed. A blank Stop date indicates that there is no known date when the autopayment plan is to terminate.
- **Expiration Date:** the expiration date for credit card accounts.
- **Routing Number:** the routing transit number used for direct debit from checking accounts.
- **Autopayments:** a listing of the automatic payments associated with the automatic payment plan, including: the Date, Amount, Batch No, Cancel Time, and Status of each.

Assistance Plans

The Assistance Plans pane displays records from the Assistance Plans table, including:

- **Plan ID:** the identifier of the assistance plan in the system.
- **Start:** the start date of the assistance plan.
- **Stop:** the stop date of the assistance plan.

Assistance Plan

The Assistance Plan pane displays data concerning individual assistance plans, including:

- **Plan ID:** the identifier of the assistance plan in the system.
- **Start Date:** the start date of the assistance plan.
- **Stop Date:** the stop date of the assistance plan.
- **Pledge Details:** individual assistance pledges associated with the assistance plan, including: the Pledge Date, Pledge Amount, Received Date, and Received Amount of each

Collection Agencies

The Collection Agencies pane displays records from the Collection Agency table, including:

- **Agency ID:** the identifier of the collection agency in the system.
- **Type:** the type of collection agency.
- **Start:** the start date of the collection agency.
- **Stop:** the stop date of the collection agency.

Collection Agency

The Collection Agency pane displays data concerning individual collection agencies, including:

- **Agency ID:** the identifier of the collection agency in the system.
- **Type:** the type of collection agency.
- **Start:** the start date of the collection agency.

- **Stop:** the stop date of the collection agency.
- **Fee:** the fee, if any, associated with the collection agency.
- **Comments:** optional comments for the collection agency.

Collection Arrangements

The Collection Arrangements pane displays records from the Collection Arrangements table, including:

- **Payments:** the number of payments associated with the collection arrangement.
- **Total Amount:** the total amount of the collection arrangement.
- **Status:** the status of collection arrangement.
- **Start:** the start date of the collection arrangement.
- **Stop:** the stop date of the collection arrangement.

Collection Arrangement

The Collection Arrangement pane displays data concerning individual collection arrangements, including:

- **Payments:** the number of payments associated with the collection arrangement.
- **Total Amount:** the amount of the collection arrangement.
- **Start Date:** the start date of the collection arrangement.
- **Stop Date:** the stop date of the collection arrangement.
- **Status:** the status of collection arrangement.
- **Modification Date:** The date on which the collection arrangement was last modified.
- **Document Date:** The date on which documents regarding the collection arrangement were sent.
- **Payment Details:** individual payments associated with the collection arrangement, including: the Date Due and Amount Due of each.

Refunds

The Refunds pane displays records from the Refunds table, including:

- **Type:** the type of refund.
- **Reason:** the reason for the refund.
- **Amount:** the amount of the refund.
- **Status:** the status of the refund.
- **Check #:** the check number for the refund (if applicable).
- **Routing #:** the routing number for the refund (if applicable).
- **Send Date:** the date the refund was sent.
- **Issue Date:** the date the refund was issued.
- **Cashed Date:** the date the check issued for the refund was cashed.
- **Void Date:** the date the refund was voided.
- **Check Acc #:** the checking account number for the check issued for the refund.
- **Institution:** the name of the financial institution associated with the refund.

Refund

The Refund pane displays data concerning individual refunds, including:

- **Type:** the type of refund.
- **Reason:** the reason for the refund.
- **Amount:** the amount of the refund.
- **Status:** the status of the refund.
- **Check #:** the check number for the refund (if applicable).
- **Routing #:** the routing number for the refund (if applicable).
- **Send Date:** the date the refund was sent.
- **Issue Date:** the date the refund was issued.
- **Cashed Date:** the date the check issued for the refund was cashed.
- **Void Date:** the date the refund was voided.
- **Check Acc #:** the checking account number for the check issued for the refund.
- **Institution:** the name of the financial institution associated with the refund.

Transactions

When you select Transactions from the Financials Tree, the Transactions window opens.

The Transactions window displays transaction records from the Transaction Table including:

-  indicates the transaction has been cancelled.
- **Date:** the date the transaction was posted to the system.
- **Description:** an optional description of the transaction.
- **Debits:** the amount of the transaction for debit transactions.
- **Credits:** the amount of the transaction for credit transactions.
- **Balance:** the balance of the transaction.
- **Charge Type:** the charge type associated with the transaction.
- **Receivable Type:** the receivable type associated with the transaction.
- **Due Date:** the due date of the transaction (if a charge).
- **Rev. Month:** the revenue month associated with the transaction.
- **User ID:** the user ID of the user who posted the transaction.
- **Invoice Id:** the invoice ID associated with the transaction (optional).
- **Invoice Date:** the invoice date associated with the transaction (optional).
- **Transfer To:** The transaction to which the transaction was transferred, if applicable.
- **Transfer From:** The transaction from which the transaction was transferred, if applicable.
- **Cancel User/Cancel Reason:** the user ID of the user who cancelled the transaction (if applicable), and the reason the transaction was cancelled (if applicable).

How to view transaction details:

1. Click on the **Date** of the transaction you wish to view. The Details window opens.

How to export the contents of the Transactions window:

You can export the contents of the Transactions window

1. Click the **Export** link. The File Download dialog opens.
2. Select either **Open this file from its current location** or **Save this file to disk** as appropriate, and click **OK**.
3. If you selected the **Open this file from its current location** option, the file will open a *.csv file compatible application (such as Microsoft Excel).
4. If you selected the **Save this file to disk option**, enter the file name and select the destination for the file.

Collections (available with Oracle Utilities Billing Component only)

The Collections clip on the Account dashboard displays the account's Collection Status, Collectible Balance, and Performance Score.

To view more detailed collections data, click **Details**. The Collections screen opens.

The Collections screen displays collections-related information about the account on three panes: the Collections Information pane, the Collections Profile pane, and the Detailed View pane.

Note: The information displayed on the Collections screen is *View-only*. You cannot change, update, delete, or modify this data in any way.

Collections Information Pane

The Collections Information pane contains collections-related information about the account, including:

- **Receivable Status:** the account's current receivable status, including Current, Past Due, Collections, Inactive Collections, Uncollectible, or Unrefundable
- **Collection Status:** the account's current collection status
- **Active Arrangement:** whether or not the account has an active collection arrangement. If yes, click **YES** to view the Collections Arrangements for the account.
- **Active Exemption:** whether or not the account has an active collection exemption. If yes, click **YES** to view the Collections Exemptions for the account.
- **Total Balance:** the account's current balance
- **Past Due Balance:** any past due amount
- **Performance Score:** a score that represents the account's payment behavior, based on the account's past payment and collection history.
- **Special Handling Code:** a code that indicates if the account has required special handling

Collections Profile Pane

The Collections Profile pane displays different types of collections-related data associated with the account. This includes aging, Collection Agencies, and Collection History.

When you click on an item in the tree, detailed information about the selected item appears in the Detailed View pane.

Detailed View Pane

The Detailed View pane displays information based on selected items in the Collections Profile pane. The default view is AR aging information, listing balances for different receivable types grouped by a number of day ranges. The specific contents of the Detailed View pane are determined by the item(s) selected in the Collections Profile pane, and include the following:

Aging

The Aging pane displays balances for different receivable types grouped by day ranges defined in the Factor and Factor Value tables (ex: 0-15, 16-30, 31-45, etc.). See **Factor and Factor Value Tables** on page 9-5 in the *Oracle Utilities Billing Component User's Guide* for more information about defining the day ranges on the Aging pane. If no day ranges are defined in the Factor and Factor Value tables, the default is one range labeled "0+".

The information in this pane is based on the Invoice Date on the account's transaction records. Transactions that have an Invoice Date of NULL are grouped in the first range.

Collection Agencies

The Collection Agencies pane displays collection agencies associated with the account, including:

- **Agency ID:** the identifier of the collection agency in the system.
- **Type:** the type of collection agency.
- **Start:** the date the account was assigned to the collection agency.
- **Stop:** the date the account was removed from the collection agency.

Collection History

The Collections History pane displays collections activities for the account, including:

- **View:** an icon that allows you to view details related to the activity. For collections process activities that created messages, this is the message payload in XML format. For other activities, the view displays detailed information about the activity. For example, for a collection arrangement, this would display the total amount of the arrangement, the arrangement type, and the number of payments.

Click the  icon to view the activity.

- **Issued:** the date the activity was issued
- **Implementation:** the implementation of the activity
- **State:** the current state of the activity. This is only populated for activities created by a collections process.
- **Completed:** whether or not the activity has been completed
- **Activity:** the type of activity
- **Source:** the source of the activity. For activities created by a collections process, this is the name of the process. For other types of activities, this is the type of activity, such as Arrangement Review Process, Exemption Review Process, etc.

Aggregation (available with Oracle Utilities Load Profiling and Settlement only)

The Aggregation clip on the Account dashboard displays the Start Date, Stop Date, and link to Aggregation results for the most recent settlement performed for the account.

To view additional settlement data for the account, click **Details**. The Settlement screen opens.

The Settlement screen displays all aggregations run against settlements completed for the account. This screen displays the following information about each set of aggregation results:

- **Actions:** the available actions for the aggregation. Available actions include **Graph/Download**. See **Actions** on page 4-7 in the *Oracle Utilities Load Profiling and Settlement Web User's Guide* for more information.
- **Start Time:** the start time of the aggregation.
- **Stop Time:** the stop time of the aggregation.
- **Aggregation:** the type of aggregation performed.

- **Custom Flag:** A flag that indicates if the aggregation was Custom or Default.
- **User:** the user who generated the aggregation.

If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field. To refresh the contents of the Settlement screen, click the **Refresh** icon (↻).

Meter Data Management (available with Oracle Utilities Meter Data Management only)

The Meter Data Management clip on the Account dashboard displays the Meter ID, Channel ID, UOM, Usage Type, Start Date, and Stop Date for the first 10 MDM Meters associated with the account.

To view usage for all meters associated with the account, click the number in parentheses. The Usage Add/Edit Results screen opens listing all the usage readings for the account.

To view a specific MDM meter associated with the account, click the Meter ID. The MDM Meter screen opens for the selected meter.

To view usage for a specific meter, click the plus sign (“+”) to the left of the Meter ID. A list of usage readings for the meter opens below the Meter ID, displaying Meter ID, Channel, UOM, Last Read Date, Total, and Energy for the usage reading.

To view all usage readings for the meter, click the number in parentheses (to the right of “Usage”). A list screen opens, based on the Usage Type of the meter (Meter Data Reading for Consumption usage, Meter Data Channel Cut for Interval usage, and Meter Data TOU Reading for TOU usage).

To view a specific usage reading for the meter, click the Meter ID (below “Usage”). The Edit Usage screen opens for the select usage reading, based on the Usage Type of the meter (Edit Usage for Consumption usage, Edit Values for Interval usage, and Edit TOU Usage Period for TOU usage).

See the *Oracle Utilities Meter Data Management User's Guide* for more information about viewing MDM meters and related data.

Chapter 5

Searching and Viewing Market Participants and Service Points

The Oracle Utilities Energy Information Platform allows users to search for and view information about selected market participants and service points. This chapter describes how to search and view market participant and service point data, including:

- **Searching and Adding Market Participants**
- **Viewing Market Participant Data**
- **Searching and Adding Service Points**
- **Viewing Service Point Data**

Searching and Adding Market Participants

The **Market Participants** option on the Entity Management menu allows users to search for market participants in the Oracle Utilities Data Repository based on various search criteria, and to add new market participants. Once added to the database, Contacts and Accounts can then be associated to the market participant.

How to search market participants:

1. Select **Entity Management->Market Participants**.

The Market Participant screen opens.

2. Enter the search criteria in the appropriate field.

You can search based on the Market Participant ID, Market Participant Name, or an Account ID or Service Point ID associated with the market participant.

You can use the percent sign (“%”) as a wildcard character when entering values in any of the fields. For instance, if you want to search for all market participants whose name begins with the letter G, you could enter “G%” in the Name field. You can use this wildcard before or after specified letters or numbers (i.e. you would use %t to search for all market participants whose names end with the letter t, etc.).

Note that market participant Names and IDs are **case-insensitive**. For example, there is no difference between the “MP_1” and “mp_1” market participant IDs.

3. Specify how the search results are displayed.
 - Select the manner in which the results are sorted by clicking the **Sort by** plus (“+”) sign. See **Specifying How Results are Sorted** on page 2-7 for more information.
 - Specify how many results should appear on each page in the **Page Length** field.
4. Click **Search** to perform the search. To clear all the search fields, click **Reset**.
5. The search results appear on the Market Participant Result screen.

This screen displays the following information for each market participant:

- Market Participant Name
 - Market Participant ID
 - Type
 - Valid Dates
 - Account ID
 - Valid Dates (Related)
 - Service Point ID
6. To sort the results by one of the columns, click the appropriate arrow on the column heading. For example, to sort the results in ascending order by Market Participant Name, click the “up” arrow on the Market Participant Name column heading. See **Sorting Search Results** on page 2-7 for more information.

If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field and press the **Enter** key.

7. To view a market participant, click on the Market Participant ID. Market participant data for the selected market participant will appear in the Market Participant dashboard.
8. To perform another search, click **New Search**. To refresh the contents of the Market Participant Result screen, click the **Refresh** icon.

How to add a market participant:

1. Select **Add** on the Market Participant screen. A blank Edit Market Participant screen opens.
2. Enter basic information for the market participant in the **Market Participant** pane, including:
 - **Market Participant ID:** (optional) ID for the market participant.
 - **Market Participant Type:** the type of the market participant
 - **Organization Name:** (optional) the name of the market participant
 - **Start Time:** the start time for the market participant. You can enter the date either by typing the date manually or clicking the drop-down arrow to the right of the date field. This opens a calendar dialog that you can use to select the start date. You can enter the time either by typing the time manually, or by using the default time of 00:00:00.
 - **Stop Time:** (optional) the stop time for the market participant. You can enter the stop time in the same manner as the start time.

To clear all the fields in the Market Participant pane, click **Clear** on the Market Participant title bar.

3. Enter addresses for the market participant as needed in the **Address Information** pane.

To add a new address, select the appropriate Address Format and enter the values for the address as appropriate.

To clear all the fields in the Address Information pane, click **Clear** on the Address Information title bar.
4. Click **Save** to save the new market participant.
5. To view the new market participant, click Market Participant Summary. See **Viewing Market Participant Data** on page 5-4 for more information.

Viewing Market Participant Data

Market Participant data is viewed from the Market Participant dashboard. This window opens when you select a Market Participant ID from the Market Participant search results screen (or other screen).

The Market Participant dashboard provides access to the following market participant-related information:

- **Market Participant Basics**
- **Market Participant Contacts**
- **Service Points**
- **Recorders**
- **Meters**
- **Related Market Participants**
- **Transactions**

See **Working with the Dashboard** on page 3-2 for more information about working with the dashboard.

Market Participant Basics

The Market Participant Basics clip on the Market Participant dashboard displays the market participant ID, Name, Type, Address, and Billing address.

To view basic market participant data, click the **Name**. The Edit Market Participant screen opens.

The Edit Market Participant screen displays the following information about the market participant:

- **Market Participant:** basic information about the market participant, including:
 - **Market Participant ID:** ID for the market participant.
 - **Market Participant Type:** the type of the market participant
 - **Organization Name:** the name of the market participant
 - **Start Time:** the start time for the market participant.
 - **Stop Time:** (optional) the stop time for the market participant.
- **Address Information:** physical addresses for the market participant.

To return to the Market Participant dashboard, click **Market Participant Summary**.

How to edit the market participant:

1. Edit the data in the **Market Participant** pane as needed.
2. Edit the data in the **Address Information** pane as needed.
3. Click **Save** to save your changes.

How to view tables related to a market participant:

1. Click **Details** on the title bar of the clip.

The Market Participant screen opens, displaying the market participant record, and links to related tables.

2. To view records in one of the related tables, click the name of the table in the **Children** section of the screen. A list of records associated with the market participant will be displayed. If there is only one record in the selected table, that record will be displayed.

You can also edit the market participant record on this screen.

Market Participant Contacts

The Market Participant Contacts clip on the Market Participant dashboard displays the Name and Contact Methods for contacts associated with the market participant.

To view and/or edit the details of a contact, click the contact Name. The Edit Contact screen opens. See **Viewing and Editing Contacts** on page 7-3 for more information about editing contacts.

To view a list of all contacts, click the underlined number on the title bar of the clip. The Market Participant Contacts screen opens.

The Market Participant Contacts screen displays the following information about each contact:

- **Name:** The name of the contact.
- **Contact Method:** The default contact method for the contact.
- **Start Time:** The start time for the relationship between the market participant and the contact.
- **Stop Time:** The stop time for the relationship between the market participant and the contact.
- **Address:** The contact's address (per Address Format).

To return to the Market Participant dashboard, click **Market Participant Summary**.

To view and/or edit the details of a contact, click the [...] link for the contact. The Edit Contact screen opens. See **Viewing and Editing Contacts** on page 7-3 for more information about editing contacts.

To delete a contact from the market participant, select the contact to delete and click **Delete**.

To add a new contact for the market participant, click **Add**. A blank Edit Contact screen opens. See **Adding Contacts** on page 7-4 for more information about adding contacts.

How to add an existing contact to a market participant:

1. Click **Add Existing** on the Market Participant Contacts screen.

The Search Contacts window opens.

2. Enter the search criteria in the appropriate field.

You can search based on the First/Last/Middle name, Suffix, Contact ID, Title, Company, Job Title, or Note associated with the contact.

You can use the percent sign (“%”) as a wildcard character when entering values in any of the fields. For instance, if you want to search for all contacts whose name begins with the letter G, you could enter “G%” in the Name field. You can use this wildcard before or after specified letters or numbers (i.e. you would use %t to search for all contacts whose names end with the letter t, etc.).

Note that company names are **case-insensitive**. For example, there is no difference between the “Thomas” and “thomas” names.

3. Click **Search** to perform the search. To clear all the search fields, click **Reset**.
4. The search results appear in the Search Contacts Results window.

This window displays the following information for each contact:

- Last Name
- First Name

- Middle Name
 - Title
 - Contact ID
 - Suffix
 - Job Title
 - Company
5. To add a contact, select the contact and click **Add**. The select contact will appear on the Market Participant Contacts screen.
 6. To perform another search, click **New Search**.

Service Points

The Service Points clip on the Market Participant dashboard lists the service points associated with the market participant.

To view a specific service point, click the **Service Point ID**. The select service point opens in the Service Point dashboard. See **Viewing Service Point Data** on page 5-12 for more information about viewing service point data.

To view a list of all service points related to the market participant, click the number in parentheses. The Market Participant Service Points screen opens.

The Market Participant Service Points screen displays service points associated with the market participant. Each record listed includes the same information.

- **Service Point ID:** The ID of the service point.
- **Service Point Name:** The name of the service point.
- **Start Time:** The start time of the relationship between the market participant and the service point.
- **Account ID:** The Account ID related to the service point.
- **Market ID:** The market ID of the market in which the service point is located.
- **Invoice ID:** Invoice ID related to the service point.

To view a specific service point, click the **Service Point ID**. The selected service point opens in the Service Point dashboard. See **Viewing Service Point Data** on page 5-12 for more information about viewing service point data.

To return to the Market Participant dashboard, click **Market Participant Summary**.

How to edit an existing market participant/service relationship:

1. Click the [...] link for the appropriate relationship on the Market Participant Service Points screen.

The Service Point Market Participant screen opens.

2. Edit the record as needed.
3. Click **Save** to save the changes.

To return to the Market Participant Service Points screen, click **Market Participant**.

How to create a new market participant/service point relationship:

1. Click **Add** on the Market Participant Service Points screen.

A blank Service Point Market Participant screen opens.

2. Enter the data for the relationship as appropriate

3. Click **Save** to save the relationship.

To return to the Market Participant Service Points screen, click **Market Participant**.

Recorders

The Recorders clip on the Market Participant dashboard displays the Recorder ID, Channel Number, Unit-of-Measure (UOM), Start Time, and End Use for the first 10 interval data recorders associated with service points related to the market participant. Note: There is no direct relationship between market participants and recorders.

To view a specific recorder, click the **Recorder ID**. The selected recorder opens in the Interval Data Results screen.

See **Viewing and Exporting Interval Data** on page 6-5 for more information about viewing recorder data.

To view a list of all recorders, click the number in parentheses. The Recorders screen opens.

The Recorders screen displays recorders associated with the service points related to the market participant. Each record listed includes the same information:

- **Service Point ID:** The ID of the service point to which the recorder is related.
- **Recorder ID:** The ID of the recorder.
- **Channel Number:** The channel number.
- **Start Time:** The start time for the recorder.
- **Stop Time:** The stop time for the recorder. Recorders with a non-Null stop time earlier than the current date are no longer active.
- **End Use:** The End Use Code for the recorder.
- **Unit of Measure:** The Unit-of-Measure (UOM) code measured by the channel.

To view one of the listed service points, click the **Service Point ID**. The selected service point opens in the Service Point dashboard. See **Viewing Service Point Data** on page 5-12 for more information about viewing service point data.

To view a specific recorder, click the **Recorder ID**. The selected recorder opens in the Interval Data Results screen. To view multiple recorders, select the recorders you wish to view and click **IDV**. The selected recorders appear in the Interval Data Results screen. See **Viewing and Exporting Interval Data** on page 6-5 for more information about viewing recorder data.

To return to the Market Participant dashboard, click **Market Participant Summary**.

Meters

The Meters clip on the Market Participant dashboard displays the Meter ID, Last Read Date, Last Reading, Consumption, and UOM (Unit-of-Measure) for the first 10 meters associated with service points related to the market participant. Note: There is no direct relationship between market participants and meters.

To view a specific meter, click the **Meter ID**. The selected meter opens in the Meter History screen.

See **Viewing Meter Data** on page 6-18 for more information about viewing meter data.

To view a list of all meters associated with the market participant, click the number in parentheses. The Meters screen opens.

The Meters screen displays meters associated with service points related to the market participant. Each record listed on the screen includes the same information.

- **Service Point ID:** The ID of the service point to which the meter is related.
- **Meter ID:** The ID for the meter.
- **Account ID:** Account ID for the account associated to the meter.
- **Account Name:** Account name for the account associated to the meter.
- **Customer Name:** Customer Name for the customer associated to the meter.
- **Address:** Address, City, State, Postal Code, and Country.

To view one of the listed service points, click the **Service Point ID**. The selected service point opens in the Service Point dashboard. See **Viewing Service Point Data** on page 5-12 for more information about viewing service point data.

To view a specific meter, click the **Meter ID**. The selected meter opens in the Meter History screen. See **Viewing Meter Data** on page 6-18 for more information about viewing meter data.

To return to the Market Participant dashboard, click **Market Participant Summary**.

Related Market Participants

The Related Market Participants clip on the Market Participant dashboard displays other market participants associated with the current market participant.

To view a specific market participant, click the **Name**. The selected market participant opens in the Market Participant dashboard. See **Viewing Market Participant Data** on page 5-4 for more information about viewing market participant data.

To view a list of all related market participants, click the underlined number in the title bar of the clip. The Related Market Participant screen opens.

Each record listed includes the same information.

- **Participant Name:** The name of the related market participant.
- **Relationship Type:** The relationship type between the current market participant and the related market participant.
- **Participant Type:** The market participant type of the related market participant.
- **Start Time:** The start time for the relationship between the market participants.
- **Stop Time:** The stop time for the relationship between the market participants.

To return to the Market Participant dashboard, click **Market Participant Summary**.

How to edit an existing market participant relationship:

1. Click the [...] link for the appropriate relationship on the Related Market Participant screen.
The Market Participant Relationship screen opens.
2. Edit the record as needed.
3. Click **Save** to save the changes.

To return to the Related Market Participant screen, click **Market Participant**.

How to create a new market participant relationship:

1. Click Add on the Related Market Participant screen.
A blank Market Participant Relationship screen opens.
2. Enter the data for the relationship as appropriate
3. Click **Save** to save the relationship.

To return to the Related Market Participant screen, click **Market Participant**.

Transactions

The Transactions clip on the Market Participant dashboard displays the Type, Transaction ID, and Date Sent for the five most recent transactions associated with the market participant.

To view a single transaction of those listed, click the Trans ID (Transaction ID) on the clip. The Transaction screen opens displaying the selected transaction. See the *Oracle Utilities Transaction Management User's Guide* for more information about viewing transactions.

To view a list of all transactions associated with the market participant, click the underlined number in the title bar of the clip. The Transaction screen opens.

This screen displays a list of transactions associated with the market participant. To view a transaction, click the Transaction ID. See the *Oracle Utilities Transaction Management User's Guide* for more information about viewing transactions.

Searching and Adding Service Points

Service points are individual points of service. Just as a customer can be associated with more than one account, a single account can be associated to multiple service points.

The **Service Points** option on the Entity Management menu allows users to search for service points in the Oracle Utilities Data Repository based on various search criteria.

How to search service points:

1. Select **Entity Management->Service Points**.

The Service Points screen opens.

2. Enter the search criteria in the appropriate field.

You can search based on the Service Point ID, Service Point Name, Account ID, Invoice ID, Market Participant Name, Market ID, Meter ID, or Recorder ID associated with the service point.

You can use the percent sign (“%”) as a wildcard character when entering values in any of the fields. For instance, if you want to search for all service points whose name begins with the letter G, you could enter “G%” in the Service Point Name field. You can use this wildcard before or after specified letters or numbers (i.e. you would use %t to search for all service points whose names end with the letter t, etc.).

Note that Service Point Names, Service Point IDs, and Account IDs are **case-insensitive**. For example, there is no difference between the “SP_1” and “sp_1” service point IDs.

3. Specify how the search results are displayed.
 - Select the manner in which the results are sorted by clicking the **Sort by** plus (“+”) sign. See **Specifying How Results are Sorted** on page 2-7 for more information.
 - Specify how many results should appear on each page in the **Page Length** field.
4. Click **Search** to perform the search. To clear all the search fields, click **Reset**.
5. The search results appear on the Service Points screen.

The Service Points screen displays the following information for each service point:

- Service Point ID
 - Service Point Name
 - Account ID
 - Market Participant Name
 - Market Participant ID
 - Market ID
 - Invoice ID
 - Recorder ID
 - Meter ID
 - Address
6. To sort the results by one of the columns, click the appropriate arrow on the column heading. For example, to sort the results in ascending order by Service Point Name, click the “up” arrow on the Service Point Name column heading. See **Sorting Search Results** on page 2-7 for more information.

If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field and press the Enter key.

7. To view a service point click on the Service Point ID. Data for the selected account will appear in the Service Point dashboard.
8. To perform another search, click **New Search**. To refresh the contents of the Service Points screen, click the refresh icon.

How to add a service point:

1. Select **Add** on the Service Point screen. A blank Edit Service Point screen opens.
2. Enter basic information for the service point in the **Service Point** pane, including:
 - **Service Point ID:** ID for the service point.
 - **Service Point Name:** (optional) the name of the service point
 - **Market ID:** market ID for the market in which the service point is located.
 - **Premise:** the premise associated with the service point.

To clear all the fields in the Service Point pane, click **Clear** on the Service Point title bar.

3. Enter addresses for the service point as needed in the **Address Information** pane.

To add a new address, select the appropriate Address Format and enter the values for the address as appropriate.

To clear all the fields in the Address Information pane, click **Clear** on the Address Information title bar.
4. Click **Save** to save the new market participant.
5. To view the new service point, click Service Point Summary. See **Viewing Service Point Data** on page 5-12 for more information.

Viewing Service Point Data

Service Point data is viewed from the Service Points dashboard. This window opens when you select a Service Point ID from the Service Point search results screen (or other screen).

The Service Point dashboard provides access to the following service point-related information:

- **Service Point Basics**
- **Service Point Contacts**
- **Service Point Contracts (available with Oracle Utilities Billing Component and Oracle Utilities Quotations Management only)**
- **Service Point Market Participants**
- **Recorders**
- **Meters**
- **Transactions**
- **Meter Data Management (available with Oracle Utilities Meter Data Management Only)**

See **Working with the Dashboard** on page 3-2 for more information about working with the dashboard.

Service Point Basics

The Service Point Basics clip on the Service Point dashboard displays the Service Point ID, Name, Market ID, Service Type, Account ID, and Address.

To view basic service point data, click the **Service Point ID**. The Edit Service Point screen opens.

The Edit Service Point screen displays the following information about the market participant:

- **Service Point:** basic information about the service point, including:
 - **Service Point ID:** ID for the service point.
 - **Organization Name:** the name of the service point.
 - **Market ID:** the market ID for the market ID in which the service point is located.
 - **Premise:** premise (from the LS Premise table) associated with the service point.
 - **Create Time:** the date and time when the service point was created (read only).
- **Address Information:** physical addresses for the service point.

To return to the Service Point dashboard, click **Service Point Summary**.

How to edit the market participant:

1. Edit the data in the **Service Point** pane as needed.
2. Edit the data in the **Address Information** pane as needed.
3. Click **Save** to save your changes.

How to view tables related to a service point:

1. Click **Details** on the title bar of the clip.

The Service Point screen opens, displaying the service point record, and links to related tables.

2. To view records in one of the related tables, click the name of the table in the **Children** section of the screen. A list of records associated with the service point will be displayed. If there is only one record in the selected table, that record will be displayed.

You can also edit the service point record on this screen.

How to view and add service point attributes:

1. Click **Attribute** on the title bar of the clip.

The Service Point Attribute screen opens, displaying the service point name, ID, and market, and a listing of service point attributes.

The service point attributes listed on this screen are those that are in effect on the “View Information As of” date. The user can change the date by clicking the left or right arrows, or by clicking on the date and either changing the date manually or clicking the drop-down arrow to the right of the date field. This opens a calendar dialog that you can use to select the start date. You can enter the time either by typing the time manually, or by using the default time of 23:59:59.

To list all attributes for the service point, check the “Show All Records” checkbox.

2. To add a service point attribute, click **Add** above the list of attributes, and enter the details of the service point attribute.
 - Select the **Attribute Type** by first clicking in the Attribute Type column, and selecting the appropriate attribute type from the drop-down list. This list is populated from the Market Attribute Type table.
 - Select the **Attribute Value** by first clicking in the Attribute Value column, and selecting the appropriate attribute type from the drop-down list. This list is populated from the Market Attribute table.
 - Enter the **Start Time** and **Stop Time** during which the attribute is in effect.
 - Click **Save** above the list of attributes to save the new service point attribute.
3. To refresh the contents of the screen, click **Refresh**.
4. To return to the Service Point dashboard, click **Service Point Summary**.

Service Point Contacts

The Service Point Contacts clip on the Service Point dashboard displays the Name and Contact Methods for contacts associated with the service point.

To view and/or edit the details of a contact, click the contact Name. The Edit Contact screen opens. See **Viewing and Editing Contacts** on page 7-3 for more information about editing contacts.

To view a list of all contacts, click the underlined number on the title bar of the clip. The Service Point Contacts screen opens.

The Service Point Contacts screen displays the following information about each contact:

- **Name:** The name of the contact.
- **Contact Method:** The default contact method for the contact.
- **Start Time:** The start time for the relationship between the service point and the contact.
- **Stop Time:** The stop time for the relationship between the service point and the contact.
- **Address:** The contact’s address (per Address Format).

To return to the Service Point dashboard, click **Service Point Summary**.

To view and/or edit the details of a contact, click the [...] link for the contact. The Edit Contact screen opens. See **Viewing and Editing Contacts** on page 7-3 for more information about editing contacts.

To delete a contact from the service point, select the contact to delete and click **Delete**.

To add a new contact for the service point, click **Add**. A blank Edit Contact screen opens. See **Adding Contacts** on page 7-4 for more information about adding contacts.

How to add an existing contact to a service point:

1. Click **Add Existing** on the Service Point Contacts screen.

The Search Contacts window opens.

2. Enter the search criteria in the appropriate field.

You can search based on the First/Last/Middle name, Suffix, Contact ID, Title, Company, Job Title, or Note associated with the contact.

You can use the percent sign (“%”) as a wildcard character when entering values in any of the fields. For instance, if you want to search for all contacts whose name begins with the letter G, you could enter “G%” in the Name field. You can use this wildcard before or after specified letters or numbers (i.e. you would use %t to search for all contacts whose names end with the letter t, etc.).

Note that company names are **case-insensitive**. For example, there is no difference between the “Thomas” and “thomas” names.

3. Click **Search** to perform the search. To clear all the search fields, click **Reset**.
4. The search results appear in the Search Contacts Results window.

This window displays the following information for each contact:

- Last Name
- First Name
- Middle Name
- Title
- Contact ID
- Suffix
- Job Title
- Company

5. To add a contact, select the contact and click **Add**. The select contact will appear on the Service Point Contacts screen.
6. To perform another search, click **New Search**.

Service Point Contracts (available with Oracle Utilities Billing Component and Oracle Utilities Quotations Management only)

The Service Point Contracts clip on the Service Point dashboard displays the Contract ID, Start Time, Contract Type, and Contract Status for contracts associated with the service point.

To view a single contract of those listed, click the Contract ID on the clip. The Contracts screen opens displaying the selected contract. See the *Oracle Utilities Billing Component User's Guide* or *Oracle Utilities Quotations Management User's Guide* for more information about viewing contracts.

To view a list of all contracts associated with the service point, click the number in parentheses. The Contract Search Result screen opens.

This screen displays a list of contracts associated with the service point. To view a contract, click the Contract ID. See the *Oracle Utilities Billing Component User's Guide* or the *Oracle Utilities Quotations Management User's Guide* for more information about viewing contracts.

Service Point Market Participants

The Service Point Market Participants clip on the Service Point dashboard displays market participants associated with the service point.

To view a specific market participant, click the **Name**. The selected market participant opens in the Market Participant dashboard. See **Viewing Market Participant Data** on page 5-4 for more information about viewing market participant data.

To view a list of all market participants, click the underlined number in the title bar of the clip. The Market Participant Result screen opens.

Each record listed includes the same information.

- **Market Participant Name:** The name of the market participant.
- **Market Participant ID:** The ID of the market participant.
- **Type:** The market participant type of the market participant.
- **Market Participant Name:** The name of the market participant.
- **Valid Dates:** The start time for the relationship between the service point and the market participant.
- **Account ID:** Account ID for the account associated with the market participant.
- **Valid Dates (related):** The stop time for the relationship between the service point and the market participant.
- **Service Point ID:** Service Point ID for the service point associated with the market participant.

How to create a new service point/market participant relationship:

1. Click **Add** on the Market Participant Result screen.

A blank Service Point Market Participant screen opens.

2. Enter the data for the relationship as appropriate
3. Click **Save** to save the relationship.

To return to the Market Participant Service Points screen, click **Market Participant**.

Recorders

The Recorders clip on the Service Point dashboard displays the Recorder ID, Channel Number, Unit-of-Measure (UOM), Start Time, and End Use for the first 10 interval data recorders associated with the service point.

To view a specific recorder, click the **Recorder ID**. The selected recorder opens in the Interval Data Results screen.

See **Viewing and Exporting Interval Data** on page 6-5 for more information about viewing recorder data.

To view a list of all recorders, click the underlined number in the title bar of the clip. The Recorders screen opens.

The Recorders screen displays recorders associated with the service point. Each record listed includes the same information:

- **Service Point ID:** The ID of the service point.
- **Recorder ID:** The ID of the recorder.
- **Channel Number:** The channel number.
- **Start Time:** The start time for the recorder.

- **Stop Time:** The stop time for the recorder. Recorders with a non-Null stop time earlier than the current date are no longer active.
- **End Use:** The End Use Code for the recorder.
- **Unit of Measure:** The Unit-of-Measure (UOM) code measured by the channel.

To view one of the listed service points, click the **Service Point ID**. The selected service point opens in the Service Point dashboard. See **Viewing Service Point Data** on page 5-12 for more information about viewing service point data.

To view a specific recorder, click the **Recorder ID**. The selected recorder opens in the Interval Data Results screen. To view multiple recorders, select the recorders you wish to view and click **IDV**. The selected recorders appear in the Interval Data Results screen. See **Viewing and Exporting Interval Data** on page 6-5 for more information about viewing recorder data.

To return to the Service Point dashboard, click **Service Point Summary**.

Meters

The Meters clip on the Service Point dashboard displays the Meter ID, Last Read Date, Last Reading, Consumption, and UOM (Unit-of-Measure) for the first 10 meters associated with the service point.

To view a specific meter, click the **Meter ID**. The selected meter opens in the Meter History screen.

See **Viewing Meter Data** on page 6-18 for more information about viewing meter data.

To view a list of all meters associated with the service point, click the underlined number on the title bar of the clip. The Meters screen opens.

The Meters screen displays meters associated with the service point. Each record listed on the screen includes the same information.

- **Service Point ID:** The ID of the service point.
- **Meter ID:** The ID for the meter.
- **Account ID:** Account ID for the account associated to the meter.
- **Account Name:** Account name for the account associated to the meter.
- **Customer Name:** Customer Name for the customer associated to the meter.
- **Address:** Address, City, State, Postal Code, and Country.

To view one of the listed service points, click the **Service Point ID**. The selected service point opens in the Service Point dashboard. See **Viewing Service Point Data** on page 5-12 for more information about viewing service point data.

To view a specific meter, click the **Meter ID**. The selected meter opens in the Meter History screen. See **Viewing Meter Data** on page 6-18 for more information about viewing meter data.

To return to the Service Point dashboard, click **Service Point Summary**.

Transactions

The Transactions clip on the Service Point dashboard displays the Type, Transaction ID, and Date Sent for the five most recent transactions associated with the service point.

To view a single transaction of those listed, click the Trans ID (Transaction ID) on the clip. The Transaction screen opens displaying the selected transaction. See the *Oracle Utilities Transaction Management User's Guide* for more information about viewing transactions.

To view a list of all transactions associated with the service point, click the underlined number in the title bar of the clip. The Transaction screen opens.

This screen displays a list of transactions associated with the service point. To view a transaction, click the Transaction ID. See the *Oracle Utilities Transaction Management User's Guide* for more information about viewing transactions.

Meter Data Management (available with Oracle Utilities Meter Data Management Only)

The Meter Data Management clip on the Service Point dashboard displays the Meter ID, Channel ID, UOM, Usage Type, Start Date, and Stop Date for the first 10 MDM Meters associated with the account.

To view usage for all meters associated with the account, click the number in parentheses. The Usage Add/Edit Results screen opens listing all the usage readings for the account.

To view a specific MDM meter associated with the account, click the Meter ID. The MDM Meter screen opens for the selected meter.

To view usage for a specific meter, click the plus sign (“+”) to the left of the Meter ID. A list of usage readings for the meter opens below the Meter ID, displaying Meter ID, Channel, UOM, Last Read Date, Total, and Energy for the usage reading.

To view all usage readings for the meter, click the number in parentheses (to the right of “Usage”). A list screen opens, based on the Usage Type of the meter (Meter Data Reading for Consumption usage, Meter Data Channel Cut for Interval usage, and Meter Data TOU Reading for TOU usage).

To view a specific usage reading for the meter, click the Meter ID (below “Usage”). The Edit Usage screen opens for the select usage reading, based on the Usage Type of the meter (Edit Usage for Consumption usage, Edit Values for Interval usage, and Edit TOU Usage Period for TOU usage).

See the *Oracle Utilities Meter Data Management User's Guide* for more information about viewing MDM meters and related data.

Chapter 6

Searching and Viewing Usage and Interval Data

The Oracle Utilities Energy Information Platform allows users to search for and view usage and interval data. This chapter describes how to search and view usage and interval data, including:

- **Interval Data Center**
- **Searching Interval Data**
- **Viewing and Exporting Interval Data**
- **Searching Meters**
- **Viewing Meter Data**
- **Adding Scalar Usage**
- **Importing Data**
- **Exporting Interval Data**

Interval Data Center

The Interval Data Center provides access to interval data tools (search, workset, and the Interval Data Sources table), and lists all interval data tables in the currently selected data source. Each table is a link to open the table in Data Navigator.

How to access the Interval Data Center:

1. Select **Usage->Center**.

The Interval Data Center screen opens.

This screen displays the following options:

- **Interval Data Viewer:** Opens the Usage search screen
- **Usage Workset:** Opens the Interval Data Manager Workset screen
- **Interval Data Sources:** Displays the records in the Interval Data Source table.
- **Interval Data Tables:** A list of all interval data tables in the currently selected data source. The following is listed for each table:
 - **Interval Data Table:** The visible name of the table (Channel Cut Header, Meter Data Channel Cut, etc.)
 - **Category:** The meta-data category of the table, either INTD (for standard interval data table) or Interval Data Handles (for enhanced interval data tables)
 - **Database Table:** The database name of the table (LSCHANNELCUTHEADER, LSMDMTRDATACUT, etc.)

2. To search interval data using the Interval Data Viewer, click **Interval Data Viewer**.

The Usage search screen opens.

3. To open the Interval Data Manager Workset, click Usage Workset. See **Chapter 9: Working with Interval Data Manager** for more information about using the Workset.

The Workset screen opens.

4. To view records in the Interval Data Sources table (via Data Navigator), click **Interval Data Sources**.

The Interval Data Sources table is displayed in a Data Navigator list screen.

5. To view records in one of the listed interval data tables, click the **Interval Data Table** link for the appropriate table.

The selected table is displayed in a Data Navigator list screen.

Searching Interval Data

The **Interval Data** option on the Usage menu allows users to search for interval data in the Oracle Utilities Data Repository based on various search criteria.

How to search interval data:

1. Select **Usage->Interval Data**.

The Usage screen opens.

2. *Optional.* To upload interval data, click **Upload File**. See **Upload Data** on page 6-27 for more information about uploading interval data.
3. *Optional.* To go to the Workset, click **Workset**. See **Interval Data Manager Workset** on page 9-7 for more information about working with the Workset.

4. Select the manner in which you wish to display the results:

- **Cuts:** Displays search results as individual cuts from the selected table
- **Series:** Displays search results as cut-series from the selected table

5. Select the **Data Source** and **Interval Data Location** you wish to search.

The Data Source drop-down lists all the data sources available to the user.

The Interval Data Location drop-down lists all the Interval Data Sources available to the user. The type (either “RDB” or “BTE”) of each data source is listed in parentheses after the data source name. “RDB” indicates the data source is a set of relational tables in the Oracle Utilities Data Repository, while “BTE” indicates the data source is a *.BTE file stored either on the web server or a server whose path is mapped to the web server. The contents of this drop-down list are configured in the Interval Data Sources table in the Oracle Utilities Data Repository. See the *Oracle Utilities Energy Information Platform Configuration Guide* for more information.

Note: If you select a Pervasive.SQL Interval Data Location (indicated by “BTE” in parentheses, the Usage screen is replaced by the Interval Data Manager Cut Search screen. See **Cut Search** on page 9-2 for more information about searching Pervasive.SQL interval data files.

6. Enter the search criteria in the appropriate field.

For each field you wish to use in your search criteria, select the appropriate operand and enter the appropriate value. See **Operands** on page 8-8 for more information about selecting operands.

You can search based on Recorder ID, Channel, ID, Start Time, Stop Time, SPI (seconds per interval), Unit of Measure, DST Participant flag, or Origin flag. In addition, you can search based on other columns in the selected table.

You can use the percent sign (“%”) as a wildcard character when entering values in any of the fields. For instance, if you want to search for all recorders whose ID begins with the letter G, you could enter “G%” in the Recorder ID field. You can use this wildcard before or after specified letters or numbers (i.e. you would use %t to search for all recorders whose IDs end with the letter t, etc.).

Note that fields are **case-sensitive**. For example, there is a difference between the “Recorder_1” and “recorder_1” recorder IDs.

7. Specify how the search results are displayed.

- Select the manner in which the results are sorted from the **Sort By:** drop-down list. You can sort the results by any of the columns in the selected table.
- Specify how many results should appear on each page in the **Page Length** field.

8. Click **Search** to perform the search. To clear all the search fields, click **Reset**.
9. The search results appear on the Usage screen.

The top portion of the screen displays the date range for all the interval data cut-series and a set of controls and options for specifying how the data can be viewed. The initial date range is based on the earliest start date/time and latest stop date/time for all the records returned by the search.

The bottom portion of the screen displays the results of the search, on either the Series or Cuts tab (depending on which the user selected in step 2 above).

For standard interval data tables, this screen displays the following information for each record:

- Recorder ID
- Channel
- Start Time
- Stop Time
- SPI (Seconds Per Interval)*
- DST Participant
- Origin
- UOM (Unit-of-Measure)*

* Cut-series that contain multiple UOM and/or SPI values are marked with an asterisk (*) in the corresponding column.

For enhanced interval data tables, this screen displays the following information for each record:

- Parent Identity (may be multiple columns)
- Start Time
- Stop Time
- SPI (Seconds Per Interval)*
- DST Participant
- Origin
- UOM (Unit-of-Measure)*

* Cut-series that contain multiple UOM and/or SPI values are marked with an asterisk (*) in the corresponding column.

10. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field and press the **Enter** key.
11. To perform a new search, click **Search**.
12. To add one or more cuts or cut-series to the Workset, select the records to add and click **Add**. Note when selecting a cut-series this option add all cuts within the selected cut-series to the Workset. To go to the Workset page, click **Workset**. See **Chapter 9: Working with Interval Data Manager** for more information about using the Workset.
13. To view a graph of one or more cuts or cut-series, select the records you wish to view and click **Analysis Graph**. See **Viewing and Exporting Interval Data** on page 6-5 for more information about the viewing cuts, cut-series, and versions.

Viewing and Exporting Interval Data

Interval data is viewed from the Usage window. This window allows you to view graphs of selected interval data cut-series, cuts, and cut versions, as well as interval data values and header information for each. This screen provides access via the following:

- **Viewing Cut-Series**
- **Viewing Cuts**
- **Viewing Cut Versions**
- **Exporting Interval Data**

Viewing Cut-Series

You view cut-series on the Series tab. This tab lists the cut-series that match your search criteria. To view all the individual cuts related to a specific cut-series, click the **[X]** link in the **Cuts** column for that cut-series. The Cuts tab displays the cuts for the selected cut-series.

How to view interval data cut-series:

1. Select the specific cut-series to view on the Series tab.

The viewer can display cut-series of up to two (2) different Units-of-Measure (UOMs).

Each additional scaling option selected (see Step #2) after the first creates an additional number of cut-series beyond those selected. For example, selecting two options for two cut-series will produce a graph with four cut-series. Selecting three options for three cut-series will produce a graph with nine cut-series.

It is recommended that you graph no more than 105,120 intervals (3 years of 15 minute data or the equivalent). For example, you could graph:

- 1 cut-series containing 3 years of 15 minute data (105,120 intervals)
- 3 cut-series, each containing 1 year of 15 minute data (35,040 intervals each)
- 6 cut-series, each containing 6 months of 15 minute data (17,520 intervals each)
- 12 cut-series, each containing 3 months of 15 minute data (8,760 intervals each)
- Etc.

2. *Optional.* Select the SPI to which the system will scale the cut-series on the **Scale Results to** drop-down list.

Cut-series of different SPIs must be scaled to the same SPI before they can be graphed. If you wish to view cut-series of different SPIs you need to scale one or more of the selected cut-series so that all the cut-series displayed are of the same SPI. For example, if you wish to view a cut-series of 15 minute data and a cut-series of 1 hour data, you need to scale them to a common SPI. The scaling options available include the following:

- **Shortest Intervals:** Scales the selected cut-series to the shortest interval type of all the selected cuts. For example, if you select a cut-series of 15 minute data and a cut-series of 1 hour data, this option would scale the 1 hour data to 15 minute intervals. Note that this option does nothing if all the selected cut-series are of the same SPI. This can be set as the default option by use of the IDV.CFG.XML configuration file. Contact your system administrator for more information about this configuration file.
- **Longest Intervals:** Scales the selected cut-series to the longest interval type of all the selected cuts. For example, if you select a cut-series of 15 minute data and a cut-series of 1 hour data, this option would scale the 15 minute data to 1 hour intervals. Note that this option does nothing if all the selected cut-series are of the same SPI. This is the default option.

- **5 minute intervals:** Scales the selected cut-series to 5 minute intervals.
- **10 minute intervals:** Scales the selected cut-series to 10 minute intervals.
- **15 minute intervals:** Scales the selected cut-series to 15 minute intervals.
- **20 minute intervals:** Scales the selected cut-series to 20 minute intervals.
- **30 minute intervals:** Scales the selected cut-series to 30 minute intervals.
- **1 hour intervals:** Scales the selected cut-series to 1 hour intervals.
- **1 day intervals:** Scales the selected cut-series to 1 day intervals.
- **1 week intervals*:** Scales the selected cut-series to 1 week intervals.
- **1 month intervals*:** Scales the selected cut-series to 1 month intervals.
- **1 year intervals*:** Scales the selected cut-series to 1 year intervals.

***Note:** Scaling up to and/or down from 1 week, 1 month, or 1 year intervals can produce unexpected results.

You can also scale a single cut-series of the same interval to a different SPI using this option.

3. *Optional.* Select whether or not the data is scaled when exported on the **Export As** drop-down list.

When exporting data, you can also select whether or not the data is scaled in the export file. The export options available include the following:

- **Not Scaled:** Exports the data as it is stored in the database, ignoring all scaling settings (Default).
- **Scaled:** Exports the data based on the selected scaling settings.

4. *Optional.* Select how scaled data is graphed using the **Graph** checkboxes.

When scaling data, you can also select the manner in which the data is graphed. The graphing options available include the following:

- **Maximum Values:** Creates a graph based on the maximum values of the values scaled. For example, if you scale 15-minute data values of 50, 60, 70, and 80 to 1 hour data, this method selects the maximum (80) as the scaled value.
- **Minimum Values:** Creates a graph based on the minimum values of the values scaled. For example, if you scale 15-minute data values of 50, 60, 70, and 80 to 1 hour data, this method selects the minimum (50) as the scaled value.
- **Averages:** Creates a graph based on the average values of the values scaled. For example, if you scale 15-minute data values of 50, 60, 70, and 80 to 1 hour data, this method selects the average (65) as the scaled value.
- **Total Value:** Creates a graph based on the total value of the values scaled. For example, if you scale 15-minute data values of 50, 60, 70, and 80 to 1 hour data, this method selects the total (260) as the scaled value.
- **Automatic (by UOM):** Creates a graph based on the Unit-of-Measure of the selected cuts, using industry standard aggregation techniques to scale the cuts in a manner similar to either the **Averages** or **Total Value** option. If you select none of the above other options, the system uses this option by default.

If you select more than one of these options, the system creates additional graphs. For example, selecting two options for one cut-series produces a graph with two cut-series. Selecting two options for two cut-series produces a graph with four cut-series.

5. *Optional.* Select the date range to view.

When you select one or more cut-series, the date range of the graph displayed is based on the earliest start time and latest stop time of the selected cut-series.

If you want to specify a different date range for the graph (such as subset of one or more of your selected cut-series), check the **Show Data from** checkbox and select the date range to view. See **Entering Date and Date/Time Values** on page 2-8 for more information about entering dates.

6. *Optional.* If you select more than one cut-series, check the **Sum Interval Data** checkbox to create an additional cut-series based on the sum of all the selected cut-series, regardless of the selected graph options. Note that if you check the **Sum Interval Data** checkbox, the data is summed regardless of unit of measure.
7. *Optional.* Check the **Display Interval Data Table** checkbox to create a table of interval values. By default this option is checked.
8. *Optional.* Check the **Display Interactively** checkbox to enable a vertical line that moves as the user moves the mouse over the graph. The availability of this option is controlled by the IDV.CFG.XML configuration file. Contact your system administrator for more information about this configuration file.
9. *Optional.* To graph the selected data in either ascending or descending order, select the appropriate option from the **Sort Values** drop-down list.
10. Click the **Analysis Graph** link to view the selected data. The selected cut-series (scaled as appropriate) will display in the **Interval Data Summary** screen.

The Interval Data Summary screen contains three sections.

- The top section contains the graph displaying the selected cut-series. A color-coded legend indicates the cut-series represented by each line on the graph.
- The **Interval Data** section below the graph displays individual values for each interval for each cut-series are displayed.
- Each displayed cut-series (identified by either Recorder and Channel or Parent Identity, start time, and UOM) is listed below the Interval Data section.

If you selected more than one cut-series to display, the UOM of each is color-coded. If you selected cut-series with different UOMs, one UOM scale will appear on the left side of the graph, the other UOM scale will appear on the right side of the graph.

Error messages related to the graphed data appear at the bottom of the interval data section.

If the **Display Interactively** checkbox was checked, a vertical line moves along the graph as the user moves the mouse over the graph. As this line moves, the start time and values of the interval data is displayed below. The time is displayed in a box beneath the graph, while the interval values are displayed next to each cut-series (identified by either Recorder and Channel or Parent Identity, start time, and UOM).

11. To zoom in on a smaller date range for the graph, select the **Date Range** radio button, enter the date range to view, and click the Submit icon. See **Entering Date and Date/Time Values** on page 2-8 for more information about entering dates.

Note: If the **Display Interactively** option was enabled, you can zoom in by clicking a start time and stop time on the graph.

12. To align the start times of the displayed cut-series, select the **Align Start Times** radio button, enter the start time to which the cut-series should be aligned, and click the Submit icon. See **Entering Date and Date/Time Values** on page 2-8 for more information about entering dates.
13. To export the graph to a PNG Image (.png format), click **Get Chart**. The user will be prompted to either open or save the file.

- To view interval values for the selected cut-series, expand the **Interval Data** section by clicking the arrow. The timestamps and interval data values for each cut-series are displayed in a table. If you selected more than one cut-series to display, the label for each is color-coded the same color as the graph.

Error messages related to the graphed data appear at the bottom of this table.

- To view statistics for the selected cut-series, expand the section for the cut-series you wish to view (identified by either Recorder and Channel or Parent Identity, start time, and UOM). The interval data cut header detail information is displayed below.

To remove a cut-series from the graph, uncheck the first checkbox and click **Refresh**. The de-selected cut-series no longer appears on the Interval Data Summary screen.

To save a selected cut-series, (also known as “pinning”), check the second checkbox. This allows users to concurrently view cut-series from multiple searches and/or Interval Data Locations.

Viewing Cuts

You view interval data cuts on the Cuts tab. This tab lists individual cuts that match your search criteria. To display the cut-series related to a specific cut, click the Containing Series icon () for that cut. The Series tab will display the cut-series which contains the selected cut. To display versions of a specific cut, click the **[X]** link in the **Ver.** column for that cut. The Versions tab opens displaying all the versions (including the current version) of the cut (see **Viewing Cut Versions** on page 6-13).

From this tab you can edit cuts, view a graph of selected cuts, and delete cuts.

How to edit interval data cuts from the Cuts tab:

- Select the cut you wish to edit and click **Edit Cut**.

The Interval Data screen opens.

This screen displays a graph and tabular view of the first 25 intervals in the selected cut. The identity of the cut (either Recorder and Channel or Parent Identity, followed by start time) is displayed above the table. For each interval in the cut, the Date/Time column contains the timestamp, the Value column contains the original value, and the Edit value column contains the edited value.

If the cut contains more than 25 intervals, you can navigate using the  and  buttons. To change the number of interval values that appears on the screen, enter the number in the **Rows** field and press the **Enter** key (or click **Refresh**).

- To return to the Usage search results screen, click **Back**.
- If the cut has previously edited, the number of previous is indicated in parentheses next to the cut's identity. To view the previous edits, click the number in parentheses. The Interval Data (Versions) screen opens, displaying a graph and table that depicts the original and edited versions of the cut. This screen scales the cut (and cut versions) to one-hour intervals. Intervals for which values have been edited are highlighted on this table.

To return to the Interval Data screen, click **Back**.

- To edit an interval value, select the interval you wish to edit in the Edit Value column and change the value as appropriate. Repeat for each interval to be edited.
- To save your edits, click **Save**. If interval data versioning is enabled for the data source from which the cut originates, a new version is created each time the cut is saved.

The Interval Data (Versions) screen opens, displaying a graph and table that depicts both the original and edited versions of the cut. This screen scales the cut (and cut versions) to one-hour intervals. Intervals for which values have been edited are highlighted on this table.

To edit additional intervals, click **Edit**.

To return to the Usage search results screen, click **Back**.

- To restore the cut to its original values prior to saving, click **Cancel** on the Interval Data screen.

Note: This option only allows editing on a single cut at a time.

How to view interval data cuts:

- Select the specific cuts to view on the Cuts tab.

The viewer can display cuts of up to two (2) different Units-of-Measure (UOMs).

It is recommended that you graph no more than 105,120 intervals (3 years of 15 minute data or the equivalent). For example, you could graph:

- 1 cut containing 3 years of 15 minute data (105,120 intervals)
- 3 cuts, each containing 1 year of 15 minute data (35,040 intervals each)
- 6 cuts, each containing 6 months of 15 minute data (17,520 intervals each)
- 12 cuts, each containing 3 months of 15 minute data (8,760 intervals each)
- Etc.

- Optional.* Select the SPI to which the system will scale the cuts.

Cuts of different SPIs must be scaled to the same SPI before they can be graphed. If you wish to view cuts of different SPIs you need to scale one or more of the selected cuts so that all the cuts displayed are of the same SPI. For example, if you wish to view a cut of 15 minute data and a cut of 1 hour data, you need to scale them to a common SPI. The scaling options available include the following:

- **Shortest Intervals:** Scales the selected cut-series to the shortest interval type of all the selected cuts. For example, if you select a cut-series of 15 minute data and a cut-series of 1 hour data, this option would scale the 1 hour data to 15 minute intervals. Note that this option does nothing if all the selected cut-series are of the same SPI. This can be set as the default option by use of the IDV.CFG.XML configuration file. Contact your system administrator for more information about this configuration file.
- **Longest Intervals:** Scales the selected cut-series to the longest interval type of all the selected cuts. For example, if you select a cut-series of 15 minute data and a cut-series of 1 hour data, this option would scale the 15 minute data to 1 hour intervals. Note that this option does nothing if all the selected cut-series are of the same SPI. This is the default option.
- **5 minute intervals:** Scales the selected cuts to 5 minute intervals.
- **10 minute intervals:** Scales the selected cuts to 10 minute intervals.
- **15 minute intervals:** Scales the selected cuts to 15 minute intervals.
- **20 minute intervals:** Scales the selected cuts to 20 minute intervals.
- **30 minute intervals:** Scales the selected cuts to 30 minute intervals.
- **1 hour intervals:** Scales the selected cuts to 1 hour intervals.
- **1 day intervals:** Scales the selected cuts to 1 day intervals.
- **1 week intervals*:** Scales the selected cuts to 1 week intervals.
- **1 month intervals*:** Scales the selected cuts to 1 month intervals.
- **1 year intervals*:** Scales the selected cuts to 1 year intervals.

***Note:** Scaling up to and/or down from 1 week, 1 month, or 1 year intervals can produce unexpected results.

You can also scale a single cut of the same interval to a different SPI using this option.

3. *Optional.* Select whether or not the data is scaled when exported on the **Export As** drop-down list.

When exporting data, you can also select whether or not the data is scaled in the export file. The export options available include the following:

- **Not Scaled:** Exports the data as it is stored in the database, ignoring all scaling settings (Default).
- **Scaled:** Exports the data based on the selected scaling settings.

4. *Optional.* Select how scaled data is graphed using the **Graph** checkboxes.

When scaling data, you can also select the manner in which the data is graphed. The graphing options available include the following:

- **Maximum Values:** Creates a graph based on the maximum values of the values scaled. For example, if you scale 15-minute data values of 50, 60, 70, and 80 to 1 hour data, this method selects the maximum (80) as the scaled value.
- **Minimum Values:** Creates a graph based on the minimum values of the values scaled. For example, if you scale 15-minute data values of 50, 60, 70, and 80 to 1 hour data, this method selects the minimum (50) as the scaled value.
- **Averages:** Creates a graph based on the average values of the values scaled. For example, if you scale 15-minute data values of 50, 60, 70, and 80 to 1 hour data, this method selects the average (65) as the scaled value.
- **Total Value:** Creates a graph based on the total value of the values scaled. For example, if you scale 15-minute data values of 50, 60, 70, and 80 to 1 hour data, this method selects the total (260) as the scaled value.
- **Automatic (by UOM):** Creates a graph based on the Unit-of-Measure of the selected cuts, using industry standard aggregation techniques to scale the cuts in a manner similar to either the **Averages** or **Total Value** option. If you select none of the above other options, the system uses this option by default.

If you select more than one of these options, the system creates additional graphs. For example, selecting two options for one cut produces a graph with two cuts. Selecting two options for two cuts produces a graph with four cuts.

5. *Optional.* Select the date range to view.

When you select one or more cuts, the date range of the graph displayed is based on the earliest start time and latest stop time of the selected cuts.

If you want to specify a different date range for the graph (such as subset of one or more of your selected cuts), check the **Show Data from** checkbox and select the date range to view. See **Entering Date and Date/Time Values** on page 2-8 for more information about entering dates.

6. *Optional.* If you select more than one cut, check the **Sum Interval Data** checkbox to create an additional cut based on the sum of all the selected cuts, regardless of the selected graph options. Note that if you check the **Sum Interval Data** checkbox, the data is summed regardless of unit of measure.
7. *Optional.* Check the **Display Interval Data Table** checkbox to create a table of interval values. By default this option is checked.
8. *Optional.* Check the **Display Interactively** checkbox to enable a vertical line that moves as the user moves the mouse over the graph.

9. *Optional.* To graph the selected data in either ascending or descending order, select the appropriate option from the **Sort Values** drop-down list.
10. Click the **Analysis Graph** link to view the selected data. The selected cuts (scaled as appropriate) will display in the **Interval Data Summary** screen.

The Interval Data Summary screen contains three sections.

- The top section contains the graph displaying the selected cuts. A color-coded legend indicates the cuts represented by each line on the graph.
- The **Interval Data** section below the graph displays individual values for each interval for each cut are displayed.
- Each displayed cuts (identified by either Recorder and Channel or Parent Identity, start time, and UOM) is listed below the Interval Data section.

If you selected more than one cut to display, the UOM of each is color-coded. If you selected cut with different UOMs, one UOM scale will appear on the left side of the graph, the other UOM scale will appear on the right side of the graph.

Error messages related to the graphed data appear at the bottom of the interval data section.

If the **Display Interactively** checkbox was checked, a vertical line moves along the graph as the user moves the mouse over the graph. As this line moves, the time and values of the interval data is displayed below. The time is displayed in a box beneath the graph, while the interval values are displayed next to each cut-series (identified by either Recorder and Channel or Parent Identity, start time, and UOM).

11. To zoom in on a smaller date range for the graph, select the **Date Range** radio button, enter the date range to view, and click the Submit icon. See **Entering Date and Date/Time Values** on page 2-8 for more information about entering dates.

Note: If the **Display Interactively** option was enabled, you can zoom in by clicking a start time and stop time on the graph.

12. To align the start times of the displayed cuts, select the **Align Start Times** radio button, enter the start time to which the cut-series should be aligned, and click the Submit icon. See **Entering Date and Date/Time Values** on page 2-8 for more information about entering dates.
13. To export the graph to a PNG Image (.png format), click **Get Chart**. The user will be prompted to either open or save the file.
14. To view interval values for the selected cuts, expand the **Interval Data** section by clicking the arrow. The interval data values for each cut are displayed in a table. If you selected more than one cut to display, the label for each is color-coded the same color as the graph.

Error messages related to the graphed data appear at the bottom of this table.

15. To view statistics for the selected cuts, expand the section for the cuts you wish to view (identified by either Recorder and Channel or Parent Identity, start time, and UOM). The interval data cut header detail information is displayed below.

To remove a cut from the graph, uncheck the first checkbox and click **Refresh**. The de-selected cut no longer appears on the Interval Data Summary screen.

To save a selected cut, (also known as “pinning”), check the second checkbox. This allows users to concurrently view cuts from multiple searches and/or Interval Data Locations.

How to delete interval data cuts from the Cuts tab:

1. Select the cuts you wish to delete and click **Delete**.
2. A dialog will open asking you to confirm the delete operation.
3. Click **OK** to delete the selected cuts.

4. Click **Cancel** to continue without deleting the selected cuts.

Viewing Cut Versions

You view historical versions of cuts on the Versions tab. This tab lists versions of cuts that match your search criteria. To display the cut-series related to a specific cut, click the Containing Series icon (🔍) for that cut. The Series tab will display the cut-series which contains the selected cut. To display versions of a specific cut, click the **[X]** link in the **Ver.** column for that cut. The Versions tab opens displaying all the versions (including the current version) of the cut.

Note: The Versions tab is only displayed if interval data versioning is enabled for the data source selected when searching.

From this tab you can view a graph of selected cut versions, and delete cut versions.

How to view interval data cut versions:

1. Select the specific cut versions to view on the Versions tab.

The viewer can display cuts of up to two (2) different Units-of-Measure (UOMs).

It is recommended that you graph no more than 105,120 intervals (3 years of 15 minute data or the equivalent). For example, you could graph:

- 1 cut containing 3 years of 15 minute data (105,120 intervals)
- 3 cuts, each containing 1 year of 15 minute data (35,040 intervals each)
- 6 cuts, each containing 6 months of 15 minute data (17,520 intervals each)
- 12 cuts, each containing 3 months of 15 minute data (8,760 intervals each)
- Etc.

2. *Optional.* Select the SPI to which the system will scale the cuts.

Cuts of different SPIs must be scaled to the same SPI before they can be graphed. If you wish to view cuts of different SPIs you need to scale one or more of the selected cuts so that all the cuts displayed are of the same SPI. For example, if you wish to view a cut of 15 minute data and a cut of 1 hour data, you need to scale them to a common SPI. The scaling options available include the following:

- **Shortest Intervals:** Scales the selected cut-series to the shortest interval type of all the selected cuts. For example, if you select a cut-series of 15 minute data and a cut-series of 1 hour data, this option would scale the 1 hour data to 15 minute intervals. Note that this option does nothing if all the selected cut-series are of the same SPI. This can be set as the default option by use of the IDV.CFG.XML configuration file. Contact your system administrator for more information about this configuration file.
- **Longest Intervals:** Scales the selected cut-series to the longest interval type of all the selected cuts. For example, if you select a cut-series of 15 minute data and a cut-series of 1 hour data, this option would scale the 15 minute data to 1 hour intervals. Note that this option does nothing if all the selected cut-series are of the same SPI. This is the default option.
- **5 minute intervals:** Scales the selected cuts to 5 minute intervals.
- **10 minute intervals:** Scales the selected cuts to 10 minute intervals.
- **15 minute intervals:** Scales the selected cuts to 15 minute intervals.
- **20 minute intervals:** Scales the selected cuts to 20 minute intervals.
- **30 minute intervals:** Scales the selected cuts to 30 minute intervals.
- **1 hour intervals:** Scales the selected cuts to 1 hour intervals.
- **1 day intervals:** Scales the selected cuts to 1 day intervals.
- **1 week intervals*:** Scales the selected cuts to 1 week intervals.

- **1 month intervals***: Scales the selected cuts to 1 month intervals.
- **1 year intervals***: Scales the selected cuts to 1 year intervals.

***Note:** Scaling up to and/or down from 1 week, 1 month, or 1 year intervals can produce unexpected results.

You can also scale a single cut of the same interval to a different SPI using this option.

3. *Optional.* Select whether or not the data is scaled when exported on the **Export As** drop-down list.

When exporting data, you can also select whether or not the data is scaled in the export file. The export options available include the following:

- **Not Scaled:** Exports the data as it is stored in the database, ignoring all scaling settings (Default).
- **Scaled:** Exports the data based on the selected scaling settings.

4. *Optional.* Select how scaled data is graphed using the **Graph** checkboxes.

When scaling data, you can also select the manner in which the data is graphed. The graphing options available include the following:

- **Maximum Values:** Creates a graph based on the maximum values of the values scaled. For example, if you scale 15-minute data values of 50, 60, 70, and 80 to 1 hour data, this method selects the maximum (80) as the scaled value.
- **Minimum Values:** Creates a graph based on the minimum values of the values scaled. For example, if you scale 15-minute data values of 50, 60, 70, and 80 to 1 hour data, this method selects the minimum (50) as the scaled value.
- **Averages:** Creates a graph based on the average values of the values scaled. For example, if you scale 15-minute data values of 50, 60, 70, and 80 to 1 hour data, this method selects the average (65) as the scaled value.
- **Total Value:** Creates a graph based on the total value of the values scaled. For example, if you scale 15-minute data values of 50, 60, 70, and 80 to 1 hour data, this method selects the total (260) as the scaled value.
- **Automatic (by UOM):** Creates a graph based on the Unit-of-Measure of the selected cuts, using industry standard aggregation techniques to scale the cuts in a manner similar to either the **Averages** or **Total Value** option. If you select none of the above other options, the system uses this option by default.

If you select more than one of these options, the system creates additional graphs. For example, selecting two options for one cut produces a graph with two cuts. Selecting two options for two cuts produces a graph with four cuts.

5. *Optional.* If you select more than one cut, check the **Sum Interval Data** checkbox to create an additional cut based on the sum of all the selected cuts, regardless of the selected graph options. Note that if you check the **Sum Interval Data** checkbox, the data is summed regardless of unit of measure.
6. *Optional.* Check the **Display Interval Data Table** checkbox to create a table of interval values. By default this option is checked.
7. *Optional.* Check the **Display Interactively** checkbox to enable a vertical line that moves as the user moves the mouse over the graph.
8. *Optional.* To graph the selected data in either ascending or descending order, select the appropriate option from the **Sort Values** drop-down list.
9. Click the **Analysis Graph** link to view the selected data. The selected cuts (scaled as appropriate) will display in the **Interval Data Summary** screen.

The Interval Data Summary screen contains three sections.

- The top section contains the graph displaying the selected cuts. A color-coded legend indicates the cuts represented by each line on the graph.
- The **Interval Data** section below the graph displays individual values for each interval for each cut are displayed.
- Each displayed cuts (identified by either Recorder and Channel or Parent Identity, start time, and UOM) is listed below the Interval Data section.

If you selected more than one cut to display, the UOM of each is color-coded. If you selected cut with different UOMs, one UOM scale will appear on the left side of the graph, the other UOM scale will appear on the right side of the graph.

Error messages related to the graphed data appear at the bottom of the interval data section.

If the **Display Interactively** checkbox was checked, a vertical line moves along the graph as the user moves the mouse over the graph. As this line moves, the time and values of the interval data is displayed below. The time is displayed in a box beneath the graph, while the interval values are displayed next to each cut-series (identified by either Recorder and Channel or Parent Identity, start time, and UOM).

10. To zoom in on a smaller date range for the graph, select the **Date Range** radio button, enter the date range to view, and click the Submit icon. See **Entering Date and Date/Time Values** on page 2-8 for more information about entering dates.

Note: If the **Display Interactively** option was enabled, you can zoom in by clicking a start time and stop time on the graph.

11. To align the start times of the displayed cuts, select the **Align Start Times** radio button, enter the start time to which the cut-series should be aligned, and click the Submit icon. See **Entering Date and Date/Time Values** on page 2-8 for more information about entering dates.
12. To export the graph to a PNG Image (.png format), click **Get Chart**. The user will be prompted to either open or save the file.
13. To view interval values for the selected cuts, expand the **Interval Data** section by clicking the arrow. The interval data values for each cut are displayed in a table. If you selected more than one cut to display, the label for each is color-coded the same color as the graph.

Error messages related to the graphed data appear at the bottom of this table.

14. To view statistics for the selected cuts, expand the section for the cuts you wish to view (identified by either Recorder and Channel or Parent Identity, start time, and UOM). The interval data cut header detail information is displayed below.

To remove a cut from the graph, uncheck the first checkbox and click **Refresh**. The de-selected cut no longer appears on the Interval Data Summary screen.

To save a selected cut, (also known as “pinning”), check the second checkbox. This allows users to concurrently view cuts from multiple searches and/or Interval Data Locations.

How to delete cut versions from the Versions tab:

1. Select the cuts you wish to delete and click **Delete**.
2. A dialog will open asking you to confirm the delete operation.
3. Click **OK** to delete the selected cuts.
4. Click **Cancel** to continue without deleting the selected cuts.

Exporting Interval Data

You can also export and download interval data from the Usage search results screen. You can export and download from the Series, Cuts, or Versions tabs.

How to export interval data:

1. Select the cut-series, cuts, or cut versions to export/download.
2. Set any desired scaling or sorting options for the export.

When exporting multiple records, they are automatically scaled to the a common SPI. To export the data as is, select **Not Scaled** from the **Export As Is** drop-down list before selecting the desired export option.

3. Select the appropriate option from the **Export Cuts** drop-down list.

Export options include:

- **CSV Scaled:** Downloads the selected cuts or cut-series to a CSV file in which the first column contains interval time stamps, and the adjacent column contains interval values. If multiple records are selected, interval values for each are displayed in a separate column to the right of the first. In addition, if multiple records are selected, they are scaled to a common SPI upon export.
 - **CSV Stacked:** Downloads the selected cuts or cut-series to a CSV file in which the first column contains interval time stamps, and the adjacent column contains interval values. If multiple records are selected, each is displayed below the previous record.
 - **CSV Vertical:** Downloads the selected cuts or cut-series to a CSV file in which the first column contains interval time stamps, and the adjacent column contains interval values. If multiple records are selected, they are displayed as additional vertically-aligned pairs of columns (Time and values).
 - **CSV Horizontal:** Downloads the selected cuts or cut-series to a CSV file in which the top row contains interval time stamps, and the row beneath contains interval values. If multiple records are selected, they are displayed as horizontally-aligned pairs of rows (Time and values).
 - **LSE:** Downloads the selected cuts or cut-series to the Oracle Utilities Enhanced Input/Output Interval Data Format. See **Appendix B: Oracle Utilities Enhanced Input/Output Interval Data Format** in the *Data Manager User's Guide* for more information about this format.
 - **XML:** Downloads the selected cuts or cut-series to the Oracle Utilities Standard XML Interval Data Format. See **Appendix C: Oracle Utilities Standard XML Interval Data Format - Version 1.2** in the *Data Manager User's Guide* for more information about this format.
 - **Excel:** Downloads the selected cuts or cut-series to a Microsoft Excel 2003 spreadsheet. The top two rows of the spreadsheet contain attributes of the cut (or cut-series), followed by interval time stamps in the first column, interval values in the next column, and interval status code in the third column. If multiple records are selected, each is exported to a separate tab in the spreadsheet.
4. The **File Download** dialog opens asking if you want to open or save the file.

To open the file in the main window, click **Open**.

To save the file to your local machine (or a network drive), click **Save**. The **Save As** dialog opens. Select the destination where you want to save the file and click **OK**.

Searching Meters

The **Meters** option on the Usage menu allows users to search for meters in the Oracle Utilities Data Repository based on various search criteria.

How to search meters:

1. Select **Usage->Scalar Data->Meters**.

The Meter screen opens.

2. Enter the search criteria in the appropriate field.

You can search based on Meter ID, Account ID, or Account Name. You can also search based on premise information such as address, city/state, etc.

You can use the percent sign (“%”) as a wildcard character when entering values in any of the fields. For instance, if you want to search for all meters whose ID begins with the letter G, you could enter “G%” in the Meter ID field. You can use this wildcard before or after specified letters or numbers (i.e. you would use %t to search for all meters whose IDs end with the letter t, etc.).

Note that Meter IDs, Account IDs, and Account Names are **case-insensitive**. For example, there is no difference between the “Meter_1” and “meter_1” meter IDs.

3. Specify how the search results are displayed.
 - Select the manner in which the results are sorted by clicking the **Sort by** plus (“+”) sign. See **Specifying How Results are Sorted** on page 2-7 for more information.
 - Specify how many results should appear on each page in the **Page Length** field.
4. Click **Search** to perform the search. To clear all the search fields, click **Reset**.
5. The search results appear in the Meters window.

The Meters window displays the following information for each meter:

- Meter ID
- Account ID
- Account Name
- Customer Name
- Premise Information (includes Address, City, Postal Code, State, and County).

6. To sort the results by one of the columns, click the appropriate arrow on the column heading. For example, to sort the results in ascending order by Meter ID, click the “up” arrow on the Meter ID column heading. See **Sorting Search Results** on page 2-7 for more information.

If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field and press the **Enter** key.

7. To view a meter, click on the Meter ID. Meter data for the selected meter will appear in the Meter History screen.
8. To view an account, click on the Account ID. Account data for the selected account will appear in the Account window.
9. To perform another search, click **New Search**.

Viewing Meter Data

Meter data is viewed from the Meter History screen. This screen opens when you select a Meter ID from the Meters screen.

The Meter History screen displays basic information about the meter, including:

- **Meter:** The meter ID of the meter.
- **Start Time:** The start date and time for the meter. This is the time at which the meter became active.
- **Service Type:** The type of service the meter measures (electricity, gas, water, etc.).
- **Service Plan:** Service plan associated with the meter.
- **Premise:** The physical premise where the meter is located.
- **Stop Time:** The stop date and time for the meter. Meters with a non-Null end time are no longer active.
- **Number of Dials:** The number of dials on the meter.
- **Meter Multiplier:** The meter multiplier.
- **Meter Offset:** The meter offset.
- **End Use:** Code that represents the end use measured by the meter.
- **Service Point ID:** ID of the service point associated with the meter.
- **Meter Reads:** A list of meter readings for the meter, including Meter ID, Meter Read Time, Bill Determinant, Stop Reading Time, Stop Reading, Start Reading Time, Start Reading, Read Month, Therm Factor, Peak Time, Peak Value, and Consumption.

How to edit meter reads:

1. Click the [...] link for the record you wish to edit. The edit screen opens.
2. Edit the meter read information as appropriate.

Update date fields either by typing the date manually, or by clicking the drop-down arrow to the right of the date field. This opens a calendar dialog that you can use to select the appropriate date. Update time fields by typing the time manually.

3. Click **Save** to save your changes. To delete the record, click **Delete**. To close the window without making any changes, click **Cancel**.

How to add meter reads:

1. Click the **Add** link above the Meter read list on the Meter History screen. A blank Meter History screen opens.
2. Enter the meter read information as appropriate. Be sure to fill in the two required fields (Meter Read Time and Stop Reading).

Enter date fields either by typing the date manually, or by clicking the drop-down arrow to the right of the date field. This opens a calendar dialog that you can use to select the appropriate date. Enter time fields by typing the time manually.

3. Click **Save** to save your changes. To close the window without making any changes, click **Cancel**.

Adding Scalar Usage

The **Meter Values** option allows users to add usage values (stored in the Meter Values table) to accounts. This type of usage can be used in pricing calculations and generating pricing contracts. You can add usage values manually or via file import.

How to select the account or list of accounts:

1. Select **Usage->Scalar Data->Meter Values**.

The **Usage Input** window opens.

2. Select an account or list of accounts. To select an account, proceed with steps 3 through 10. To select a list of accounts, skip to steps 11 through 18.
3. To select an account, select ID from the Account drop-down list and click the Browse button (...). The Accounts window opens.
4. Enter the search criteria in the appropriate field.

You can search based on the Account Name, Customer ID, or an Account ID associated with the account. You can also search based on Account Status, Operating Company, and/or Jurisdiction. To search on one of these, select it from the drop-down lists. In addition, you can search based on contact information such as phone number, address, city/state, etc.

You can use the percent sign (“%”) as a wildcard character when entering values in any of the fields. For instance, if you want to search for all accounts whose name begins with the letter G, you could enter “G%” in the Name field. You can use this wildcard before or after specified letters or numbers (i.e. you would use %t to search for all accounts whose names end with the letter t, etc.).

Note that Account Names, Customer IDs, and Account IDs are **case-insensitive**. For example, there is no difference between the “Acct_1” and “acct_1” account IDs.

5. Specify how the search results are displayed.
 - Select the manner in which the results are sorted from the **Sort By:** drop-down list. You can sort the results by Name, Account ID, Account Status, Customer ID, or Customer Name.
 - Specify how many results should appear on each page in the **Page Length** field.
6. Click **Search** to perform the search. To clear all the search fields, click **Reset**.
7. The search results appear on the Accounts screen.

The Search Results window displays the following information for each account:

- Customer ID
 - Account ID
 - Account Name
 - Account Status
 - Start Date/Stop Date
 - Account Type
 - Contact Information (includes Contact Type, Name, Address, City, and State).
8. To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by Customer Name, click the Customer Name column heading. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.
 9. To perform another search, click **New Search**.

10. To select an account, click on the Account ID. Usage for the selected account will appear in the Usage Input screen.
11. To select a list, select List from the Account drop-down list and click the Browse button (...). The Lists window opens.
12. Enter the search criteria in the appropriate field.

You can search based on the Name, Type, Description, Status Code, Public/Private flag, Create Time, Start Time, or Stop Time associated with the list.

You can use the percent sign (“%”) as a wildcard character when entering values in any of the text fields. For instance, if you want to search for all lists whose name begins with the letter G, you could enter “G%” in the Name field. You can use this wildcard before or after specified letters or numbers (i.e. you would use %t to search for all lists whose names end with the letter t, etc.).

Note that Names are **case-insensitive**. For example, there is no difference between the “List_1” and “list_1” list names.

13. Specify how the search results are displayed.
 - Select the manner in which the results are sorted from the **Sort By:** drop-down list. You can sort the results by List Name, Description, Type, Status Code, Public flag, User ID, Start Time, Stop Time, or Create Time.
 - Specify how many results should appear on each page in the **Page Length** field.
14. Click **Search** to perform the search. To clear all the search fields, click **Reset**.
15. The search results appear in the Account Lists screen.

The Account Lists window displays the following information for each list:

- List Name
 - Description
 - Type
 - Status Code
 - Public/Private
 - User
 - Start Time/Stop Time/Create Time
16. To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by Name, click the Name column heading. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.
 17. To perform another search, click **New Search**.
 18. To select a list, click the **List Name** link. The selected list will appear in the field on the Usage Input screen.

How to manually add usage values for an account:

1. From the Usage Input screen, select the account you wish to add the usage to. If you searched based on an account, the account should be listed in the **Account ID** field.

If you searched based on a list of accounts, the List Name will appear at the top of the screen, and the first account in the list should appear in the **Account List** field. Select the appropriate account from the **Account List** drop-down list.
2. Click **Add**. A new row will appear in the list at the bottom of the screen.

3. Enter a **Name** for the usage record.
4. Enter or edit the **Read Date**, **Start Time** and **Stop Time** for the usage record. To change a date, double click the field. A red box will outline the field. Click the arrow to open the calendar control and select the appropriate date or type in the date manually.
5. Enter a **Value** for the usage record. Double click the Value field. A red box will outline the field and a cursor will appear in the field. Enter the appropriate value.
6. Select the **Determinant** for the usage record. Double click the Determinant field. A red box will outline the field and a drop-down box will appear in the field. Select the appropriate determinant from the drop-down list.

Note: The combination of Account ID, Name, and Determinant must be unique for each record. To ensure you create unique records, use a unique Name for each record (RAW_IMPORT-1000, RAW_IMPORT-1001, RAW_IMPORT-1002, etc.).

7. To add a new usage record for the same account, click **Add** again.
8. *Optional.* To create a copy of one or more existing usage records, select the item(s) to copy by checking the checkbox in the far left column, and click **Copy**. Checking the checkbox in the far left column of the headings row selects all existing usage records.
9. *Optional.* To add usage records to a different account in the same list, select the account from the **Account List** drop-down box, and repeat steps 2 through 6.
10. To save the usage, click **Save**.

Note: After you enter new values for a usage record, the Date and Value fields turns red to indicate that the value has not yet been saved. When you save the forecast, the fields turn blue/white (alternating rows).

How to add usage values via file import:

1. From the Usage Input screen, click **Load from File**.
2. The Upload Usage screen opens.
3. Click the **Browse** button. The **Choose file** dialog opens.

Navigate to the file you wish to upload and click **Open**. You can upload *.imp, *.bte, and *.lse files.

*.imp files are used to load scalar usage to the Meter Value table. See **Creating Usage Import Files** on page 6-23 for more information about creating *.imp files that contain usage records.

If you select a *.imp file, the **Import Mode** drop-down list appears on the Upload Files screen.

*.bte and *.lse files are used to load interval data. If you select a *.bte or *.lse file, the **Import Mode** drop-down list disappears from the Upload Files screen. See **Importing Interval Data** on page 6-24 for more information about *.bte and *.lse files that contain usage data.

If you select a *.bte or *.lse file, the **OverCount**, **UnderCount**, and **Validation Status** drop-down lists appear on the Upload Files screen.

4. **For *.imp files only.** Specify how the records in the file are processed by selecting the appropriate **Import Mode**:
 - **Add:** Adds **new** records to the Data Repository. If there are any records in the file that already exist in the database, or if there are duplicate record IDs in the import file, the program considers it an error.
 - **Update:** Replaces **existing** records in the Data Repository with the version in the import file. If there are any records in the file that do not already exist in the database, or if there are duplicate record IDs in the import file, the program considers it an error.

- **Delete:** Deletes records from the Data Repository. For every parent ID in the import file, the program automatically deletes both the parent and all of its dependents. If there are any records in the file that do not already exist in the database, or if there are duplicate record IDs in the import file, the program considers it an error.
- **Add/Update:** Both adds **new** records and replaces **existing** records. If a record is not already in the database, it is added. If it does exist, it is updated.

Note: Using the ‘Add/Update’ mode will fail if the Import file contains more columns than the database table you are importing data into. Existing records will **not** be updated, and New records will **not** be created.

5. **For *.lse or *.bte files only.** Select an **OverCount** option from the drop-down list. This controls the behavior of import functions when an incoming cut has too many recorded intervals for the time span defined by the cut start time and the cut stop time and the DST_Participant flag.
 - **REJECT:** Directs the function to produce an error and disallow the import of any incoming/uploaded cuts when it has too many recorded intervals (Expected < Recorded).
 - **BE:** Behaves exactly like REJECT, except in the case where a cut that crosses the beginning of a DST period has its recorded interval count equal to the expected intervals count without the hour adjusted for DST.
 - **ASIS:** Allow the storage of any incoming cuts with a number of expected intervals less than the number of recorded intervals. The stop times of these cuts will remain unchanged.
6. **For *.lse or *.bte files only.** Select an **UnderCount** option from the drop-down list. This controls the behavior of import functions when an incoming cut has too few recorded intervals for the time span defined by the cut start time and the cut stop time and the DST Participant flag.
 - **REJECT:** Directs the function to produce an error and disallow the import of any incoming/uploaded cut when it has too few recorded intervals (Expected > Recorded).
 - **BE:** Directs the function to behave similar to the default behavior observed in previous installations and versions. This setting works exactly like FILL in most cases. When a cut being processed spans the end of the DST period, usually the fall DST hour, if viewed directly from the raw flat file, the cut will appear to be filled using DST calculations, yet if the cut is saved to any binary data source (RDB or BTE), it will only be filled with missing values as if the DST_Participant flag is set to “N”. For example, if a cut is supplied that crosses the Fall DST change and has only 92 intervals (23 hours), the system will fill to only 96 not 100. If 100 intervals are supplied, then 100 will be stored. Also, if 97 - 99 intervals are supplied and the DST = “Y”, then the system will Reject the incoming cut.
 - **FILL:** Fills all incoming cuts with missing values (value = 0, Status = “9”) to the stop time of the cut using DST adjustments if appropriate (DST_Participant = “Y”).
 - **ASIS:** Allows the storage of any incoming cuts with a number of expected intervals greater than the number of recorded intervals. The stop times of these cuts will remain unchanged.
7. **For *.lse or *.bte files only.** Select the **Validation Status** option from the drop-down list. This controls the default behavior of how the system sets the Validate_Record_Flag.
 - **Use Cut’s Status:** Sets the incoming cuts as invalid if the Validate_Record_Flag for a cut is set to “Y”, or valid if the flag is set to “N”. If the incoming Validate_Record_Flag is “Y” then it will act as Force Invalid for that cut. If the incoming Validate_Record_Flag is “N” then it will act as Force Valid for that cut.

- **Force Valid:** Sets all incoming cuts in the import file as valid (INTERNAL_VALIDATION, EXTERNAL_VALIDATION, MERGE, and DELETE flags all set “Y”), effectively ignoring the Validate_Record_Flags of the imported cuts.
 - **Force Invalid:** Sets all incoming cuts as in the import file invalid (INTERNAL_VALIDATION, EXTERNAL_VALIDATION, MERGE, and DELETE flags all set “N”), effectively ignoring the Validate_Record_Flags of the imported cuts.
8. Click the **Upload** link to begin the upload. To clear the screen, click the **Reset** link.
The upload will appear as an item on the **View Reports** screen.
To view the upload results, click the **Report Title** link.
 9. For scalar usage (imported using a *.imp file), the new usage records will appear the next time you view usage for the account. For interval data, the data is stored in the Oracle Utilities Data Repository.

How to delete usage values from a forecast:

1. Select the usage record(s) to be deleted from the list by checking the checkbox (s) in the far left column, and click **Delete**. Checking the checkbox in the far left column of the headings row selects all existing usage records.

Creating Usage Import Files

Import files used with this option must follow a number of guidelines in order to work properly.

Importing Scalar Values

Importing scalar values requires creating a *.imp file that contains Meter Value records. These records contain the following data, separated by commas:

- **METERVAL:** Identifying mnemonic for the record type, in this case Meter Value records. This must be the first value of the record.
- **Account ID:** The account id for the usage record.
- **Read Date:** The read date for the usage record.
- **Bill Determinant:** The bill determinant for the usage record.
- **Name:** The Name of the usage record. Names should begin with “RAW_IMPORT-” followed by a combination of other characters. This will help you identify forecast value records created via import vs. those created using the Usage Input screen.

Note: The combination of Account ID, Bill Determinant, and Name must be unique for each record in the Meter Value table. To ensure you import unique records, use a unique Name for each record (RAW_IMPORT-1000, RAW_IMPORT-1001, RAW_IMPORT-1002, etc.).

- **Value:** The value of the usage record, as measured in the specified bill determinant.
- **Start Time:** *Optional.* The start time for the usage record.
- **Stop Time:** *Optional.* The stop time for the usage record.
- **String Value:** *Optional.* The string value for the usage record.

Notes:

The following rules provide specific details concerning the input file format:

- Each record must begin on a new line (though text wrapping may occur).
- Comments may be placed on a line by themselves by beginning the line with an asterisk (*) character. Blank lines are also allowed.
- Each value may optionally be enclosed by double-quotation marks. If a value is enclosed in double quotation marks, then all characters between the quotation marks will be considered part of the value, including any leading or trailing blanks.
- If a value contains a comma (,) character, or any leading or trailing blank characters, then it **must** be enclosed in double-quotation marks.
- Null values are represented by no value. Trailing null values must be preceded by commas.

Example:

The following sample could be used to import usage records for the “BXT01_GS1” account for September through November 2002.

```
METERVAL, "BXT01_GS1", "2002-09-30", "1", "RAW-1032537871500", 120.0, , , , ,  
METERVAL, "BXT01_GS1", "2002-10-31", "1", "RAW-1032537871562", 120, , , , ,  
METERVAL, "BXT01_GS1", "2002-11-30", "1", "RAW-1032537871578", 120, , , , ,
```

See **Appendix A: Oracle Utilities Data Repository Schema Import File Format** in the *Data Manager User's Guide* for more information about creating *.imp files.

Importing Interval Data

When importing interval data, there must be a Channel History record that links the account to the recorder,channel being imported.

Importing Data

The Usage menu provides two options for importing data. These include:

- **Import Data**
- **Upload Data**

Import Data

The **Import Data** option allows users to upload customer/account and interval data into the Oracle Utilities Data Repository.

Customer/account data must be in the Oracle Utilities Data Repository Schema Import File Format (*.imp), described in **Appendix A: Oracle Utilities Data Repository Schema Import File Format** of the *Data Manager User's Guide*.

When importing interval data, this option imports interval data into the Channel Cut Header table. You can upload interval data in the following formats:

- Oracle Utilities Enhanced Database Format (Pervasive.SQL) (*.bte)
- Oracle Utilities Enhanced Input/Output Format (*.lse)

See the *Oracle Utilities Energy Information Platform Installation and Configuration Guide* for detailed information about these formats.

Note: The Import Data function does not offer all the options available when importing data using Data Manager or command line programs. To take advantage of those options, use the Customer Database Import Utility or PLIMPORT.EXE for customer/account data and the Interval Data Import Utility or INTDIMPEX.EXE for interval data. See **Chapter Three: Importing Data** in the *Data Manager User's Guide* for more information.

How to upload usage:

1. Select **Usage->Import/Export->Import Data**.

The Upload Usage screen opens.

2. Click the **Browse** button. The **Choose file** dialog opens.

Navigate to the file you wish to upload and click **Open**. You can upload *.imp, *.bte, and *.lse files.

If you select a *.imp file, the **Import Mode** drop-down list appears on the Upload Files screen.

If you select a *.bte or *.lse file, the **OverCount**, **UnderCount**, and **Validation Status** drop-down lists appear on the Upload Files screen.

3. **For *.imp files only.** Specify how the records in the file are processed by selecting the appropriate **Import Mode**:
 - **Add:** Adds **new** records to the Data Repository. If there are any records in the file that already exist in the database, or if there are duplicate record IDs in the import file, the program considers it an error.
 - **Update:** Replaces **existing** records in the Data Repository with the version in the import file. If there are any records in the file that do not already exist in the database, or if there are duplicate record IDs in the import file, the program considers it an error.
 - **Delete:** Deletes records from the Data Repository. For every parent ID in the import file, the program automatically deletes both the parent and all of its dependents. If there are any records in the file that do not already exist in the database, or if there are duplicate record IDs in the import file, the program considers it an error.

- **Add/Update:** Both adds **new** records and replaces **existing** records. If a record is not already in the database, it is added. If it does exist, it is updated.

Note: Using the 'Add/Update' mode will fail if the Import file contains more columns than the database table you are importing data into. Existing records will **not** be updated, and New records will **not** be created.

4. **For *.lse or *.bte files only.** Select an **OverCount** option from the drop-down list. This controls the behavior of import functions when an incoming cut has too many recorded intervals for the time span defined by the cut start time and the cut stop time and the DST_Participant flag.
 - **REJECT:** Directs the function to produce an error and disallow the import of any incoming/uploaded cutn when it has too many recorded intervals (Expected < Recorded).
 - **BE:** Behaves exactly like REJECT, except in the case where a cut that crosses the beginning of a DST period has its recorded interval count equal to the expected intervals count without the hour adjusted for DST.
 - **ASIS:** Allow the storage of any incoming cuts with a number of expected intervals less than the number of recorded intervals. The stop times of these cuts will remain unchanged.
5. **For *.lse or *.bte files only.** Select an **UnderCount** option from the drop-down list. This controls the behavior of import functions when an incoming cut has too few recorded intervals for the time span defined by the cut start time and the cut stop time and the DST Participant flag.
 - **REJECT:** Directs the function to produce an error and disallow the import of any incoming/uploaded cut when it has too few recorded intervals (Expected > Recorded).
 - **BE:** Directs the function to behave similar to the default behavior observed in previous installations and versions of Oracle Utilities products. This setting works exactly like FILL in most cases. When a cut being processed spans the end of the DST period, usually the fall DST hour, if viewed directly from the raw flat file, the cut will appear to be filled using DST calculations, yet if the cut is saved to any binary data source (RDB or BTE), it will only be filled with missings as if the DST_Participant flag is set to "N". For example, if a cut is supplied that crosses the Fall DST change and has only 92 intervals (23 hours), the system will fill to only 96 not 100. If 100 intervals are supplied, then 100 will be stored. Also, if 97 - 99 intervals are supplied and the DST = "Y", then the system will Reject the incoming cut. **Note:** Use of this feature may prevent the Proxyday Extension from successfully reading and merging together spring DST cuts imported using this feature. (It may effectively cause the cuts to be stored in an overcount state.) Cuts being imported are for use with Proxyday must have a valid number of intervals. In addition, using this feature on Spring DST cuts with may cause Data Manager and the Rules Language to ignore the 4 missing intervals when calculating recorded intervals.
 - **FILL:** Fills all incoming cuts with missings (value = 0, Status = "9") to the stop time of the cut using DST adjustments if appropriate (DST_Participant = "Y").
 - **ASIS:** Allows the storage of any incoming cuts with a number of expected intervals greater than the number of recorded intervals. The stop times of these cuts will remain unchanged.
6. **For *.lse or *.bte files only.** Select the **Validation Status** option from the drop-down list. This controls the default behavior of how the system sets the Validate_Record_Flag.
 - **Use Cut's Status:** Sets the incoming cuts as invalid if the Validate_Record_Flag for a cut is set to "Y", or valid if the flag is set to "N". If the incoming Validate_Record_Flag is "Y" then it will act as Force Invalid for that cut. If the incoming Validate_Record_Flag is "N" then it will act as Force Valid for that cut.

- **Force Valid:** Sets all incoming cuts in the import file as valid (INTERNAL_VALIDATION, EXTERNAL_VALIDATION, MERGE, and DELETE flags all set “Y”), effectively ignoring the Validate_Record_Flags of the imported cuts.
 - **Force Invalid:** Sets all incoming cuts as in the import file invalid (INTERNAL_VALIDATION, EXTERNAL_VALIDATION, MERGE, and DELETE flags all set “N”), effectively ignoring the Validate_Record_Flags of the imported cuts.
7. Click the **Upload** link to begin the upload. To clear the screen, click the **Reset** link.
- The upload will appear as an item on the **View Reports** screen.
- To view the upload results, click the **Report Title** link.

Upload Data

The **Upload Data** option allows users to upload interval data into the Oracle Utilities Data Repository.

Interval data uploaded using this option must be in one of the following formats:

- Oracle Utilities Enhanced Input/Output Format (*.lse)
- Oracle Utilities Compact XML Format (*.xml)
- Oracle Utilities Enhanced Database Format (Pervasive.SQL) (*.bte)

See the *Oracle Utilities Energy Information Platform Configuration Guide* for detailed information about these formats.

How to upload data:

1. Select **Usage->Upload Data**.

The Upload Files screen opens.

2. Select the table you wish to import the data into from the **Interval Data Location** drop-down list. This list is populated from the Interval Data Sources table.
3. Click the **Browse** button next to Upload File. The **Choose file** dialog opens.

Navigate to the file you wish to upload and click **Open**. You can upload *.lse, *.xml, and *.bte files.

4. Select an **OverCount** option from the drop-down list. This controls the behavior of import functions when an incoming cut has too many recorded intervals for the time span defined by the cut start time and the cut stop time and the DST_Participant flag.
 - **REJECT:** Directs the function to produce an error and disallow the import of any incoming/uploaded cuts when it has too many recorded intervals (Expected < Recorded).
 - **BE:** Behaves exactly like REJECT, except in the case where a cut that crosses the beginning of a DST period has its recorded interval count equal to the expected intervals count without the hour adjusted for DST.
 - **ASIS:** Allow the storage of any incoming cuts with a number of expected intervals less than the number of recorded intervals. The stop times of these cuts will remain unchanged.
5. Select an **UnderCount** option from the drop-down list. This controls the behavior of import functions when an incoming cut has too few recorded intervals for the time span defined by the cut start time and the cut stop time and the DST Participant flag.
 - **REJECT:** Directs the function to produce an error and disallow the import of any incoming/uploaded cut when it has too few recorded intervals (Expected > Recorded).

- **BE:** Directs the function to behave similar to the default behavior observed in previous installations and versions of Oracle Utilities products. This setting works exactly like **FILL** in most cases. When a cut being processed spans the end of the DST period, usually the fall DST hour, if viewed directly from the raw flat file, the cut will appear to be filled using DST calculations, yet if the cut is saved to any binary data source (RDB or BTE), it will only be filled with missings as if the `DST_Participant` flag is set to "N". For example, if a cut is supplied that crosses the Fall DST change and has only 92 intervals (23 hours), the system will fill to only 96 not 100. If 100 intervals are supplied, then 100 will be stored. Also, if 97 - 99 intervals are supplied and the `DST = "Y"`, then the system will Reject the incoming cut. **Note:** Use of this feature may prevent the Proxyday Extension from successfully reading and merging together spring DST cuts imported using this feature. (It may effectively cause the cuts to be stored in an overcount state.) Cuts being imported are for use with Proxyday must have a valid number of intervals. In addition, using this feature on Spring DST cuts with may cause Data Manager and the Rules Language to ignore the 4 missing intervals when calculating recorded intervals.
 - **FILL:** Fills all incoming cuts with missings (value = 0, Status = "9") to the stop time of the cut using DST adjustments if appropriate (`DST_Participant = "Y"`).
 - **ASIS:** Allows the storage of any incoming cuts with a number of expected intervals greater than the number of recorded intervals. The stop times of these cuts will remain unchanged.
6. Click the **Upload** link to begin the upload. To clear the screen, click the **Reset** link.

The upload will appear on the **Adding Cuts** screen. For each cut within the import file, this screen lists the result (Success or Failure), identity, category, start time, and comment.

Exporting Interval Data

The Oracle Utilities Energy Information Platform can export account-related interval data to a Microsoft Excel 2003 spreadsheet, allowing stakeholders to view interval data using Microsoft Excel 2003.

Data exported using this feature contains interval timestamps, values, and optional status codes for any number of pre-defined recorder,channel pairings (known as channels) associated to an account via a table called the Entity Interval Data table.

Set up and use of this feature includes the following:

- **Export Purposes**
- **Entity Interval Data**
- **Exporting Data**

Export Purposes

The Entity Purpose table stores purposes (or reasons) for associating accounts and channels, which are in turn used when defining relationships between accounts and channels in the Entity Interval Data table. For example, for a given account, a user might need to export one set of data for an end use customer or other external party, and another set of data for internal parties. Defining an export purpose for each audience (external vs. internal) allows the user to set up a different set of relationships for each.

The Export Purpose table includes the following pre-defined record:

Purpose Code	Purpose
NS	Not Specified

How to search Export Purpose records:

1. Select **Usage->Import/Export->Setup->Export Purpose**.

The Export Purpose screen opens.

2. Enter the search criteria in the appropriate field.

You can search by Purpose Code, Purpose, UserID, and Timestamp.

See **Searching Database Tables** on page 8-7 for more information about searching records, including the use of operands and wildcards.

3. Click **Search** to perform the search. To reset the search fields to their previous values, click **Reset**. To clear all the search fields, click **Clear**. To add a new record, click **Add**. See **Adding Export Purpose Records** on page 6-30 for more information about adding new records.

4. The search results appear on the Export Purpose list screen.

The Export Purpose list screen displays the following information for each record:

- Purpose Code
- Purpose
- User ID/Timestamp

See **Viewing and Editing Export Purpose Records** on page 6-30 for more information about viewing individual records.

5. To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by Purpose, click the Purpose column heading. If there is more than one

page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.

6. To view a record, click on the corresponding [...] link. The selected record will appear in the From Address screen. See **Viewing and Editing Export Purpose Records** on page 6-30 for more information.
7. To perform another search, click **Search**. To refresh the contents of the list screen, click the refresh icon.
8. *Optional.* To delete one or more records, check the check boxes corresponding to the records to be deleted, and click **Delete**. To clear all the checkboxes, click **Clear**.
9. *Optional.* To add a new record, click **Add**. See **Adding Export Purpose Records** on page 6-30 for more information about adding new records.

Viewing and Editing Export Purpose Records

Individual Export Purpose records are viewed on the Export Purpose screen. This screen opens when you select a record from the Export Purpose search results screen.

How to view and edit Export Purpose records:

1. Click on the [...] link for the Export Purpose record you wish to view. The selected record opens in the Export Purpose screen.

The Export Purpose screen displays the following information for the selected record:

- **Purpose Code:** A code that designates the export purpose.
- **Purpose:** The name of the export purpose.
- **User ID:** The user ID of the last user to update the record.
- **Timestamp:** The date and time when the record was last updated.

2. Edit data in the fields as appropriate. See **Working with Data Types** on page 8-4 for more information about editing data values.
3. To save changes made to the record, click **Save**. To save the edited record as a new record, click **Save As New**.

Note: The **Save As New** option only works if the both columns in the record have been changed.

4. To perform a new search, click **Search**.
5. To open a list of records, click **List**.
6. To delete the current record, click **Delete**.
7. To navigate from the current record to one of its parent or lookup records, click the Name of the parent table on the record. Parent and lookup records appear underlined on the screen. Use the **Back** button to return to the record being viewed.
8. To view a list of child records, click the name of the child table you wish to view in the Children section of the screen. Use the **Back** button to return to the record being viewed.

Adding Export Purpose Records

You can also add new Export Purpose records.

How to add Export Purpose records:

1. Click **Add** on either the Export Purpose search or list screens. A blank Export Purpose screen opens.
2. Enter the purpose code in the **Purpose Code** field.

3. Enter the name of the export purpose in the **Purpose** field.
4. To save the record, click **Save**. The new Export Purpose appears on the screen.

Entity Interval Data

The Entity Interval Data table stores relationships between accounts and channels (recorder,channel pairings) over a specified date range. These relationships can also be further defined by an export purpose (from the Export Purpose table).

The Export Usage function uses this table to determine the interval data to export for a specified export purpose and account.

How to search Entity Interval Data records:

1. Select **Usage->Import/Export->Setup->Export Entity**.

The Entity Interval Data screen opens.

2. Enter the search criteria in the appropriate field.

You can search by Purpose Code, Account, Channel, Start Time, Stop Time, UserID, and Timestamp.

See **Searching Database Tables** on page 8-7 for more information about searching records, including the use of operands and wildcards.

3. Click **Search** to perform the search. To reset the search fields to their previous values, click **Reset**. To clear all the search fields, click **Clear**. To add a new record, click **Add**. See **Adding Entity Interval Data Records** on page 6-32 for more information about adding new records.
4. The search results appear on the Entity Interval Data list screen.

The Entity Interval Data list screen displays the following information for each record:

- Purpose Code
- Account
- Channel
- Start Time
- Stop Time
- User ID/Timestamp

See **Viewing and Editing Entity Interval Data Records** on page 6-32 for more information about viewing individual records.

5. To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by Purpose Code, click the Purpose Code column heading. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.
6. To view a record, click on the corresponding [...] link. The selected record will appear in the From Address screen. See **Viewing and Editing Entity Interval Data Records** on page 6-32 for more information.
7. To perform another search, click **Search**. To refresh the contents of the list screen, click the refresh icon.
8. *Optional.* To delete one or more records, check the check boxes corresponding to the records to be deleted, and click **Delete**. To clear all the checkboxes, click **Clear**.
9. *Optional.* To add a new record, click **Add**. See **Adding Entity Interval Data Records** on page 6-32 for more information about adding new records.

Viewing and Editing Entity Interval Data Records

Individual Entity Interval Data records are viewed on the Entity Interval Data screen. This screen opens when you select a record from the Entity Interval Data search results screen.

How to view and edit Entity Interval Data records:

1. Click on the [...] link for the Entity Interval Data record you wish to view. The selected record opens in the Entity Interval Data screen.

The Entity Interval Data screen displays the following information for the selected record:

- **Purpose Code:** The export purpose for the relationship defined by the record.
 - **Account:** The Account ID of the account in the relationship defined by the record.
 - **Channel:** The channel (recorder,channel pair) in the relationship defined by the record.
 - **Start Time:** The start date and time for the relationship between the Account and Channel.
 - **Stop Time:** The stop date and time for the relationship between the Account and Channel.
 - **User ID:** The user ID of the last user to update the record.
 - **Timestamp:** The date and time when the record was last updated.
2. Edit data in the fields as appropriate. See **Working with Data Types** on page 8-4 for more information about editing data values.
 3. To save changes made to the record, click **Save**. To save the edited record as a new record, click **Save As New**.
Note: The **Save As New** option only works if the identity of the record has been changed.
 4. To perform a new search, click **Search**.
 5. To open a list of records, click **List**.
 6. To delete the current record, click **Delete**.
 7. To navigate from the current record to one of its parent or lookup records, click the Name of the parent table on the record. Parent and lookup records appear underlined on the screen. Use the **Back** button to return to the record being viewed.
 8. To view a list of child records, click the name of the child table you wish to view in the Children section of the screen. Use the **Back** button to return to the record being viewed.

Adding Entity Interval Data Records

You can also add Entity Interval Data records.

How to add Entity Interval Data records:

1. Click **Add** on either the Entity Interval Data search or list screens. A blank Entity Interval Data screen opens.
2. Select the **Purpose Code** by clicking the **Browse** button (...). This opens a dialog window that lists all the available purpose codes.
3. Select the **Account** by clicking the **Browse** button (...). This opens a dialog window that lists all the available accounts.
4. Select the **Channel** by clicking the **Browse** button (...). This opens a dialog window that lists all the available channels.
5. Enter the date and time at which the relationship is in effect in the **Start Time** field. You can enter the date either by typing the date manually or clicking the drop-down arrow to the right

of the date field. This opens a calendar dialog that you can use to select the start date. You can enter the time either by typing the time manually, or by using the default time of 00:00:00.

6. *Optional.* Enter the date and time after which the relationship is no longer in effect in the **Stop Time** field in the same manner as for Start Time.
7. To save the record, click **Save**. The new Export Purpose appears on the screen.

Exporting Data

The Export function exports interval data related to a specified account to a Microsoft Excel 2003 spreadsheet.

How to export account interval data:

1. Select **Usage->Import/Export->Export Data**.

The Account Interval Export screen opens.

2. Select the interval data location from which the data to be exported will come from the **Interval Data Location** drop-down list. This list is populated by records in the Interval Data Sources table.
3. *Optional.* Select the **Account Type** for the account for which you wish to export data by clicking the **Browse** button (...). This opens a dialog window that lists all the available account types.
4. Select the **Account ID** for the account for which you wish to export data by clicking the **Browse** button (...). This opens a dialog window that lists all the available accounts. If you supplied an Account Type, this dialog displays only those accounts of the selected Account Type.
5. *Optional.* Select the **Account Name** for the account for which you wish to export data by clicking the **Browse** button (...). This opens a dialog window that lists all the available accounts. If you supplied an Account Type, this dialog displays only those accounts of the selected Account Type.
6. Select the **Purpose** for the export by clicking the **Browse** button (...). This opens a dialog window that lists all the available purpose codes.
7. Enter the **Start Time** for the date range of the data to be exported by either typing the date manually or clicking the drop-down arrow to the right of the date field.
8. Enter the **Stop Time** for the date range of the data to be exported by either typing the date manually or clicking the drop-down arrow to the right of the date field.
9. *Optional.* Select the SPI (seconds per interval) to which the system will scale the data from the **Scale Results to** drop-down list.

Data of different SPIs must be scaled to the same SPI before they can be exported. If you wish to export data of different SPIs you need to scale the data so that all the data exported are of the same SPI. For example, if you wish to export 15 minute data and 1 hour data, you need to scale them to a common SPI. The scaling options available include the following:

- **Automatic:** Scales the data to the highest common interval type of all the data to be exported. For example, if you export 15 minute data and 1 hour data, this option would scale the 15 minute data to 1 hour intervals. Note that the Automatic option does nothing if all the exported data is of the same SPI. If you select a cut with multiple SPI values, this option scales the selected cut to 1 hour intervals. This is the default option.
- **5 minute intervals:** Scales the exported data to 5 minute intervals.
- **10 minute intervals:** Scales the exported data to 10 minute intervals.
- **15 minute intervals:** Scales the exported data to 15 minute intervals.

- **20 minute intervals:** Scales the exported data to 20 minute intervals.
- **30 minute intervals:** Scales the exported data to 30 minute intervals.
- **1 hour intervals:** Scales the exported data to 1 hour intervals.
- **1 day intervals:** Scales the exported data to 1 day intervals.
- **1 week intervals*:** Scales the exported data to 1 week intervals.
- **1 month intervals*:** Scales the exported data to 1 month intervals.
- **1 year intervals*:** Scales the exported data to 1 year intervals.

***Note:** Scaling up to and/or down from 1 week, 1 month, or 1 year intervals can produce unexpected results.

10. Select whether or not the exported data will include interval status codes (Yes or No) from the **Include Status Codes** drop-down list. The default is to not include status codes.
11. Click **Export** to export the data. Click **Reset** to clear all fields on the screen.
The **File Download** dialog opens.
12. To open the file, click **Open**. To close the dialog without opening the file, click **Cancel**.

The data will open in the Main Window in Microsoft Excel 2003 format.

	A	B	C	D	E
1		1700 - 1	1700_VER - 1		
2	Time	KWH	KWH		
3	3/1/1997 0:00	31.58063999	46.58063999		
4	3/1/1997 0:15	31.58063999	46.58063999		
5	3/1/1997 0:30	31.53455999	46.53455999		
6	3/1/1997 0:45	31.53455999	46.53455999		
7	3/1/1997 1:00	31.52304	46.52304		
8	3/1/1997 1:15	31.58063999	46.58063999		
9	3/1/1997 1:30	31.56911999	46.56911999		
10	3/1/1997 1:45	31.5	46.5		
11	3/1/1997 2:00	31.51152	46.51152		
12	3/1/1997 2:15	32.29487988	47.29487988		
13	3/1/1997 2:30	31.58063999	46.58063999		
14	3/1/1997 2:45	31.54607999	46.54607999		
15	3/1/1997 3:00	31.51152	46.51152		
16	3/1/1997 3:15	31.51152	46.51152		
17	3/1/1997 3:30	31.51152	46.51152		
18	3/1/1997 3:45	31.54607999	46.54607999		
19	3/1/1997 4:00	31.54607999	46.54607999		
20	3/1/1997 4:15	31.52304	46.52304		

The left-most column displays the time stamp of each interval in the exported data. Each column to the right lists individual values (and status codes if appropriate) for each interval for each channel in the exported data. The column headings display the channel and Unit-of-Measure of the exported data.

13. To save the file, click **Save**. To close the window without saving the file, click **Cancel**.
The **Save As** dialog opens.

Select the destination and enter a name for the file and click **Save**. To close the window without saving the file, click **Cancel**.

Chapter 7

Tools

This chapter describes functions available from the Tools and Utilities menu of the Energy Information Platform, including:

- **Address Book**
- **Time of Use and Season Schedules**
- **Security Administration**
- **Report Administration**
- **Lists**
- **Run Reports**
- **View Reports**

Address Book

The Energy Information Platform Address Book stores information about individuals who are associated with entities stored in the Oracle Utilities Data Repository, such as Service Points and Market Participants. This includes basic information about these individuals (first name, last name, job title, etc.) as well as specific methods for contacting the individual (phone numbers, email addresses, etc.), and address information.

The Oracle Utilities Energy Information Platform Address Book includes the following:

- **Contacts**
- **Groups**
- **Email Aliases**

Contacts

Contacts are specific individuals associated to Service Point and Market Participants stored in the Oracle Utilities Data Repository.

How to search contacts:

1. Select **Tools and Utilities->Address Book->Contacts**.

The Search Contacts screen opens.

2. Enter the search criteria for the contacts you wish to send email to. You can search by Last Name, First Name, Middle Name, Suffix, Contact ID, Title, Company, Job Title, or Note.
3. Specify how the search results are displayed.
 - Select the manner in which the results are sorted by clicking the **Sort by** plus (“+”) sign. See **Specifying How Results are Sorted** on page 2-7 for more information.
 - Specify how many results should appear on each page in the **Page Length** field.
4. Click **Search** to perform the search. To reset the search fields to their previous values, click **Reset**. To add a new contact, click **Add**. See **Adding Contacts** on page 7-4 for more information about adding new contacts.
5. The search results appear on the Search Contacts Result screen.

The Search Contacts Result screen displays the following information for each contact:

- Last Name
 - First Name
 - Middle Name
 - Title
 - Contact ID
 - Suffix
 - Job Title
 - Company
6. To sort the results by one of the columns, click the appropriate arrow on the column heading. For example, to sort the results in ascending order by Last Name, click the “up” arrow on the Last Name column heading. See **Sorting Search Results** on page 2-7 for more information.

If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field and press the **Enter** key.

7. To view a contact, click on the Last Name. Contact data for the selected contact will appear on the Edit Contact screen. See **Viewing and Editing Contacts** on page 7-3 for more information about viewing and editing contact information.
8. *Optional.* To delete one or more contacts, check the check boxes corresponding to the contacts to be deleted, and click **Delete**. To clear all the checkboxes, click **Reset**.
9. To perform another search, click **New Search**. To refresh the contents of the screen, click the **Refresh** icon.

Viewing and Editing Contacts

Individual contacts are viewed on the Edit Contact screen. This screen opens when you select a contact from the Search Contact Result screen.

How to view and edit contacts:

1. Click on the **Last Name** of the contact you wish to view or edit on the Search Contacts Result screen.

The selected contact will appear on the Edit Contact screen.

The Edit Contact screen displays the following information for the selected record:

- **Personal Information:** basic information about the contact, including:
 - **Is Private:** a flag that indicates if the contact is considered private or public. Private contacts can be only be viewed by the user who created the contact record. Public contacts (Is Private unchecked) can be viewed by all users.
 - **Last Name:** the contact's last name (or surname)
 - **First Name:** the contact's first name
 - **Middle Name:** the contact's middle name
 - **Suffix:** the suffix used with the contact's name (if applicable)
 - **Contact ID:** an optional ID for the contact. If there is more than one contact with the same first/last names, the contact ID can be used to distinguish between them.
 - **Title:** the contact's title
 - **Company:** the company the contact works for/with
 - **Job Title:** the contact's job title
 - **Note:** an optional note about the contact
- **Contact Methods:** specific contact methods for the contact, such as Email, Work Phone, Cell Phone, etc. The default contact method is designated by the radio button.
- **Addresses:** physical addresses for the contact.

2. Edit the **Personal Information** pane for the contact as needed.

To clear all the fields in the Personal Information pane, click **Clear** on the Personal Information title bar.

3. Edit the **Contact Methods** for the contact as needed.

Contact method types are defined in the Contact Method Type table. The name of each available contact method includes the Contact Method Type (Email, Phone, Fax, etc.) preceded by its Subtype (Home, Work, etc.).

Contact Methods are displayed in groups based on the Contact Method Type. Groupings are indicated in the  column. The default contact method in each group is indicated by the radio button in the  column. If there is only one contact method in a group, it is considered the default.

To edit an existing contact method, click on the contact method or value and edit accordingly.

To delete a contact method, check the contact method to be deleted and click **Delete** in the Contact Method title bar.

To add a contact method, click **Add** in the Contact Method title bar, select the contact method type from the drop-down list in the Contact Method column, and enter the value as appropriate.

4. Edit **Addresses** for the contact as needed.

Addresses are listed for the contact based on the address format selected in the Address Format drop-down list in the Address Information title bar. Address formats are defined in the Address Format table. The name of each available address format (US Format, UK Format, etc) is displayed in the drop-down list in the Address Information title bar. The “US Format” address format is supplied by default.

The default address for the contact is indicated by the radio button in the column. If there is only one address for the contact, it is considered the default.

To edit an address, select the address and edit the address information as needed.

To delete an address, check the contact method to be deleted and click **Delete** in the Contact Method title bar.

To add a new address, select the appropriate Address Format, click **Add** in the Address Information title bar, and enter the values for the address as appropriate.

To add an existing address to the contact, click **Add Existing** in the Address Information title bar. The Search Address window opens.

Select the address format from the Address Format drop-down list and enter search criteria. You can search by any of the fields in the selected address format. Click **Search** to perform the search. To clear all the fields, click **Reset**.

The search results appear in the Search Result Address window.

Select the address (or addresses) you wish to add to the contact and click **Add**. To perform a new search, click **New Search**.

5. To save the contact, click **Save**.

Adding Contacts

You can also add new contacts.

How to add new contacts:

1. Click **Add** on the Search Contacts screen.

A blank Edit Contact screen opens.

2. Enter **Personal Information** for the contact, including:

- **Is Private:** a flag that indicates if the contact is considered private or public. Private contacts can be only be viewed by the user who created the contact record. Public contacts (Is Private unchecked) can be viewed by all users.
- **Last Name:** the contact’s last name (or surname)
- **First Name:** the contact’s first name
- **Middle Name:** the contact’s middle name
- **Suffix:** the suffix used with the contact’s name (if applicable)
- **Contact ID:** an optional ID for the contact. If there is more than one contact with the same first/last names, the contact ID can be used to distinguish between them.

- **Title:** the contact's title
- **Company:** the company the contact works for/with
- **Job Title:** the contact's job title
- **Note:** an optional note about the contact

To clear all the fields in the Personal Information pane, click **Clear** on the Personal Information title bar.

3. Enter **Contact Methods** for the contact as needed.

To add a contact method, click **Add** in the Contact Method title bar, select the contact method type from the drop-down list in the Contact Method column and enter the value as appropriate.

Contact method types are defined in the Contact Method Type table. The name of each available contact method includes the Contact Method Type (Email, Phone, Fax, etc.) preceded by its Subtype (Home, Work, etc.).

Contact Methods are displayed in groups based on the Contact Method Type. Groupings are indicated in the  column. The default contact method in each group is indicated by the radio button in the  column. If there is only one contact method in a group, it is considered the default.

4. Enter **Addresses** for the contact as needed.

To add a new address, select the appropriate Address Format, click **Add** in the Address Information title bar, and enter the values for the address as appropriate.

Addresses are listed for the contact based on the address format selected in the Address Format drop-down list in the Address Information title bar. Address formats are defined in the Address Format table. The name of each available address format (US Format, UK Format, etc) is displayed in the drop-down list in the Address Information title bar. The "US Format" address format is supplied by default.

The default address for the contact is indicated by the radio button in the  column. If there is only one address for the contact, it is considered the default.

5. Click **Save** to save the new contact.

Groups

Contact groups are groups of individuals associated to Service Point and Market Participants stored in the Oracle Utilities Data Repository.

How to search contact groups:

1. Select **Tools and Utilities->Address Book->Groups**.

The Search Groups screen opens.

2. Enter the search criteria for the contact groups you wish to send email to. You can search by Group Name or Description, or the Last Name, First Name, Job Title, or Company of one of the members of the group.
3. Specify how the search results are displayed.
 - Select the manner in which the results are sorted by clicking the **Sort by** plus ("+") sign. See **Specifying How Results are Sorted** on page 2-7 for more information.
 - Specify how many results should appear on each page in the **Page Length** field.
4. Click **Search** to perform the search. To reset the search fields to their previous values, click **Reset**. To add a contact group, click **Add**. See **Adding Contact Groups** on page 7-7 for more information about adding new contact groups.

- The search results appear on the Search Groups screen.
The Search Groups screen displays the following information for each group:
 - Group Name
 - Description
 - Is Private flag
- To sort the results by one of the columns, click the appropriate arrow on the column heading. For example, to sort the results in ascending order by Group Name, click the “up” arrow on the Group Name column heading. See **Sorting Search Results** on page 2-7 for more information.

If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field and press the **Enter** key.
- To view a contact group, click on the Group Name. The selected group will appear on the Edit Group screen. See **Viewing and Editing Contact Groups** on page 7-6 for more information about viewing and editing contact groups.
- Optional.* To delete one or more groups, check the check boxes corresponding to the contacts to be deleted, and click **Delete**. To clear all the checkboxes, click **Reset**.
- To perform another search, click **New Search**. To refresh the contents of the screen, click the **Refresh** icon.

Viewing and Editing Contact Groups

Contact groups are viewed on the Edit Group screen. This screen opens when you select a group from the Search Groups screen.

How to view and edit contact groups:

- Click on the **Group Name** of the contact group you wish to view or edit on the Search Groups screen.

The selected contact group will appear on the Edit Group screen.

The Edit Group screen displays the following information for the selected record:

- Group Name:** the name of the contact group
 - Description:** a description of the contact group
 - Is Private:** a flag that indicates if the contact group is considered private or public. Private groups can be only be viewed by the user who created the contact record. Public groups (Is Private unchecked) can be viewed by all users.
 - Membership:** a list of members of the group. The following information is displayed for each member listed: Contact ID, Email Address, Is Private flag, Default, and Email Type. See **Viewing and Editing Contacts** on page 7-3 for more information about contact information.
- Edit the **Group Name**, **Description**, or **Is Private** flag for the group as needed.
 - Edit **Membership** for the group as needed.

Contacts are listed for the group in the Membership pane.

To delete a contact, check the contact to be deleted and click **Delete** in the Membership title bar.

To add a new contact, click **Add** in the Membership title bar, and select the contact from the drop-down list in the Contact ID column.

Adding Contact Groups

You can also add new contact groups.

How to add new contact groups:

1. Click **Add** on the Search Groups screen.
A blank Edit Group screen opens.
2. Enter a name for the group in the **Group Name** field.
3. Enter a description of the group in the **Description** field.
4. Check the **Is Private flag** as appropriate. This flag indicates if the group is considered private or public. Private groups can be only be viewed by the user who created the contact record. Public groups (Is Private unchecked) can be viewed by all users.
5. Add contacts to the group. To add a contact to the group, click **Add** in the Membership title bar, select the contact from the drop-down list in the Contact ID column. Note: contact information will not appear in the Membership pane until the group have been saved.
6. Click **Save** to save the new group.

Email Aliases

Email aliases are alternative email addresses that users can send email from when using the Send Email function. Email addresses are stored in the From Address table. When populating the From field on an email the user can select from their own email address (defined on the User Overview screen in the Security Administration user interface) or any one of the email addresses stored in the From Address table.

Note: By default, all records in the From Address table are available to all users when sending email. Record-level security can be applied to the From Address table to restrict users to a specific set of From Address records. Contact your system administrator for more information.

How to search From Address records:

1. Select **Tools and Utilities->Address Book->Email Aliases**.

The From Address screen opens.

2. Enter the search criteria in the appropriate field.

You can search by UID, Email Address, Description, Department, Code, UserID, and Timestamp.

See **Searching Database Tables** on page 8-7 for more information about searching records, including the use of operands and wildcards.

3. Click **Search** to perform the search. To reset the search fields to their previous values, click **Reset**. To clear all the search fields, click **Clear**. To add a new record, click **Add**. See **Adding From Address Records** on page 7-9 for more information about adding new From Address records.

4. The search results appear on the From Address list screen.

The From Address list screen displays the following information for each record:

- UID
- Email Address
- Description
- Department
- Code
- User ID/Timestamp

See **Viewing and Editing From Address Records** on page 7-8 for more information about viewing individual records.

5. To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by Name, click the Name column heading. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.
6. To view a record, click on the corresponding [...] link. The selected record will appear in the From Address screen. See **Viewing and Editing From Address Records** on page 7-8 for more information.
7. To perform another search, click **Search**. To refresh the contents of the list screen, click the refresh icon.
8. *Optional.* To delete one or more records, check the check boxes corresponding to the records to be deleted, and click **Delete**. To clear all the checkboxes, click **Clear**.
9. *Optional.* To add a new record, click **Add**. See **Adding From Address Records** on page 7-9 for more information about adding new records.

Viewing and Editing From Address Records

Individual From Address records are viewed on the From Address screen. This screen opens when you select a record from the From Address search results screen.

How to view and edit From Address records:

1. Click on the [...] link for the From Address you wish to view. The selected record opens in the From Address screen.

The From Address screen displays the following information for the selected record:

- **UID:** The unique identifier for the record in the Oracle Utilities Data Repository.
- **Email Address:** The email address to be used as the “from” address.
- **Description:** A description of the from address.
- **Department (optional):** The department to which the address is related.
- **Code (optional):** A code that identifies the address.
- **User ID:** The user ID of the last user to update the record.
- **Timestamp:** The date and time when the record was last updated.

2. Edit data in the fields as appropriate. See **Working with Data Types** on page 8-4 for more information about editing data values.
3. To save changes made to the record, click **Save**. To save the edited record as a new record, click **Save As New**.

Note: The **Save As New** option only works if the identity of the record has been changed.

4. To perform a new search, click **Search**.
5. To return to the search results, click **List**.
6. To delete the current record, click **Delete**.
7. To navigate from the current record to one of its parent or lookup records, click the Name of the parent table on the record. Parent and lookup records appear underlined on the screen. Use the **Back** button to return to the record being viewed.
8. To view a list of child records, click the name of the child table you wish to view in the Children section of the screen. Use the **Back** button to return to the record being viewed.

Adding From Address Records

You can also add new From Address records.

How to add a new From Address record:

1. Click **Add** on either the From Address search or list screens. A blank From Address screen opens.
2. Enter the email address in the **Email Address** field.
3. Enter a description of the address in the **Description** field.
4. *Optional.* Enter the department to which the address is related in the **Department** field.
5. *Optional.* Enter a code for the address in the **Code** field.
6. To save the record, click **Save**. The new From Address appears on the screen.

Time of Use and Season Schedules

Business rules defined in the Oracle Utilities Rules Language can incorporate time of use and season-based pricing. You can use calendar schedules to assign every hour of every day to a Time of Use schedule, so that the programs apply the correct charges. This section describes how you work with season and time of use schedules, including:

- **Season Schedules**
- **Time of Use Period Names**
- **Time of Use Schedules**

Season Schedules

Season schedules specify the dates for specific seasons. You can define any period or periods as “Summer,” “Winter,” or any time period. When you have defined the seasons, you can use the Rules Language to apply different charges to each season.

Rules for Creating Season Schedules

The following rules apply when creating/modifying a Season Schedule:

- A season schedule must have at least uniquely named periods (seasons).
- Each season period must have a name, start date, and stop date.
- No overlaps are allowed. This means one day may not be in two seasons.
- No gaps are allowed. This means that all season periods within the schedule must be contiguous.

An example season schedule might be as follows:

Season Schedule Name: 2005_SEASONS

Season Schedule Periods:

Season Period Name	Start Date	Stop Date
WINTER	11/01/2005	03/31/2006
SUMMER	04/01/2006	10/31/2006

Searching Season Schedules

You can search for existing season schedules in the Oracle Utilities Data Repository.

How to search season schedules:

1. Select **Tools and Utilities->Configuration->Season Schedule**.

The Season Schedule screen opens.

2. Enter the search criteria in the appropriate field.

You can search based on the UID (unique identifier for the record in the Oracle Utilities Data Repository), the Season Schedule Name, or Note.

See **Searching Database Tables** on page 8-7 for more information about searching records, including the use of operands and wildcards.

3. Click **Search** to perform the search. To reset the search fields to their previous values, click **Reset**. To clear all the search fields, click **Clear**. To add a new record, click **Add**. See **Adding Season Schedules** on page 7-12 for more information about adding new season schedules.
4. The search results appear on the Season Schedule list screen.

The Season Schedule list screen displays the following information for each record:

- UID
- Season Schedule Name
- Note

See **Viewing and Editing Season Schedules** on page 7-11 for more information about viewing individual records.

- To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by Season Schedule Name, click the Season Schedule Name column heading. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.
- To view a record, click on the corresponding [...] link. The selected record will appear in the Edit Season Schedule screen. See **Viewing and Editing Season Schedules** on page 7-11 for more information.
- To perform another search, click **Search**. To refresh the contents of the list screen, click the refresh icon.
- Optional.* To add a new record, click **Add**. See **Adding Season Schedules** on page 7-12 for more information about adding new season schedules.

Viewing and Editing Season Schedules

Individual season schedules are viewed on the Edit Season Schedule screen. This screen opens when you select a record from the Season Schedule search results screen.

How to view and edit season schedules:

- Click on the [...] link for the season schedule you wish to view. The selected record opens in the Edit Season Schedule screen.

* Season Period Name	* Start Date	* Stop Date
<input type="checkbox"/> WINTER	11/01/2005	03/31/2006
<input type="checkbox"/> SUMMER	04/01/2006	10/31/2006

The Edit Season Schedule screen displays the following information for the selected record:

- **Schedule Name:** The name of the season schedule.
 - **Schedule Note:** An optional note regarding the season schedule.
 - **Season Schedule Periods:** A listing of the individual season periods defined for the season schedule. The following are listed for each season period:
 - **Season Period Name:** The name of the season period
 - **Start Date:** The start date for the season period
 - **Stop Date:** The stop date for the season period
- Edit data in the fields as appropriate. See **Working with Data Types** on page 8-4 for more information about editing data values.

To add a Season Period, click **Add** (in the Season Schedule Periods pane) and enter the Season Period Name, Start Date, and Stop Date.

To make a copy of an existing Season Period, check the Season Period to copy, click **Add** (in the Season Schedule Periods pane), and edit the Season Period Name, Start Date, and Stop Date.

To delete a Season Period, check the corresponding checkbox(es) and click **Delete** (in the Season Schedule Periods pane).

3. To save changes made to the record, click **Save**. To save the edited record as a new record, click **Save As New**.

Note: The **Save As New** option only works if the identity of the record has been changed.

4. To perform a new search, click **Search**.
5. To open a list of records, click **List**.

Adding Season Schedules

You can also add new season schedules.

How to add season schedules:

1. Click **Add** on either the Season Schedule search or list screens. A blank Edit Season Schedule screen opens.
2. Enter the name of the season schedule in the **Schedule Name** field.
3. Enter the season periods for the season schedule in the Season Schedule Periods pane. Be sure to follow the **Rules for Creating Season Schedules** on page 7-10 when creating season schedule periods.

For each season period in the Season Schedule, click **Add** (in the Season Schedule Periods pane) and enter the following:

- **Season Period Name:** The name of the season period
 - **Start Date:** The start date for the season period. To enter the start date, click the arrow and select the date from the calendar control.
 - **Stop Date:** The stop date for the season period. To enter the start date, click the arrow and select the date from the calendar control.
4. To save the record, click **Save**. The new season schedule appears on the screen.

Time of Use Period Names

Time of Use (TOU) Period Names are names for time of use periods within time of use schedules. Examples of TOU Period Names include OFF_PEAK and ON_PEAK.

How to search Time of Use Period Names:

1. Select **Tools and Utilities->Configuration->TOU Period Name**.

The Time of Use Period Name screen opens.

2. Enter the search criteria in the appropriate field.

You can search based on the TOU Period Name or Description.

See **Searching Database Tables** on page 8-7 for more information about searching records, including the use of operands and wildcards.

3. Click **Search** to perform the search. To reset the search fields to their previous values, click **Reset**. To clear all the search fields, click **Clear**. To add a new record, click **Add**. See **Adding Time of Use Period Names** on page 7-14 for more information about adding new TOU Period Names.
4. The search results appear on the Time of Use Period Name list screen.

The Time of Use Period Name list screen displays the following information for each record:

- TOU Period Name
- Description

See **Viewing and Editing Time of Use Period Names** on page 7-13 for more information about viewing individual records.

5. To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by TOU Period Name, click the TOU Period Name column heading. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.
6. To view a record, click on the corresponding [...] link. The selected record will appear in the TOU Period Name screen. See **Viewing and Editing Time of Use Period Names** on page 7-13 for more information.
7. To perform another search, click **Search**. To refresh the contents of the list screen, click the refresh icon.
8. *Optional.* To delete one or more records, check the check boxes corresponding to the records to be deleted, and click **Delete**. To clear all the checkboxes, click **Clear**.
9. *Optional.* To add a new record, click **Add**. See **Adding Time of Use Period Names** on page 7-14 for more information about adding new TOU Period Names.

Viewing and Editing Time of Use Period Names

Individual TOU Period Names are viewed on the Time of Use Period Name screen. This screen opens when you select a record from the Time of Use Period Name search results screen.

How to view and edit TOU Period Names:

1. Click on the [...] link for the TOU Period Name you wish to view. The selected record opens in the Time of Use Period Name screen.

The Time of Use Period Name screen displays the following information for the selected record:

- **TOU Period Name:** The name of the TOU Period.
- **Description:** An optional description of the TOU Period Name.

2. Edit data in the fields as appropriate. See **Working with Data Types** on page 8-4 for more information about editing data values.
3. To save changes made to the record, click **Save**. To save the edited record as a new record, click **Save As New**.

Note: The **Save As New** option only works if the identity of the record has been changed.

4. To perform a new search, click **Search**.
5. To open a list of records, click **List**.
6. To delete the current record, click **Delete**.

Adding Time of Use Period Names

You can also add new TOU Period Names.

How to add TOU Period Names:

1. Click **Add** on either the Time of Use Period Name search or list screens. A blank Time of Use Period Name screen opens.
2. Enter the name of the TOU Period in the **TOU Period Name** field.
3. Enter an optional description of the TOU Period in the **Description** field.
4. To save the record, click **Save**. The new TOU Period Name record appears on the screen.

Time of Use Schedules

Time of Use (TOU) Schedules are used to classify each hour in a week or holiday as belonging to a specific TOU Period Name, such as ON_PEAK or OFF_PEAK.

Rules for Creating TOU Schedules

The following rules apply when creating/modifying a TOU Schedule:

- A TOU Schedule must have at least one period.
- Each period must have a TOU Period Name, start time, stop time, and at least one day checked.
- No overlaps or gaps are allowed between periods. This means that every minute in the seven weekdays must be included in a period. No hour may be in more than one period.
- Times should be entered on full hour boundaries. For example, 00:00 to 12:00 and 12:00 to 24:00.

An example season schedule might be as follows:

Season Schedule: 2005_SEASONS

TOU Schedule Name: 2005_TOU

TOU Schedule Note: TOU Schedule - 2005

Time of Use Schedule Periods:

TOU Period Name	Season Period Name	Days	Start	Stop
ON_PEAK	SUMMER	M,T,W,Th,F	12:00	21:00
OFF_PEAK	SUMMER	M,T,W,Th,F	00:00	12:00
OFF_PEAK	SUMMER	M,T,W,Th,F	21:00	24:00
OFF_PEAK	SUMMER	S,Su,H	00:00	24:00
ON_PEAK	WINTER	M,T,W,Th,F	06:00	10:00
ON_PEAK	WINTER	M,T,W,Th,F	18:00	22:00
OFF_PEAK	WINTER	M,T,W,Th,F	00:00	06:00
OFF_PEAK	WINTER	M,T,W,Th,F	10:00	18:00
OFF_PEAK	WINTER	M,T,W,Th,F	22:00	24:00
OFF_PEAK	WINTER	S,Su,H	00:00	24:00

Searching Time of Use Schedules

You can search for existing time of use schedules in the Oracle Utilities Data Repository.

How to search time of use schedules:

1. Select **Tools and Utilities->Configuration->TOU Schedule**.

The TOU Schedule screen opens.

2. Enter the search criteria in the appropriate field.

You can search based on the UID (unique identifier for the record in the Oracle Utilities Data Repository), TOU Schedule Name, Season Schedule, Note, or Validated flag.

See **Searching Database Tables** on page 8-7 for more information about searching records, including the use of operands and wildcards.

3. Click **Search** to perform the search. To reset the search fields to their previous values, click **Reset**. To clear all the search fields, click **Clear**. To add a new record, click **Add**. See **Adding Time of Use Schedules** on page 7-17 for more information about adding new TOU schedules.

4. The search results appear on the TOU Schedule list screen.

The TOU Schedule list screen displays the following information for each record:

- UID
- TOU Schedule Name
- Season Schedule
- Note
- Validated

See **Viewing and Editing Time of Use Schedules** on page 7-16 for more information about viewing individual records.

5. To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by TOU Schedule Name, click the TOU Schedule Name column heading. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.
6. To view a record, click on the corresponding [...] link. The selected record will appear in the Edit TOU Schedule screen. See **Viewing and Editing Time of Use Schedules** on page 7-16 for more information.
7. To perform another search, click **Search**. To refresh the contents of the list screen, click the refresh icon.
8. *Optional.* To add a new record, click **Add**. See **Adding Time of Use Schedules** on page 7-17 for more information about adding new TOU schedules.

Viewing and Editing Time of Use Schedules

Individual TOU schedules are viewed on the Edit TOU Schedule screen. This screen opens when you select a record from the TOU Schedule search results screen.

How to view and edit TOU schedules:

1. Click on the [...] link for the TOU schedule you wish to view. The selected record opens in the Edit TOU Schedule screen.

<input type="checkbox"/>	* TOU Period Name	* Season Period	M	T	W	Th	F	S	Su	H	* Start Time	* Stop Time
<input type="checkbox"/>	ON_PEAK	SUMMER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	12 : 00	21 : 00				
<input type="checkbox"/>	OFF_PEAK	SUMMER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	00 : 00	12 : 00				
<input type="checkbox"/>	OFF_PEAK	SUMMER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	21 : 00	24 : 00				
<input type="checkbox"/>	OFF_PEAK	SUMMER	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	00 : 00	24 : 00				
<input type="checkbox"/>	ON_PEAK	WINTER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	06 : 00	10 : 00				
<input type="checkbox"/>	ON_PEAK	WINTER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	18 : 00	22 : 00				
<input type="checkbox"/>	OFF_PEAK	WINTER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	00 : 00	06 : 00				
<input type="checkbox"/>	OFF_PEAK	WINTER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10 : 00	18 : 00				
<input type="checkbox"/>	OFF_PEAK	WINTER	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	22 : 00	24 : 00				
<input type="checkbox"/>	OFF_PEAK	WINTER	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	00 : 00	24 : 00				

The Edit TOU Schedule screen displays the following information for the selected record:

- **Season Schedule:** The name of the season schedule associated with the TOU Schedule.
 - **TOU Schedule Name:** The name of the TOU schedule.
 - **TOU Schedule Note:** An optional note regarding the TOU schedule.
 - **Time of Use Schedule Periods:** A listing of the individual TOU periods defined for the TOU schedule. The following are listed for each TOU period:
 - **TOU Period Name:** The name of the TOU period (from the TOU Period Names table)
 - **Season Period:** The season period (from the Season Schedule associated to the TOU schedule)
 - **Days:** Checkboxes that indicate which days are considered part of the TOU period (M=Monday, T=Tuesday, W=Wednesday, Th=Thursday, F=Friday, S=Saturday, Su=Sunday, H=Holiday)
 - **Start Time:** The start time for the TOU period
 - **Stop Time:** The stop time for the TOU period
2. Edit data in the fields as appropriate. See **Working with Data Types** on page 8-4 for more information about editing data values.

To add a TOU Period, click **Add** (in the Time of Use Schedule Periods pane) and enter the TOU Period Name, Season Period, Days, Start Time, and Stop Time.

To make a copy of an existing TOU Period, check the TOU Period to copy, click **Add** (in the Time of Use Schedule Periods pane), and edit the TOU Period Name, Season Period, Days, Start Date, and Stop Date.

To delete a TOU Period, check the corresponding checkbox(es) and click **Delete** (in the Time of Use Schedule Periods pane).

3. To save changes made to the record, click **Save**. To save the edited record as a new record, click **Save As New**.

Note: The **Save As New** option only works if the identity of the record has been changed.

4. To perform a new search, click **Search**.
5. To open a list of records, click **List**.

Adding Time of Use Schedules

You can also add new TOU schedules.

How to add TOU schedules:

1. Click **Add** on either the Time of Use Schedule search or list screens. A blank Edit TOU Schedule screen opens.
2. Select the season schedule to be associated to the TOU Schedule from the **Season Schedule** drop-down list.
3. Enter the name of the TOU schedule in the **TOU Schedule Name** field.
4. Enter an optional note for the TOU schedule in the **TOU Schedule Note** field.
5. Enter the TOU periods for the TOU schedule in the Time of Use Schedule Periods pane. Be sure to follow the **Rules for Creating TOU Schedules** on page 7-14 when creating TOU schedule periods.

For each TOU period in the TOU Schedule, click **Add** (in the Time of Use Schedule Periods pane) and enter the following:

- **TOU Period Name:** The name of the TOU period (from the TOU Period Names table)
 - **Season Period:** The season period (from the Season Schedule associated to the TOU schedule)
 - **Days:** Checkboxes that indicate which days are considered part of the TOU period (M=Monday, T=Tuesday, W=Wednesday, Th=Thursday, F=Friday, S=Saturday, Su=Sunday, H=Holiday)
 - **Start Time:** The start time for the TOU period
 - **Stop Time:** The stop time for the TOU period
6. To save the record, click **Save**. The new season schedule appears on the screen.

Security Administration

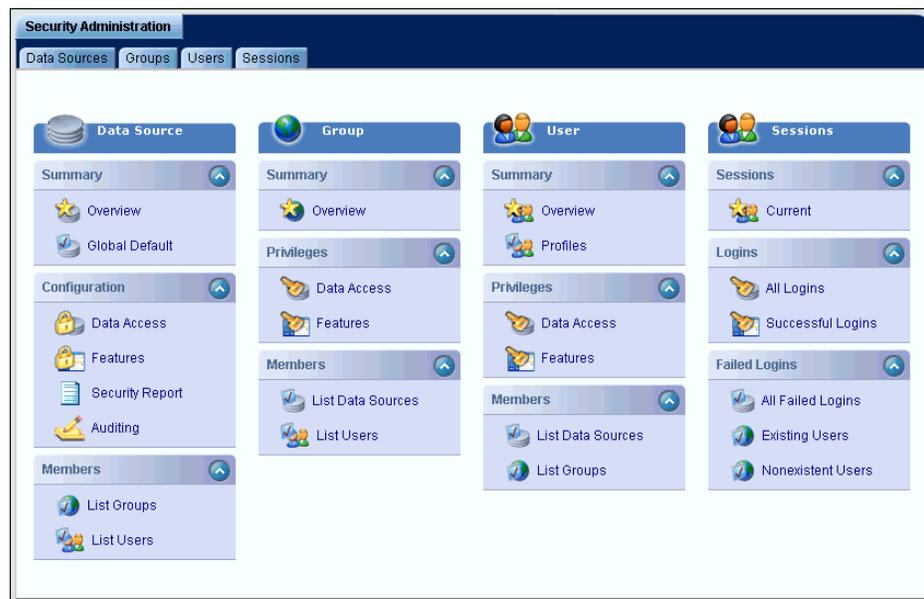
The Security Admin option allows users and administrators to set up and administer security for the entire Energy Information Platform.

The Security Administration screen allows administrators to configure and administer security, and includes the following options:

- **Security Administration Map**
- **Data Sources**
- **Groups**
- **Users**
- **Sessions**
- **Granting Data Privileges**

Security Administration Map

When a user selects the **Security Admin** option from the **Tools and Utilities** menu, the Security Administration map screen opens.



Security Administration Functions

The Security Administration map screen displays a set of navigation panes that allows users to quickly navigate to any of the main functions related to Data Sources, Groups, or Users, including:

- **Data Source->Summary->Overview:** Opens the data source overview screen for the current data source. See **Summary: Overview** under **Data Sources** for more information.
- **Data Source->Summary->Global Default:** Allows the administrator to select the global default data source. See **Summary: Global Default** under **Data Sources** for more information.
- **Data Source->Configuration->Data Access:** Opens the Data Access configuration screen which allows administrators to configure data access for the current data source. See **Configuration: Data Access** under **Data Sources** for more information.
- **Data Source->Configuration->Features:** Opens the Features configuration screen which allows administrators to configure navigator features for the current data source. See **Configuration: Features** under **Data Sources** for more information.
- **Data Source->Configuration->Security Report:** Opens the Report Parameters screen for a report which lists the feature privileges by user or group for a selected data source. See **Configuration: Security Report** under **Data Sources** for more information.
- **Data Source->Configuration->Auditing:** Opens the Auditing configuration screen which allows administrators to configure auditing for the current data source. See **Configuration: Auditing** under **Data Sources** for more information.
- **Data Source->Members->List Groups:** Opens the Groups members screen that lists all groups for which either data or feature privileges have been defined for the data source for the currently selected data source. See **Members: List Groups** under **Data Sources** for more information.
- **Data Source->Members->List Users:** Opens the Users members screen that lists all users for which either data or feature privileges have been defined for the currently selected data source. See **Members: List Users** under **Data Sources** for more information.
- **Group->Summary->Overview:** Opens the data source overview screen for the current group. See **Summary: Overview** under **Groups** for more information.
- **Group->Privileges->Data:** Opens the Data Privileges screen which allows administrators to grant data privileges to the current group. See **Privileges: Data Access** under **Groups** for more information.
- **Group->Privileges->Features:** Opens the Features Privileges screen which allows administrators to grant feature privileges to the current group. See **Privileges: Features** under **Groups** for more information.
- **Group->Members->List Data Sources:** Opens the Data Sources members screen that lists all data sources and indicates those for which either data or feature privileges have been defined for the current group. See **Members: List Data Sources** under **Groups** for more information.
- **Group->Members->List Users:** Opens the Users members screen that lists all users and indicates those assigned to the current group. See **Members: List Users** under **Groups** for more information.
- **User->Summary->Overview:** Opens the data source overview screen for the current user. See **Summary: Overview** under **Users** for more information.
- **User->Privileges->Data:** Opens the Data Privileges screen which allows administrators to grant personal data privileges to the current user. See **Privileges: Data Access** under **Users** for more information.

- **User->Privileges->Features:** Opens the Features Privileges screen which allows administrators to grant personal feature privileges to the current user. See **Privileges: Features** under **Users** for more information.
- **User->Members->List Data Sources:** Opens the Data Sources members screen that lists all data sources and indicates those for which either data or feature privileges have been defined for the current user. See **Members: List Data Sources** under **Users** for more information.
- **User->Members->List Groups:** Opens the Groups members screen that lists all groups and indicates those to which the current user is assigned. See **Members: List Groups** under **Users** for more information.
- **Sessions->Sessions->Current:** Opens the Current Sessions screen that lists all current sessions. See **Sessions: Current** under **Sessions** for more information.
- **Sessions->Logins->All Logins:** Opens the All Logins screen that lists the last (or most current) login attempts for all users, including both successful and failed attempts. See **Logins: All Logins** under **Sessions** for more information.
- **Sessions->Logins->Successful Logins:** Opens the Successful Logins screen that lists the most current successful login attempts for each user. See **Logins: Successful Logins** under **Sessions** for more information.
- **Sessions->Failed Logins->All Failed Logins:** Opens the All Failed Logins screen that the most current failed login attempts for each user. See **Failed Logins: All Failed Logins** under **Sessions** for more information.
- **Sessions->Failed Logins->Existing Users:** Opens the Existing Users screen that lists the most current login attempts for all existing users. See **Failed Logins: Existing Users** under **Sessions** for more information.
- **Sessions->Failed Logins->Nonexistent Users:** Opens the Nonexistent Users screen that lists the most current failed login attempts for nonexistent users. See **Failed Logins: Nonexistent Users** under **Sessions** for more information.

Security Administration Screen Tabs

In addition, clicking on the tabs at the top of this screen allows users to navigate between security functions.

- **Data Sources:** opens the Data Sources overview screen.
- **Groups:** opens the Groups overview screen.
- **Users:** opens the Users overview screen.
- **Sessions:** opens the Current Sessions screen.

The current active tab is white. Inactive tabs are blue. Clicking on the active tab reloads the default screen for that tab (as above).

Data Sources

The Data Sources screens allow administrators to maintain and update Data Sources in the Security system. Clicking on the Data Sources tab opens the Data Sources Overview screen, which includes the following options:

- **Summary: Overview**
- **Summary: Global Default**
- **Configuration: Data Access**
- **Configuration: Features**
- **Configuration: Security Report**
- **Configuration: Auditing**
- **Members: List Groups**
- **Members: List Users**

As the user moves from the screen to screen while working with data sources, the currently selected data source is indicated at the top of the Data Sources navigation pane.



Note: If this is the first time working with Data Sources, the Data Source list screen opens instead of the overview screen. Click the Data Source ID of the data source you wish to work with to open that data source in the Overview screen.

Summary: Overview

The Overview screen provides basic information about the data source, and provides several options for creating and maintaining data sources.

How to view a list of all available data sources:

1. Click **List Data Sources** on the Overview screen. The Overview List screen opens.

This screen lists all the available data sources. The presence of one or more icons in the **Secured** column indicates if Navigator Features and/or Data Access has been configured for each.

Icon	Meaning
	Indicates that Navigator Features have been configured for the data source. Clicking this icon opens the Configuration: Features screen for the selected data source.
	Indicates that Data Access has been configured for the data source. Clicking this icon opens the Configuration: Data Access screen for the selected data source.

2. To view a data source, click the **ID** link. The data source opens on the accessed screen. For instance, if you were configuring data access for a data source, and then viewed the list and selected a different data source from the list, the selected data source would open in the **Configuration: Data Access** screen.

How to edit an existing data source:

1. Open the data source you wish to edit on the **Overview** screen.

To open a data source from the Overview List screen, click the ID of the appropriate data source, and (if necessary) click **Overview** on the Data Source navigation pane.

2. Edit the data source as appropriate. You can make changes to the following data:
 - **Name:** Edit the text in the Name field as needed.
 - **Type:** Select the appropriate type from the drop-down list. There are two types available:
 - Oracle
 - MS SQL.
 - **Qualifier:** Edit the database qualifier in the Qualifier field as appropriate. Qualifiers cannot be longer than eight (8) characters in length.

Connect String: Edit the text in the Connect String field as appropriate. A connect string consists of the following elements separated by semi-colons:

For Oracle databases:

```
Data Source=<data_source>;User  
ID=<user_id>;Password=<password>;LSProvider=ODP;
```

For Microsoft SQL databases:

```
Data Source=<address>;Initial Catalog=<SQL_database>;User  
Id=<user_id>;Password=<password>;MultipleActiveResultSets=True;LSProvi  
der=MSSQL;
```

where:

- <data_source> is the Oracle TNS Name for the data source, from the TNS_NAMES.ora file (typically located in the \\<machine>\oracle\network\admin directory)
 - <user_id> is the user ID for the database connection
 - <password> is the password for the supplied user ID.
 - <address> is the IP address or Hostname of the MS SQL Server database server
 - <SQL_database> is the name of the MS SQL Server database
- **Data Access:** To edit the data access configuration, click the **Edit** link in the Data Access portion of the screen. This opens the **Configuration: Data Access** screen.
3. Click **Save** to save the changes. To reset the data source to the previously saved version, click **Refresh**.

Note: The password characters are masked (replaced with dots) when the data source is saved.

How to add a new data source:

1. Click **Add Data Source** on the Overview screen. A blank Overview screen opens.
2. Enter data for the data source as appropriate. You can enter the following data:
 - **ID:** Enter an ID for the data source. The Data Source ID must be unique, and must not contain any spaces.
 - **Name:** Enter a Name for the data source.
 - **Type:** Select the appropriate type from the drop-down list. There are two types available:
 - Oracle
 - MS SQL.
 - **Qualifier:** Enter the database qualifier for the data source. Qualifiers cannot be longer than eight (8) characters in length.

- **Connect String:** Enter the text in the Connect String field as appropriate. A connect string consists of the following elements separated by semi-colons:

For Oracle databases:

```
Data Source=<data_source>;User
ID=<user_id>;Password=<password>;LSProvider=ODP;
```

For Microsoft SQL databases:

```
Data Source=<address>;Initial Catalog=<SQL_database>;User
Id=<user_id>;Password=<password>;MultipleActiveResultSets=True;LSProvi
der=MSSQL;
```

where:

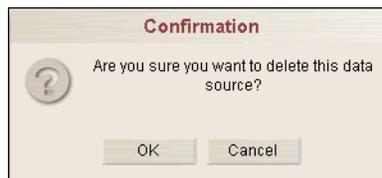
- <data_source> is the Oracle TNS Name for the data source, from the TNS_NAMES.ora file (typically located in the \\<machine>\oracle\network\admin directory)
 - <user_id> is the user ID for the database connection
 - <password> is the password for the supplied user ID.
 - <address> is the IP address or Hostname of the MS SQL Server database server
 - <SQL_database> is the name of the MS SQL Server database
3. Click **Save** to save the changes. To cancel without saving the data source, click **Cancel** (which returns you to the last screen you viewed).

Note: The password characters are masked (replaced with dots) when the data source is saved.

How to delete an existing data source:

1. Click **Delete Data Source**.

A confirmation dialog opens asking you to verify that you want to delete the data source.



2. Click **OK** to delete the data source. Click **Cancel** to close the dialog without deleting the data source.

Summary: Global Default

The Global Default screen allows users to select which data source is the global default data source. This is used to determine which data source users access when logging into the Oracle Utilities Energy Information Platform.

How to set a data source as the global default:

1. Click **Global Default** on the Data Source navigation pane. The Global Default screen opens.
2. Select the data source you wish to make the global default from the list, and click **Set Global Default**.

Configuration: Data Access

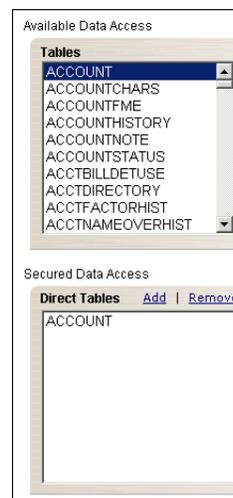
The Data Access screen allows users to configure data access for the currently selected data source.

Data access can be configured for both Direct security (securing specific tables, such as the Account or Customer table) and for Specified Indirect security (indirect security that flows up from a Child to Parent table, where the Child table in question has been secured in some manner, such as Direct security).

In both cases, data access is configured by selecting one or more tables that are to be secured. Once data access is configured for a data source, data privileges can be assigned to a specific group or user. See **Working with Record-Level Security** on page 12-9 in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information.

How to configure Direct security:

1. Open the data source you wish to configure on the **Data Access** screen.
To open a data source from the Overview List screen, click the ID of the appropriate data source, and (if necessary) click **Data Access** on the Data Source navigation pane.
2. Select the table you wish to secure in the **Tables** box in the **Available Data Access** pane.
3. Click the **Add** link that appears above the **Direct Tables** box in the **Secured Data Access** pane. The selected table now appears in the **Direct Tables** box.

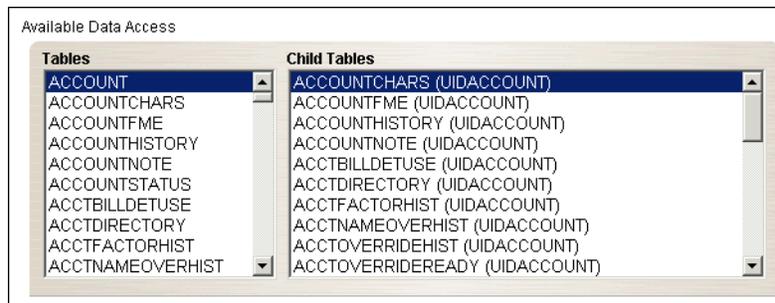


Note that a table cannot be secured both Directly and Indirectly (via Specified Indirect security).

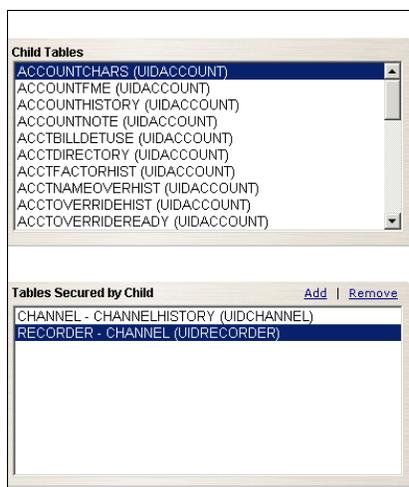
4. To remove a table from the data access configuration, select the table in the the **Direct Tables** box in the **Secured Data Access** pane and click the **Remove** link.
5. Click **Save Data Access** to save the current data access configuration. Click **Clear Data Access** to clear the current data access configuration. To reset the data access configuration to the previously saved version, click **Refresh**.

How to configure Specified Indirect security:

1. Open the data source you wish to configure on the **Data Access** screen.
To open a data source from the Overview List screen, click the ID of the appropriate data source, and (if necessary) click **Data Access** on the Data Source navigation pane.
2. Select the parent table you wish to secure in the **Tables** box in the **Available Data Access** pane. A list of child tables for the selected table appears in the **Child Tables** box.



3. Select the child table by which you wish to secure the parent in the **Child Tables** box in the **Available Data Access** pane.
4. Click the **Add** link that appears above the **Tables Secured by Child** box in the **Secured Data Access** pane. The selected table now appears in the **Tables Secured by Child** box.



Note that a table cannot be secured both Directly and Indirectly (via Specified Indirect security).

5. To remove a table from the data access configuration, select the table in the **Tables Secured by Child** box in the **Secured Data Access** pane and click the **Remove** link.
6. Click **Save Data Access** to save the current data access configuration. Click **Clear Data Access** to clear the current data access configuration. To reset the data access configuration to the previously saved version, click **Refresh**.

Viewing Data Access Dependencies

As tables are added to the data access configuration, it's important to consider the implications of securing each table, and the dependencies between the tables in the Oracle Utilities Data Repository. For example, because direct security applied to a table is also inherited by the children and descendants of that table, any data access restrictions placed on a parent table act as a filter on all the child (and descendant) tables of the secured table.

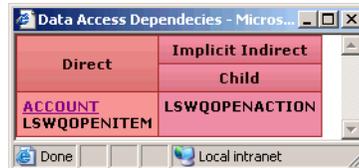
There are two tools that illustrate data access dependencies: the Data Access Dependencies window, and the Data Access Digraph.

How to open the Data Access Dependencies window:

1. Click **View Dependencies** on the Data Access screen. The Data Access Dependencies window opens.

This window displays a list of all directly secured tables, and all the child and grandchild tables (and descendants if applicable) secured via inherited indirect security.

2. To view the dependencies of a directly secured table, click the name of the table in the **Direct** column. The **Inherited Indirect** column will then display all the corresponding child and grandchild tables (and descendants if applicable).



How to open the Data Access Digraph:

1. Click **View Digraph** on the Data Access screen. The Data Access Digraph opens.

This window provides a graphical depiction of all directly secured tables, and all the child and grandchild tables (and descendants if applicable) secured via inherited indirect security. The top of the window includes a legend that explains what each symbol in the picture represents. By default, the digraph displays directly secured tables and their corresponding child tables.

2. To change the depth of the digraph and view grandchild and later descendants, click the desired depth in the **Depth** column.
3. To change the size of the digraph, click the appropriate percentage in the **Zoom** column.

Configuration: Features

The Features screen allows users to configure Data Navigator features (tables and columns in the Oracle Utilities Data Repository) for the currently selected data source.

Navigator features are tables and columns in the Oracle Utilities Data Repository. This allows administrators to restrict access to specific tables (and columns within those tables) via Data Navigator, as well as restrict Insert, Update, and Delete actions on records in secured tables.

Navigator features are configured by selecting one or more tables and/or columns that are to be securable. Once navigator features are configured for a data source, feature privileges can be assigned for each table (and corresponding columns) to a specific group or user. See **Working with Function-Level Security** on page 12-7 in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information.

How to configure Navigator Features:

1. Open the data source you wish to configure on the **Features** screen.

To open a data source from the Overview List screen, click the ID of the appropriate data source, and (if necessary) click **Features** on the Data Source navigation pane.

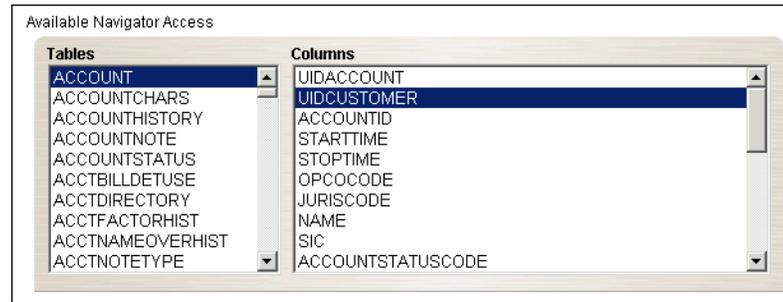
2. Select the table you wish to secure in the **Tables** box in the **Available Navigator Access** pane. A list of columns from the selected table appears in the **Columns** box.

The screenshot shows the 'Available Navigator Access' pane. It contains two lists: 'Tables' and 'Columns'. The 'Tables' list includes: ACCOUNT, ACCOUNTCHARS, ACCOUNTHISTORY, ACCOUNTNOTE, ACCOUNTSTATUS, ACCTBILLDETUSE, ACCTDIRECTORY, ACCTFACTORHIST, ACCTNAMEOVERHIST, and ACCTNOTETYPE. The 'Columns' list includes: UIDACCOUNT, UIDCUSTOMER, ACCOUNTID, STARTTIME, STOPTIME, OPCOCODE, JURISCODE, NAME, SIC, and ACCOUNTSTATUSCODE. The 'ACCOUNT' table is selected in the 'Tables' list, and its columns are listed in the 'Columns' list.

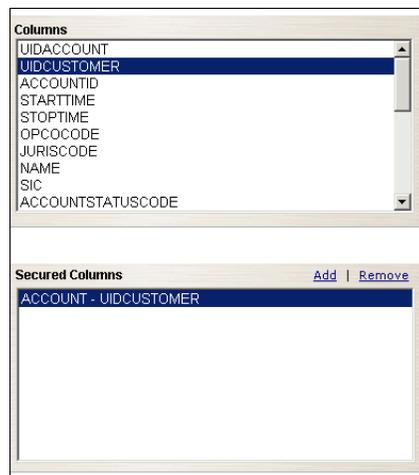
3. Click the **Add** link that appears above the **Secured Tables** box in the **Secured Navigator Access** pane. The selected table now appears in the **Secured Tables** box.

The screenshot shows the 'Available Navigator Access' pane, which is identical to the previous one. Below it is the 'Secured Navigator Access' pane. It contains two boxes: 'Secured Tables' and 'Secured Columns'. The 'Secured Tables' box now contains the text 'ACCOUNT' and 'JURISDICTION'. The 'Secured Columns' box is empty. Above the 'Secured Tables' box are the links 'Add' and 'Remove'. Above the 'Secured Columns' box are the links 'Add' and 'Remove'.

- To secure a column, select the table that corresponds to the column in the **Tables** box in the **Available Navigator Access** pane. A list of columns for the selected table appears in the **Columns** box.



- Select the column you wish to secure, and click the **Add** link that appears above the **Secured Columns** box in the **Secured Navigator Access** pane. The selected column now appears in the **Secured Columns** box. Note that securing a column automatically secures the corresponding table.



- To remove a table from the navigator features configuration, select the table in the the **Secured Tables** box in the **Secured Navigator Access** pane and click the **Remove** link. Note that removing a table from navigator automatically removes any columns from that table as well.
- To remove a column from the navigator features configuration, select the column in the the **Secured Columns** box in the **Secured Navigator Access** pane and click the **Remove** link.
- Click **Save Configuration** to save the current configuration. Click **Delete Configuration** to clear the current configuration. To reset the navigator features configuration to the previously saved version, click **Refresh**.

Viewing Features Dependencies

As tables are added to the navigator features configuration, it's important to consider the implications of securing each table, and the dependencies between the tables in the Oracle Utilities Data Repository. For example, restricting access to a parent table also restricts access to that table's children and descendants. The Dependencies diagram is a tool that illustrates these navigator feature dependencies.

How to open the Features Digraph:

1. Click **View Digraph** on the Features screen. The Dependencies Digraph opens.

This window displays the relationships (if any) between the tables in the current navigator features configuration. The top of the window includes a legend that explains what each symbol in the picture represents.

Configuration: Security Report

The Security Report downloads a list of feature privileges by user or group for a selected data source to an XML file.

How to run the Security Report:

1. Click **Security Report** on the Data Source navigation pane.
2. The Enter Report Parameters screen opens.
3. Select the Data Source you wish to report on from the **Data Source** drop-down list.
4. Select whether you wish to run the report by User ID or Group from the **Report by** drop-down list.
5. Click **Download** to download an XML file containing the report.

Configuration: Auditing

The Auditing screen allows users to configure auditing for the currently selected data source. Auditing tracks changes to selected tables in the Oracle Utilities Data Repository. Whenever a user makes a change to an audited table (such as performing an Insert, Update, or Delete action), the change is tracked in the database.

There are two types of auditing: Basic auditing and Full auditing. When using Basic auditing, whenever a user changes a database record, the user's user ID and the time the record was changed are logged in the User ID and Timestamp columns on the changed record. When using Full Auditing, the specific changes to the record are logged in the Database Audit (LSDBAUDIT) table.

See **Database Auditing** on page 11-36 in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information.

How to Configure Auditing:

1. Open the data source you wish to configure on the **Auditing** screen.

To open a data source from the Overview List screen, click the ID of the appropriate data source, and (if necessary) click **Auditing** on the Data Source navigation pane.

2. Select the table you wish to audit in the **Tables and their CLOB columns to audit** box.

The tree provides a graphic representation of the tables that can be audited. The tree displays these in an alphabetical list, based on each table's visible name. The actual database name appears in parentheses.

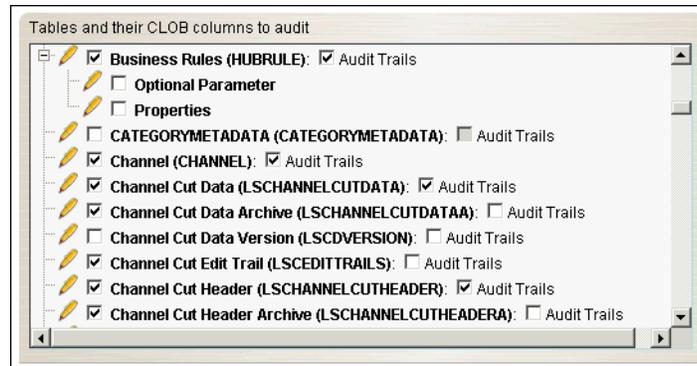
Each of the auditable tables and CLOB columns is listed in the tree. Each table on the tree has a corresponding checkbox and an Audit Trails checkbox. Checking Audit Trails for a table will automatically check its parent table. Unchecking a table will automatically uncheck the Audit Trails checkbox for the table.

To enable Basic auditing for a table, check the checkbox that precedes the table name. To enable Basic auditing for all tables, press and hold the Alt key and click the Auditing icon



To enable Full auditing for a table, check the **Audit Trails** checkbox that corresponds to the table to be audited. To enable Full auditing for all tables and CLOB columns), press and hold the Ctrl key and click the Auditing icon ().

3. *Optional.* Select the CLOB columns you wish to audit. By default, CLOB columns are not audited.



Tables with CLOB columns (indicated by a plus (“+”) sign) have tree branches beneath them listing each of the CLOB columns. Clicking the “+” next to a table opens the tree branch of that table, displaying its CLOB columns. Clicking the “-” closes the tree branch of that table.

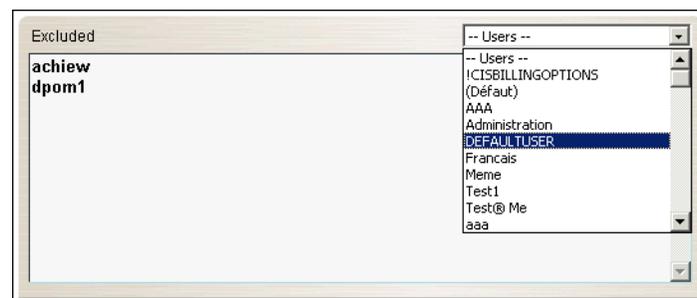
Checking Audit Trails for a table will automatically check its parent table. Checking a CLOB column for a table will automatically check Audit Trails and its parent table. Unchecking a table (or the Audit Trails checkbox for the table) will automatically uncheck all CLOB columns for that table.

To enable audit for a CLOB column, check the checkbox that corresponds to the column.

4. *Optional.* Specify any users who should be excluded from auditing.

Individual users can be excluded from auditing. This provides the flexibility to exclude database updates performed via batch processing (such as data import) from auditing.

To exclude a user (or users) from auditing, enter the user’s user ID in the Excluded box on the Auditing screen. You can either type the User ID manually, or in the case of user ID defined in the Security database, you can select the user ID to exclude from the Users drop-down list.



5. Click **Save Configuration** to save the current auditing configuration. To reset the navigator features configuration to the previously saved version, click **Refresh**.

Audit Reports

When using Full auditing, changes made to database records are logged in the Database Audit (LSDBAUDIT) table. The Audit Report option allows administrators to view and produce audit reports.

How to open the Audit Report:

1. Click **Audit Report** on the Auditing screen.

The **Audit Report** screen opens.

This screen lists all changes logged in the Database Audit (LSDBAUDIT) table. Changes are logged by column, meaning if a user changes values in three columns of a single record, the Audit Report will list three records, one for each column.

Each change listed on the Audit Report includes the following:

- **Time:** the time at which the change was made.
 - **User:** The User ID of the user who made the change.
 - **Event:** The type of change (U=Update, I=Insert, D=Delete).
 - **Table:** The table in which the change was made.
 - **Key:** The resolved identity of the record, displayed as a comma-separated list.
 - **Column or Full:** The column in which the change was made (for Update events), or the full comma-separated record (for Insert or Delete events).
 - **Value Before:** The value of the column before the change (Update events only).
 - **Value After:** The value of the column after the change (Update events only).
2. To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by Time, click the Season Schedule Time column heading. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field and press the **Enter** key.
 3. To filter the results, enter filtering criteria in the fields at the top of the screen and click **Search**. You can filter results by:
 - **Table:** the table for which you wish to view changes. Select the table from the drop-down list
 - **Key:** the identity of the changed record. The identity must be in double quotes (“”). When filtering by Key, the percent sign (%) can be used as a wildcard character, but the double quotes (“”) are considered part of the key.
 - **User:** the user ID of the user who made the change(s)
 - **Date Range:** the date range in which the change(s) was made
 - **Time:** a list of “Quick Pick” times (Today, Yesterday, This Week, Last Week, This Month, Last Month, This Year, or Last Year) during which the change(s) was made
 - **Event:** The type of change, Insert, Update, or Delete
- To reset the fields to their previous values, click **Reset**. To clear all the search fields, click **Clear**.

4. *Optional.* By default the Audit Report does not show CLOB columns. To display CLOB columns, check the **Show CLOBs** checkbox in the upper right corner of the Audit Report screen.

CLOB columns are designated by a CLOB link. For Updates to CLOB columns, a CLOB link appears in both the **Value Before** and **Value After** columns. For Inserts and Deletes, a CLOB link appears within the comma-separated record.

To view the data in a CLOB column, click the **CLOB** link. A window opens displaying the data of the selected CLOB column.

5. *Optional.* To export the current results to a Microsoft Excel file, click **Export**.

The **File Download** dialog opens.

To open the file, click **Open**. The file opens in Microsoft Excel within the Main Window.

To save the file, click **Save**. A **Save As** dialog opens. Select the destination location for the file, enter a name for the file, and click **Save**. The default name of the file is “export.xls.”

Note: CLOB columns are not exported.

6. *Optional.* To generate a persistent report based on the current results, click **Report**.

The **Report Generate** screen opens.

When the report generation is complete, the report will appear on the (Tools and Utilities) **View Reports** screen. The report can then be viewed or emailed. See **View Reports** on page 7-77 in the *Oracle Utilities Energy Information Platform User's Guide* for more information about viewing reports.

Note: You must be currently accessing the data source upon which the audit report is based in order to generate this report. See **Data Sources** on page 3-6 in the *Oracle Utilities Energy Information Platform User's Guide* for more information.

Members: List Groups

The List Groups screen displays a list of all the groups associated with the currently selected data source. Groups are considered associated to a data source if the group has Feature Privileges defined for that data source. See **Groups**, below for more information about groups.

How to view a list of groups associated to a data source:

1. Open the data source you wish to configure on the **Groups** screen.

To open a data source from the Overview List screen, click the ID of the appropriate data source, and (if necessary) click **List Groups** on the Data Source navigation pane.

The List Groups screen displays a list of all the groups associated with the data source.

2. To view a group on the list, click the group **Name**. The selected group will open on the Groups **Overview** screen.

Members: List Users

The List Users screen displays a list of all the users associated with the currently selected data source. Users are considered associated to a data source if the user has Feature Privileges defined for that data source. See **Users**, below for more information about users.

How to view a list of user associated to a data source:

1. Open the data source you wish to configure on the **Users** screen.

To open a data source from the Overview List screen, click the ID of the appropriate data source, and (if necessary) click **List Users** on the Data Source navigation pane.

The List Users screen displays a list of all the users associated with the data source, including the user ID, profile, and default data source for each.

- To view a user on the list, click the user **ID**. The selected user will open on the Users **Overview** screen.

Groups

The Groups screens allow administrators to maintain and update groups in the Security system. Clicking on the Groups tab opens the Groups overview screen, which includes the following options:

- **Summary: Overview**
- **Privileges: Data Access**
- **Privileges: Features**
- **Members: List Data Sources**
- **Members: List Users**

As the user moves from the screen to screen while working with groups, the currently selected group is indicated at the top of the Group navigation pane.



Note: If this is the first time working with Groups, the Groups list screen opens instead of the overview screen. Click the Group ID of the group you wish to work with, and the selected group will open in the Overview screen.

Summary: Overview

The Overview screen provides basic information about the currently selected group, and provides several options for creating and maintaining groups.

How to view a list of all available groups:

- Click **List Groups** on the Overview screen. The Overview List screen opens.

This screen lists all the available groups. To view a group, click the **Name** link. The group opens on the last accessed screen. For instance, if you were granting feature privileges for a group, and then viewed the list and selected a different group from the list, the selected group would open in the **Privileges: Features** screen.

How to add a new group:

- Click **Add Group** on the Overview screen. A blank Overview screen opens.
- Enter a name for the new group in the Name field. Names can be from 1 to 64 characters in length and can include upper and lower case letters. Group names are **case-sensitive**. For example, there is a difference between the “Admin” and “admin” groups.
- Click **Save** to save the changes. To cancel without saving the group, click **Refresh** (which returns you to the last screen you viewed).

How to delete an existing group:

- Click **Delete Group**.
A confirmation dialog opens asking you to verify that you want to delete the group.
- Click **OK** to delete the group. Click **Cancel** to close the dialog without deleting the group.

Privileges: Data Access

The Data Privileges option allows users to grant the currently selected group privileges to data in one or more data sources.

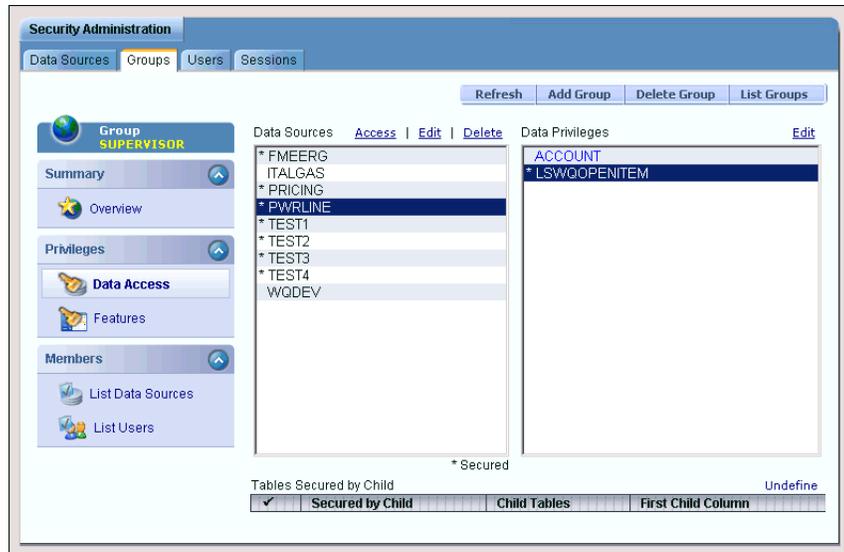
How to grant data access privileges to a group:

1. Open the group you wish to work with on the **Overview** screen.

To open a group from the Overview List screen, click the Name of the appropriate group, and (if necessary) click **Overview** on the Group navigation pane.

2. Click **Data** on the Group navigation pane. The Data screen opens.

The Data screen lists the data sources to which the user can grant data privileges.



3. Select the data source you wish to work with in the **Data Sources** column. Tables marked with an asterisk are those whose data privileges have been granted for the currently selected group.
4. A list of tables configured for the selected data source (if any) will display in the **Data Privileges** column. In addition, any tables secured by Child are listed in the **Tables Secured by Child** section at the bottom of the screen.

To edit the data access configuration for the selected data source, click the **Access** link above the **Data Sources** column. To edit the selected data source, click the **Edit** link above the **Data Sources** column. To delete the selected data source, click the **Delete** link above the **Data Sources** column.

5. Click the **Edit** link above the **Data Privileges** column. The Data Privileges screen opens.

This screen allows users to configure data privileges for the currently selected group. See **Granting Data Privileges** for more information.

Privileges: Features

The Features Privileges option allows users to grant the currently selected group privileges to features for one or more data sources. Features are screens, functions, and operations available through the Oracle Utilities Energy Information Platform, including tables in Data Navigator.

How to grant features privileges to a group:

1. Open the group you wish to work with on the **Overview** screen.

To open a group from the Overview List screen, click the Name of the appropriate group, and (if necessary) click **Overview** on the Group navigation pane.

2. Click **Features** on the Group navigation pane. The Features screen opens, displaying an expandable tree that contains all the features that can be granted.
3. Select the data source you wish to work with in the **Data Sources** column. Tables marked with an asterisk are those whose features privileges have been granted for the currently selected group.
4. Assign features privileges for the group as appropriate in the Feature Privileges tree.

The tree provides a graphic representation of the menu items, functions, and fields that can be secured. The tree displays these in a hierarchical structure similar to the structure of the Left Menu. Each line of this structure is referred to as a **node**. Each menu item, function, or field represented on the tree is referred to as an **element**.

Each of the menu items and functions accessible and securable in the application (such as Account Management, Set Preferences, etc.) are listed in the tree. The menu items and/or commands that can be secured for each main menu item are listed beneath each main menu node. Clicking the “+” next to a node opens the tree branch of that node, displaying its child nodes. Clicking the “-” closes the tree branch of that node.

Each element on the tree has a corresponding checkbox. Selecting an element enables the menu item and/or function for the role. For example, to enable users with the “Admin” group to access the Locales tab on the Set Preferences screen, you would select the Locales element. Checking a child element will check all parents of that element. Unchecking an element will uncheck all children of that element.

Some elements can be further secured by enabling/disabling or restricting specific operations related to the element. These restrictions are represented by **element attributes**.

There are two types of element attributes: permission attributes and value attributes. Permission attributes enable/disable access to the function or operation they represent. For example, each of the Security functions (Data Sources, Groups, Users, Data Privileges, and Sessions) includes a “Delete” permission attribute that allows enabling/disabling of the Delete operation of each of the Security functions. Value attributes restrict operations by a minimum or maximum value. For example, some functions can be restricted so that users can only perform those functions based on a minimum or maximum value.

All element attributes appear on the same node of the tree as their respective element. Each permission attribute has a corresponding checkbox. Each value (Min/Max) attribute has a corresponding text box in which the appropriate value can be entered.

Element attributes are disabled if their corresponding element is not checked, including all descending attributes.

To select all elements and attributes, press and hold the Ctrl key and click the Features icon



5. Click **Save Features** to save the changes. To delete all feature privileges for the selected data source, click **Delete Privileges**. To cancel without saving the changes, click **Refresh** (which returns you to the last screen you viewed).

Members: List Data Sources

The List Data Sources screen displays a list of all the data sources and indicates which associated with the currently selected group. Data sources are considered associated to a group if the group has Feature Privileges defined for that data source. See **Data Sources**, above for more information about data sources.

How to view a list of data sources associated to a group:

1. Open the group you wish to view on the **Data Sources** screen.

To open a group from the Overview List screen, click the ID of the appropriate group, and (if necessary) click **List Data Sources** on the Group navigation pane.

The List Data Sources screen displays a list of all the data sources associated with the group. The presence of one or more icons in the **Secured** column indicates if Navigator Features and/or Data Access has been configured for each data source. The presence of one or more icons in the **Group** column indicates if Features and/or Data privileges for the data source have been assigned for the currently selected group.

Icon	Meaning
	<ul style="list-style-type: none"> • Secured Column: Indicates that Navigator Features have been configured for the data source. Clicking this icon opens the Configuration: Features screen for the data source. • Group Column: Indicates that Feature Privileges have been assigned to the currently selected group. Clicking this icon opens the Privileges: Features screen for the selected group.
	<ul style="list-style-type: none"> • Secured Column: Indicates that Data Access has been configured for the data source. Clicking this icon opens the Configuration: Data Access screen for the data source. • Group Column: Indicates that Data Privileges have been assigned to the currently selected group. Clicking this icon opens the Privileges: Data Access screen for the selected group.

2. To view a data source on the list, click the data source **ID**. The selected data source will open on the Data Source **Overview** screen.

Members: List Users

The List Users screen displays a list of all the users and indicates which are associated with the currently selected group. Users are associated with groups using the Users screen. See **Users**, below for more information about users.

How to view a list of users associated to a group:

1. Open the group you wish to view on the **Users** screen.

To open a group from the Overview List screen, click the **Name** of the appropriate group, and (if necessary) click **List Users** on the Group navigation pane.

The List Users screen displays a list of all the users associated with the group, including the user ID, profile, and default data source for each.

2. To view a user on the list, click the user **ID**. The selected user will open on the Users **Overview** screen.

How to associate one or more users to a group:

1. Open the group you wish to view on the **Users** screen.

To open a group from the Overview List screen, click the **Name** of the appropriate group, and (if necessary) click **Users** on the Group navigation pane.

The Users screen displays a list of all the users associated with the group, including the user ID, profile, and default data source for each.

2. Check the checkbox(es) for the users to be associated to the group.
3. Click **Set Users** to save your settings. To cancel without saving the changes, click **Refresh**.

Users

The Users screens allow administrators to maintain and update users in the Security system. Clicking on the Users tab opens the User overview screen, which includes the following options:

- **Summary: Overview**
- **Summary: Profiles**
- **Privileges: Data Access**
- **Privileges: Features**
- **Members: List Data Sources**
- **Members: List Users**

As the user moves from the screen to screen while working with users, the currently selected user is indicated at the top of the User navigation pane.



Note: If this is the first time working with Users, the Users search screen opens instead of the overview screen. Click **Search** and then the User ID of the user you wish to work with, and the selected user will open in the Overview screen.

Summary: Overview

The Overview screen provides basic information about the currently selected user, and provides several options for creating and maintaining users.

How to view a list of users:

1. Click **List Users** on the Overview screen. The User Search screen opens.
2. Enter a value to base the search on in the **User ID** field.

You can use the percent sign (“%”) as a wildcard character when entering values in the User ID field. The User ID field automatically appends a wildcard character to the end of any search criteria you enter. For example, if you want to search for all users that begin with the letter G, you could simply enter “G” in the User ID field.

If you want to search for all users that contain the letter G, you could enter “%G” in the User ID field, and the search would retrieve all users that contain the letter G.

User searches are **case-insensitive**, meaning you can search for the letter “g” or “G” and retrieve the same results.

3. Select a Group from the **Group** drop-down list. To search for users of any group, select the top (blank) line from the drop-down list. Click **Search**.
4. The results appear on the Users List screen.

This screen lists all the users that match the search criteria. To view a user, click the **User** link. The user opens on the last accessed screen. For instance, if you were granting feature privileges for a user, and then viewed the list and selected a different user from the list, the selected user would open in the **Privileges: Features** screen.

How to add a new user in Default mode:

1. Click **Add User** on the Overview screen. A blank Overview screen opens.
2. Enter a user id for the new user in the ID field. IDs can be from 1 to 64 characters in length and can include upper and lower case letters. User names are **case-insensitive**. For example, there is no difference between the “Admin” and “admin” users.
3. Enter a password for the user in the **Password** field. By default, passwords can be from 1 to 64 characters in length, can include upper and lower case letters as well as numbers, and are **case-sensitive**. For example, there is a difference between “Password” and “password”. Password-related requirements specified in the LSSECURE.CFG.XML configuration file can override these defaults.
4. Enter the password again in the **Confirm Password** field.
5. Enter an optional profile in the **Profile** field. The default profile for all new users is “(Default)”. See **Summary: Profiles**, below for more information about profiles.
6. To disable the user ID, check the **Disabled** checkbox.
7. Enter an optional email address in the **Email** field. This is used in the From field when sending email from the View Reports screen.
8. Click **Save** to save the new user. To cancel without saving the user, click **Refresh** (which returns you to the last screen you viewed).

How to add a new user in LDAP mode:

1. Click **Add User** on the Overview screen. The Overview screen opens with a list of users in the LDAP server that can be granted access to Oracle Utilities applications.

The list displays only the first 25 users in the LDAP server.

If the user you wish to add does not appear on the list, you can search the LDAP server.

To search the LDAP server, enter a value to base the search on in the LDAP Search (ID) field and click **Search**. The list will display only those LDAP user IDs that match the search criteria.

You can use the percent sign (“%”) as a wildcard character when entering values in the LDAP Search (ID) field. The field automatically appends a wildcard character to the end of any search criteria you enter. For example, if you want to search for all users that begin with the letter G, you could simply enter “G” in the LDAP Search (ID) field.

If you want to search for all users that contain the letter G, you could enter “%G” in the LDAP Search (ID) field, and the search would retrieve all users that contain the letter G.

User searches are **case-insensitive**, meaning you can search for the letter “g” or “G” and retrieve the same results.

To specify the number of user IDs displayed on the list, enter the desired number in the **Result Size** field.

2. Select the user you wish to add from the **ID** drop-down.
3. Enter an optional profile in the **Profile** field. The default profile for all new users is “(Default)”. See **Summary: Profiles**, below for more information about profiles.
4. To disable the user ID, check the **Disabled** checkbox.
5. Enter an optional email address in the **Email** field. This is used in the From field when sending email from the View Reports screen.
6. Click **Save** to save the new user. To cancel without saving the user, click **Refresh** (which returns you to the last screen you viewed).

How to change a user's password:

1. Click **Change Password**.

The Change Password dialog opens.

2. Enter the new password in the Password and Confirm Password fields. By default, passwords can be from 1 to 64 characters in length, can include upper and lower case letters as well as numbers, and are **case-sensitive**. For example, there is a difference between “Password” and “password”. Password-related requirements specified in the LSSECURE.CFG.XML configuration file can override these defaults. Also, any password-related requirements are displayed in the Change Password dialog.
3. Click **Save** to save the new password. Click **Cancel** to close the dialog without changing the user's password.

How to delete an existing user:

1. Click **Delete User**.

A confirmation dialog opens asking you to verify that you want to delete the user.

2. Click **OK** to delete the user. Click **Cancel** to close the dialog without deleting the user.

Summary: Profiles

The Profiles screen displays a list of profiles for the currently selected user, and provides several options for creating and maintaining user profiles.

How to add a new profile for a user:

1. Open the user you wish to work with on the **Profiles** screen.

To open a user from the Overview List screen, click the ID of the appropriate user, and (if necessary) click **Profiles** on the User navigation pane.

2. Click **Add Profile**. A blank Profile screen opens.



3. Enter a name for the new profile in the Profile field. Profile names can be from 1 to 64 characters in length and can include upper and lower case letters. User names are **case-sensitive**. For example, there is a difference between the “Admin” and “admin” profiles.
4. Click **Save Profile** to save the new user profile. To cancel without saving the profile, click **Refresh** (which returns you to the last screen you viewed).

How to delete an existing profile:

1. Select the profile you wish to delete from the Profile list screen by clicking the corresponding **User** link. The currently selected profile will be highlighted in blue.
1. Click **Delete Profile**.
A confirmation dialog opens asking you to verify that you want to delete the profile.
2. Click **OK** to delete the profile. Click **Cancel** to close the dialog without deleting the profile.

Privileges: Data Access

The Data Privileges option allows users to grant the currently selected user privileges to data in one or more data sources.

How to grant data access privileges to a user:

1. Open the user you wish to work with on the **Overview** screen.
To open a user from the Overview List screen, click the ID of the appropriate user, and (if necessary) click **Overview** on the Group navigation pane.
2. Click **Data** on the User navigation pane. The Data screen opens.
The Data screen lists the data sources to which the user can grant data privileges.
3. Select the data source you wish to work with in the **Data Sources** column. Tables marked with an asterisk are those whose data privileges have been granted for the currently selected user.
4. A list of tables configured for the selected data source (if any) will display in the **Data Privileges** column. In addition, any tables secured by Child are listed in the **Tables Secured by Child** section at the bottom of the screen.
To edit the data access configuration for the selected data source, click the **Access** link above the **Data Sources** column. To edit the selected data source, click the **Edit** link above the **Data Sources** column. To delete the selected data source, click the **Delete** link above the **Data Sources** column.
5. Click the **Edit** link above the **Data Privileges** column. The Data Privileges screen opens.

This screen allows users to configure data privileges for the currently selected user. See **Granting Data Privileges** for more information.

Privileges: Features

The Features Privileges option allows users to grant the currently selected user privileges to features for one or more data sources. Features are screens, functions, and operations available through the Oracle Utilities Energy Information Platform, including tables in Data Navigator.

How to grant features privileges to a user:

1. Open the user you wish to work with on the **Overview** screen.
To open a user from the Overview List screen, click the ID of the appropriate user, and (if necessary) click **Overview** on the User navigation pane.
2. Click **Features** on the User navigation pane. The Features screen opens, displaying an expandable tree that contains all the features that can be granted.
3. Select the data source you wish to work with in the **Data Sources** column. Tables marked with an asterisk are those whose features privileges have been granted for the currently selected user.
4. Assign features privileges for the user as appropriate in the Feature Privileges tree.

The tree provides a graphic representation of the menu items, functions, and fields that can be secured. The tree displays these in a hierarchical structure similar to the structure of the

Left Menu. Each line of this structure is referred to as a **node**. Each menu item, function, or field represented on the tree is referred to as an **element**.

Each of the menu items and functions accessible and securable in the application (such as Account Management, Set Preferences, etc.) are listed in the tree. The menu items and/or commands that can be secured for each main menu item are listed beneath each main menu node. Clicking the “+” next to a node opens the tree branch of that node, displaying its child nodes. Clicking the “-” closes the tree branch of that node.

Each element on the tree has a corresponding checkbox. Selecting an element enables the menu item and/or function for the role. For example, to enable users with the “Admin” group to access the Locales tab on the Set Preferences screen, you would select the Locales element. Checking a child element will check all parents of that element. Unchecking an element will uncheck all children of that element.

Some elements can be further secured by enabling/disabling or restricting specific operations related to the element. These restrictions are represented by **element attributes**.

There are two types of element attributes: permission attributes and value attributes. Permission attributes enable/disable access to the function or operation they represent. For example, each of the Security functions (Data Sources, Groups, Users, Data Privileges, and Sessions) includes a “Delete” permission attribute that allows enabling/disabling of the Delete operation of each of the Security functions. Value attributes restrict operations by a minimum or maximum value. For example, some functions can be restricted so that users can only perform those functions based on a minimum or maximum value.

All element attributes appear on the same node of the tree as their respective element. Each permission attribute has a corresponding checkbox. Each value (Min/Max) attribute has a corresponding text box in which the appropriate value can be entered.

Element attributes are disabled if their corresponding element is not checked, including all descending attributes.

To select all elements and attributes, press and hold the Ctrl key and click the Features icon .

5. Click **Save Features** to save the changes. To delete all feature privileges for the selected data source, click **Delete Privileges**. To cancel without saving the changes, click **Refresh** (which returns you to the last screen you viewed).

Members: List Data Sources

The List Data Sources screen displays a list of all the data sources and indicates which are associated with the currently selected user. Data sources are considered associated to a user if the user has Feature Privileges defined for that data source. See **Data Sources**, above for more information about data sources.

How to view a list of data sources associated to a user:

1. Open the user you wish to view on the **Data Sources** screen.

To open a user from the Overview List screen, click the ID of the appropriate user, and (if necessary) click **List Data Sources** on the User navigation pane.

The List Data Sources screen displays a list of all the data sources associated with the user. The presence of one or more icons in the **Secured** column indicates if Navigator Features and/or Data Access has been configured for each data source. The presence of one or more icons in the **Personal** column indicates if Features and/or Data privileges for the data source have been assigned for the currently selected user. The presence of one or more numbers in

the **Group** column indicates the number of groups the currently selected user belongs to for which Features and/or Data privileges for the data source have been assigned..

Icon	Meaning
	<ul style="list-style-type: none"> • Secured Column: Indicates that Navigator Features have been configured for the data source. Clicking this icon opens the Configuration: Features screen for the data source. • Personal Column: Indicates that Feature Privileges have been assigned to the currently selected user. Clicking this icon opens the Privileges: Features screen for the selected user.
	<ul style="list-style-type: none"> • Secured Column: Indicates that Data Access has been configured for the data source. Clicking this icon opens the Configuration: Data Access screen for the data source. • Personal Column: Indicates that Data Privileges have been assigned to the currently selected user. Clicking this icon opens the Privileges: Data Access screen for the selected user.

2. To view a data source on the list, click the data source **ID**. The selected data source will open on the Data Source **Overview** screen.

Viewing User and Data Source Relationships

As users become associated with data sources (through assigning the user Features Privileges for a data source) and with groups, it's important to be able to keep track of those relationships easily. The Users diagram is a tool that illustrates these user/group/data source relationships.

How to open the Users Digraph:

1. Click **View Digraph** on the Data Sources screen. The Users Digraph opens.

This window displays the relationships (if any) between the currently selected user and any groups and/or data sources the user is associated with. The top of the window includes a legend that explains what each symbol in the picture represents.

Members: List Groups

The List Groups screen displays a list of all the groups and indicates which are associated with the currently selected users. Groups are associated with users using the Groups screen. See **Groups**, above for more information about groups.

How to view a list of groups associated to a user:

1. Open the user you wish to view on the **List Groups** screen.

To open a user from the Overview List screen, click the **ID** of the appropriate user, and (if necessary) click **List Users** on the Group navigation pane.

The List Groups screen displays a list of all the groups associated with the user, including the group Name for each.

2. To view a group on the list, click the group **Name**. The selected group will open on the Groups **Overview** screen.

How to associate one or more users to a group:

1. Open the user you wish to view on the **List Groups** screen.

To open a user from the Overview List screen, click the **ID** of the appropriate user, and (if necessary) click **Users** on the Group navigation pane.

The Groups screen displays a list of all the groups associated with the user, including the group Name for each.

2. Check the checkbox(es) for the group(s) to be associated to the user.
3. Click **Set Groups** to save your settings. To cancel without saving the changes, click **Refresh**.

Sessions

The Sessions screens allow administrators to view and end current sessions in the Security system. Session-related functions include ending selected sessions and ending all sessions, and viewing the status of login attempts. Clicking on the Sessions tab opens the Current Sessions screen.

Sessions: Current

The Current Sessions screen displays the User, session start time (Started) and the last activity for the session (Last Visit) for each current session.

How to End Specified Sessions:

1. On the Sessions List screen, select the sessions to be ended by checking the checkbox in the far left column, and click **End Selected Sessions**.

A confirmation dialog opens asking you to verify that you want to end the selected sessions. Click **OK** to end the sessions.

How to End All Sessions:

1. On the Sessions List screen, click **End All Sessions**.

A confirmation dialog opens asking you to verify that you want to end all sessions. Click **OK** to end the sessions.

Logins: All Logins

The All Logins screen lists the last (or most current) login attempt for each user, including both successful and failed login attempts. For each login attempt listed, this screen displays the following:

- **User:** the User ID used for the login attempt.
- **Status:** The current status of the User ID. Can be Active, Disabled, or Nonexistent.
- **Time:** the time of the last login attempt.
- **Success:** whether or not the login attempt was successful (Yes or No) .

By default this screen lists all login attempts stored in the database. To filter the list based on a specified date range, select the appropriate date/time values in the “Most recent between” and the “and” fields by either typing the date and time manually, or clicking the arrow to the right of the field and selecting the date using the calendar control.

How to Delete Login History for All Logins:

1. Specify the date range over which you wish to delete the login history using the calendar controls. To delete the entire history, leave the “Most recent between” and the “and” fields blank.
2. Click **Delete History in Range**.

A confirmation dialog opens asking you to verify that you want to delete all login attempts within the specified range.



3. Click **OK** to delete the records. Click **Cancel** to close the dialog without deleting the records.

Logins: Successful Logins

The Successful Logins screen lists the last (or most current) successful login attempt for each user. For each login attempt listed, this screen displays the following:

- **User:** the User ID used for the login attempt.
- **Status:** The current status of the User ID. Can be Active, Disabled, or Nonexistent.
- **Time:** the time of the last login attempt.
- **Success:** whether or not the login attempt was successful (Yes) .

By default this screen lists all successful login attempts stored in the database. To filter the list based on a specified date range, select the appropriate date/time values in the “Most recent between” and the “and” fields by either typing the date and time manually, or clicking the arrow to the right of the field and selecting the date using the calendar control.

How to Delete Login History for Successful Logins:

1. Specify the date range over which you wish to delete the login history using the calendar controls. To delete the entire history, leave the “Most recent between” and the “and” fields blank.

2. Click **Delete History in Range**.

A confirmation dialog opens asking you to verify that you want to delete all successful login attempts within the specified range.

3. Click **OK** to delete the records. Click **Cancel** to close the dialog without deleting the records.

Failed Logins: All Failed Logins

The All Failed Logins screen lists the last (or most current) failed login attempt for each user. For each login attempt listed, this screen displays the following:

- **User:** the User ID used for the login attempt.
- **Status:** The current status of the User ID. Can be Active, Disabled, or Nonexistent.
- **Time:** the time of the last login attempt.
- **Success:** whether or not the login attempt was successful (No) .

By default this screen lists all failed login attempts stored in the database. To filter the list based on a specified date range, select the appropriate date/time values in the “Most recent between” and the “and” fields by either typing the date and time manually, or clicking the arrow to the right of the field and selecting the date using the calendar control.

How to Delete Login History for All Failed Logins:

1. Specify the date range over which you wish to delete the login history using the calendar controls. To delete the entire history, leave the “Most recent between” and the “and” fields blank.

2. Click **Delete History in Range**.

A confirmation dialog opens asking you to verify that you want to delete all failed login attempts within the specified range.

3. Click **OK** to delete the records. Click **Cancel** to close the dialog without deleting the records.

Failed Logins: Existing Users

The Existing Users screen lists the last (or most current) failed login attempt for each existing user. For each login attempt listed, this screen displays the following:

- **User:** the User ID used for the login attempt.
- **Status:** The current status of the User ID. Can be Active, Disabled, or Nonexistent.
- **Time:** the time of the last login attempt.
- **Success:** whether or not the login attempt was successful (No) .

By default this screen lists all failed login attempts for existing users stored in the database. To filter the list based on a specified date range, select the appropriate date/time values in the “Most recent between” and the “and” fields by either typing the date and time manually, or clicking the arrow to the right of the field and selecting the date using the calendar control.

How to Delete Login History for Existing Users:

1. Specify the date range over which you wish to delete the login history using the calendar controls. To delete the entire history, leave the “Most recent between” and the “and” fields blank.
2. Click **Delete History in Range**.
A confirmation dialog opens asking you to verify that you want to delete all login attempts for existing users within the specified range.
3. Click **OK** to delete the records. Click **Cancel** to close the dialog without deleting the records.

Failed Logins: Nonexistent Users

The Nonexistent Users screen lists the last (or most current) failed login attempt for all nonexistent user IDs used in login attempts. For each login attempt listed, this screen displays the following:

- **User:** the User ID used for the login attempt.
- **Status:** The current status of the User ID. Can be Active, Disabled, or Nonexistent.
- **Time:** the time of the last login attempt.
- **Success:** whether or not the login attempt was successful (No) .

By default this screen lists all failed login attempts for nonexistent users stored in the database. To filter the list based on a specified date range, select the appropriate date/time values in the “Most recent between” and the “and” fields by either typing the date and time manually, or clicking the arrow to the right of the field and selecting the date using the calendar control.

How to Delete Login History for Nonexistent Users:

1. Specify the date range over which you wish to delete the login history using the calendar controls. To delete the entire history, leave the “Most recent between” and the “and” fields blank.
2. Click **Delete History in Range**.
A confirmation dialog opens asking you to verify that you want to delete all login attempts for nonexistent users within the specified range.
3. Click **OK** to delete the records. Click **Cancel** to close the dialog without deleting the records.

Granting Data Privileges

The Data Privileges screens allow administrators to grant access to secured tables for a user or group. Administrators open the Data Privileges screen by selecting the data source and table to which they wish to grant access on the **Privileges: Data Access** screen (for either the Group or User). The Data Privileges overview screen includes the following options:

- **Summary: Overview**
- **Summary: Test Access**
- **Summary: View Access**
- **Keys: View/Delete**
- **Keys: Add**
- **SQLEditor: Plain Text**

As the administrator moves from the screen to screen while working with data privileges, the currently selected table is indicated at the top of the Data Privileges navigation pane.



Summary: Overview

The Overview screen provides an overview of the data privileges granted for the currently selected table for the current user/group.

This screen displays the following information:

- **User** (or Group): The current user or group for which data access privileges are being granted.
- **Data Source**: The data source in which the table for which data access privileges are being granted resides.
- **Table**: The currently selected table for which data access privileges are being granted. An asterisk next to the table name indicates that data access (of some sort) has been granted to the table. To select a different table, select the desired table from the drop-down list. This list is defined by the tables directly secured for the data source (see **Configuration: Data Access**, above for more information).
- **All** (checkbox): A checkbox that, if checked, indicates that the user or group has been granted access to all records in the currently selected table. By default, all tables have the **All** checkbox disabled.
- **Allow Null** (checkbox): A checkbox that, if checked, specifies that records in tables that use this table as a parent or lookup are not restricted if the value is NULL. For example, when securing the Account table, access to all child and descendent records is also automatically restricted via inherited indirect security. However, records in child tables (such as Bill History) where the Account ID column is NULL would not be restricted. By default, all tables have the **Allow Null** checkbox enabled.
- **Plain Text**: The SQL query, if any, defined for the currently selected table. See **SQLEditor: Plain Text** below, for more information.
- **Keys**: A list of specific records, known as Keys, in the currently selected table that the user or group has been granted access to.

How to grant access to all records in a selected table:

1. Open the Data Privileges screen for the appropriate data source and table.
2. Check the **All** checkbox.
3. Click **Save** to save the settings. To cancel without saving the settings, click **Refresh**.

How to clear privileges for a selected table:

1. Open the Data Privileges screen for the appropriate data source and table.
2. Click **Clear Table Privileges**.

A confirmation dialog opens asking you to verify that you want to clear the privileges.

3. Click **OK** to clear the privileges. Click **Cancel** to close the dialog without clearing the privileges.

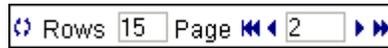
Summary: Test Access

The Test Access screen allows administrators to view the records available to the user/group for the currently selected table and the time required for those records to be retrieved from the database. This tool can aid administrators in tracking potential problems in the security configuration and in fine-tuning the configuration and data privileges as necessary.

This screen displays the following information:

- **User** (or Group): The current user or group for which data access privileges are being granted.
- **Data Source**: The data source in which the table for which data access privileges are being granted resides.
- **Table**: The currently selected table for which data access privileges are being granted. An asterisk next to the table name indicates that data access (of some sort) has been granted to the table. To select a different table, select the desired table from the drop-down list. This list is defined by the tables directly secured for the data source (see **Configuration: Data Access**, above for more information).
- **Table**: The currently selected table (from the Table drop-down list above)
- **Mode**: The current mode in which records are displayed. There are three modes:
 - **One Table**: In this mode, only the security on the currently selected table is considered when displaying records.
 - **One Table with Dependencies**: In this mode, the effects of security on the currently selected and its children and descendants, but not tables secured using specified indirect security (tables secured via child), are considered when displaying records. In this mode, it is as if all other tables were removed from the Data Access configuration.
 - **All Tables**: All data privileges for the user or group and data source are considered, including those resulting from specified indirect security (tables secured via child), when displaying records.
- **Combined** (checkbox): This checkbox is visible only when granting data access for users. If this checkbox is checked records are displayed based on combined data privileges for the user and any groups the user is a member of. By default, the **Combined** checkbox is disabled.
- **Not Optimized** (checkbox): If checked, the records are retrieved using a non-optimized version of the query being used to grant access to the currently selected table. By default, the **Not Optimized** checkbox is disabled.
- **Record List**: A list of records currently accessible by the user or group. This list displays all the columns for each record listed.

If there is more than one page of records, you can move between pages using the navigation controls.



Using the ◀ button to move to the previous page, and the ▶ button to move to the next page. Use the ⏪ button to return to the first page, and the ⏩ button to navigate to the last page. To change the number of results that appears on each page, enter the number in the **Rows** field.

- **Time:** The time, in seconds, it takes for the query being used to grant access to the currently selected table to return the list of accessible records. The time is displayed to the immediate right of the navigation controls above the record list.

How to test access for a selected table:

1. Open the Data Privileges screen for the appropriate data source and table.
2. Click **Test Access** on the Data Privileges navigation pane. The Test Access screen opens.
3. Select the appropriate mode (One Table, One Table with Dependencies, or All Tables).

The records accessible by the user or group for the selected table and the time to retrieve those records is displayed.

4. *Optional.* Check **Not Optimized** to observe the impact of a non-optimized query.

The records accessible by the user or group for the selected table and the time to retrieve those records is displayed.

5. To test access for a different directly secured table in the same data source, select the table from the Table drop-down list and repeat steps 2 and 3 above.

How to test combined access for a selected table (users only):

1. Open the Data Privileges screen for the appropriate data source and table.
2. Click **Test Access** on the Data Privileges navigation pane. The Test Access screen opens.
3. Select the appropriate mode (One Table, One Table with Dependencies, or All Tables).

4. Check the **Combined** checkbox.

The records accessible by the user or group for the selected table and the time to retrieve those records is displayed.

5. *Optional.* Check **Not Optimized** to observe the impact of a non-optimized query.

The records accessible by the user or group for the selected table and the time to retrieve those records is displayed.

6. To test access for a different directly secured table in the same data source, select the table from the Table drop-down list and repeat steps 2 through 4 above.

Batch Test

The Batch Test option executes queries for all the tables in the selected data source. Like the Test Access option, the Batch Test can aid administrators in tracking potential problems in the security configuration and in fine-tuning the configuration and data privileges as necessary. When the administrator clicks **Batch Test** on the Test Access screen, the Batch Test screen opens.

This screen displays the following information:

- **User** (or Group): The current user or group for which data access privileges are being granted.
- **Data Source**: The data source in which the table for which data access privileges are being granted resides.
- **Table**: The table for which the query is being currently executed. This changes as the test proceeds.
- **Percentage Complete**: A progress bar that indicates the percentage of the test that has completed.
- **Tables Queried**: A table that lists the performance of the query for each table in the data source, sorted by Time. The most recently run table is highlighted. This includes the following information for each table:
 - **Table**: the name of the table
 - **Time**: the duration, in seconds, of the secured request
 - **Plain**: the duration, in seconds of an unsecured request
 - **Ratio**: the Plain result divided by the Time result
 - **Count**: the number of returned secured records up to 25 (the requested amount)
 - **Available**: the number of returned unsecured records
 - **Depth**: the maximum count of ancestors for any node in secured hierarchy for this table
 - **Width**: the maximum count of elements at the same level in the above hierarchy
 - **Tables**: the count of tables in the above hierarchy
 - **Unique**: the count of unique tables in the above hierarchy
 - **Status**: The status of the query. Can be one of: "OK": no errors, "Plain OK": errors in unsecured, "<error descr.>": description of error.

The bottom three rows of the table, labeled Max, Min, and Average, display the maximum, minimum, and average values (respectively) for the columns.

How to run a batch test:

1. Open the Data Privileges screen for the appropriate data source and table.
2. Click **Test Access** on the Data Privileges navigation pane. The Test Access screen opens.
3. Click **Batch Test**.

The Batch Test screen opens, displaying the results of the test.

4. *Optional.* To pause the test and download the results to a *.CSV file, click **Download CSV**. A File Download dialog opens, allowing the user to either save the file or open it.
5. To restart the test, click **Restart**. To return the previous screen (the Test Access screen), click **Return to Data**.

Summary: View Access

The View Access screen allows administrators to view the query being used to grant access to the currently selected table. Like the Test Access option, this tool can aid administrators in tracking potential problems in the security configuration and in fine-tuning the configuration and data privileges as necessary.

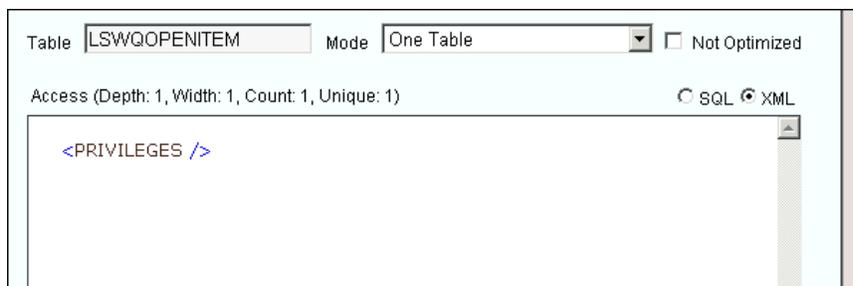
This screen displays the following information:

- **User** (or Group): The current user or group for which data access privileges are being granted.
- **Data Source**: The data source in which the table for which data access privileges are being granted resides.
- **Table**: The currently selected table for which data access privileges are being granted. An asterisk next to the table name indicates that data access (of some sort) has been granted to the table. To select a different table, select the desired table from the drop-down list. This list is defined by the tables directly secured for the data source (see **Configuration: Data Access**, above for more information).
- **Table**: The currently selected table (from the Table drop-down list above)
- **Mode**: The current mode in which access is viewed. There are three modes:
 - **One Table**: In this mode, only the security on the currently selected table is considered when viewing access.
 - **One Table with Dependencies**: In this mode, the effects of security on the currently selected and its children and descendants, but not tables secured using specified indirect security (tables secured via child), are considered when viewing access. In this mode, it is as if all other tables were removed from the Data Access configuration.
 - **All Tables**: All data privileges for the user or group and data source are considered, including those resulting from specified indirect security (tables secured via child), when displaying access.
- **Combined** (checkbox): This checkbox is visible only when granting data access for users. If this checkbox is checked the access is viewed based on combined data privileges for the user and any groups the user is a member of. By default, the **Combined** checkbox is disabled.
- **Not Optimized** (checkbox): If checked, a non-optimized version of the query being used to grant access to the currently selected table is displayed. By default, the **Not Optimized** checkbox is disabled.
- **Access**: A text box that displays the query being used to grant access to the currently selected table. The query can be viewed as SQL or XML. By default the access query is displayed as SQL. To display the query in XML, click the XML radio button. By selecting between SQL and XML and checking/unchecking the **Not Optimized** checkbox, there are four distinct views of the access query:
 - **SQL/Optimized**: Default. Displays an optimized query in SQL.
 - **SQL/Not Optimized**: Displays a non-optimized query in SQL.

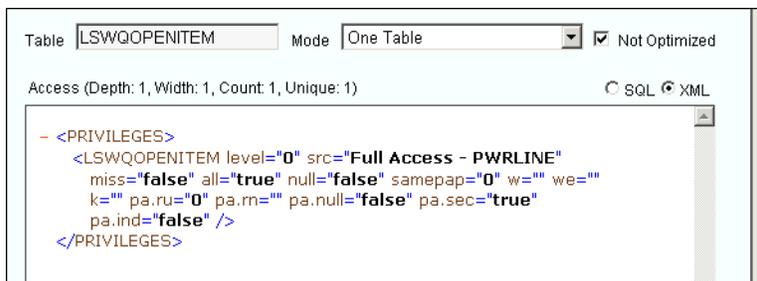
The screenshot shows a web interface for viewing access. At the top, there is a 'Table' field containing 'LSWQOPENITEM' and a 'Mode' dropdown menu set to 'One Table'. To the right of the mode dropdown is a checked checkbox labeled 'Not Optimized'. Below this, there is an 'Access' section with two radio buttons: 'SQL' (selected) and 'XML'. The main area is a text box containing the following SQL query:

```
SELECT * FROM PWRLINE.LSWQOPENITEM T WHERE
( /*Full Access - PWRLINE*/
(1=1)
)
```

- **XML/Optimized:** Displays a optimized query in XML.



- **XML/Not Optimized:** Displays a non-optimized query in XML.



How to view access for a selected table:

1. Open the Data Privileges screen for the appropriate data source and table.
2. Click **View Access** on the Data Privileges navigation pane. The View Access screen opens.
3. Select the appropriate mode (One Table, One Table with Dependencies, or All Tables).
The query used to retrieve records for the user or group for the selected table is displayed.
4. *Optional.* Check **Not Optimized** to change the query to a non-optimized version.
The (non-optimized) query used to retrieve records for the user or group for the selected table is displayed.
5. *Optional.* Select XML to view the query in XML rather than SQL.
6. To view access for a different directly secured table in the same data source, select the table from the Table drop-down list and repeat steps 2 through 4 above.

How to view combined access for a selected table (users only):

1. Open the Data Privileges screen for the appropriate data source and table.
2. Click **View Access** on the Data Privileges navigation pane. The View Access screen opens.
3. Select the appropriate mode (One Table, One Table with Dependencies, or All Tables).
4. Check the **Combined** checkbox.
The query used to retrieve records for the user or group for the selected table is displayed.
5. *Optional.* Check **Not Optimized** to change the query to a non-optimized version.
The (non-optimized) query used to retrieve records for the user or group for the selected table is displayed.
6. *Optional.* Select XML to view the query in XML rather than SQL.
7. To view access for a different directly secured table in the same data source, select the table from the Table drop-down list and repeat steps 2 through 5 above.

Keys: View/Delete

The View/Delete Keys screen allows administrators to view and/or delete selected records (or Keys) for which the user or group has been previously granted access. This screen opens when the user selects the **View/Delete** option on the Data Privileges navigation pane.

This screen displays the following information:

- **User** (or Group): The current user or group for which data access privileges are being granted.
- **Data Source**: The data source in which the table for which data access privileges are being granted resides.
- **Table**: The currently selected table for which data access privileges are being granted. An asterisk next to the table name indicates that data access (of some sort) has been granted to the table. To select a different table, select the desired table from the drop-down list. This list is defined by the tables directly secured for the data source (see **Configuration: Data Access**, above for more information).
- **Keys**: A list of keys currently accessible by the user or group. This list displays all the columns for each key listed.

How to delete one or more keys:

1. Select the **View/Delete** option on the Data Privileges navigation pane. A list of previously assigned keys for the currently selected table appears.
2. Select the key or keys to be deleted by checking the corresponding checkboxes in the far left column of the list.
3. Click **Delete Keys**.

A confirmation dialog opens asking you to verify that you want to delete the selected keys.

4. Click **OK** to delete the selected keys. Click **Cancel** to close the dialog without deleting the selected keys.

Keys: Add

The Add Keys screen allows administrators to add keys (records) to which the user or group will have access. This screen opens when the user selects the **Add** option on the Data Privileges navigation pane.

This screen displays the following information:

- **User** (or Group): The current user or group for which data access privileges are being granted.
- **Data Source**: The data source in which the table for which data access privileges are being granted resides.
- **Table**: The currently selected table for which data access privileges are being granted. An asterisk next to the table name indicates that data access (of some sort) has been granted to the table. To select a different table, select the desired table from the drop-down list. This list is defined by the tables directly secured for the data source (see **Configuration: Data Access**, above for more information).
- **Search screen**: A search screen for the currently selected table. The specific fields that appear on the search screen are based on the selected table.

How to search for and select keys:

1. Select the **Add** option on the Data Privileges navigation pane. A search screen for the currently selected table opens. The specific fields that appear on the search screen are based on the selected table.

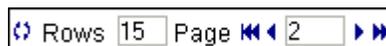
The search screen is similar to that used by Data Navigator. See in the Oracle Utilities Energy Information Platform User's Guide for more information about using the search screen.

Note: The Keys search screen does not use the Combine with or Case-sensitive options.

2. Enter the search criteria as appropriate and click **Search**.

The screen displays a list of records that match the search criteria.

If there is more than one page of records, you can move between pages using the navigation controls.



Using the ◀ button to move to the previous page, and the ▶ button to move to the next page. Use the ⏪ button to return to the first page, and the ⏩ button to navigate to the last page. To change the number of results that appears on each page, enter the number in the **Rows** field.

3. Select the key or keys to be added by checking the corresponding checkboxes in the far left column of the list.
4. Click **Add**.
5. The selected records will appear on the View/Delete screen.

SQL Editor: Plain Text

The SQL Editor: Plain Text screen allows administrators to define a SQL query for a WHERE clause that defines the records to which the user or group will have access. This screen opens when the user selects the **Plain Text** option on the Data Privileges navigation pane.

This screen displays the following information:

- **User** (or Group): The current user or group for which data access privileges are being granted.
- **Data Source:** The data source in which the table for which data access privileges are being granted resides.
- **Table:** The currently selected table for which data access privileges are being granted. An asterisk next to the table name indicates that data access (of some sort) has been granted to the table. To select a different table, select the desired table from the drop-down list. This list is defined by the tables directly secured for the data source (see **Configuration: Data Access**, above for more information).
- **Plain Text:** The SQL query for the currently selected table. The query displayed is the WHERE clause.

How to write (or edit) a SQL query for a selected table:

1. Open the Data Privileges screen for the appropriate data source and table.
2. Click **Plain Text** on the Data Privileges navigation pane. The Plain Text screen opens.
3. Enter (or edit) the SQL query in the Plain Text box. See **Writing SQL Queries Using the Plain Text Editor** below for more information about writing queries.
4. Click **Save SQL** to save the query (or changes made to the query. Click **Refresh** to restore the contents of the text box to the last saved version. Click **Clear SQL Text** to clear all table privileges, including the SQL query.
5. To write or edit a SQL query for a different directly secured table in the same data source, select the table from the Table drop-down list and enter (or edit) the query.

Writing SQL Queries Using the Plain Text Editor

Any valid SQL query can be entered in the text editor. However, the following guidelines apply:

- The currently selected table is designated as “##T”.
- Columns are designated using the following convention:

```
##T.<COLUMN_NAME>
```

where:

<COLUMN_NAME> is the name of the column. For example,

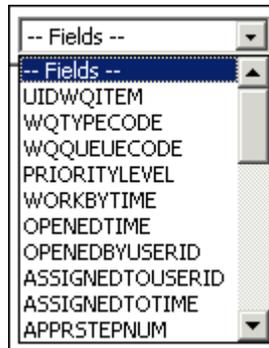
```
##T.JURISCODE
```

specifies the Jurisdiction (JURISCODE) for the currently selected table.

- Dates must be formatted as appropriate for the data source type (Oracle or MS SQL).

Using the Intellisense Drop-Down Lists: The SQL editor provides two drop-down lists that can help in scripting queries.

- **Fields:** The Fields drop-down list includes all the columns in the currently selected table.



- **Operators:** The Operators drop-down list displays a list of SQL operators.



When the administrator selects an item from one of the drop-down lists, the selected word (column or operator) is inserted into the SQL text at the position where the cursor had been prior to opening the drop-down list.

Saving SQL Queries: When the administrator saves a SQL query, the query is validated to ensure no errors were entered. If an error occurs, an error message appears at the bottom of the Plain Text screen.

Report Administration

The Report Administration screen allows users to search, view, edit, and add report templates, report relationships, and report categories. This screen includes three tabs:

- **Templates Tab**
- **Relationships Tab**
- **Categories Tab**

Templates Tab

The Templates tab is used to search, view, add, and edit report templates used by the Reporting Framework.

How to search report templates:

1. Select **Tools and Utilities->Report Admin.**

The Report Administration screen opens, displaying the Templates tab.

You can search based on the Report Name, Report Type, User ID (who created the report), Output Format, Creation Date, the Priority of the report, whether or not the report is a Base Report, whether or not the report is run in Real Time, a Report Category associated with the report template, a Product associated with the report template, or the report Description.

You can search for reports whose creation dates are Less Than (<), Greater Than (>), Less Than or Equal To (<=), or Greater Than or Equal To (>=) the supplied date by selecting the appropriate operand from the drop-down list.

You can use the percent sign (“%”) as a wildcard character when entering values in any of the text fields. For instance, if you want to search for all reports whose name begins with the letter G, you could enter “G%” in the Name field. You can use this wildcard before or after specified letters or numbers (i.e. you would use %t to search for all reports whose names end with the letter t, etc.).

Note that account Report Names, User IDs, and Descriptions are **case-insensitive**. For example, there is no difference between the “WQAging” and “wqaging” report names.

2. Specify how the search results are displayed.
 - Select the manner in which the results are sorted from the **Sort By:** drop-down list. You can sort the results by Allow Real Time, Base Report, Creation Date, Description, Output Format, Report Name, Report Type, or User ID.
 - Specify how many results should appear on each page in the **Page Length** field.
3. Click **Search** to perform the search. To clear all the search fields, click **Reset**.
4. The search results appear on the Templates tab.

The search results list displays the following information for each report template:

- **Report Name:** The name of the report template.
- **Description:** A description of the report template.
- **Priority:** The priority (High, Medium, or Low) of the report template.
- **Type:** The type of report template.
- **Output Format:** The output format for the report template (applies only to templates of type “BIPublisher” or “Crystal”).
- **Creation Date:** The date the report template was created.

- **User:** The User ID of the user who created the report template, or who last updated the template.
 - **Allow Real Time:** A flag that indicates if the report can be run in real time instead of being run in a queue.
 - **Generate ASP:** A flag that indicates if the Report Framework should automatically generate an ASP page that prompts for report parameters when users run the report.
 - **Base Report:** A flag that indicates if the report is provided by Oracle Utilities or is a custom report.
5. To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by Report Name, click the Report Name column heading. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field and click the **Refresh** icon.
 6. To perform a new search, click **New Search**. To delete one or more report templates, check the checkbox for the template(s) in the far left column and click **Delete**. **Note:** Report templates with a User of “SYSTEM” cannot be deleted.

How to view and/or edit a report template:

1. Select the report template you wish to view or edit by clicking the **Report Name** link from the search results list. The selected template appears in the Templates tab.
2. Edit the report template as appropriate. You can change the following fields:
 - **Allow Real Time:** A flag that indicates if the report can be run in real time instead of being run in a queue. This flag **must** be set to “No” when the Report Type is BIPublisher (Oracle BI Publisher).
 - **Generate ASP:** A flag that indicates if the Report Framework should automatically generate an ASP page that prompts for report parameters when users run the report. **Note:** This flag **must** be set to “Yes” when the Report Type is LSRate (Oracle Utilities Rules Language) or BIPublisher (Oracle BI Publisher).
 - **Output Format:** The output format for the report template (applies only to templates of type “Crystal” or “BIPublisher”). Default formats include:
 - BLANK (indicates that the output format is specified when the report is viewed).
 - Adobe Acrobat
 - Microsoft Excel
 - Microsoft Word
 - Rich Text Format

For Crystal Reports and Oracle BI Publisher reports, this list can be changed (to include additional output formats or to remove default output formats) by editing the LSREPORTMONITOR.CFG.XML file.

A specific (non-BLANK) format is required for Oracle BI Publisher reports.

- **Priority:** The priority for the report template. This determines the priority in which reports are generated. Can be High, Medium, or Low.
- **Template File:** This is the template file used for the report. For Crystal Reports, this is a Crystal Reports template (*.rpt). For Rules Language reports, this is an XSD for the report. To update the template file, click the **Browse** button and use the **Choose File** dialog that opens to locate and select the updated template file.

For Oracle BI Publisher reports, this is a drop-down list that lists the available Oracle BI Publisher reports defined on the BI Publisher server.

- **Description:** The description of the report.
 - **Save To:** The file name and destination path for reports generated from the report template (applies only to templates of type “Crystal” with a specified Output Format).
3. To edit a Rules Language report template XSD, click **Edit Template**. The selected template will open in the Template dialog. See **Viewing and Editing LSRate Templates** (below) for more information.
 4. To export the template (for Crystal Reports and Oracle Utilities Rules Language reports only), click the **Export** link.
 5. To view an Oracle BI Publisher report, click the **BI Publisher** link. The Oracle BI Publisher server will open in a new browser window.
 6. Click **Save** to save the changes to the report template. Click **Delete** to delete the report template. Click **Reset** to restore all the fields on the report template to their previously saved values. Click **Cancel** to return to the search results list without changing the report template.

How to add a report template:

1. Click **Add** on the Templates tab. A blank template screen appears.
2. Enter a **Report Name** for the report template. The Report Name must be a valid Windows file name, and cannot contain any of the following characters: / \ : * ? " < > |.
3. Select the **Report Type** for the report template from the drop-down list. Select “BIPublisher” for Oracle BI Publisher Reports. Select “LSRate” for Oracle Utilities Rules Language. Select “Crystal” for Crystal Reports.
4. For report templates with a Report Type of “Crystal” or “BIPublisher”, select an **Output Format** for the report template. Default formats include:
 - BLANK (indicates that the output format is specified when the report is viewed).
 - Adobe Acrobat
 - Microsoft Excel
 - Microsoft Word
 - Rich Text Format

This list can be changed (to include additional output formats or to remove default output formats) by editing the LSREPORTMONITOR.CFG.XML file.

For Crystal Reports and Oracle BI Publisher reports, this list can be changed (to include additional output formats or to remove default output formats) by editing the LSREPORTMONITOR.CFG.XML file.

A specific (non-BLANK) format is required for Oracle BI Publisher reports.

5. Set the **Allow Real Time** flag (Yes or No) to specify if the report can be run in real time instead of being run in a queue. This flag **must** be set to “No” when the Report Type is BIPublisher (Oracle BI Publisher).
6. Set the **Generate ASP** flag (Yes or No) to indicate if the Report Framework should automatically generate an ASP page that prompts for report parameters when users run the report. This flag **must** be set to “Yes” when the Report Type is LSRate (Oracle Utilities Rules Language) or BIPublisher (Oracle BI Publisher).
7. Select the **Priority** for the report template (High, Medium, or Low) from the drop-down list. This determines the priority in which reports are generated.
8. Enter a **Template File** for the report template. This is the Crystal Reports template (*.rpt) or XML schema (*.xsd) file used for the report. To add the template file, click the **Browse** button and use the **Choose File** dialog that opens to locate and select the updated template file (*.rpt or *.xsd file).

For Oracle BI Publisher reports, this is a drop-down list that lists the available Oracle BI Publisher reports defined on the BI Publisher server.

9. Enter an optional **Description** for the report template.
10. For report templates with a Report Type of “Crystal” and a specified Output Format, specify where reports generated from the template should be saved in the **Save To** field. This field can specify:
 - The destination folder for the report. The default file name for report will be: <ReportName>_<ReportTitle>_<ReportGUID>.ext. The extension will be based on the output format.
 - An explicitly specified file path and name.
 - Destination file path by using substitute parameters:

Parameter	Description
%N	Report (Template) Name
%T	Report Title
%P	Product Code (if the report template is associated to more than one product, the first product code (alphabetically) is used)
%C	Report Category (if the report template is associated to more than one category, the first category (alphabetically) is used)
%G	Report GUID (global unique identifier)
%A	Process ID
%U	User ID
%D	Run/Schedule time, expressed as YYYY-MM-DD-HH-MI-SS
%E	Extension, based on selected output format.

Note: Any invalid characters used in file names (/ \ : * ? " < > |) will be replaced with a string equal to “%” plus the character’s hexadecimal code. For example, an asterisk (“*”) would be replaced with “%2A.”

11. Click **Save** to save the report template. Click **Reset** to clear all the fields. Click **Cancel** to return to the search results list without adding the report template.

Viewing and Editing LSRate Templates

Individual LSRate templates can be viewed and edited from the Templates tab. See **Creating Templates (*.XSD Files)** on page 13-32 in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about LSRate templates.

How to view and edit LSRate templates:

1. Click on the **Edit Template** link for the template you wish to view or edit. The selected templates opens in the Template dialog, and displays the following information:
 - **Template Properties:** Basic attributes of the report template, including:
 - **Template Name:** The name of rate schedule in the following format:
 <OPCOCODE>_<JURISCODE>_<RATE_FORM_CODE>

where:

 - **<OPCOCODE>** is the Operating Company code associated with the rate schedule.

- **<JURISCODE>** is the Jurisdiction code associated with the rate schedule.
 - **<RATE_FORM_CODE>** is the Rate Form code of the rate schedule.
 - **Rate Code:** The Rate Form code of the rate schedule.
 - **Operating Company:** The Operating Company of the rate schedule.
 - **Jurisdiction:** The Jurisdiction of the rate schedule.
 - **Attributes Properties:** The attributes and properties that define the parameters for the report. Each parameter is defined by the following:
 - **Attribute Name:** is the identifier used in the rate schedule.
 - **Attribute Type:** is the type of parameter.
 - **Caption:** is the name for the parameter that will appear on the user interface
 - **Properties:** Click the plus (“+”) in the far left column to display specific properties for the parameter. See **Attribute Properties** (below) for more information about attribute properties.
 - **Script Document:** A expandable text box that defines Javascript validations and/or business rules related to values entered for the parameter. Click the **Script Document** plus (“+”) sign to open the text box.
2. Edit data in the fields as appropriate.
 3. To add an attribute, click **Add**. Enter the attribute name in the **Attribute Name** column, select the attribute type from the **Attribute Type** drop-down list, and enter the label for the attribute in the **Caption** column. See **Attribute Properties** (below) for more information about attribute properties.
 4. To delete an attribute(s), check the corresponding checkbox(es) and click **Delete**.
 5. To edit the **Script Document**, click the Script Document plus (“+”) sign to open the text box and edit the script as appropriate.
 6. To save changes made to the record, click **Save**.

Attribute Properties

The parameters defined in a template are called attributes, and each can be one of the following types:

- **String** (xs:string): A string (can contain letters or numbers)
- **Date** (xs:date): A date (e.g. 12/19/2005)
- **DateTime** (xs:dateTime): A date and time (e.g. 12/19/2005 16:03:45)
- **Bill Month** (xs:MonthYear): A bill month (12/2005). Note: when used with a date or date time field, bill months are converted to the first day of the selected month.
- **Long** (xs:long): A long integer
- **Double** (xs:double):
- **Boolean** (xs:boolean): A boolean value (indicated by a checkbox on the user interface)
- **Lookup** (ls:lookup): A lookup value from a table in the Oracle Utilities Data Repository
- **Drop-down list** (ls:enumeration): A drop-down list of possible values

In addition to the Attribute Name, Attribute Type, and Caption, attributes also have other properties that can be defined. These properties help define default values for attributes, the values available with drop-down list attributes, and other parameters.

There are four types of attribute properties:

Common properties define some default behavior for the attribute, including:

- **Default Value:** The default value of the attribute. This default is overridden if a default value is specified for the Term. Note: Default values for Date and Date/Time attributes must be in the “YYYY-MM-DD HH:mm:ss” format.
- **Is Required:** A flag that designates (Yes or No) whether or not the attribute is required.
- **Is Visible:** A flag that designates (Yes or No) whether or not the attribute is visible on the user interface.
- **Is Disabled:** A flag that designates (Yes or No) whether or not the attribute is accessible by the user from the user interface.

Action properties allow Javascript or Javascript functions to be called, and include:

- **Event:** The name of the action to trigger the script or call the function.
- **Function Name:** The name of the function called by the action.
- **Script:** The Javascript called by the action.

Entity properties define lookup attributes, including:

- **Table Name:** The name of the table in the Oracle Utilities Data Repository that is used by the lookup
- **IsUID:** A flag that designates (Yes or No) if the lookup field is a UID.
- **Entity Fields:** Filters applied to the lookup. To apply a filter, enter the column name in the left column, select the appropriate operand, and enter the filtering value in the right column.

Enumeration properties define drop-down lists.

To add an entry to the drop-down list, click **Add**, enter the value in the left column, and the label in the right column. For example, to create a drop-down list that displays Yes (value = Y) and No (value = N), you would create the following entries:

Left Column	Right Column
Y	Yes
N	No

To delete an entry (or entries), check the corresponding checkbox(es) and click **Delete**.

Relationships Tab

The Relationships tab is used to search, view, and add report relationships used by the Reporting Framework to associate report templates to specific products, and to group reports by user-specified categories.

Note: You cannot change a report relationship once it has been created. To change the relationship of a report template to specific products and/or categories, you must delete the old relationship and create a new relationship.

How to search and view report relationships:

1. Select **Tools and Utilities->Report Admin.**

The Report Administration screen opens, displaying the Templates tab. Click the **Relationships** tab.

You can search based on the Report Name, Product, or Report Category. Select the appropriate values from the drop-down lists.

2. Specify how the search results are displayed.
 - Select the manner in which the results are sorted from the **Sort By:** Product, Report Category, or Report Name.
 - Specify how many results should appear on each page in the **Page Length** field.
3. Click **Search** to perform the search. To clear all the search fields, click **Reset**.
4. The search results appear on the Relationships tab.

The search results list displays the following information for each report relationship:

- **Report Name:** The name of the report.
 - **Product:** The product associated with the report, from the LODESTAR Product table in the Oracle Utilities Data Repository. This determines on which product-specific **Run Reports** screen the report will appear.
 - **Report Category:** The report category for the report. See **Categories Tab** on page 7-62 for more information.
5. To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by Report Name, click the Report Name column heading. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field and click the **Refresh** icon.
 6. To perform a new search, click **New Search**. To delete one or more report relationships, check the checkbox for the relationship(s) in the far left column and click **Delete**. **Note:** Report relationships supplied by Oracle Utilities cannot be deleted.

How to add a report relationship:

1. Click **Add** on the Relationships tab. A blank relationship screen appears.
2. Select the **Report Name** for the relationship from the drop-down list.
3. Select the **Product** for the relationship from the drop-down list.
4. Select an optional **Report Category** for the relationship from the drop-down list. See **Categories Tab** on page 7-62 for more information.
5. Click **Save** to save the report relationship. Click **Reset** to clear all the fields. Click **Cancel** to return to the search results list without adding the report relationship.

Categories Tab

The Categories tab is used to search, view, add, and edit user-specified report categories used by the Reporting Framework to group reports.

How to view report categories:

1. Select **Tools and Utilities->Report Admin.**

The Report Administration screen opens, displaying the Templates tab. Click the **Categories** tab. A list of all report categories appears.

2. To sort the categories by one of the columns, click the appropriate column heading. For example, to sort the results by Report Category, click the Report Category column heading. If there is more than one page of records, you can move between pages using the ◀ and ▶ buttons. To change the number of records that appears on each page, enter the number in the **Rows** field and click the **Refresh** icon.
3. To delete one or more report categories, check the checkbox for the category(s) in the far left column and click **Delete**.

How to view/edit a report category:

1. Select the report category you wish to view or edit by clicking the **Report Category** link from the search results list. The selected category appears in the Relationships tab.
2. Edit the Description of the report category as appropriate.
3. Click **Save** to save the changes to the report category. Click **Reset** to restore all the fields on the report category to their previously saved values. Click **Cancel** to return to the search results list without changing the report category.

How to add a report category:

1. Click **Add** on the search results list page (on the Categories tab). A blank category screen appears.
2. Enter a name for the **Report Category**.
3. Enter a **Description** for the report category.
4. Click **Save** to save the report category. Click **Reset** to clear all the fields. Click **Cancel** to return to the search results list without adding the report category.

Lists

The **Lists** option allows user to create and maintain lists of accounts and customers for use with Oracle Utilities Billing Component, Oracle Utilities Quotations Management, and other applications. The Lists option also allows users to create query lists used with Oracle Utilities Rules Language.

- **Account and Customer Lists**
- **Query Lists**

Account and Customer Lists

Account and Customer lists are pre-defined lists of accounts or customers used with Oracle Utilities Billing Component, Oracle Utilities Quotations Management, and other applications.

Note: Account and Customer lists created using the Lists function cannot be edited using Data Manager.

How to search existing lists:

1. Select **Tools and Utilities->Lists**.

The Lists screen opens.

2. Enter the search criteria in the appropriate field(s).

You can search based on the Name, Type, Description, Status Code, Public/Private flag, Create Time, Start Time, or Stop Time associated with the list.

You can use the percent sign (“%”) as a wildcard character when entering values in any of the text fields. For instance, if you want to search for all lists whose name begins with the letter G, you could enter “G%” in the Name field. You can use this wildcard before or after specified letters or numbers (i.e. you would use %t to search for all lists whose names end with the letter t, etc.).

Note that Names are **case-insensitive**. For example, there is no difference between the “List_1” and “list_1” list names.

3. Specify how the search results are displayed.
 - Select the manner in which the results are sorted by clicking the **Sort by** plus (“+”) sign. See **Specifying How Results are Sorted** on page 2-7 for more information.
 - Specify how many results should appear on each page in the **Page Length** field.
4. Click **Search** to perform the search. To clear all the search fields, click **Reset**.
5. The search results appear in the Account (or Customer) Lists screen.

The Account Lists window displays the following information for each list:

- List Name
 - Description
 - Type
 - Status
 - Public/Private
 - User
 - Start Time (Valid After)/Stop Time (Valid Until)/Create Time
6. To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by Name, click the Name column heading. If there is more than one page

of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.

7. To select a list, click the **Name** link. The selected list will open in the Edit List screen. See **How to edit an existing list:** on page 7-65 for more information.

How to create a new list:

1. Select **Add** on the Lists screen. The List screen opens.
2. Enter the **Name** of the list.
3. Select the **Type** of list, either Account or Customer from the drop-down list.
4. Enter a **Description** of the list.
5. Select a **Status Code** for the list from the drop-down list.
6. Select the **Public/Private** flag for the list from the drop-down list.
7. Enter the **Start Time** (Valid After) for the list. To enter a date, enter the date manually or click the arrow and select the date using the calendar control.
8. Enter the **Stop Time** (Valid Until) for the list. To enter a date, enter the date manually or click the arrow and select the date using the calendar control.
9. Click the **Create** link. The Edit List screen opens.
10. Click the **Add Item(s)** link. The Accounts (or Customers) window opens.
11. Enter the search criteria in the appropriate field(s).

You can search based on the Customer Name, Customer ID, or an Account ID associated with the account. You can also search based on Account Status, Operating Company, and/or Jurisdiction. To search on one of these, select it from the drop-down lists. In addition, you can search based on contact information such as phone number, address, city/state, etc.

You can use the percent sign (“%”) as a wildcard character when entering values in any of the text fields. For instance, if you want to search for all accounts whose name begins with the letter G, you could enter “G%” in the Name field. You can use this wildcard before or after specified letters or numbers (i.e. you would use %t to search for all accounts whose names end with the letter t, etc.).

Note that account Names, Customer IDs, and Account IDs are **case-insensitive**. For example, there is no difference between the “Acct_1” and “acct_1” account IDs.

12. Specify how the search results are displayed.
 - Select the manner in which the results are sorted by clicking the **Sort by** plus (“+”) sign. See **Specifying How Results are Sorted** on page 2-7 for more information.
 - Specify how many results should appear on each page in the **Page Length** field.
13. Click **Search** to perform the search. To clear all the search fields, click **Reset**.
14. The search results appear in the Accounts (or Customers) window.
15. Select the accounts (or customers) you wish to add to the list by checking the checkbox in the far left column and click the **Save** link. To select all the accounts (or customers), check the checkbox in the far left column of the heading row. The selected accounts appear on the Edit List screen.
16. To add more accounts (or customers) to the list, click the **Add Items(s)** link again. To delete accounts (or customers) from the list, select the accounts (or customers) to delete using the checkboxes in the far left column and click the **Remove Selected Item(s)** link.
17. Click the **Save** link to save the list. Click the **Reset** link to restore the list to the previously saved version. Click the **Delete** link to delete the list.

How to edit an existing list:

1. Select **Tools and Utilities->Lists**.

The Lists screen opens.

2. Enter the search criteria in the appropriate field(s).

You can search based on the Name, Type, Description, Status Code, Public/Private flag, Create Time, Start Time, or Stop Time associated with the list.

You can use the percent sign (“%”) as a wildcard character when entering values in any of the fields. For instance, if you want to search for all lists whose name begins with the letter G, you could enter “G%” in the Name field. You can use this wildcard before or after specified letters or numbers (i.e. you would use %t to search for all lists whose names end with the letter t, etc.).

Note that Names are **case-insensitive**. For example, there is no difference between the “List_1” and “list_1” list names.

3. Specify how the search results are displayed.

- Select the manner in which the results are sorted by clicking the **Sort by** plus (“+”) sign. See **Specifying How Results are Sorted** on page 2-7 for more information.
- Specify how many results should appear on each page in the **Page Length** field.

4. Click **Search** to perform the search. To clear all the search fields, click **Reset**.

The results of the search appear in the Account (or Customer) Lists screen.

5. Click the **Name** of the list you wish to edit. The selected list will open in the Edit List screen.

6. To add accounts (or customers) to the list, click the **Add Items(s)** link. The Search Accounts (or Customers) window opens.

7. Enter the search criteria in the appropriate field(s).

You can search based on the Account Name, Customer ID, or an Account ID associated with the account. You can also search based on Account Status, Operating Company, and/or Jurisdiction. To search on one of these, select it from the drop-down lists. In addition, you can search based on contact information such as phone number, address, city/state, etc.

You can use the percent sign (“%”) as a wildcard character when entering values in any of the text fields. For instance, if you want to search for all accounts whose name begins with the letter G, you could enter “G%” in the Name field. You can use this wildcard before or after specified letters or numbers (i.e. you would use %t to search for all accounts whose names end with the letter t, etc.).

Note that account Names, Customer IDs, and Account IDs are **case-insensitive**. For example, there is no difference between the “Acct_1” and “acct_1” account IDs.

8. Specify how the search results are displayed.

- Select the manner in which the results are sorted by clicking the **Sort by** plus (“+”) sign. See **Specifying How Results are Sorted** on page 2-7 for more information.
- Specify how many results should appear on each page in the **Page Length** field.

9. Click **Search** to perform the search. To clear all the search fields, click **Reset**.

10. The search results appear in the Accounts (or Customers) window.

11. Select the accounts (or customers) you wish to add to the list by checking the checkbox in the far left column and click the **Save** link. To select all the accounts (or customers), check the checkbox in the far left column of the heading row. The selected accounts (or customers) appear on the Edit List screen.

12. To delete accounts (or customers) from the list, select the accounts (or customers) to delete using the checkboxes in the far left column and click the **Remove Selected Item(s)** link.
13. Click the **Save** link to save the list. Click the **Reset** link to restore the list to the previously saved version. Click the **Delete** link to delete the list.

Query Lists

Query lists are structured query language (SQL) queries that can be used by Oracle Utilities Rules Language to access records stored in the Oracle Utilities Data Repository.

Note: Query lists created using the Lists function cannot be edited using Data Manager.

Working with Query Lists

This section outlines how to search, create, and edit query lists.

How to search existing query lists:

1. Select **Tools and Utilities->Lists**.

The Lists screen opens.

2. Select Query from the **Type** drop-down list.
3. Enter other search criteria in the appropriate field(s).

You can search based on the List Name, Description, Status Code, Public/Private flag, Create Time, Start Time, or Stop Time associated with the list.

You can use the percent sign (“%”) as a wildcard character when entering values in any of the text fields. For instance, if you want to search for all lists whose name begins with the letter G, you could enter “G%” in the Name field. You can use this wildcard before or after specified letters or numbers (i.e. you would use %t to search for all lists whose names end with the letter t, etc.).

Note that Names are **case-insensitive**. For example, there is no difference between the “List_1” and “list_1” list names.

4. Specify how the search results are displayed.
 - Select the manner in which the results are sorted by clicking the **Sort by** plus (“+”) sign. See **Specifying How Results are Sorted** on page 2-7 for more information.
 - Specify how many results should appear on each page in the **Page Length** field.
5. Click **Search** to perform the search. To clear all the search fields, click **Reset**.
6. The search results appear in the Query List screen.

The Query Lists window displays the following information for each list:

- List Name
 - Description
 - Type (will be Query for all lists displayed)
 - Status Code
 - Public/Private
 - User
 - Start Time (Valid After)/Stop Time (Valid Until)/Create Time
7. To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by Name, click the Name column heading. If there is more than one page

of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.

8. To select a list, click the **List Name** link. The selected list will open in the Edit List screen. See **How to edit an existing list:** on page 7-65 for more information.

How to create a new query list:

1. Select **Add** on the Lists screen. The List screen opens.
2. Enter the **Name** of the list.
3. Select Query from the **Type** drop-down list.
4. Enter a **Description** of the list.
5. Select a **Status Code** for the list from the drop-down list.
6. Select the **Public/Private** flag for the list from the drop-down list.
7. Enter the **Start Time** (Valid After) for the list. To enter a date, enter the date manually or click the arrow and select the date using the calendar control.
8. Enter the **Stop Time** (Valid Until) for the list. To enter a date, enter the date manually or click the arrow and select the date using the calendar control.
9. Click the **Browse** button (⋮) to open the Query Editor dialog.
10. Define the SQL query for the list. Click **OK** to close the Query Editor dialog and return to the List screen. See **Creating SQL Queries for Query Lists** on page 7-68 for more information about creating SQL queries using this screen.
11. A list of results returned by the query (including all columns specified in the query) will be displayed at the bottom of the dialog. If the query requires parameters, click **Execute Query**, and enter the appropriate parameters in the Query Parameters dialog and click **Continue** to execute the query and display the results. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.
12. Click the **Create** link. The Edit List screen opens.
13. Click the **Save** link to save the list. Click the **Reset** link to restore the list to the previously saved version. Click the **Delete** link to delete the list.

How to edit an existing query list:

1. Select **Tools and Utilities->Lists**.
The Lists screen opens.
2. Select Query from the **Type** drop-down list.
3. Enter other search criteria in the appropriate field(s).

You can search based on the List Name, Description, Status Code, Public/Private flag, Create Time, Start Time, or Stop Time associated with the list.

You can use the percent sign (“%”) as a wildcard character when entering values in any of the fields. For instance, if you want to search for all lists whose name begins with the letter G, you could enter “G%” in the Name field. You can use this wildcard before or after specified letters or numbers (i.e. you would use %t to search for all lists whose names end with the letter t, etc.).

Note that Names are **case-insensitive**. For example, there is no difference between the “List_1” and “list_1” list names.

4. Specify how the search results are displayed.

- Select the manner in which the results are sorted by clicking the **Sort by** plus (“+”) sign. See **Specifying How Results are Sorted** on page 2-7 for more information.
 - Specify how many results should appear on each page in the **Page Length** field.
5. Click **Search** to perform the search. To clear all the search fields, click **Reset**.
The results of the search appear in the Account (or Customer) Lists screen.
 6. Click the **Name** of the list you wish to edit. The selected list will open in the Edit List screen.
 7. You can edit List Name, Description, Status Code, Public/Private flag, Start Time, or Stop Time, or Query associated with the list.

To edit the SQL query used by the list, click the **Browse** button (...) to open the Query Editor dialog. Edit the SQL as needed. See **Creating SQL Queries for Query Lists** on page 7-68 for more information about creating SQL queries using the Query Editor dialog. Click **OK** to close the Query Editor dialog and return to the Edit List screen.
 8. A list of results returned by the query (including all columns specified in the query) will be displayed at the bottom of the dialog. If the query requires parameters, click **Execute Query**, and enter the appropriate parameters in the Query Parameters dialog and click **Continue** to execute the query and display the results. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.
 9. Click the **Save** link to save the list. Click the **Reset** link to restore the list to the previously saved version. Click the **Delete** link to delete the list.

Creating SQL Queries for Query Lists

The Query Editor dialog is used to define SQL queries used by Query Lists. To open the Query Editor screen, click the **Browse** button (...) next to the Query field on the Edit List screen.

Any valid SQL single “select” statement can be defined for a query list. The statement must begin with the SELECT command. This statement can include the use of inner and outer joins, “where” clauses, and nested “select” statements. Valid SQL syntax is defined by the RDBMS (Oracle or MS SQL Server) being used.

Date parameters should be converted to strings in the Rules Language before being used by query lists. This conversion can be done through use of the DATETIMETOSTRING function (see **DATETIMETOSTRING Function** on page 13-25 in the Oracle Utilities Rules Language Reference Guide for more information about using this function) or other means of creating strings in the Rules Language. The following sample Rules Language code illustrates how date parameters can be converted into strings using the DATETIMETOSTRING function:

```
START_STRING = DATETIMETOSTRING(BILL_START, "MM/dd/yyyy HH:mm:ss");
STOP_STRING = DATETIMETOSTRING(BILL_STOP, "MM/dd/yyyy HH:mm:ss");
```

When referencing date parameters within a query, dates must be formatted as appropriate for the RDBMS (Oracle or MS SQL Server) being used. Oracle Utilities recommends using the SQL conversion functions to ensure proper date formatting. For example, when using an Oracle database, you would use the “to_date” function. When using a MS SQL Server database, you would use the “cast” function. The following example illustrates how the “to_date” function can be used within a query list:

```
SELECT ACCOUNTID, STARTTIME, STOPTIME, OPCOCODE, JURISCODE FROM
##Q.ACCOUNT WHERE STARTTIME > to_date(##P.START1, 'MM/DD/YYYY
HH24:MI:SS') AND STARTTIME < to_date(##P.START2, 'MM/DD/YYYY
HH24:MI:SS')
```

In addition, the following SQL extensions will be used:

- The current database qualifier is designated as “##Q”. All table references must be preceded by “##Q”.
- Parameters are designated using the following convention:

```
##P.<IDENTIFIER>
```

where:

<IDENTIFIER> is the name of a Rules Language identifier. For example,

```
##P.ACCT_ID
```

specifies that the Rules Language identifier ACCT_ID as a parameter used by the query.

The column names of the SQL statement's result set should be valid Rules Language identifiers. See **Identifiers** on page 4-2 in the *Oracle Utilities Rules Language User's Guide* and the **Assignment Statement** on page 2-2 in the *Oracle Utilities Rules Language Reference Guide* for more information about Rules Language identifiers. This can be achieved by using SQL aliases.

Example:

```
select min(A.STARTTIME) MIN_ACCOUNT, A.JURISCODE
from ##Q.ACCOUNT A
group by A.JURISCODE
```

Using the Drop-Down Lists: The Query Editor screen provides reference drop-down lists that can help in scripting queries.

- **Entities:** The Entities drop-down list includes all the tables in the Oracle Utilities Data Repository.
- **Fields:** The Fields drop-down list includes all the columns in the table selected on the Entities drop-down list.
- **Operators:** The Operators drop-down list displays a list of valid SQL operators for the field selected in the Fields drop-down list.

To validate the query, click **Validate**.

To save the query and return to the Edit List screen, click **OK**. The query will be validated to ensure no errors were entered. If an error occurs, an error message appears at the top of the screen. To close the Query Editor screen without saving the query, click **Cancel**.

Using Query Lists in Oracle Utilities Rules Language

Query lists are intended for use in Oracle Utilities Rules Language via the FOR EACH IN LIST statement and the LISTVALUE function.

Query lists behave as follows when executed in Rules Language:

- A query list with one field in the result set will behave as a Table/Column list that does not store the unique key for the table. This means that only one scalar value can be retrieved for each item returned using the FOR EACH IN LIST statement or by calling of the LISTVALUE function.
- A query list with more than one field in the result set will behave similar to a "full record" Table/Column list except that processing of UIDs and access to virtual columns are not supported. This means the following:
 - Temporary identifiers assigned using the "FOR EACH IN LIST" statement for each list item will be the "DATABASE VALUES" type. All fields will be accessible via STEM.TAIL syntax where STEM is the name of temporary identifier.
 - Results returned from the LISTVALUE function call will be the "DATABASE VALUES" type. All field values will be accessible via STEM.TAIL syntax where STEM is the name of temporary identifier.

- LOB fields are not supported in SQL-based query lists
- The RETURN_UID_FOR_UID_TARGETED_LISTS and TARGET_IDS_FOR_UID_REF_LISTS parameters in LODESTAR.CFG configuration file are not supported.

Query lists are not supported by the following Rules Language functions:

- LISTUPDATE
- LISTOP
- LISTCOUNT*

*Note: LISTCOUNT does not support SQL-based lists when the Rules Language is executed against Microsoft SQL Server and the SQL statement contains the ORDER BY clause. A work around for this case can be accomplished by creating a second list that uses the COUNT function.

Query List Examples

This section outlines several examples of using query lists in Rules Language.

Example 1: Single column SQL list accessed via FOR EACH IN LIST statement

List (MYACCOUNTS) SQL:

```
select A.ACCOUNTID
from ##Q.ACCOUNT A
```

Rules Language:

```
FOR EACH ACCOUNTID IN LIST "MYACCOUNTS"
  REPORT ACCOUNTID LABEL "Account";
END FOR;
```

Output Report:

```
Account      :GSGP_01
Account      :GSGP_02
...
```

Example 2: Single column SQL list accessed via LISTVALUE function call

List (MYACCOUNTS) SQL:

```
select A.ACCOUNTID
from ##Q.ACCOUNT A
```

Rules Language:

```
ACCOUNTID = LISTVALUE("MYACCOUNTS")
REPORT ACCOUNTID LABEL "Account";
```

Output Report:

```
Account      : GSGP_01
```

Example 3: SQL list with multiple columns accessed via FOR EACH IN LIST statement

List (MYACCOUTSM) SQL:

```
select A.ACCOUNTID, A.STARTTIME
from ##Q.ACCOUNT A
```

Rules Language:

```
FOR EACH ACC IN LIST "MYACCOUTSM"
  LABEL ACC.ACCOUNTID "Account ID";
  LABEL ACC.STARTTIME "Start Time";
  REPORT ACC LABEL "Accounts";
END FOR;
```

Output Report:

Accounts	
Account ID	Start Time
GSGP_01	04/09/2003
GSGP_02	02/05/2004

Example 4: SQL list with multiple columns accessed via LISTVALUE function call

List (MYACCOU2SM) SQL:

```
select A.ACCOUNTID, A.STARTTIME
from ##Q.ACCOUNT A
```

Rules Language:

```
ACC = LISTVALUE("MYACCOU2SM");
LABEL ACC.ACCOUNTID "Account ID";
LABEL ACC.STARTTIME "Start Time";
```

Output Report:

```
Account ID          : GSGP_01
Start Time          : 04/09/2003
...
```

Example 5: Alias for expression in result column accessed via FOR EACH IN LIST statement

List (MYACCOU2S2) SQL:

```
select min(A.STARTTIME) MIN_ACCOUNT, A.JURISCODE
from ##Q.ACCOUNT A
group by A.JURISCODE
```

Rules Language:

```
FOR EACH A1 IN LIST "MYACCOU2S2"
  LABEL A1.JURISCODE "Jurisdiction";
  LABEL A1.MIN_ACCOUNT "Start Time";
  REPORT A1 LABEL "Early Starts";
END FOR;
```

Output Result:

```
Early Starts

Jurisdiction      Start Time
NJ                01/29/2002 00:00:00
MA                01/01/1993 00:00:00
DT                01/01/2003 00:00:00
```

Example 6: Complex SQL list for Oracle Database accessed via FOR EACH IN LIST statement

List (MYACCFAC2UOM) SQL:

```
select A.ACCOUNTID, NVL(F.UOMCODE, 'NONE') AS UOMCODE, AFH.STARTTIME,
F.OPCODE || ':' || F.JURISCODE AS OPJUR
from ##Q.ACCOUNT A left outer join ##Q.ACCTFACTORHIST AFH
on (A.UIDACCOUNT = AFH.UIDACCOUNT)
join ##Q.FACTOR F on (F.UIDFACTOR = AFH.UIDFACTOR)
```

Rules Language:

```
FOR EACH ACC IN LIST " MYACCFAC2UOM"
  LABEL ACC.ACCOUNTID "Account ID";
  LABEL ACC.UOMCODE "UOM";
  LABEL ACC.STARTTIME "Start Time";
  LABEL ACC.OPJUR "Opco and Juris";
  REPORT ACC LABEL "Special Case";
END FOR;
```

Output Report:

Special Case			
Account ID	UOM	Start Time	Opco and Juris
GSGP_01	01	04/09/2003	GLOBAL:ALL
GSGP_02	NONE	02/05/2004	GECO:SF

...

Example 7: Complex SQL list for SQL Server Database accessed via FOR EACH IN LIST statement

List (MYACCFACTORUOM) SQL:

```
select A.ACCOUNTID, ISNULL(F.UOMCODE, 'NONE') AS UOMCODE,
AFH.STARTTIME, F.OPCODE + ':' + F.JURISCODE AS OPJUR
  from ##Q.ACCOUNT A left outer join ##Q.ACCTFACTORHIST AFH
    on (A.UIDACCOUNT = AFH.UIDACCOUNT)
    join ##Q.FACTOR F on (F.UIDFACTOR = AFH.UIDFACTOR)
```

Rules Language:

```
FOR EACH ACC IN LIST " MYACCFACTORUOM"
  LABEL ACC.ACCOUNTID "Account ID";
  LABEL ACC.UOMCODE   "UOM";
  LABEL ACC.STARTTIME "Start Time";
  LABEL ACC.OPJUR     "Opco and Juris";
  REPORT ACC LABEL "Special Case";
END FOR;
```

Output Report:

Special Case			
Account ID	UOM	Start Time	Opco and Juris
GSGP_01	01	04/09/2003	GLOBAL:ALL
GSGP_02	NONE	02/05/2004	GECO:SF

...

Run Reports

The **Run Reports** option displays reports available through the Energy Information Platform Reporting Framework. From this screen, users can select and run reports. Each product has its own **Run Reports** option that displays reports associated with that product. For example, the Oracle Utilities Billing Component list displays billing reports, while the Oracle Utilities Receivables Component reports list displays its reports.

How to run reports:

1. Select the **Run Reports** option from the appropriate menu (Tools and Utilities, Work Queues, Billing, Financials, etc.). The Run Reports screen opens.

The Run Reports screen displays the following information for each report:

- **Report Name:** The name of the report.
 - **Description:** A description of the report.
 - **Priority:** The priority of the report (High, Medium, or Low).
 - **Type:** The type of report (PLBX, LSRate (Oracle Utilities Rules Language), Active, BIPublisher, or Crystal).
 - **Output Format:** The output format for the report (applies to reports of type “BIPublisher” and “Crystal” only).
 - **Creation Date:** The date the report template was created.
 - **User:** The User ID who created the report template.
 - **Generate ASP:** A flag that indicates if the report framework generates an ASP parameters page for the report.
2. Select the report you wish to run by clicking the **Report Name** link from the list.
The **Enter Report Parameters** screen opens displaying the report parameters for the selected report.
 3. Enter the parameters for the report as appropriate.
The **Report Title** field is the title that appears on the **View Reports** screen when the report is run.
 4. Select the **Priority** for the report. This determines the priority (High, Medium, or Low) in which the report will be generated.
 5. Uncheck the **Shared Report** checkbox if you wish to make the results of the report private. If you leave this checkbox checked, the report results will be available to all users.
 6. Click **Run** to run the report. Click **Schedule Report** to schedule the report using the Schedule Process screen (see **Scheduling Reports** below, for more information). When the report is complete, the report opens in the appropriate viewer (Active, Crystal, etc.). In addition, the report is also listed on the **View Reports** screen.

How to search reports:

1. Click **New Search** on the Run Reports screen. The Run Reports search screen appears.

You can search based on the Report Name, Report Type, User ID (who created the report or who last updated the report), Output Format, Creation Date, Priority, Report Category, Product, or the report Description.

You can search for reports whose creation dates are Less Than (<), Greater Than (>), Less Than or Equal To (<=), or Greater Than or Equal To (>=) the supplied date by selecting the appropriate operand from the drop-down list.

You can use the percent sign (“%”) as a wildcard character when entering values in any of the text fields. For instance, if you want to search for all reports whose name begins with the letter G, you could enter “G%” in the Name field. You can use this wildcard before or after specified letters or numbers (i.e. you would use %t to search for all reports whose names end with the letter t, etc.).

Note that account Report Names, User IDs, and Descriptions are **case-insensitive**. For example, there is no difference between the “WQAgging” and “wqaging” report names.

2. Specify how the search results are displayed.
 - Select the manner in which the results are sorted from the **Sort By:** drop-down list. You can sort the results by Creation Date, Description, Report Name, Report Type, or User ID.
 - Specify how many results should appear on each page in the **Page Length** field.
3. Click **Search** to perform the search. To clear all the search fields, click **Reset**.
4. The search results appear on the Run Reports screen.

Scheduling Reports

The Schedule Process screen allows users to define a schedule for running processes unattended.

How to schedule a process:

1. Click **Schedule** (or **Schedule Report**). The Schedule Process screen opens.
2. Enter the **Start Time** for the scheduled process by entering the date and time manually or clicking the arrow and select the date using the calendar control and typing the time manually. See **Entering Date and Date/Time Values** on page 2-8 for more information about using the calendar control.

Note: The **Server Time** displayed above the Start Time field is the current time of the web server running the scheduler, including both the location and Time Zone where the server is located. Scheduled processes run based on the server time, not the time on the client machine.

3. Select a **Recurrence Pattern** for the scheduled process. You can select one of the following:

None: The scheduled process runs only once at the specified start time. **Note:** Scheduled processes with a recurrence pattern of None ignore Business Calendars and will run on non-business days.

Intra Daily: The scheduled process runs multiple times, from as frequent as once every 15 minutes to once every several hours. To base the recurrence on a number of minutes, select the **Every x minutes** radio button and select the number from the **Minutes** drop-down list. To base the recurrence on a number of hours, select the **Every x hours** radio button and enter the number of hours in the text box. Intra Daily processes may run throughout a single day or may span multiple days.

Daily: The scheduled process runs once per day or once per number of days. To base the recurrence on a number of days, select the **Every x days** radio button and enter the number of days in the text box. To set the scheduled process to run every weekday, check the **Every weekday** radio button.

Weekly: The scheduled process runs once or more per week (or number of weeks) on specified days. Enter the number of weeks in the **Recur every x week(s) on** text box, and check the specific days of the week on which the process should run. For example, to schedule a process to run on Monday and Wednesday every two weeks, you would enter 2 in the **Recur every x week(s) on** text box and check the Monday and Wednesday checkboxes.

Monthly: The scheduled process runs once per month or once per number of months. A monthly recurrence can be based on either a specific day of the month (such as the the 10th

day of the month), or a specific type of day (such as the 2nd Friday of the month). To base the recurrence on a specific day, select the **Day x of every x month(s)** radio button and enter the specific day and number of months in the text boxes. To base the recurrence on a specific type of day, select the **The x x of every x month(s)** radio button and select the appropriate number (First, Second, Third, Fourth, or Last) and day (Sunday through Saturday) from the drop-down lists and enter the number of months in the text box.

Important Note: Each execution of a recurring scheduled process uses the original parameters entered for the process.

4. Set the **Range of Recurrence** for the scheduled process. This specifies how many times the scheduled process will run (based on the specified recurrence pattern). There are three options:
 - **No end date:** To specify no ending date for the recurrence, select the **No end date** radio button.
 - **End after occurrence:** To specify that the recurrence ends after a predetermined number, select the **End after occurrence** radio button and enter the number of recurrences in the text box.
 - **End by:** To specify a date on which to end the recurrences, select the **End by** radio button and enter the date and time by which the recurrence should end. Enter the date and time manually or click the arrow and select the date using the calendar control and type the time manually. See **Entering Date and Date/Time Values** on page 2-8 for more information about using the calendar control.
5. Set any applicable **Recurrence Exceptions** for the scheduled process. Recurrence exceptions define which business calendar, if any, is used in scheduling and how to handle processes scheduled to run on non-business days. There are two options:
 - **Business Calendar:** To schedule the process using a business calendar, click the Browse button (...). This opens a dialog window that lists all the available Business Calendars. Click the [...] link to select the appropriate calendar. The field is automatically populated.
 - **Roll to next business day:** Check this checkbox to specify that a process scheduled to run on a non-business day is rolled forward to the next business day. If the process is already scheduled to run on the next business day, a new process is NOT scheduled.

Note: When using a Business Calendar, if the Start Time entered for a process is later than the last date in the Business Calendar, an error will be returned. Also, for scheduled processes with the No End Date option selected, occurrences that would have occurred on dates later than the last date in the Business Calendar will not occur, and do not appear on the View Reports screen.

View Reports

The **View Reports** option displays previously run reports available through the Energy Information Platform Reporting Framework, including other processes such as uploading data via the Upload Usage option. From this screen, users can view and delete reports. Each product has its own **View Reports** option that displays reports associated with that product. For example, the Oracle Utilities Billing Component View Reports screen displays billing reports, while the Oracle Utilities Receivables Component View Reports screen displays its reports.

How to view reports:

1. Select the **View Reports** option from the appropriate product menu (Tools and Utilities, Work Queues, Billing, Financials, etc.) The View Reports screen opens.

The View Reports screen displays the following information for each report:

- **Status Icon:** An icon that displays the status of the report. If an output format was specified for the report, the icon indicates the output format. See **Report Icons** for more information.
 - **Run/Schedule Time:** The time the report was run or is scheduled to run.
 - **Report Title:** The title of the report, specified when the report was run. For LSRate (Oracle Utilities Rules Language) reports, this column will display the name of the Report Template used to generate the report, unless specified using the SETREPORTTITLE Rules Language function.
 - **Priority:** The priority of the report (High, Medium, or Low).
 - **Type:** The type of report (PLBX (Oracle Utilities Billing Component), LSRate (Oracle Utilities Rules Language), Active, BIPublisher, or Crystal).
 - **User:** The user ID of the user who ran the report.
 - **Progress:** The current percentage of the report instance that has been generated, from 0 to 100 percent.
 - **Shared:** A flag that indicates if the report is shared by all users or is accessible only by the user who ran the report.
 - **Base:** A flag that indicates if the report is provided by Oracle Utilities or is a custom report.
 - **Process:** The (machine) name of the server on which the report was executed.
 - **Account Name:** The name of the account associated with the report, if applicable.
 - **Account ID:** The ID of the account associated with the report, if applicable.
2. To view a specific report, click the **Report Title** link for the report. The selected report opens in the appropriate viewer.
 3. To refresh the contents of the screen, click **Refresh Periodically**. To have the screen continually refresh its contents, check the **Refresh Periodically** checkbox.

Note: The current state of the Refresh Periodically checkbox (selected or not) is stored in the user's settings, and is used as the default setting when subsequently opening this screen.

How to delete reports:

1. Check the checkbox next to the reports(s) to delete. To select all reports, check the top check box.
2. Click **Delete**.

How to search reports:

1. Click **New Search** on the View Reports screen. The View Reports search screen appears.

You can search based on the Report Title, Report Type, User ID (who created the report), Output Format, Creation Date, Report Category, or Product.

You can search for reports whose creation dates are Less Than (<), Greater Than (>), Less Than or Equal To (<=), or Greater Than or Equal To (>=) the supplied date by selecting the appropriate operand from the drop-down list.

You can use the percent sign (“%”) as a wildcard character when entering values in any of the text fields. For instance, if you want to search for all reports whose name begins with the letter G, you could enter “G%” in the Name field. You can use this wildcard before or after specified letters or numbers (i.e. you would use %t to search for all reports whose names end with the letter t, etc.).

Note that account Report Titles, User IDs, and Descriptions are **case-insensitive**.

2. Specify how the search results are displayed.
 - Select the manner in which the results are sorted by clicking the **Sort by** plus (“+”) sign. See **Specifying How Results are Sorted** on page 2-7 for more information.
 - Specify how many results should appear on each page in the **Page Length** field.
3. Click **Search** to perform the search. To clear all the search fields, click **Reset**.
4. The search results appear on the View Reports screen.

Report Icons

The icon listed next to each report indicates the status of the report. The meanings of these icons are as follows:

Icon	Description
	Report Starting: Report processing is starting.
	Report in Process: Report processing
	Report Complete: Report processing is complete.
	<p>Report Complete (unspecified format): Report processing is complete. The user can select the output format by hovering the cursor over the icon, and selecting the desired output formats.</p> <div data-bbox="894 1383 1200 1604" style="border: 1px solid black; padding: 5px; margin: 10px auto; width: fit-content;"> <p>1/21/2005 10:40:50</p> <ul style="list-style-type: none">  Adobe Acrobat  Microsoft Excel  Microsoft Word  Rich Text Format </div>
	Report Complete (Adobe Acrobat format): Report processing is complete.
	Report Complete (Microsoft Excel format): Report processing is complete.
	Report Complete (Microsoft Word format): Report processing is complete.

This feature applies to Crystal reports only.

Icon	Description
	Report Complete (Rich Text format): Report processing is complete.
	Report Complete (Comma Separated Values format): Report processing is complete.
	Report Scheduled: Report is scheduled to run at a future time. To view scheduling details, click the  arrow in the far right column. To edit the schedule, click Edit .
	Report Reminder: Indicates that a scheduled report is due to run in 15 minutes or less.
	Report Error: One or more errors or warnings associated with the report. To view the error, click the Error icon.

Viewing Oracle BI Publisher Reports

When you select an Oracle BI Publisher Report, the report opens in a viewer based on the output format defined for the report. For the default output formats, this includes:

- Adobe Acrobat
- Microsoft Excel
- Microsoft Word (for MS Word and Rich Text Format reports. If Microsoft Word is not installed, Rich Text Format reports open in the installed application (if any) associated with the *.rtf file extension).

Viewing Oracle Utilities Rules Language Reports

When you select a Oracle Utilities Rules Language Report (one with a Type of LSRate), the report opens in the Report view screen.

The **State** section above the top left corner of the report displays the state of the report, including the number of Errors, the number of Pages expected and ready, and the elapsed time (in seconds) it took for the report to run.

State: Errors: 0 Pages: 32 expected, 32 ready, 15 elapsed

The **From:** and **To:** fields above the top right corner of the report show the current pages displayed. The **From:** field displays the current page. The  and  buttons and the field between them are used to navigate the report. The field between the buttons defines how many pages display in the report window at a time. The default is 1. To display more than one page at a time, enter the number of pages you wish to view in the field.

Viewing Crystal Reports

When you select a Crystal Report, the report opens in a viewer based on the output format. For the default output formats, this includes:

- Adobe Acrobat
- Microsoft Excel
- Microsoft Word (for MS Word and Rich Text Format reports. If Microsoft Word is not installed, Rich Text Format reports open in the installed application (if any) associated with the *.rtf file extension).

Emailing Reports

You can also email reports from the View Reports screen. This allows users to distribute reports to other parties via email.

Note: The Send Email function requires the presence of the LSRELAY.CFG.XML file in the C:\LODESTAR\CFG directory on the web server computer. Contact your system administrator for more information about this file.

How to email a report:

1. Select the report (or reports) you wish to send via email and click **Send Email** on the View Reports screen.

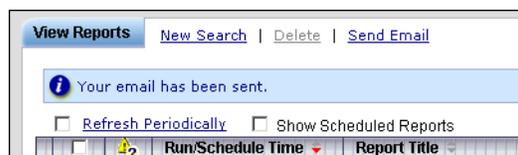
The Send Email screen opens.

2. Select a **From** address from the drop-down list. This list is based on available records in the From Addresses table. If there are no available records in the From Addresses table, the current user's email address is populated (if provided on the User Overview screen on the Security Administration user interface).
3. Enter an email address in the **To** field, or click Address Book (or the "+" sign) to add a contact or group name. See **Using the Address Book** on page 7-80 for more information about using the Address Book.
4. *Optional.* Enter an email address in the **CC** field, or click Address Book (or the "+" sign) to add a contact or group name. See **Using the Address Book** on page 7-80 for more information about using the Address Book.

To remove the CC field, click **Remove CC**.

5. *Optional.* To add the BCC field, click **Add BCC**, and enter an email address in the **BCC** field, or click Address Book (or the "+" sign). See **Using the Address Book** on page 7-80 for more information about using the Address Book.
6. Enter a subject for the email in the **Subject** field.
7. Enter the email message in the **Message** field.
8. To send the email, click **Send**. To clear all the fields, click **Reset**.

A message will appear at the top of the View Reports screen after your email has been sent.



Using the Address Book

In addition to entering email addresses manually, you can use the Address Book feature to select email recipients from those defined in the Oracle Utilities Data Repository. The Address Book contains listings of:

- **Contacts**
- **Groups**

Contacts

Contacts are specific individuals related to parties (such as Service Points or Market Participants) defined in the Oracle Utilities Data Repository.

How to select an existing contact from the Address Book:

1. Click **Address Book** (or the "+" sign) on the Send Email screen.

The Address Book dialog opens on the Contacts tab.

2. Enter the search criteria for the contacts you wish to send email to. You can search by Last Name, First Name, Middle Name, or Company.
3. Specify how the search criteria are to be combined by selecting the appropriate **Combine with** option (**AND** or **OR**), located in the upper right corner of the search screen. The default combine option is **AND**.
4. Specify whether or not the search is Case-sensitive by checking or unchecking the **Case-sensitive** checkbox, located in the upper right corner of the search screen. The default setting is case-sensitive.
5. Specify how the search results are displayed.
 - Select the manner in which the results are sorted by clicking the **Sort by** plus (“+”) sign. See **Specifying How Results are Sorted** on page 2-7 for more information.
 - Specify how many results should appear on each page in the **Page Length** field.
6. Click **Search** to perform the search. To reset the search fields to their previous values, click **Reset**. To clear all the search fields, click **Clear**. To add a new contact to the Address Book, click **Add**.
7. The search results appear on the Address Book dialog.
8. Select the contact(s) you wish to send the email to and click **To**. The selected contact(s) will appear in the To field on the Send Email screen.

To remove a contact from the To, CC, or BCC field, select the contact and click the Delete Key, or click the right mouse, and select **Remove**.
9. *Optional.* To add a contact to the CC (or BCC) field, select the contact(s) you wish to send the email to and click **CC** (or **BCC** as appropriate). The selected contact(s) will appear in the CC (or BCC) field on the Send Email screen.

How to add a contact using the Address Book:

1. Click **Add** on the Contacts tab of the Address Book dialog.

The Edit Contact screen opens.
2. Enter personal information for the contact (First, Middle, and Last Names, Title, etc.) in the **Personal Information** pane.
3. Enter contact methods (phone numbers, email addresses, etc.) for the contact in the **Contact Method** pane.
4. Enter optional address(es) for the contact in the **Address Information** pane.
5. Click **Save** to save the contact.
6. Click **Return to Email** to return to the Send Email screen and Address Book dialog.
7. Select the new contact and click **To**, **CC**, or **BCC** to add the contact to the appropriate field.

See **Contacts** on page 7-2 in the *Oracle Utilities Energy Information Platform User's Guide* for more information about creating contacts.

Groups

Groups are groupings of contacts in the Oracle Utilities Data Repository.

How to select an existing group from the Address Book:

1. Click **Address Book** (or the “+” sign) on the Send Email screen.

The Address Book dialog opens on the Contacts tab. Click the **Groups** tab.
2. Enter the search criteria for the contacts you wish to send email to. You can search by Group Name or Description.

3. Specify how the search criteria are to be combined by selecting the appropriate **Combine with** option (**AND** or **OR**), located in the upper right corner of the search screen. The default combine option is **AND**.
4. Specify whether or not the search is Case-sensitive by checking or unchecking the **Case-sensitive** checkbox, located in the upper right corner of the search screen. The default setting is case-sensitive.
5. Specify how the search results are displayed.
 - Select the manner in which the results are sorted by clicking the **Sort by** plus (“+”) sign. See **Specifying How Results are Sorted** on page 2-7 for more information.
 - Specify how many results should appear on each page in the **Page Length** field.
6. Click **Search** to perform the search. To reset the search fields to their previous values, click **Reset**. To clear all the search fields, click **Clear**. To add a new group to the Address Book, click **Add**.
7. The search results appear on the Address Book dialog.
8. Select the group(s) you wish to send the email to and click **To**. The selected group(s) will appear in the To field on the Send Email screen.

To remove a group name from the To, CC, or BCC field, select the group name and press the Delete key, or click the right mouse, and select **Remove**.
9. *Optional.* To add a group to the CC (or BCC) field, select the group(s) you wish to send the email to and click **CC** (or **BCC** as appropriate). The selected group(s) will appear in the CC (or BCC) field on the Send Email screen.

How to add a group using the Address Book:

1. Click **Add** on the Groups tab of the Address Book dialog.

The Edit Group screen opens.
2. Enter a name for the group in the **Group Name** field.
3. Enter a description of the group in the **Description** field.
4. *Optional.* Check the **Is Private** checkbox to indicate that the group is private. Private groups can be only be viewed by the user who created the group. Public groups (Is Private unchecked) can be viewed by all users.
5. To add a contact to the group, click **Add** on the Membership title bar, and select the contact from the **Contact ID** drop-down list. Repeat this step for each contact you wish to add to the group.
6. Click **Save** to save the group.
7. Click **Return to Email** to return to the Send Email screen and Address Book dialog.
8. Select the new group and click **To**, **CC**, or **BCC** to add the group to the appropriate field.

See **Groups** on page 7-5 in the *Oracle Utilities Energy Information Platform User's Guide* for more information about creating contact groups.

Chapter 8

Searching and Viewing Data in the Oracle Utilities Data Repository

The Oracle Utilities Energy Information Platform Data Navigator allows users to search for and view database records and tables in the Oracle Utilities Data Repository. This chapter describes how to search and view database record, including:

- **Working With Data Navigator**
- **Searching Database Tables**
- **Adding Records to Database Tables**
- **Viewing and Editing Records**
- **Exporting Records from Database Tables**
- **Viewing Interval Data Tables**

Important Note

Data Navigator can access only those tables defined in the meta-data tables in the Oracle Utilities Data Repository.

Working With Data Navigator

This section describes how you work with Data Navigator, including:

- **Accessing the Data Menu**
- **Data Navigator Actions**
- **Navigation History**
- **Working with Data Types**
- **Data Navigator Security**

Accessing the Data Menu

To access Data Navigator, click the **Set Default Menu** icon at the bottom of the Left menu the Main menu normally displayed in the **Left Menu** is replaced by the Data menu. The Data menu lists tables alphabetically by visible name.

Data Navigator Actions

There are four primary actions performed when using the Data Navigator. Each is described below.

Selecting Tables to Search

To select a table to search, click the table name in the Data menu. A search screen based on the selected table opens. Results of the search appear on the **List Screen**. See **Searching Database Tables** on page 8-7 for more information about searching.

Selecting Records to View/Edit

To select a specific record to view or edit, click the [...] icon for the appropriate record on the **List Screen**. The selected record opens. See **Viewing and Editing Records** on page 8-11 for more information about viewing/editing records.

Navigating from a Child Record to a Parent or Lookup Record

To navigate from a record to one of its parent or lookup records, click the Name of the parent table on the record. The labels for parent and lookup records appear underlined on the screen.

Navigating from a Parent record to Child records

To navigate from a parent record to child records, click the name of the child table you wish to view in the Children section of the screen.

Navigation History

As users navigate between tables and records using Data Navigator, a history of the tables visited and the relationships between those tables is tracked in the **History** section, located just between the title of the screen in the Main Workspace.



The History section first appears when you perform a search on, or add a record to a table, displaying the name of the table. See **Searching Database Tables** on page 8-7 for more information about searching. See **Adding Records to Database Tables** on page 8-10 for more information about adding records.

Navigation Icons

The relationship between tables in the History section are designated by icons located between the table names. These icons represent relationships between tables from left to right along the History section. That is, they indicate the relationship of the table on the left side of the icon to the table on the right side of the icon.

For example, the Channel History table is a child of the Account table. If you navigate from the Channel History table to the Account table, the **Child** icon would appear between the table names.



To continue the example, if you navigate from the Account table to the Bill History table (or other parent table), the **Parent** icon would appear between the table names.



To continue the example further, if you select a single record to view, the **Last Item** icon appears to the right of the table name.



Navigation Example

The following example demonstrates how the History section and Navigation icons help track the history of the tables and records viewed.

While performing billing calculations based on interval data, an error related to usage occurs. You might start to research this error by searching the Channel History table. When the search results appear, Channel History appears in the History section.



When you select the specific Channel History record in question from the search results, a Last Item icon appears to the right of Channel History in the History section, and the selected record opens below.



The Channel History record seems okay, so you decide to continue your research by checking the Account record. When you select the Account record (a parent record of the record currently displayed), a Child icon appears to the right of Channel History, followed by the name of the parent table (Accounts) and a Last Item icon. The Account record opens below.



The Account record doesn't reveal any errors, so you decide to check the Bill History record(s) for the associated bill period. When you select the Bill History table, a Parent icon appears to the right

of Accounts, followed by Bill History (the name of the child table). A list of Bill History records for the selected account appears below.



When you select the appropriate Bill History record from the list, a Last Item icon appears to the right of Bill History, and the selected record opens below.



The Bill History record seems okay, so you decide to see if there are any related Bill History Values records. When you select the Bill History Values table, a Parent icon appears to the right of Bill History, followed by Bill History Values (the name of the child table), and a list of records from the Bill History Values table appears below.



Working with Data Types

Records can employ several different data types. How the user enters or edits data for a specific database column depends on the data type of that column. Records can contain the following data types:

Text

ID

Text fields store text (characters and numerals) and are often used for Name, Code, or Description fields. To enter or edit values in a text field, simply type the value in the text box. To set the value of a text field to Null, delete the contents of the text field.

Date/Time

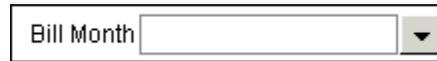
Start Time

Date/Time fields store dates and datetimes, such as Start Time and Stop Time fields. To enter or edit date/time values, either type the date and time manually, or click the arrow to the right of the field and select the date using the calendar control. To set the value of a date/time field to Null, delete the contents of the field.



The calendar control displays the current month when opened. Click the appropriate day to select it. To change the month, click the arrows on either side of the month displayed. To change the year, click the arrows on either side of the year displayed.

Month/Year



Month/Year fields store month/year combinations, such as Bill Months (used by Oracle Utilities Billing Component). To enter or edit month/year values, either type the month/year manually, or click the arrow and select the date using the calendar control. To set the value of a month/year field to Null, delete the contents of the field.

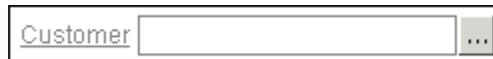
The calendar control displays the current month when opened. Click the any day to select the corresponding month/year. To change the month, click the single arrows on either side of the month/year displayed (i.e. “6/2003”). To change the year, click the double arrows on either side of the month/year displayed (i.e. “6/2003”).

Drop-Down List



Drop-down lists contain lists of values. These are often used with database flags such as the Billing Mode Flag and Print Detail Flag. To enter or edit a value from a drop-down list, click the arrow to the right of the field and select the appropriate value from the list. To set the value of a drop-down field to Null, select the blank value (at the top of the list).

Lookup



Lookups are references to records in other tables in the Oracle Utilities Data Repository, including both lookup records such as Operating Company and Jurisdiction records, and parent records such as Customer or Account records. When populated, lookup fields display the identity of the referenced record. To set the value of a lookup field to Null, delete the contents of the field.

To enter or edit a lookup, click the **Browse** button (...). This opens a dialog window that lists all the records in the corresponding table.

You can filter the records that appear in the dialog by typing the first letter (or first few letters) of the values you wish to enter in the text box and pressing the Tab key on the keyboard (or by clicking anywhere else on the screen). When the dialog window opens, the listed records will be those that match the letter or letters entered. For example, if you were searching for Account records for the Peabody, MA jurisdiction, you could enter the letters “PE” in the Jurisdiction text box. When the dialog opens, it would display only those Jurisdiction records whose Code begins with the letters “PE” instead of all the records in the Jurisdiction table.

If there is more than one page of records, you can move between pages using the ◀ and ▶ buttons. Use the ⏪ button to return the first page, and the ⏩ button to navigate to the last page. To change the number of results that appears on each page, enter the number in the **Rows** field.

To search for a specific record, click **Search**. The dialog displays a search screen.

Enter the appropriate parameters for your search and click **Search**. The dialog will display a list of records that match the search criteria.

Click the [...] link for the appropriate record. The lookup field is automatically populated.

Data Navigator Security

Access to Data Navigator and to specific data sources, tables, and functions can be restricted through configuration of Security. See **Security Administration** on page 7-18 for more information about configuring Security.

Data Navigator Access

The Data Sources feature allows access to the Data menu and Data Navigator.

Tables

Individual tables can be listed beneath the Data Sources feature, which represent the specific table(s) that can be secured from Data Navigator. If an individual table is listed beneath the Data Sources feature, it must be selected (checked) before it can be accessed using Data Navigator. In addition, Data Navigator can access all other tables available to the user (those not listed in the Permissions tree).

Note: Securing a parent table also secures access to all corresponding child tables. For example, securing access to the Account table also secures access to the Account History, Bill History, and all other child tables of the Account table.

Columns

Individual columns can be listed for each of the tables listed beneath Data Sources feature. These represent the specific columns that have been secured from Data Navigator. If an individual column is listed beneath a table, it must be selected (checked) before it can be accessed using Data Navigator.

Functions

Insert, Update, and Delete functions can also be secured for each table listed in the Permissions tree. If one or more of these functions is listed next to a table in the Permissions tree, it must be selected (checked) in order for the user to perform the specified function on records in the specific table. If a function is not listed for a specific table, users cannot perform that function using Data Navigator.

Searching Database Tables

This section describes how to search data using Data Navigator. Data Navigator can search any of the tables defined in the meta-data tables in the Oracle Utilities Data Repository.

How to search database tables:

1. Select the table you wish to search from the Data menu.

A search screen based on the selected table opens.

The specific fields that appear on the search screen are based on the selected table.

2. For each field you wish to use in your search criteria, select the appropriate operand and enter the appropriate value. See **Operands** on page 8-8 for more information about selecting operands. See **Working with Data Types** on page 8-4 for more information about entering data values. You can use the percent sign (“%”) as a wildcard character when entering values in any of the text fields. See **Wildcards** for more information about using wildcards.
3. Specify how the search criteria are to be combined by selecting the appropriate **Combine with** option (**AND** or **OR**), located in the upper right corner of the search screen. The default combine option is **AND**.

Selecting **AND** generates a search in which the results match **all** the criteria in **all** the entered fields. For example, if you enter “>10000” for Account ID and “=GECO” for Operating Company and use the **Combine with AND** option, the search would only return those records where **both** conditions were true.

Selecting **OR** results in a search in which the results match **any** of the criteria specified in **any** of the entered fields. For example, if you enter “>10000” for Account ID and “=GECO” for Operating Company and use the **Combine with OR** option, the search would return those records where **either** condition was true.

4. Specify whether or not the search is Case-sensitive by checking or unchecking the **Case-sensitive** checkbox, located in the upper right corner of the search screen. The default setting is case-sensitive.

Selecting **Case-sensitive** (the Case-sensitive checkbox is checked) generates searches in which the results match the case (upper or lower) of the search criteria. For example, if you enter “>NRST” for Account ID on a **Case-sensitive** search, the search would return only those records whose Account IDs begin with “NRST” (all upper-case letters).

Selecting **Case-insensitive** (the Case-sensitive checkbox is unchecked) generates searches in which the results match the search criteria regardless of upper/lower case. For example, if you enter “>NRST” for Account ID on a **Case-insensitive** search, the search would return those records whose Account IDs begin with the “NRST”, but in any combination of upper and/or lower case letters (“Nrst”, “NRst”, “NRSt”, “nRst”, etc.).

Note: MS SQL Server databases support case-sensitive searching and sorting only.

5. Specify how the search results are displayed.
 - Select the manner in which the results are sorted from the **Sort By:** drop-down list. You can sort the results by any of the columns in the selected table.
 - Specify how many results should appear on each page in the **Page Length** field.
6. Click **Search** to perform the search. To reset the search fields to their previous values, click **Reset**. To clear all the search fields, click **Clear**. To add a record to the selected table instead of searching, click **Add** (see **Adding Records to Database Tables** on page 8-10 for more information about adding records).
7. The search results appear on the **List Screen** screen.

Operands

Each field on the search screen has a drop-down list containing available operands. Operands allow you to narrow your search. The table below lists all the available operands. Specific data types (see **Working with Data Types** on page 8-4) have different operands available.

Operand	Explanation
	Blank. This indicates that the field does not participate in the search. If all fields have a blank operand, the search returns all records.
=	The search results are Equal to the supplied value.
<>	The search results are Not Equal to the supplied value.
<	The search results are Less Than the supplied value
<=	The search results are Less Than or Equal to the supplied value.
>	The search results are Greater Than the supplied value.
>=	The search results are Greater than or Equal to the supplied value.
like	The search results match the supplied wildcard (see Wildcards , below).
not like	The search results do not match the supplied wildcard (see Wildcards , below).
null	The field is Null .
not null	The field is Not Null .

For example, if you wanted to select all Account records with an Account ID greater than 1000, you would select the Greater Than (“>”) operand and enter 1000 in the Account Id field.

Wildcards

You can use the percent sign (“%”) as a wildcard character when entering values in any of the text fields. For instance, if you want to search for all Account records whose Account IDs begin with the letter G, you could enter “G%” in the Account ID field.

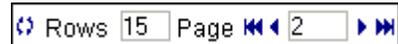
Note: If you include a wildcard but do not specify an operand, the operand defaults to LIKE.

List Screen

The List screen lists all the records that match the search criteria, and displays all columns for each record.

Note: Columns that contain BLOB (binary large object) or CLOB (character large object) data are not displayed on the list screen.

If there is more than one page of records, you can move between pages using the navigation controls.



Using the ◀ button to move to the previous page, and the ▶ button to move to the next page. Use the ⏪ button to return to the first page, and the ⏩ button to navigate to the last page. To change the number of results that appears on each page, enter the number in the **Rows** field.

From the List screen, users can perform the following actions:

- To open a record, click the [...] link.
- To perform a new search, click **Search**.
- To delete one or more records, check the checkbox(es) for the records you wish to delete and click **Delete**.
- To reset the checkboxes to their previous values, click **Reset**.
- To clear all the checkboxes, click **Clear**.
- To add a record to the selected table, click **Add**. See **Adding Records to Database Tables** on page 8-10 for more information about adding records.
- To export one or more records, check the checkbox(es) for the records you wish to export, click **Tools** and select the appropriate format (XLS or IMP). See **Exporting from the List Screen** on page 8-12 for more information about exporting records from the List screen.

Adding Records to Database Tables

This section describes how to add new records to a table using Data Navigator. Data Navigator can add records to any of the tables defined in the meta-data tables in the Oracle Utilities Data Repository.

How to add records to database tables:

1. Select the table to which you wish to add a record from the Data menu.
A search screen based on the selected table opens.
2. Click **Add**. A data entry screen based on the selected table opens and the name of the selected table appears in the History section.
3. Enter data in the fields as appropriate. See **Working with Data Types** on page 8-4 for more information about entering data values. Fields marked with an asterisk (*) are required.

When a parent or lookup record is entered, the name of the field appears underlined on the screen. To navigate from the current record (the record being created) to one of its parent or lookup records, click the Name of the parent table on the record. the name of the selected table and the Last Item icon appear in the History section.

Use the **Back** button to return to the record being created.

4. To save the record, click **Save**. To search for records in the selected table, click **Search**.
5. The new record appears on the screen, and the Last Item icon appears in the History section.

Viewing and Editing Records

This section describes how to view and edit records using Data Navigator. Data Navigator can display and update records in any of the tables defined in the meta-data tables in the Oracle Utilities Data Repository.

How to view and/or edit records using the Data Navigator:

1. Select the record you wish to view or edit from the List screen.

The Edit screen displays the selected record and the Last Item icon appears in the History section.

2. Edit data in the fields as appropriate. See **Working with Data Types** for more information about editing data values.

Note: Columns that are designated “Read-Only” in the meta-data tables cannot be edited. Also, columns that contain BLOB (binary large object) data are not displayed on the edit screen.

3. To save changes made to the record, click **Save**. To save the edited record as a new record, click **Save As New**.

Note: The **Save As New** option only works if the identity of the record has been changed.

4. To return the List screen, click **List**.

The Edit screen also allows users to perform other options, including:

- **Search Table:** To perform a search on the current table (the table to which the record belongs), click **Search**.
- **List Records:** To open a list of records from the current table (the table to which the record belongs), click **List**. If you arrived at the Edit screen from the List screen (after performing a search), the List screen displays the results of your search.
- **Delete Record:** To delete the current record, click **Delete**.
- **View Parent/Lookup Record:** To navigate from the current record to one of its parent or lookup records, click the Name of the parent table on the record. Parent and lookup records appear in color on the screen. Use the **Back** button to return to the record being viewed.
- **View Child Records:** To view a list of child records, click the name of the child table you wish to view in the Children section of the screen. Use the **Back** button to return to the record being viewed.
- **Export Record:** To export the current record, click **Tools** and select the appropriate format (XLS or IMP). See **Exporting from the Edit Screen** on page 8-12 for more information about exporting records from the Edit screen.

Exporting Records from Database Tables

This section describes how to export records using Data Navigator. Users can export records in either Oracle Utilities Import/Export (*.IMP) format or in Microsoft Excel 2003 (*.XLS) format.

Exporting Records

Users can export records from either the **List Screen** or the **Edit** screen.

Exporting from the Edit Screen

Exporting from the Edit screen allows users to export a single record.

How to export a record from the Edit screen:

1. Click **Tools** on the Edit screen.
The **Tools** menu opens.
 2. To export the record to a Microsoft Excel 2003 file (*.xls), select **Export to XLS**.
The **File Download** dialog opens.
To open the file, click **Open**. The file opens in Microsoft Excel 2003 format.
To save the file, click **Save**. A **Save As** dialog opens. Select the destination location for the file, enter a name for the file, and click **Save**. The default name of the file is the name of the table from which the record is being exported (e.g. ACCOUNT.xls).
 3. To export the record to a Oracle Utilities Import/Export file (*.imp), select **Export to IMP**.
The **File Download** dialog opens.
To open the file, click **Open**. The file opens in Notepad or other text editor program.
To save the file, click **Save**. A **Save As** dialog opens. Select the destination location for the file, enter a name for the file, and click **Save**. The default name of the file is the name of the table from which the record is being exported (e.g. ACCOUNT.imp).
 4. To export the record to a comma separated values file (*.csv), select **Export to CSV**.
The **File Download** dialog opens.
To open the file, click **Open**. The file opens in Microsoft Excel 2003 format.
To save the file, click **Save**. A **Save As** dialog opens. Select the destination location for the file, enter a name for the file, and click **Save**. The default name of the file is the name of the table from which the record is being exported (e.g. ACCOUNT.csv).
5. To open the Detach window for the current record, click **Detach Explorer**.
The **Detach** window opens. See **Detach Explorer** for more information about working with the Detach window.

Exporting from the List Screen

Exporting from the List screen allows users to export multiple records.

How to export records from the List screen:

1. Select the records you wish to export on the list screen. You can export either selected records, or all the records returned based on the search criteria. See **Searching Database Tables** on page 8-7 for more information about searching records.
 - To export selected records, check the checkbox(es) for the records you wish to export.
 - To export all records, leave all the checkboxes **unchecked**. **Note:** If a search returns more than one page of records, exporting all records includes the records on subsequent pages as well as on the current list screen.

2. Click **Tools** on the List screen.
The **Tools** menu opens.
3. To export the record to a Microsoft Excel 2003 file (*.xls), select **Export to XLS**.
The **File Download** dialog opens.
To open the file, click **Open**. The file opens in Microsoft Excel 2003 format.
To save the file, click **Save**. A **Save As** dialog opens. Select the destination location for the file, enter a name for the file, and click **Save**. The default name of the file is the name of the table from which the record is being exported (e.g. ACCOUNT.xls).
4. To export the record to a Oracle Utilities Import/Export file (*.imp), select **Export to IMP**.
The **File Download** dialog opens.
To open the file, click **Open**. The file opens in Notepad or other text editor program.
To save the file, click **Save**. A **Save As** dialog opens. Select the destination location for the file, enter a name for the file, and click **Save**. The default name of the file is the name of the table from which the record is being exported (e.g. ACCOUNT.imp).
5. To export the record to a comma separated values file (*.csv), select **Export to CSV**.
The **File Download** dialog opens.
To open the file, click **Open**. The file opens in Microsoft Excel 2003 format.
To save the file, click **Save**. A **Save As** dialog opens. Select the destination location for the file, enter a name for the file, and click **Save**. The default name of the file is the name of the table from which the record is being exported (e.g. ACCOUNT.csv).
6. To open the Detach window for the current record, click **Detach Explorer**.
The **Detach** window opens. See **Detach Explorer** for more information about working with the Detach window.

Tools Menu

The Tools menu provides users with a number of options for exporting records from Data Navigator.



The Tools menu provide the following options:

- **Export to XLS**
- **Export to IMP**
- **Export to CSV**
- **Detach Explorer**

Each of these options is described in more detail below.

Export to XLS

The **Export to XLS** option allows users to export records to a Microsoft Excel 2003 spreadsheet. This allows users to export data from the Oracle Utilities Data Repository and use it in external systems.

This spreadsheet lists all the exported records, and includes column headings named for each of the columns in the table from which the records are exported.

	A	B	C	D	E	F
1	Customer	ID	Start Time	Stop Time	Operating Compar	Jurisdiction
2	TEST	000001	1/1/2000 0:00		OPCO	JURIS
3	TEST	000002	1/1/2000 0:00		OPCO	JURIS
4	TEST	000003	1/1/2000 0:00		OPCO	JURIS
5	TEST	000004	1/1/2000 0:00		OPCO	JURIS
6	*					
7						

Note: References to UID columns in other tables are resolved when exporting data. For example, when exporting records from the Account table, instead of displaying the value of the UIDCUSTOMER column, the spreadsheet displays the Customer ID.

Export to IMP

The **Export to IMP** option allows users to export records to a Oracle Utilities Import/Export file. This allows users to export data from one Oracle Utilities Data Repository data source and import it into another Oracle Utilities Data Repository data source.

See the *Data Manager User's Guide* for more information about the Oracle Utilities Import/Export format.

Export to CSV

The **Export to CSV** option allows users to export records to a comma separate values spreadsheet. This allows users to export data from the Oracle Utilities Data Repository and use it in external systems. This spreadsheet lists all the exported records.

Note: References to UID columns in other tables are resolved when exporting data. For example, when exporting records from the Account table, instead of displaying the value of the UIDCUSTOMER column, the spreadsheet displays the Customer ID.

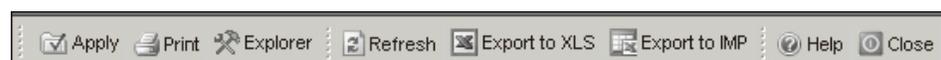
Detach Explorer

The **Detach Explorer** option allows users to open a separate window that provides additional options for exporting records.

When the user selects Detach Explorer, the **Detach** window opens. This window includes two panes: the **Detach Explorer Pane** and the **Record Pane**, which displays a list of records selected for export. **Note:** If this option is selected from the Edit screen, the Record pane displays the current record.

Detach Toolbar

The Detach toolbar is located at the top of the Detach window, and provides users with access to various options and tools.



The table below lists the available options from the Detach toolbar.

Button	Description
 Apply	Apply: Applies changes made in the Explorer pane to the records displayed in the Record pane.
 Print	Print: Opens the Internet Explorer Print dialog to allow the user to print the contents of the Detach window.
 Explorer	Explorer: Displays/Hides the Detach Explorer pane on the Detach window.
 Refresh	Refresh: Refreshes the contents of the Record pane.
 Export to XLS	Export to XLS: Exports the records listed on the Record pane to a Microsoft Excel 2003 (*.xls) file.
 Export to IMP	Export to IMP: Exports the records listed on the Record pane to a Oracle Utilities import (*.imp) file.
 Help	Help: Opens an online help window for the Detach window.
 Close	Close: Closes the Detach window.

Detach Explorer Pane

The Detach Explorer displays a tree listing the table from which the records are to be exported and all of its columns. The table and each column has a corresponding checkbox. This allows users to select specific columns to be included/excluded when exporting records to Excel 2003 format. The default is to include all columns when exporting records.

Note: Columns that contain BLOB (binary large object) or CLOB (character large object) data are not displayed on the Detach Explorer tree.

How to exclude columns from exported records:

1. Uncheck the checkbox(es) for the column(s) you wish to exclude from exported records.
2. Click **Apply** on the Detach toolbar.

Any unchecked checkboxes no longer appear in the Record pane, and are excluded from the exported records.

Note: Selections on the Detach Explorer apply only when exporting records to Excel 2003 spreadsheets, and are ignored when exporting records to the Oracle Utilities Import/Export format.

The Detach Explorer pane is displayed by default, but it can be hidden by clicking the **Explorer** button on the Detach toolbar.

Record Pane

The Record Pane displays the record(s) selected for export.

- When opened from the List screen, the Record Pane displays a list of selected records.

Note: Columns that contain BLOB (binary large object) or CLOB (character large object) data are not displayed on the Record pane list.

- When opened from the Edit screen, the Record pane displays the current record.

Note: Columns that contain BLOB (binary large object) data are not displayed on the Record pane.

Working with the Detach Window

From the Detach window, the user can print and export records displayed in the Record pane:

How to print records from the Detach window:

1. Click the **Print** button on the Detach toolbar.

The Internet Explorer Print dialog opens.

2. Select the appropriate printer and print options on the print dialog.
3. Click **Print**.

How to export records to an Excel 2003 spreadsheet:

1. Click the **Export to XLS** button on the Detach toolbar.

The **File Download** dialog opens.

2. To open the file, click **Open**. The file opens in Microsoft Excel 2003 format.
3. To save the file, click **Save**. A **Save As** dialog opens. Select the destination location for the file, enter a name for the file, and click **Save**. The default name of the file is the name of the table from which the record is being exported (e.g. ACCOUNT.xls).

How to export records to an Oracle Utilities Import/Export file:

1. Click the **Export to IMP** button on the Detach toolbar.

The **File Download** dialog opens.

2. To open the file, click **Open**. The file opens in Notepad or another text editor program.
3. To save the file, click **Save**. A **Save As** dialog opens. Select the destination location for the file, enter a name for the file, and click **Save**. The default name of the file is the name of the table from which the record is being exported (e.g. ACCOUNT.imp).

Viewing Interval Data Tables

When viewing tables that store interval data cuts, such as the Channel Cut Header table, the Tools menu displays two additional options.

Add to Workset

This option adds selected cuts to the user's Workset. When adding cuts to the Workset from Data Navigator, the system checks for an Interval Data Source with a Name matching the interval data table name from which the cuts are to be copied to the Workset. If the system finds an Interval Data Source with a Name matching the interval data table name, it uses that as the Interval Data Source for the cuts in the Workset. If it cannot find an Interval Data Source with a Name matching the interval data table name, the cuts are added to the Workset as "Disconnected" cuts.

Note: Cuts can be added to the Workset only from interval data tables in the currently selected data source (defined on the **Data Sources** screen)

See **Interval Data Manager Workset** on page 9-7 for more information about the Workset.

View Graph

This option displays the selected cuts on the Interval Data Summary screen, in the same manner as if the user had selected the same cut(s) on the Usage screen and selected the Analysis Graph option.

See **Viewing and Exporting Interval Data** on page 6-5 for more information about viewing interval data.

Chapter 9

Working with Interval Data Manager

This chapter describes how to work with Interval Data Manager, including:

- **Cut Search**
- **Cut Search Results**
- **Interval Data Manager Workset**
- **Working with Cut Data on the Workset Page**
- **Viewing Cut Data on the Workset Page**
- **Viewing and Editing Header Information**
- **Viewing and Editing Interval Data Values and Status Codes**
- **Interval Data Manager Functions and Graphing Views**
- **Available Functions and Graphing Views**

Cut Search

The **Cut Search** screen allows users to search for interval data cuts in Pervasive.SQL (*.BTE) files based on various search criteria. This screen opens when you select a Pervasive.SQL Interval Data Location (indicated by “BTE” in parentheses) on the Usage screen (see **Searching Interval Data** on page 6-3 for more information).

How to search interval data cuts in Pervasive.SQL files:

1. Select **Usage->Interval Data**.

The Usage screen opens.

2. Select the **Data Source** you wish to search.

The Data Source drop-down lists all the data sources available to the user.

3. Select the Pervasive.SQL **Interval Data Location** you wish to search.

The Interval Data Location drop-down lists all the Interval Data Sources available to the user. The type (either “RDB” or “BTE”) of each data source is listed in parentheses after the data source name. “RDB” indicates the data source is a set of relational tables in the Oracle Utilities Data Repository, while “BTE” indicates the data source is a *.BTE file stored either on the web server or a server whose path is mapped to the web server. The contents of this drop-down list are configured in the Interval Data Sources table in the Oracle Utilities Data Repository. See the *Oracle Utilities Energy Information Platform Configuration Guide* for more information.

4. Enter the search criteria in the appropriate field(s).

You can search based on the Recorder ID, Channel, SPI (Seconds per Interval), Start Time, and Stop Time. To search based on Recorder ID, Channel, or SPI, enter the search criteria in the text field. To search based on date/times, select the appropriate operand from the drop-down list (see **Using Operands** below), and enter date fields either by typing the date manually, or by clicking the drop-down arrow to the right of the date field (this opens a calendar dialog that you can use to select the appropriate date), and enter time fields by typing the time manually, or by clicking the “up” and/or “down” arrows.

Note: Recorder IDs are stored in uppercase. Lowercase Recorder IDs are automatically converted to uppercase before the search is initiated.

You can also search based on the Edited, Externally Valid, Internally Valid, Merge, Origin or Archive flags, the Unit-of-Measure (UOM), and the Descriptor and ValMsg(s) (Validation Messages) fields. To search on one of flags, select the appropriate value from the drop-down lists. To search on Descriptor or ValMsg(s) enter the search criteria in the text field.

Using Operands: You can enter optional operands when searching by dates and times to narrow your search. The table below lists the available operands.

Value	Explanation	Example	User Input Example
=	Equals	Account ID = 800001	=800001
>	Greater Than	Channel > 2	>2
<	Less Than	StopDate < 10/03/2002	<10/03/2002
<>	Not Equal to	Channel != 2	<>2
>=	Greater than or Equal to	ValMsg1 >= (EXT'	>=(EXT'
<=	Less Than or Equal to	StartDate <= 12/31/2002-14:00:00	<=12/31/2002 14:00:00

Using Wildcards: You can use the percent sign (“%”) as a wildcard character when entering values in any of the text fields. For instance, if you want to search for all cuts whose Recorder IDs begin with the letter G, you could enter “G%” in the Recorder ID field. You can use this wildcard before or after specified letters or numbers (i.e. you would use %t to search for all cuts whose Recorder IDs end with the letter t, etc.).

Note: Customer Names, Account Names, Customer IDs, and Account IDs are **case-insensitive**. For example, there is no difference between the “Acct_1” and “acct_1” account IDs.

5. Specify how the search results are displayed.
 - Specify how many results should appear on each page in the **Page Size** field.
6. Click **Search** to perform the search. To clear all the search fields, click **Reset**. To go to the Workset page without searching, click **Cancel**.
7. The search results appear on the **Cut Search Results** screen.

Uploading Data from the Cut Search Page

You can also upload interval data in the following formats from the Cut Search page:

- Oracle Utilities Enhanced Database Format (Pervasive.SQL) (*.bte)
- Oracle Utilities Enhanced Input/Output Interval Data Format (*.lse)

See the *Data Manager User's Guide* for detailed information about these formats.

Note: The Upload Data function does not offer all the options available when importing data using Data Manager or command line programs. To take advantage of those options, use the Interval Data Import Utility or INTDIMPEXE. See **Chapter Three: Importing Data** in the *Data Manager User's Guide* for more information.

How to upload data:

1. Click the **Upload File** link on the Cut Search screen. The Upload Files screen opens.
2. Select the Interval Data Location into which the data will be imported.
3. Click the **Browse** button. The **Choose file** dialog opens.

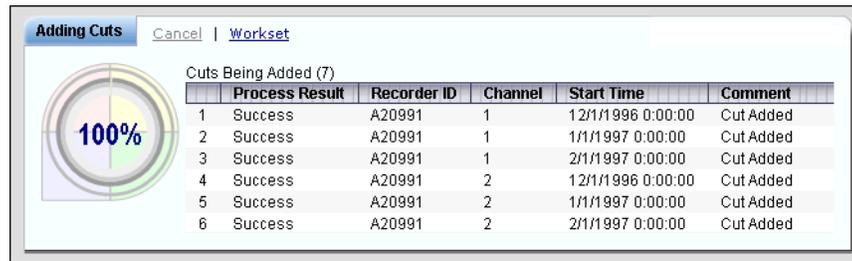
Navigate to the file you wish to upload and click **Open**. You can upload *.bte and *.lse files.
4. Select an **OverCount** option. This controls the behavior of import functions when an incoming cut has too many recorded intervals for the time span defined by the cut start time and the cut stop time and the DST_Participant flag.
 - **REJECT** (default): Directs the function to produce an error and disallow the import of any incoming/uploaded cut when it has too many recorded intervals (Expected < Recorded).
 - **BE**: Behaves exactly like REJECT, except in the case where a cut that crosses the beginning of a DST period has its recorded interval count equal to the expected intervals count without the hour adjusted for DST.
 - **ASIS**: Allow the storage of any incoming cuts with a number of expected intervals less than the number of recorded intervals. The stop times of these cuts will remain unchanged.
5. Select an **UnderCount** option. This controls the behavior of import functions when an incoming cut has too few recorded intervals for the time span defined by the cut start time and the cut stop time and the DST Participant flag.
 - **REJECT**: Directs the function to produce an error and disallow the import of any incoming/uploaded cut when it has too few recorded intervals (Expected > Recorded).

- **BE** (default): Directs the function to behave similar to the default behavior observed in previous installations and versions. This setting works exactly like FILL in most cases. When a cut being processed spans the end of the DST period, usually the fall DST hour, if viewed directly from the raw flat file, the cut will appear to be filled using DST calculations, yet if the cut is saved to any binary data source (RDB, BTE or BTR), it will only be filled with missings as if the DST Participant flag is set to “N”. For example, if a cut is supplied that crosses the Fall DST change and has only 92 intervals (23 hours), the system will fill to only 96 not 100. If 100 intervals are supplied, then 100 will be stored. Also, if 97 - 99 intervals are supplied and the DST = “Y”, then the system will Reject the incoming cut.

Note: Use of this feature may prevent the Proxyday Extension from successfully reading and merging together spring DST cuts imported using this feature. (It may effectively cause the cuts to be stored in an overcount state.) Cuts being imported are for use with Proxyday must have a valid number of intervals.

Using this feature on Spring DST cuts with may cause Data Manager and the Rules Language to ignore the 4 missing intervals when calculating recorded intervals.

- **FILL:** Fills all incoming cuts with missings (value = 0, Status = “9”) to the stop time of the cut using DST adjustments if appropriate (DST_Participant = “Y”).
 - **ASIS:** Allows the storage of any incoming cuts with a number of expected intervals greater than the number of recorded intervals. The stop times of these cuts will remain unchanged.
6. Click the **Upload** link to begin the upload. To clear the screen, click the **Reset** link.
 7. The Adding Cuts screen appears, displaying the results of your upload.



The cuts in the uploaded file are imported into the selected Interval Data Location.

Cut Search Results

The Cut Search Results screen displays the results of your search.

This window displays the following information for each cut:

- Recorder ID
- Channel
- Start Time
- Stop Time
- UOM
- SPI
- Edit Flag (E)
- Internally Valid Flag (I)
- Externally Valid Flag (X)
- Merge Flag (M)
- Archive Flag (A)

If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.

Note: The order in which the search results are listed differs slightly based on the Relational Management Database System (RDBMS) being used (Oracle or MS SQL Server).

To perform another search, click **Search**. To view your Workset page, click on the **Workset** link. To refresh the contents of the Cut Search Results screen, click **Reset**.

How to download cuts to *.CSV or *.LSE files:

1. Select the cuts you wish to download by checking the appropriate checkbox(es) in the far left column. To select all cuts, check the **Select All** checkbox at the top of the list. To invert your selection, check the **Invert Selection** checkbox.
2. Click the **Download CSV** or **Download LSE** link as appropriate.

The **File Download** dialog opens.

3. To open the file, click **Open**. The file will open using an appropriate application (Excel 2003 for *.CSV files, Notepad for *.LSE files).

To save the file, click **Save**. The **Save As** dialog opens.

Select the destination for the file and change the file name as appropriate and click **Save** to save the file. To close the dialog without opening or saving the file, click **Cancel**.

Adding Cuts and Cut Series to the Workset

You can add cuts to the Workset from the Cut Search Results screen. You can add cuts as either individual cuts, or as an entire cut-series. Adding a cut-series allows you to add interval data to the Workset based on a user-specified start and stop time, rather than the start and stop times of the individual cuts.

How to add individual cuts to the workset page:

1. Select the cuts you wish to add by checking the appropriate checkbox(es) in the far left column. To select all cuts, check the **Select All** checkbox at the top of the list. To invert your selection, click the **Invert Selection** link.

Note: If there is more than one page of results, checking the Select All checkbox selects only the results on the currently displayed page.

2. Click **Add**.
3. The **Adding Cuts** screen appears, displaying the results of your addition.

The cuts are added to your Workset.

How to add a cut-series to the workset page:

1. Click the **Load Dates** icon () for any one of the cuts to which the cut-series you wish to add belongs.

The Cut Series screen opens, displaying the Recorder ID, Channel, Start Time and Stop Time of the entire cut-series.

2. Edit the Start Time and/or Stop Time as appropriate.

Note: You cannot change the Recorder ID or Channel when adding cut-series using this option.

3. Click **Add**.
4. The **Adding Cuts** screen appears, displaying the results of your addition.

The cut-series is added to your Workset.

Note: When you use this option, the cut-series is added to the Workset as a single cut, meaning that saving the data back to its original data source would result in overlapping data.

Also, cut-series added to the Workset using this option are “disconnected,” meaning they are not associated to a Data Source or Interval Data Location.

Interval Data Manager Workset

The Interval Data Manager Workset is the place from where you perform all operations and actions on interval data cuts. It contains your current “working set” of interval data cuts. You add cuts to your workset page using the **Add** option on the Usage search result screen. See **Searching Interval Data** on page 6-3 for more information.

Key topics regarding the workset page include:

- **Workset Cut List**
- **Selecting Cuts from the Workset Cut List**
- **Workset Page Function Lists**
- **Viewing Cut Header Information from the Workset Cut List**

Workset Cut List

Each cut listed on the Workset page contains the following:

- **Expand View Toggle:** A button that expands the cut to include header information and a number of options. Click the arrow (▶) to expand the view of the cut. See **Viewing Cut Header Information from the Workset Cut List** on page 9-8 for more information.
- **Select Checkbox:** A checkbox used to select cuts. See **Selecting Cuts from the Workset Cut List** on page 9-8 for more information.
- **Edit Flag:** A flag that indicates if the cut has been edited/modified and not saved since it was stored in the user’s workset.
- **Time Series:** The identity of the cut. For standard interval data cuts, this includes the Recorder ID and Channel Number. For enhanced interval data cuts, this is the parent identity of the cut.
- **Category:** The category of the cut (used with enhanced interval data cuts only, and only when category is part of the identity of the cut).
- **Start Time:** The cut’s Start Time.
- **Stop Time:** The cut’s Stop Time.
- **UOM:** The cut’s unit-of-measure (UOM)
- **SPI:** The number of seconds-per-interval in the cut.
- **Total Energy:** The total energy of the cut (calculated from the total of all interval values).
- **Data Source:** The data source the cut is connected to. Cuts that have no listed data source are considered “disconnected”.

Cuts that have been added to the Workset as a result of the user selecting them from the Search Results list from an RDB or a BTE are connected. These cuts have the original data source information maintained with the cut. Disconnected cuts are cuts that have been uploaded using the Upload File function or created via the **Copy** function. These cuts do not maintain a data source identifier until they are saved to a BTE or RDB data source. These cuts, once connected, may be saved but will not be saved with any edit trail information or validation messages (as the cuts are new to the data source when saved). Any “Save-as” operation (i.e. saving a cut to a new data source) adds the original cut to a data source therefore it makes no sense to create an archive and save the edit trail. If a user wants to save the edit trails of a copied or uploaded cut, he must first save the cut to a data source, thus creating a connected cut. Upon the next save for that cut, the archive will be created and the edit trails since the save was performed will be kept.

The Restore Archive and Delete functions on the **Data Source Cuts** drop-down list cannot be used on disconnected cuts.

- **Location:** The interval data location (within the data source) where the cut is stored. Each data source can have multiple interval data locations associated with it, as defined in the Interval Data Sources table in the Oracle Utilities Data Repository. See the *Oracle Utilities Energy Information Platform Configuration Guide* for more information.

Selecting Cuts from the Workset Cut List

In order to apply functions to cuts from your workset, you must first select the cuts you wish to work with. You select cuts from your workset using the Select Checkbox in the far left column of the Workset Cut List. To select a cut, check the Select Checkbox for that cut.

In addition to selecting individual cuts, you can also select groups of cuts using the Select checkboxes that appear at the top of the Workset Cut List. These include:

- **Select All:** Selects all cuts in the workset.
- **Select Disconnected:** Selects all disconnected cuts in the workset.
- **Select Modified:** Selects all modified cuts in the workset.
- **Invert Selection Link:** Inverts your current selection. When you click this link, all currently selected cuts are unselected, and all currently unselected cuts are selected.

Workset Page Function Lists

The Workset page provides three types of functions that can be applied to one or more cuts:

Data Source Cuts: functions that apply to cuts in a connected data source. See **Data Source Cuts** on page 9-9 for more information about using these functions.

Workset Cuts: functions that apply to selected cuts in your workset. See **Workset Cuts** on page 9-12 for more information about using these functions.

Functions: interval data functions that can be applied to selected cuts. See **Interval Data Manager Functions and Graphing Views** on page 9-28 for more information about using these functions.

View: graphing views that can be applied to selected cuts. See **Interval Data Manager Functions and Graphing Views** on page 9-28 for more information about using these functions.

Viewing Cut Header Information from the Workset Cut List

You can also view header information for each of the cuts in your workset by clicking the arrow (▶) in the far left column of the Workset Cut List to expand the view of the cut.

The screenshot shows the 'Workset' page interface. At the top, there are tabs for 'Data Source Cuts', 'Workset Cuts', and 'Functions'. Below the tabs, there are checkboxes for 'Select All', 'Select Disconnected', and 'Select Modified', along with an 'Invert Selection' link and a 'Reset' button. The main table displays a list of cuts with columns for Recorder ID, Ch., Start Time, Stop Time, UOM, SPI, and Data Source. The first three rows are expanded, showing detailed header information for each cut. The first cut (Recorder ID A20991, Ch. 1) has a Start Time of 12/1/1996 0:00:00 and a Stop Time of 12/31/1996 23:59:59. The second cut (Recorder ID A20991, Ch. 1) has a Start Time of 1/1/1997 0:00:00 and a Stop Time of 1/31/1997 23:59:59. The third cut (Recorder ID A20991, Ch. 1) has a Start Time of 2/1/1997 0:00:00 and a Stop Time of 2/28/1997 23:59:59. Below the table, there are links for 'Copy', 'Edit Header', 'Edit Values', 'Graph', 'Statistics', 'Validation Messages', and 'Edit Trails'. The expanded header information for the first cut includes: Start Time (2/1/1997 0:00:00), Stop Time (2/28/1997 23:59:59), Meter Start Reading (0.0), Meter Stop Reading (0.0), Meter Multiplier (0.0), Meter Offset (0.0), SPI (1800), UOM Name (KWH), Time Zone (0), and Descriptor ('UMS INC').

Recorder ID	Ch.	Start Time	Stop Time	UOM	SPI	Data Source
A20991	1	12/1/1996 0:00:00	12/31/1996 23:59:59	01 - KWH	1800	ENTPORT
A20991	1	1/1/1997 0:00:00	1/31/1997 23:59:59	01 - KWH	1800	ENTPORT
A20991	1	2/1/1997 0:00:00	2/28/1997 23:59:59	01 - KWH	1800	ENTPORT

This view includes the cut's header information and a number of options. See **Viewing Cut Data on the Workset Page** on page 9-15 for more information about using these options.

Working with Cut Data on the Workset Page

The Workset page provides four types of functions that can be applied to one or more cuts: those that apply to **Data Source Cuts**, those that apply to **Workset Cuts, Functions**, and **View**.

Data Source Cuts

The Data Source Cuts drop-down list contains functions that can be applied to data source cuts, including:

- **Save**
- **Restore Archive**
- **Delete**
- **View Keys Lists**

Note: The **Restore Archive** and **Delete** functions cannot be used on disconnected cuts.

Save

The **Save** function saves (and optionally validates) the selected cut or cuts to a data source in the following manner:

If the cut is Connected:

- The original cut is archived (assuming the cut has been edited)
- Session edit trails of edits performed on the workset cut are written or appended
- The original data source cut is replaced with the edited version in the workset.
- An optional remark entered by the user will be stored as the last edit trail of the session prior to commit.
- The cut may be saved to an alternate data source. If this happens, the cut is saved as edited “NO”.

If the cut is Disconnected:

- The user must select the data source they wish to save the cut to from the drop-down list. This creates a new cut or overwrites an existing cut in the selected data source.
- The user may elect to protect against overwriting the data source cut with the workset cut if they share the same key.

How to save a cut to a data source:

1. Select the cut(s) you wish to save.
2. Select **Save** from the **Data Source Cuts** drop-down list.

The **Save to Data Source** screen appears.

3. Select the **Data Source** and **Interval Data Location** you wish to save the cut to from the drop-down lists. The defaults are “Original Data Source” and “Original Interval Data Location”.

For connected cuts, these are the data source and location to which the cut is currently connected. For disconnected cuts, you must select a data source and location from the drop-down lists. It is an error to save a disconnected cut to its “Original Data Source” or “Original Interval Data Location”.

Note: You must save all the selected cuts to the same data source and location. However, you can simultaneously save connected cuts to their respective data sources/locations using the

“Original Data Source” and “Original Interval Data Location” options. To save different disconnected cuts to different data sources and/or locations, use multiple Save operations.

4. Enter an optional **Remark**. Remarks can be up to 188 characters in length.
5. Select the cut(s) to save from the **Cuts to be Saved** list. To prevent overwriting existing cuts in the selected data source, check the **Do not overwrite existing cuts** checkbox.
6. Click **Save** (or **Save & Validate**) to save the cut(s). To return to the workset page without saving, click the **Cancel** link.

A Progress screen will appear, displaying the results of the operation.

Note: If cut validation is enabled, the Save option is replaced with Save & Validate. In this case, cuts are automatically validated via the Oracle Utilities Load Analysis Load Data Management System prior to being saved. Any validation exceptions encountered will appear on the Progress screen. See the *Oracle Utilities Load Analysis Load Data Management User's Guide* for more information about the validations performed.

See **Chapter 4: Configuring Interval Data Viewer and Interval Data Manager** in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about enabling validation.

Restore Archive

The **Restore Archive** function restores the selected cut or cuts in the workset and the original data source/location by replacing it with the cut from the original archive and deleting the active record and all edit trails in the data source. Note that archive tables are only populated when cuts are saved to a data source, and only for interval data sources where the Audit flag is set to “True” on the Interval Data Sources table. They are not populated automatically. This function cannot be used on disconnected cuts, or on cuts associated to a data source where the Audit flag is set to “False” on the Interval Data Sources table.

Note: To restore a cut not yet saved in the workset, use the **Refresh** function from **Workset Cuts** drop-down list

How to restore an archive cut:

1. Select the cut(s) you wish to restore.
2. Select **Restore Archive** from the **Data Source Cuts** drop-down list.

A confirmation screen will appear.

3. Click **OK** to restore the archive cut(s). Click **Cancel** to cancel the operation.

Delete

The **Delete** function deletes the selected cut or cuts from the original data source and location. This action also deletes the archive and edit trails in the original data source and location. A cut that is deleted in the data source and location will become disconnected in the workset and all edit trails will be removed (however validation messages will remain).

Note that deleting a cut from its data source and location does not automatically remove it from your workset. To remove a cut from your workset, use the **Remove** function from the **Workset Cuts** drop-down list.

How to delete a data source cut:

1. Select the cut(s) you wish to delete.
2. Select **Delete** from the **Data Source Cuts** drop-down list.

A confirmation screen will appear.

3. Click **OK** to delete the data source cut(s). Click **Cancel** to cancel the operation.

View Keys Lists

The View Keys Lists function allows users to view and/or download lists of cut keys for cuts that have been edited using Interval Data Manager and subsequently saved to a data source. These lists can be used as a Control file (*.ctl) for validation programs run using the Oracle Utilities Load Analysis load research tool. When this option is enabled, Keys Lists are automatically created whenever a cut is edited and saved to a data source.

This option is enabled by selecting the Create Keys List option in Interval Usage features Features screen in the Security Administration user interface. See **Common Features** on page 7-8 in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information.

How to view Keys Lists:

1. Select **View Keys Lists** from the **Data Source Cuts** drop-down list.

The **Keys Lists - Data Sources** screen appears.

This screen lists the Data Sources and Interval Data Locations for which cut key information has been saved.

2. Click the **[...]** link to view a Keys List for a specific Data Source/Interval Data Location.

The **Keys Lists - Keys** screen appears.

This screen lists the keys for the selected Data Source/Interval Data Location.

To return to the Keys Lists - Data Sources screen, click **Lists**. To clear the list of keys for the selected Data Source/Interval Data Location, click **Clear**.

How to download a list of cut keys:

1. Click **Download** on the Keys Lists - Keys screen.

The **File Download** dialog opens.

2. To open the file, click **Open**. To close the window without opening the file, click **Cancel**.

The file will open using an appropriate application (such as Microsoft Excel 2003).

3. To save the file, click **Save**. To close the window without saving the file, click **Cancel**.

The **Save As** dialog opens.

4. Select the destination and enter a name for the file and click **Save**. To close the window without saving the file, click **Cancel**. This file is a Control file (*.ctl) that can be used with Oracle Utilities Load Analysis validation programs.

Workset Cuts

The Workset Cuts drop-down list contains functions that apply to cuts in your workset, including:

- **Add**
- **Upload File**
- **Refresh**
- **Remove**
- **Analysis Graph**
- **Download CSV**
- **Download LSE**

Add

The **Add** function adds cuts to the workset. When you select this function, the Usage search screen opens.

How to add cuts to the workset:

1. Select **Add** from the **Workset Cuts** drop-down list.
The Usage search screen opens.
2. Search and add cuts as described under **Searching Interval Data** on page 6-3.

Upload File

The **Upload File** function adds cuts to the workset via file import. When you select this function, the Upload Files screen opens.

How to import cuts to the workset:

1. Select **Upload File** from the **Workset Cuts** drop-down list.
The Upload Files search screen opens.
2. Import cuts as described under **Upload Data** on page 6-27.

Note: When uploading interval data using this option, cuts are imported into the Workset. The Interval Data Location drop-down list is not displayed.

Refresh

The **Refresh** function restores the cut(s) in the workset by replacing it with the cut stored in the original data source and location.

How to refresh one or more cuts in the workset:

1. Select the cut(s) you wish to refresh.
2. Select **Refresh** from the **Workset Cuts** drop-down list.
If any modifications have been made to the cut in the workset, a confirmation screen will appear.
3. Click **OK** to refresh the selected cut(s). Click **Cancel** to cancel the operation.
A Progress screen will appear, displaying the results of the operation.

Remove

The **Remove** function deletes the cut(s) from the workset.

How to remove one or more cuts in the workset:

1. Select the cut(s) you wish to remove.
2. Select **Remove** from the **Workset Cuts** drop-down list.
If any modifications have been made to the cut in the workset, a confirmation screen will appear.
3. Click **OK** to remove the selected cut(s). Click **Cancel** to cancel the operation.
A Progress screen will appear, displaying the results of the operation.

Analysis Graph

The **Analysis Graph** function displays a graph of the selected cut(s) (up to 12 on a single graph).

How to view a graph of one or more cuts in the workset:

1. Select the cut(s) you wish to view. Up to 12 cuts of up to two UOMs can be graphed at one time.
2. Select **Analysis Graph** from the **Workset Cuts** drop-down list.
The selected cuts will appear in the Interval Data Summary screen. See **Viewing Cuts** on page 6-8 for more information about viewing cuts on the Interval Data Summary screen.

Download CSV

The **Download CSV** function downloads the interval data from the selected cut(s) to a comma-separated-values (*.csv) file. You can either open the file or save it to disk.

How to download one or more cuts in the workset to a *.CSV file:

1. Select the cut(s) you wish to download.
2. Select **Download CSV** from the **Workset Cuts** drop-down list.
The **File Download** dialog opens.
3. To open the file, click **Open**. To close the window without opening the file, click **Cancel**.
The file will open using an appropriate application (such as Microsoft Excel 2003).
4. To save the file, click **Save**. To close the window without saving the file, click **Cancel**.
The **Save As** dialog opens.
5. Select the destination and enter a name for the file and click **Save**. To close the window without saving the file, click **Cancel**.

Download LSE

The **Download LSE** function downloads the interval data from the selected cut(s) to an Oracle Utilities Enhanced Input/Output Interval Data format (*.lse) file. You can either open the file or save it to disk.

How to download one or more cuts in the workset to a *.LSE file:

1. Select the cut(s) you wish to download.
2. Select **Download LSE** from the **Workset Cuts** drop-down list.
The **File Download** dialog opens.
3. To open the file, click **Open**. To close the window without opening the file, click **Cancel**.
The file will open using an appropriate application (such as Microsoft Excel 2003).

4. To save the file, click **Save**. To close the window without saving the file, click **Cancel**.
The **Save As** dialog opens.
5. Select the destination and enter a name for the file and click **Save**. To close the window without saving the file, click **Cancel**.

Functions

The Functions drop-down list contains interval data functions that can be applied to selected cuts, including:

- **Scalar Operation**
- **Prorate**
- **Adjust Stop Time**
- **Change DST Flag**
- **Remove Dips**
- **Remove Spikes**
- **Clip**
- **Sum Intervals**
- **Scale Aggregate**
- **Interpolate**
- **Replace Range**
- **Insert Intervals**
- **Delete Intervals**

See **Interval Data Manager Functions and Graphing Views** on page 9-28 for more information about using these functions.

View

The View drop-down list contains interval data graphing views that can be applied to selected cuts, including:

- **Graph Range**
- **Duration Plot**
- **Calendar Plot**
- **Daily Profiles**
- **Day Profiles**
- **Data Report**

See **Interval Data Manager Functions and Graphing Views** on page 9-28 for more information about using these graphing views.

Viewing Cut Data on the Workset Page

You can also view header information and other cut data from the workset page, including statistics, graphs, validation messages, and edit trails.

To expand the view of the cut, click the arrow (▶) in the far left column of the Workset Cut List.

The screenshot shows the 'Workset' interface with a table of 'Workset Cuts (6)'. The table has columns for Recorder ID, Ch., Start Time, Stop Time, UOM, SPI, and Data Source. One row is expanded to show detailed information for Recorder ID A20991, Channel 1, starting on 2/1/1997 0:00:00 and ending on 2/28/1997 23:59:59. The expanded view includes fields like Start Time, Stop Time, Meter Start Reading, Meter Stop Reading, Meter Multiplier, Meter Offset, SPI, UOM Name, Time Zone, and Descriptor, each with a status indicator (e.g., Edited, Internally Valid, Externally Valid, Merge, DST Participant, Archive, Origin, Validation Flags, Edited by Rules Language).

Recorder ID	Ch.	Start Time	Stop Time	UOM	SPI	Data Source
A20991	1	12/1/1996 0:00:00	12/31/1996 23:59:59	01 - KWH	1800	ENTPORT
A20991	1	1/1/1997 0:00:00	1/31/1997 23:59:59	01 - KWH	1800	ENTPORT
A20991	1	2/1/1997 0:00:00	2/28/1997 23:59:59	01 - KWH	1800	ENTPORT
A20991	2	12/1/1996 0:00:00	12/31/1996 23:59:59	03 - KVARH	1800	ENTPORT
A20991	2	1/1/1997 0:00:00	1/31/1997 23:59:59	03 - KVARH	1800	ENTPORT
A20991	2	2/1/1997 0:00:00	2/28/1997 23:59:59	03 - KVARH	1800	ENTPORT

This view includes the cut's header information and a number of options, including:

- **Copy**
- **Edit Header**
- **Edit Values**
- **Analysis Graph**
- **Statistics**
- **Validation Messages**
- **Edit Trails**

Copy

The **Copy** option creates a duplicate of the cut and adds it to your workset.

How to create a copy of a cut in your workset:

1. Click the **Copy** link in the expanded cut box.

The **Copy** screen opens.

2. Edit the Recorder ID or enter a new Recorder ID.

Valid characters allowed for the recorder ID include uppercase letters A-Z, positive integers 0-9, the underscore character “_” and the dash “-” character. Invalid values will disable the Apply link and generate an error message.

When the Copy screen opens, the Recorder ID is the original Recorder ID appended with “_COPY”.

3. Edit the channel number or enter a new channel number.

Valid values include integers 0 -32767.

When the Copy screen opens, the channel number is the original channel number.

4. Edit the start time or enter a new Start Time. Enter the date and time manually, or click the arrow to open a calendar control and select the appropriate date and enter the time manually.

Valid values are date/times in the MM/DD/YYYY HH:MM:SS format.

When the Copy screen opens, the start time is the original start time.

5. Click the **Apply** link to create the new cut in your workset. Click the **Cancel** link to return to the workset page without creating the new cut.

A Progress screen will appear, displaying the results of the operation.

Edit Header

The **Edit Header** option opens the Edit Header screen, allowing you to view and edit header information for the cut. See **Working with Cut Data on the Workset Page** on page 9-9 for more information about using this option.

Edit Values

The **Edit Values** option opens the Edit Values screen, allowing you to view and edit interval values and status codes. See **Viewing and Editing Interval Data Values and Status Codes** on page 9-21 for more information about using this option.

Analysis Graph

The **Analysis Graph** option opens the Interval Data Summary screen, which contains a graphic display of the cut. See **Viewing Cuts** on page 6-8 for more information about viewing cuts on the Interval Data Summary screen.

Statistics

The **Statistics** option opens the Statistics window, displaying calculated statistics for the cut.

Validation Messages

The **Validation Messages** option opens the View Validation Messages window, displaying validation messages associated with the cut.

Note: A maximum of 10 validation messages can be displayed.

Edit Trails

The **Edit Trails** option opens the Edit Trails window, displaying any edit trails for the cut.

Note: A maximum of 100 edit trails can be displayed.

Viewing and Editing Header Information

Viewing and editing header information is done on the Edit Header screen. You access this screen by clicking the **Edit Header** link on the expanded view on the Workset page, or on the Edit Values screen.

Viewing and editing header information includes the following:

- **The Edit Header Screen**
- **Edit Header Options**
- **Working with the Edit Header Screen**

The Edit Header Screen

The Edit Header screen displays the following header information about the cut:

- **Recorder ID:** The recorder ID associated with the cut. This field cannot be edited.
- **Channel:** The channel number associated with the cut. This field cannot be edited.
- **Start Time:** The cut's Start Time. This field cannot be edited.
- **DST Participant Flag:** The cut's DST Participant flag, indicating whether or not this cut will be processed using DST adjustments.
 - **Y:** (DST Participant) The intervals recorded participate in DST adjustments and the intervals during DST reflect the time change.
 - **N:** (Does not participate in DST) The intervals recorded do not make any DST changes.
 - **A:** (DST participant) The intervals have been adjusted to 24-hour days. These cuts will be converted to a "Y" or "N", depending on settings in the INTDCONFIG.CFG.XML configuration file and are not stored in the database as "A".

This field cannot be edited, but can be changed using the **Change DST Flag** function.

- **Time Zone:** The difference in time, heading west, between Greenwich Mean Time and the represented time zone as measured in half hours. Eastern Standard Time should have a value of 10; Pacific = 16. A value of -1 will indicate "Time Zone not available".
- **TZ Std. Name:** Defines the Time Zone to which the cut is associated. The value must be one of EST, CST, MST, PST, or be defined in the LSCALENDAR.CFG.XML configuration file. Each value in this field must contain printable ASCII characters no longer than 32 bytes. Only letters, numbers, underscores, and hyphens will be accepted in this field, all other characters and embedded blanks will cause the record to be rejected.
- **Origin:** The origin of the cut. Can be one of: M (metered), P (profiled), C (computed), or S (Oracle Utilities Load Analysis Statistic).
- **Population:** Statistical value used by Oracle Utilities Load Analysis. May be any non-negative integer value. This field is not enabled for cuts stored in a relational (RDB) data source.
- **Weight:** Statistical value used by Oracle Utilities Load Analysis. May be any non-negative integer value. This field is not enabled for cuts stored in a relational (RDB) data source.
- **Archive Flag:** A flag that indicates that the cut can be transferred to an ALDB or SLDB database (used by Oracle Utilities Load Analysis).
- **Merge Flag:** A flag that indicates that data can be retrieved from the cut for a specified time range regardless of how the cut is stored (used by Oracle Utilities Load Analysis).
- **Stop Time:** The cut's Stop Time. This must be a valid datetime value greater than the value of the Start Time.

- The value must agree with the number of interval values past the start time multiplied by the SPI.
- One second is subtracted if the value is equal to an even interval start time.
- **SPI:** The number of seconds-per-interval for the cut.
- **UOM:** The Unit-of-Measure for the cut.
- **Descriptor:** A description of the cut.
- **Meter Information:** An expandable section that contains meter information for the cut, including:
 - **Meter Start Reading:** The meter reading at the cut's start time. Must be supplied if any of the other Meter fields (Meter Stop Reading, Meter Multiplier, or Meter Offset) are supplied.
 - **Meter Stop Reading:** The meter reading at the cut's stop time. Must be supplied if any of the other Meter fields (Meter Start Reading, Meter Multiplier, or Meter Offset) are supplied.
 - **Meter Multiplier:** The meter multiplier for the cut. Must be supplied if any of the other Meter fields (Meter Start Reading, Meter Stop Reading, or Meter Offset) are supplied.
 - **Meter Offset:** The meter offset for the cut. Must be supplied if any of the other Meter fields (Meter Start Reading, Meter Stop Reading, or Meter Multiplier) are supplied.
 - **Meter Energy:** The metered energy for the cut, calculated as the difference between the Meter Start Reading and the Meter Stop Reading.
 - **Interval Energy:** The total energy recorded in the cut's intervals.
 - **Energy Ratio M/I:** Metered energy divided by the Interval Energy, rounded to 10,000^{ths}.
- **Statistics:** An expandable section that contains statistics for the cut. These are the same statistics available from the **Statistics** option in the expanded view on the Workset page.
- **Validation Messages:** An expandable section that lists validation messages for the cut.

Edit Header Options

The Edit Header screen also provides a number of options, including:

- **Functions**
- **Graph**
- **Update**
- **Recalculate**
- **Refresh**
- **Reset**
- **Edit Values**
- **Workset**

Functions

The Functions drop-down list contains interval data functions that can be applied to selected cuts, including:

- **Scalar Operation**
- **Prorate**
- **Adjust Stop Time**
- **Change DST Flag**
- **Remove Dips**
- **Remove Spikes**
- **Clip**
- **Sum Intervals**
- **Scale Aggregate**
- **Interpolate**
- **Replace Range**
- **Insert Intervals**
- **Delete Intervals**

Apply the **Update** option before applying functions to the cut. See **Interval Data Manager Functions and Graphing Views** on page 9-28 for more information about using these functions.

Graph

The **Graph** option opens the View Graph window, which contains a graphic display of the cut.

Update

The **Update** option saves the changes made to the cut and updates the workset. Use this option before applying **Functions** to the cut.

Recalculate

The **Recalculate** option recalculates the cut's statistics and meter information based on edits made to the cut. Note that this option does not save the changes.

Refresh

The **Refresh** option refreshes the header data by replacing it with the cut's header data stored in the original data source.

Reset

The **Reset** option resets all the values on the Edit Header screen to the values at the last time the cut was updated using the Update Workset option.

Edit Values

The **Edit Value** option opens the Edit Values screen, allowing you to view and edit interval values and status codes. See **Viewing Cut Data on the Workset Page** on page 9-15 for more information about using this option.

Workset

The **Workset** option cancels any unsaved changes and returns the user to the workset page.

Working with the Edit Header Screen

From the Edit Header screen, you can edit header information, view and edit meter information, view statistics, and view validation messages.

How to view and edit header information on the Edit Header screen:

1. Open the Edit Header screen for the cut (from either the expanded view on the Workset page, or the Edit Values screen).
2. Edit the values in the editable fields as appropriate.
3. Click the **Recalculate** link to update the cut's statistics and meter information.

To view updated statistics, expand the Statistics section by clicking the Statistics arrow (▶).

4. Click the **Update** link to save the changes to the workset, or click the **Cancel** link to return the Workset page without saving any changes.

Note: Changing the SPI of a cut does not cause the cut's Stop Time to be recalculated. To recalculate the cut's Stop Time, use the **Adjust Stop Time** function.

How to view and edit Meter Information on the Edit Header screen:

1. Open the Edit Header screen for the cut (from either the expanded view on the Workset page, or the Edit Values screen).
2. Expand the Meter Information section by clicking the Meter Information arrow (▶).
3. Edit the Meter fields as appropriate.
4. Click the **Recalculate** link to update the cut's statistics and meter information.

To view updated statistics, expand the Statistics section by clicking the Statistics arrow (▶).

To view updated meter information, expand the Meter Information section by clicking the Meter Information arrow (▶).

5. Click the **Update Workset** link to save the changes to the workset, or click the **Cancel** link to return the Workset page without saving any changes.

How to view Statistics on the Edit Header screen:

1. Open the Edit Header screen for the cut (from either the expanded view on the Workset page, or the Edit Values screen).
2. Expand the Statistics section by clicking the Statistics arrow (▶).

How to view Validation Messages on the Edit Header screen:

1. Open the Edit Header screen for the cut (from either the expanded view on the Workset page, or the Edit Values screen).
2. Expand the Validation Messages section by clicking the Validation Messages arrow (▶).

How to view a graph of the cut:

1. Open the Edit Header screen for the cut (from either the expanded view on the Workset page, or the Edit Values screen).
2. Click the **Graph** link.

The cut will appear in the Graph window.

The Graph window allows you to view the graph in the three sizes, Small (default), Medium, and Large. To change the size, select the desired size from the **Size** drop-down list. The window will resize the graph automatically.

Viewing and Editing Interval Data Values and Status Codes

Viewing and editing interval data values and status codes is done on the Edit Values screen. You access this screen by clicking the **Edit Values** link on the expanded view on the Workset page, or on the Edit Header screen.

Viewing and editing interval data values and status codes includes the following:

- **The Edit Values Screen**
- **Edit Values Options**
- **Working with the Edit Values Screen**

The Edit Values Screen

The Edit Values screen includes the following sections:

Entire Cut View

The Entire Cut View displays a graphical view of the entire cut.



- The graph has two axes, time (measured on the X-axis), and value (measured along the Y-axis).
- **Minimum** (Min) and **Maximum** (Max) values and times are displayed above the left side of the graph.
- The **Span Size** and **Interval Start** navigation controls are displayed above the right side of the graph. These determine the size and position of the portion of the graph currently displayed in the **Detail View** (the green shaded area of the graph). See **How to navigate the cut on the Edit Values screen:** on page 9-25 for more information about using these controls.
- The red lines on the graph represent the position of the mouse on the graph. The number of intervals between the lines is determined by the value in the **Span Size** field of the navigation controls. See **How to navigate the cut on the Edit Values screen:** on page 9-25 for more information about using the mouse to navigate the cut.
- The **Unit-of-Measure** for the cut is displayed along the left end of the graph.
- The cut's **Start Time** and **Stop Time** are displayed below the graph.

Detail View

The Detail View displays a graphical view of the portion of the cut outlined in the green shaded area of the Entire Cut View graph.



- Like the Entire Cut View, this graph has two axes, time (measured on the X-axis), and value (measured along the Y-axis).
- The size and position of this area are determined by the **Span Size** and **Interval Start** navigation controls displayed above the right side of the graph.
- The red circle represents the position of the mouse on the graph. You can use the mouse to edit values on the graph. When values are edited in the detail view, the old values are displayed on a different colored “shadow” graph. See **How to view and edit interval values on the Edit Values screen:** on page 9-26 for more information.
- The **Unit-of-Measure** for the cut is displayed along the left end of the graph.
- The **Start Time** and **Stop Time** of the Detail view are displayed below the graph.
- **Highlight Status Code** drop-down list displayed below the Detail View allows the user to highlight intervals of a selected Status Code. The list includes status codes from the intervals in the Detail View, as well as “Normal” and empty options. “Normal” indicates that intervals with a Null status code should be highlighted, while the empty option indicates that no intervals should be highlighted. **Note:** If the Status Code of the last interval in the Detail View matches the selected Status Code, the interval does not appear highlighted.

Values/Status Codes

The Values/Status Codes section displays a list of date and times, values, and status codes for all the intervals within the Detail View.

Cut Values (100) <input checked="" type="checkbox"/> Status L'		
Date/Time	Value	Status
1/1/1997 00:00:00	16308.0	
1/1/1997 00:30:00	16308.0	
1/1/1997 01:00:00	16236.0	
1/1/1997 01:30:00	16272.0	
1/1/1997 02:00:00	16272.0	
1/1/1997 02:30:00	16236.0	
1/1/1997 03:00:00	16308.0	
1/1/1997 03:30:00	16272.0	
1/1/1997 04:00:00	16272.0	
1/1/1997 04:30:00	16344.0	
1/1/1997 05:00:00	16272.0	
1/1/1997 05:30:00	16308.0	

Interval Total | 24021396.0 | Metered Energy | 0.0

- The **Cut Values (X)** label displays the number of intervals displayed on the list. This number (X) is determined by the value in the **Span Size** field of the navigation controls.

- The **Status 'L'** checkbox indicates whether or not edited values should have their Status Code automatically set to "L" (the Default for data modified by Oracle Utilities Load Analysis Load Data Editor). See **How to view and edit interval values on the Edit Values screen:** on page 9-26 for more information.

When you hover the mouse over the **Status 'L'** label, the Status Code list window opens, displaying a list of pre-defined interval Status Codes.

' '	Normal
'A'	Normal, alternate-record (e.g., hand-entered)
'J'	Data inserted by C/S LodeStar to correct outage
'L'	Default for data modified by Load Data Editor
'M'	Splice peak interval (estimated value)
'N'	Interruptible or curtailable load
'P'	Inserted outage
'Q'	Corrected outage
'X'	Cuts resulting from merging invalid data or from unrecognized status codes
'y'	Reserved
'1'	Uncorrected outage (also called loss of potential)
'2'	Non-normal (usually timing-pulse defects)
'5'	Aggregated interval used in rolling format with partially missing or unavailable data
'7'	Aggregated or transformed interval with partially missing data
'9'	Missing

- For each interval on the list, the Values/Status Code list displays the Date/Time of the interval, the interval Value, and the interval Status Code. You can edit the Values and Status Codes in this list. See **How to view and edit interval values on the Edit Values screen:** on page 9-26 for more information about editing interval values. The number of decimal places displayed on this list can be controlled by the IDV.CFG.XML configuration file. Contact your system administrator for more information about this configuration file.
- Intervals with extended status codes are noted with a red asterisk (*). Hovering the cursor over the mouse causes a popup dialog to appear displaying the Status Code and Description for the extended status code of the interval.
- The **Interval Total** and **Metered Energy** values are displayed below the graph. The Interval Total value is updated automatically when you change the value of any interval on the list.

Edit Values Options

The Edit Values screen also provides a number of options (located above the **Entire Cut View**), including:

- **Functions**
- **Validation Messages**
- **Update**
- **Reset**
- **Edit Header**
- **Workset**

Functions

The Functions drop-down list contains interval data functions that can be applied to selected cuts, including:

- **Scalar Operation**
- **Prorate**
- **Adjust Stop Time**
- **Change DST Flag**
- **Remove Dips**
- **Remove Spikes**
- **Clip**
- **Sum Intervals**
- **Scale Aggregate**
- **Interpolate**
- **Replace Range**
- **Insert Intervals**
- **Delete Intervals**

Apply the **Update** option to save any changes before applying functions to the cut. See **Interval Data Manager Functions and Graphing Views** on page 9-28 for more information about using these functions.

Validation Messages

The **Validation Messages** option opens the View Validation Messages dialog, displaying validation messages associated with the cut.

Reset

The **Reset** option resets all the values on the Edit Values screen to the values at the last time the cut was updated using the Update option.

Update

The **Update** option saves the changes made to the cut. Use this option before applying **Functions** to the cut.

Edit Header

The **Edit Header** option opens the Edit Header screen, allowing you to view and edit header information. See **Working with Cut Data on the Workset Page** on page 9-9 for more information about using this option.

Workset

The **Workset** option cancels any unsaved changes and returns the user to the workset page.

Working with the Edit Values Screen

The Edit Values screen allows users to edit the values and status codes of individual intervals, and view validation messages for the cut.

How to navigate the cut on the Edit Values screen:

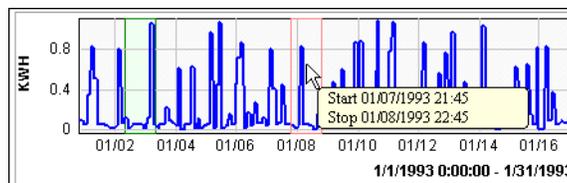
1. Open the Edit Values screen for the cut (from either the expanded view on the Workset page, or the Edit Header screen).
2. Enter the number of intervals you wish to view in the **Detail View** in the **Span Size** field of the navigation controls. The default value for this field is 100. The maximum value for this field is 400.

When the Edit Values screen opens, the detail area starts at the first interval (as shown by the “1” in the Interval Start field).

3. To move the start of the Detail View to a specific interval, enter the interval number in the **Interval Start** field and click the **Update** link.

You can also use the mouse to move the start of the Detail View.

As you move the mouse back and forth along the Entire Cut View, a pair of red lines follow the mouse, and tooltip opens displaying the approximate Start Time and Stop Time of the range between the lines.



Once you’ve located the appropriate range, click the left mouse button. The screen will refresh, and the Detail View (indicated by the green shaded area on the graph) will display the selected range.

Note: If you have selected a status code in the Locate Status drop-down list, you can only move the Detail View to a section of the cut that contains the selected status code.

4. To move the start of the Detail View in increments of the Span Size, click the ◀ and ▶ buttons.

If you enter a number in the **Interval Start** field and click either the ◀ or ▶ button, the Detail View will skip to that interval number plus or minus (respectively) the number you entered.

For example, if the Span Size is set to 100 and you enter “50” in the Interval Start field click the ▶ button, the Detail View will skip to interval 150. If the Span Size is set to 50 and you enter “100” in the Interval Start field click the ◀ button, the Detail View will skip to interval 50.

If you enter an Interval Start number smaller than the Span Size and click the ◀ button, the Detail View will skip back to the first interval in the cut.

How to locate the minimum value in a cut:

1. Open the Edit Values screen for the cut (from either the expanded view on the Workset page, or the Edit Header screen).
2. Click the **Min** link (above the left side of the graph). The Detail View will be centered on the first interval in the cut with the minimum value.

How to locate the maximum value in a cut:

1. Open the Edit Values screen for the cut (from either the expanded view on the Workset page, or the Edit Header screen).
2. Click the **Max** link (above the left side of the graph). The Detail View will be centered on the first interval in the cut with the maximum value.

How to search for status codes in a cut:

1. Open the Edit Values screen for the cut (from either the expanded view on the Workset page, or the Edit Header screen).
2. Select the status code you wish to search for from the **Locate Status** drop-down list. The list includes status codes from the intervals in the entire cut, as well as “Normal” and empty options.

Selecting the Normal option searches for the first interval with a blank status code. Selecting the empty option does nothing.

3. Click **Locate Status**. The Detail View shifts to the first interval whose status code matches the selected status code. This interval is selected in both the Detail View and the Values/Status Codes list. To locate the next interval with the selected status code, click **Locate Status** again.

Note: Once you have selected a status code from the Locate Status drop-down list, the Detail View can only be moved to a section of the cut that contains the selected status code.

How to view and edit interval values on the Edit Values screen:

1. Open the Edit Values screen for the cut (from either the expanded view on the Workset page, or the Edit Header screen).

Note: If you want to leave Status Codes of all edited values unchanged, uncheck the **Status ‘L’** checkbox. If you leave this checked, the Status Codes of all edited values are automatically set to “L”.

2. To edit values in the Detail View, click the interval you wish to edit. The selected interval will be highlighted in the **Values/Status Codes** list.

Click the left mouse button, and drag the mouse to the appropriate value for the interval. The Detail View graph and the value in the **Values/Status Codes** list will both change as you move the mouse. When you’ve reached the appropriate value for the interval, release the mouse button. As you edit values in the detail view, the old values are displayed on a different colored “shadow” graph.

3. To edit values in the Values/Status Codes list, highlight the value of the interval you wish to edit and enter the appropriate value.

Clicking anywhere else on the Edit Values screen or pressing the **Tab** key on your keyboard updates the value.

4. Click the **Update** link to save the changes to the cut. Click the **Reset** link to reset all the values on the Edit Values screen to the values at the last time the cut was updated using the Update option.

How to highlight status codes in the Detail View:

1. Open the Edit Values screen for the cut (from either the expanded view on the Workset page, or the Edit Header screen).
2. Select the status code you wish to highlight from the **Highlight Status Code** drop-down list. The list includes status codes from the intervals in the Detail View, as well as “Normal” and empty options.
3. The intervals whose status codes match the selected status code will appear highlighted in the Detail View. Selecting Normal highlights all those intervals with a blank status code. Selecting the empty option highlights no intervals.

How to edit status codes:

1. Open the Edit Values screen for the cut (from either the expanded view on the Workset page, or the Edit Header screen).
2. Click the Status Code box for the interval you wish to edit and enter the appropriate code.
Clicking anywhere else on the Edit Values screen or pressing the **Tab** key on your keyboard updates the value.
3. To set the Status Code to blank, click the Status Code box and click either the **Delete** or **Backspace** key on your keyboard.
4. Click the **Update** link to save the changes to the cut. Click the **Reset** link to reset all the values on the Edit Values screen to the values at the last time the cut was updated using the Update option.

How to view validation messages on the Edit Values screen:

1. Open the Edit Values screen for the cut (from either the expanded view on the Workset page, or the Edit Header screen).
2. Click the **Validation Messages** link.
3. The **Validation Messages** dialog opens displaying validation messages associated with the cut.

Interval Data Manager Functions and Graphing Views

All of the functions and graphing views available through the Interval Data Manager are used in the same manner. That is, regardless of the specific function, you follow the same set of steps when applying each.

How to apply a function or graphing view to one or more interval data cuts:

1. Select the cut or cuts to which you wish to apply the function.
2. Select the function or graphing view from the appropriate drop-down list (Functions or View).

The function or graphing view screen appears (if applicable - not all functions require parameters).

The screen lists the parameters for the operation and a list of cuts the operation will be applied to.

3. Enter the appropriate parameters for the operation. Specific parameters for each available function and graphing view are described under **Available Functions and Graphing Views** on page 9-30.
4. Click **Apply**. To return to the screen from which you triggered the operation, click the **Cancel** link.

For functions, the process screen appears, displaying the results of the function.

For graphing views, a graph opens displaying the selected cuts in the selected graphing view.

- To return to the graphing view screen, click **Back**.
- To return to the Workset, click **Workset**.
- To export the graph to a PNG Image (.png format), click **Get Chart**. The user will be prompted to either open or save the file.
- To define custom graphing options for the graph, expand the **Graphing Options** section by clicking the arrow. Several options for customizing the graph are displayed, including:
 - **Top Title**: Enter an optional title that will appear above the graph
 - **Left Title**: An optional title that will appear to the left of the graph. This replaces the UOM label along the left axis.
 - **Right Title**: An optional title that will appear to the right of the graph. This only applies if more than one UOM is displayed on the graph. This replaces the UOM label along the right axis (if present).
 - **Bottom Title**: An optional title that will appear below the graph. This replaces the date range label along the bottom axis.
 - **Tick Marks**: The number of tick marks to display between each hour or day label on the bottom axis of the graph
 - **Scale Maximum**: The maximum value for the graph
 - **Scale Minimum**: The minimum value for the graph
 - **Status Codes**: An operator and status code for highlighting intervals within the cut that match the specified criteria. Operators include “none,” “equal to,” and “worse than or equal to.” Click the question mark (“?”) to open a window displaying pre-defined status codes.

Enter and/or select the desired graphing options, and click **Apply** to apply the options to the graph view.

- To view interval values for the selected cut, expand the **Interval Data** section by clicking the arrow. The interval data values for each cut are displayed in a table. If you selected more than one cut to display, the label for each is color-coded the same color as the graph.
- To view statistics for the selected cut, expand the **Analysis** section for the cut you wish to view. The interval data cut header detail information is displayed below.

Function and Graphing View Format

The function and graphing views descriptions that follow all use the same format.

Description: A description of what the function or graphing view does.

Default Status Code: The default status code for the function. This status code is applied to all intervals operated on by the function when the “Use Default” option is selected for the **Status Type** parameter. Not applicable for graphing views.

Parameters: A list of parameters used by the function or graphing view. If applicable, default values are supplied in parentheses.

- **Start and Stop Times:** Several functions and graphing views include **Start Time Type** and **Stop Time Type** parameters. These specify the start/stop time for the operation. You can select either **Cut Start (or Stop) Time**, **Custom**, and in the case of some functions, other options.
- **Status Codes:** All functions (except Adjust Stop Time, Change DST Flag, and Delete Intervals) include the **Status Type** and **User Defined Status** parameters. These specify if and how the status codes of intervals operated on by the function are updated.

Example: An example of using the function or graphing view, including sample parameters.

Notes: Other notes concerning use of the function or graphing view. (Only present if applicable)

Available Functions and Graphing Views

Interval Data Manager includes the following functions and graphing views.

Functions: Interval Data Manager functions are available from the **Interval Data Manager Workset**, the Edit Header screen, and the Edit Values screen, and include:

- **Scalar Operation**
- **Prorate**
- **Adjust Stop Time**
- **Change DST Flag**
- **Remove Dips**
- **Remove Spikes**
- **Clip**
- **Sum Intervals**
- **Scale Aggregate**
- **Interpolate**
- **Replace Range**
- **Insert Intervals**
- **Delete Intervals**

Graphing Views: Interval Data Manager graphing views are available from the **Interval Data Manager Workset** and include:

- **Graph Range**
- **Duration Plot**
- **Calendar Plot**
- **Daily Profiles**
- **Day Profiles**
- **Scatter Plot (Available with Oracle Utilities Load Analysis Only)**
- **Data Report**

Scalar Operation

Description: Performs a scalar operation on each interval in a user-specified time range.

Default Status Code: L

Parameters: The available parameters for this function include:

- **Scale Type:** The type of operation. Can be Add, Subtract, Multiply, or Divide. (Default: Add)
- **Value:** A constant floating point value by which the intervals in the cut are operated. This may be a negative number.
- **Start Time Type:** The start time type or start time-related option for the operation.
 - **Cut Start Time:** Use the cut's Start Time.
 - **Custom:** Use the specified start time. Enter the date and time manually, or click the arrow to open a calendar control and select the appropriate date and enter the time manually.
- **Stop Time Type:** The stop time type or stop time-related option for the operation.
 - **Cut Stop Time:** Use the cut's Stop Time.
 - **Custom:** Use the specified stop time. Enter the date and time manually, or click the arrow to open a calendar control and select the appropriate date and enter the time manually.
 - **DO n:** *Optional.* The number of intervals to be operated on, starting at the Start Time.
- **Status Type:** How and if the status codes of the intervals operated on by the function are to be updated. The three options include:
 - **Leave As Is:** Make no change to any status codes.
 - **Use Default:** Apply the default status codes for the function. (Default)
 - **User Defined:** Apply a user-defined status code to all intervals operated on by the function. If you select this option, enter the new status code in the **User Defined Status** field.

Example: Add 2 to the value of every interval in the cut.

Parameter values:

- Scale Type: Add
- Value: 2
- Start Time Type: Cut Start Time
- Stop Time Type: Cut Stop Time
- Status Type: Use Default

Prorate

Description: Adjust the cut's intervals so that the recorded energy is consistent with the metered energy.

Default Status Code: N/A

Parameters: The available parameters for this function include:

- **Minimum Value:** The minimum value for adjusted intervals. Intervals should not be adjusted to values lower than this value. (Default: -1.0e100)
- **Maximum Value:** The maximum value for adjusted intervals. Intervals should not be adjusted to values higher than this value. (Default: 1.0e100)
- **Status:** (Default: *)
- **Meter Energy:** *Optional.* The cut's metered energy.
- **Status Type:** How and if the status codes of the intervals operated on by the function are to be updated. The three options include:
 - **Leave As Is:** Make no change to any status codes. (Default)
 - **Use Default:** Apply the default status codes for the function.
 - **User Defined:** Apply a user-defined status code to all intervals operated on by the function. If you select this option, enter the new status code in the **User Defined Status** field.

Example: Adjust the interval values in the cut so that the recorded energy matches the metered energy value of 200.00, with a high boundary of 5 and a low boundary of 1.

Parameter values:

- Minimum Value: 1
- Maximum Value: 5
- Meter Energy: 200.00
- Status Type: Leave As Is

Adjust Stop Time

Description: Adjust the cut's stop time to match the start time, number of recorded intervals, and SPI.

Default Status Code: N/A

Change DST Flag

Description: Changes the cut's DST Participant flag and/or converts the cut's Start Time and Stop Time as appropriate (forward one hour when changing from "N" to "Y", and back one hour when changing from "Y" to "N", when the cut's Start Time falls during Daylight Savings Time).

Parameters: The available parameters for this function include:

- **Change DST Flag to:** the setting to which the DST Participant flag will be set.
- **Convert:** whether to change only the DST Participant flag or to also convert the cut as appropriate. The two options include:
 - **Change Flag Only:** Change only the DST Participant flag and do not adjust the Start Time and Stop Time of the cut (Default).

Note: The "Change Flag Only" option is not available when using this function on the Meter Data Management Edit Values screen (accessed via the Usage Add/Update menu option).

- **Change Flag and Convert Cut:** Change the DST Participant flag and adjust the Start Time and Stop Time of the cut.

Example: Change the DST Participant flag from "N" to "Y", and convert the cut's Start Time and Stop Time appropriately.

Parameter values:

- Change DST Flag to: Y
- Convert: Change Flag and Convert Cut

Notes: When the start time of a cut is changed due to change of the DST Participant flag, a new cut is created in the workset. The new cut has no edit trails and is disconnected. This allows the user to see the results of the function and if required, delete the old cut from the original data source. If the user saves the new cut to the same data source as the original cut, an interval data overlap situation will occur. Therefore Oracle Utilities recommends that users recognize and understand that performing DST conversions using this function can change the cut's start time, and that if they elect to save the new cut to the original data source, they should remember to delete the original cut from the data source.

Remove Dips

Description: Removes dips in the cut that exceed user-specified limits. Intervals identified as dips are replaced using linear interpolation based on the surrounding interval values.

Default Status Code: K

Parameters: The available parameters for this function include:

- **Interval Sequence Length:** The number of intervals occurring in sequence that must be lower than the Minimum Value to be considered a dip.
- **Minimum Value:** the minimum value that any interval must be lower than to be considered a dip.
- **Status Type:** How and if the status codes of the intervals operated on by the function are to be updated. The three options include:
 - **Leave As Is:** Make no change to any status codes.
 - **Use Default:** Apply the default status codes for the function. (Default)
 - **User Defined:** Apply a user-defined status code to all intervals operated on by the function. If you select this option, enter the new status code in the **User Defined Status** field.

Example: Remove intervals in the cut with a value lower than 40 and that occur within a sequence of five intervals.

Parameter values:

- Interval Sequence Length: 5
- Minimum Value: 40
- Status Type: Use Default

Remove Spikes

Description: Removes spikes in the cut that exceed user-specified limits. Intervals identified as spikes are replaced using linear interpolation based on the surrounding interval values.

Default Status Code: K

Parameters: The available parameters for this function include:

- **Interval Sequence Length:** The number of intervals occurring in sequence that must be higher than the Maximum Value to be considered a spike.
- **Maximum Value:** the maximum value that any interval must be higher than to be considered a spike.
- **Status Type:** How and if the status codes of the intervals operated on by the function are to be updated. The three options include:
 - **Leave As Is:** Make no change to any status codes.
 - **Use Default:** Apply the default status codes for the function. (Default)
 - **User Defined:** Apply a user-defined status code to all intervals operated on by the function. If you select this option, enter the new status code in the **User Defined Status** field.

Example: Remove the intervals in the cut with a value higher than 120 and that occur within a sequence of five intervals.

Parameter values:

- Interval Sequence Length: 5
- Maximum Value: 120
- Status Type: Use Default

Clip

Description: Removes dips and spikes in the cut that exceed user-specified limits. Intervals identified as dips or spikes are replaced using linear interpolation based on the surrounding interval values.

Default Status Code: K

Parameters: The available parameters for this function include:

- **Interval Sequence Length:** The number of intervals occurring in sequence that must be lower than the Minimum Value to be considered a dip, and/or higher than the Maximum Value to be considered a spike.
- **Minimum Value:** the minimum value that any interval must be lower than to be considered a dip.
- **Maximum Value:** the maximum value that any interval must be higher than to be considered a spike.
- **Status Type:** How and if the status codes of the intervals operated on by the function are to be updated. The three options include:
 - **Leave As Is:** Make no change to any status codes.
 - **Use Default:** Apply the default status codes for the function. (Default)
 - **User Defined:** Apply a user-defined status code to all intervals operated on by the function. If you select this option, enter the new status code in the **User Defined Status** field.

Example: Remove the intervals in the cut with a value lower than 40 and that occur within a sequence of five intervals, and those with a value higher than 120 and that occur within a sequence of five intervals.

Parameter values:

- Interval Sequence Length: 5
- Minimum Value: 40
- Maximum Value: 120
- Status Type: Use Default

Notes: This function combines the **Remove Dips** and **Remove Spikes** functions.

Sum Intervals

Description: Sums the interval values in the cut.

Default Status Code: N/A

Scale Aggregate

Description: Changes the SPI (seconds per interval) of the cut, and optionally converts (scales) the interval values.

Default Status Code: N/A

Parameters: The available parameters for this function include:

- **Change SPI to:** The SPI (seconds per interval) you wish to change the cut to.
- **Convert:** A flag that indicates whether the function should change the SPI and convert the interval values (scaling up or down accordingly), or only change the value of the SPI on the cut.

Example: Change the SPI from 900 to 1800, and convert the interval values accordingly.

Parameter values:

- Change SPI to: 1800
- Convert: Convert

Interpolate

Description: Estimates data within a range of intervals within the cut by linear interpolation between the intervals immediately before and after the selected range.

Default Status Code: J

Parameters: The available parameters for this function include:

- **Start Time Type:** The start time type or start time-related option for the operation.
 - **Cut Start Time:** Use the cut's Start Time.
 - **Custom:** Use the specified start time. Enter the date and time manually, or click the arrow to open a calendar control and select the appropriate date and enter the time manually.
- **Stop Time Type:** The stop time type or stop time-related option for the operation.
 - **Cut Stop Time:** Use the cut's Stop Time.
 - **Custom:** Use the specified stop time. Enter the date and time manually, or click the arrow to open a calendar control and select the appropriate date and enter the time manually.
 - **DO n:** *Optional.* The number of intervals to be replaced, starting at the Start Time. If you select this option, you must enter the number of intervals in the **DO n** field.
- **Quality Code:** The minimum status code for intervals used in the linear interpolation.
- **Status Type:** How and if the status codes of the intervals operated on by the function are to be updated. The three options include:
 - **Leave As Is:** Make no change to any status codes.
 - **Use Default:** Apply the default status codes for the function. (Default)
 - **User Defined:** Apply a user-defined status code to all intervals operated on by the function. If you select this option, enter the new status code in the **User Defined Status** field.

Example: Estimate data for the first 100 intervals based on intervals that have a status code of 5 or better.

Parameter values:

- Start Time: Cut Start Time
- DO n: 100
- Quality Code: 5
- Status Type: Use Default

Notes: If the interpolation range is in the middle of the cut (i.e., includes neither its first nor its last interval), the interval immediately preceding the interpolation range is used as the first point from which to interpolate, and the interval immediately following the interpolation range is used as the second point. If either of these intervals fails the quality test, the interpolation is not performed.

If the interpolation range begins with the first interval of the cut, the program will attempt to use the last interval of the preceding cut in the series, if any, as the first point from which to interpolate. If the preceding cut is not present, or if its last interval fails the quality test, the value of the second point is used for the first point, resulting in all interpolated intervals receiving this same value (flat load). However, if the second point fails the quality test, the interpolation is not performed.

If the interpolation range ends with the last interval of the cut, the value of the first point is used for the second point, resulting in all interpolated intervals receiving this same value (flat load). However, if the first point fails the quality test, the interpolation is not performed.

Replace Range

Description: Replaces a range of intervals within a cut with either a specified value, or with intervals from a different specified cut.

Default Status Code: L

Parameters: The available parameters for this function include:

- **Start Time Type:** The start time type or start time-related option for the operation.
 - **Cut Start Time:** Use the cut's Start Time.
 - **Custom:** Use the specified start time. Enter the date and time manually, or click the arrow to open a calendar control and select the appropriate date and enter the time manually.
- **Stop Time Type:** The stop time type or stop time-related option for the operation.
 - **Cut Stop Time:** Use the cut's Stop Time.
 - **Custom:** Use the specified stop time. Enter the date and time manually, or click the arrow to open a calendar control and select the appropriate date and enter the time manually.
 - **DO n:** *Optional.* The number of intervals to be replaced, starting at the Start Time.
- **Interval Source:** The interval data cut from which the function takes values. This drop-down list is based on the cuts in the user's Workset.
- **Value:** The value assigned to the replaced intervals. Supplied only if "Value" is selected from the Interval Source drop-down list.
- **Source Start Time:** The start time of the first interval to be used in the cut specified in the Interval Value parameter. Enter the date and time manually, or click the arrow to open a calendar control and select the appropriate date and enter the time manually.
- **Status Type:** How and if the status codes of the intervals operated on by the function are to be updated. The three options include:
 - **Leave As Is:** Make no change to any status codes.
 - **Use Default:** Apply the default status codes for the function. (Default)
 - **User Defined:** Apply a user-defined status code to all intervals operated on by the function. If you select this option, enter the new status code in the **User Defined Status** field.

Example: Replace the first 50 intervals in the cut with the value 45.

Parameter values:

- Start Time: Cut Start Time
- DO n: 50
- Value: 45
- Status Type: Use Default

Insert Intervals

Description: Inserts a range of intervals into a cut.

Default Status Code: J (when Value field is used), or L (when From Key field is used).

Parameters: The available parameters for this function include:

- **Start Time Type:** The start time type or start time-related option for the operation.
 - **Cut Start Time:** Use the cut's Start Time.
 - **Custom:** Use the specified start time. Enter the date and time manually, or click the arrow to open a calendar control and select the appropriate date and enter the time manually.
 - **Append:** Indicates that the intervals should be appended to the end of the cut, starting at one second after the Stop Time.
- **Stop Time Type:** The stop time type or stop time-related option for the operation.
 - **Cut Stop Time:** Use the cut's Stop Time.
 - **Custom:** Use the specified stop time. Enter the date and time manually, or click the arrow to open a calendar control and select the appropriate date and enter the time manually.
 - **DO n:** *Optional.* The number of intervals to be inserted, starting at the Start Time.
- **Interval Source:** The interval data cut from which the function takes values. This drop-down list is based on the cuts in the user's Workset.
- **Value:** The value assigned to the inserted intervals. Supplied only if "Value" is selected from the Interval Source drop-down list.
- **Source Start Time:** The start time of the first interval to be used in the cut specified in the Interval Value parameter. Enter the date and time manually, or click the arrow to open a calendar control and select the appropriate date and enter the time manually.
- **Status Type:** How and if the status codes of the intervals operated on by the function are to be updated. The three options include:
 - **Leave As Is:** Make no change to any status codes.
 - **Use Default:** Apply the default status codes for the function. (Default)
 - **User Defined:** Apply a user-defined status code to all intervals operated on by the function. If you select this option, enter the new status code in the **User Defined Status** field.

Example: Insert 100 intervals starting on 10/10/2002 00:00:00 from corresponding intervals in cut 1700,1,10/01/2002 00:00:00, and set the status code of each to "L".

Parameter values:

- Start Time: 10/10/2002 00:00:00
- DO n: 100
- From Key: 1700,1,10/01/2002 00:00:00
- Start Time2: 10/10/2002 00:00:00
- Status Type: User Defined
- New Status: L

Delete Intervals

Description: Deletes a range of intervals from a cut.

Parameters: The available parameters for this function include:

- **Start Time Type:** The start time type or start time-related option for the operation.
 - **Cut Start Time:** Use the cut's Start Time.
 - **Custom:** Use the specified start time. Enter the date and time manually, or click the arrow to open a calendar control and select the appropriate date and enter the time manually.
- **Stop Time Type:** The stop time type or stop time-related option for the operation.
 - **Cut Stop Time:** Use the cut's Stop Time.
 - **Custom:** Use the specified stop time. Enter the date and time manually, or click the arrow to open a calendar control and select the appropriate date and enter the time manually.
 - **DO n:** *Optional.* The number of intervals to be deleted, starting at the Start Time.

Example: Delete intervals from the cut's start time through 10/15/2002 23:59:59.

Parameter values:

- Start Time: Cut Start Time
- Stop Time: 10/15/2002 23:59:59

Notes: It is invalid to use both the "Cut Start Time" and the "Cut Stop Time" at the same time.

Graph Range

Description: Displays a graph of the selected cuts for a user-specified time range.

Parameters: Available parameters include:

- **Start Time:** The start time for the graph.
- **Stop Time:** The stop time for the graph.
- **Aggregation:** The SPI to which the cut should be aggregated in the graph. Note: This option is applied to the graph only, and does NOT affect the cut itself.

Example: Display a graph of the selected cuts with a start time of April 1, 2001 00:00:00 and a stop time of April 1, 2001 11:59:59.

Parameter values:

- Start Time: 04/01/2001 00:00:00
- Stop Time: 04/01/2001 11:59:59
- Aggregation: Default

Duration Plot

Description: Displays a graph of the selected cuts in which the interval values are sorted in descending order.

Parameters: Available parameters include:

- **Start Time:** The start time for the graph.
- **Stop Time:** The stop time for the graph.
- **Aggregation:** The SPI to which the cut should be aggregated in the graph. Note: This option is applied to the graph only, and does NOT affect the cut itself.

Example: Display a graph of the selected cuts with a start time of April 1, 2001 00:00:00 and a stop time of April 1, 2001 11:59:59.

Parameter values:

- Start Time: 04/01/2001 00:00:00
- Stop Time: 04/01/2001 11:59:59
- Aggregation: Default

Calendar Plot

Description: Displays a series of daily, weekly, or monthly graphs of the selected cuts.

Parameters: Available parameters include:

- **Graph Type:** The type of graph to display, Daily, Weekly, or Monthly
- **Start Time:** The start time for the graph.
- **Stop Time:** The stop time for the graph.
- **Aggregation:** The SPI to which the cut should be aggregated in the graph. Note: This option is applied to the graph only, and does NOT affect the cut itself.

Example: Display daily graphs of the selected cuts with a start time of April 1, 2001 00:00:00 and a stop time of April 30, 2001 23:59:59.

Parameter values:

- Graph Type: Daily
- Start Time: 04/01/2001 00:00:00
- Stop Time: 04/30/2001 23:59:59
- Aggregation: Default

Notes:

- Weekly graphs span from Sunday through Saturday. In cases where the cut starts or ends in mid-week, the preceding or following days are included on the graph, but no date is displayed for those days.
- Clicking on a Daily, Weekly, or Monthly graph opens the graph in a full size graph screen.

Daily Profiles

Description: Displays a graph of the selected cuts where each point represents a single day's value.

Parameters: Available parameters include:

- **Graph Type:** The type of graph to display:
 - **Daily Usage:** A graph that displays the daily total (for cumulative units of measure) or average (for non-cumulative units of measure) value for each day
 - **Daily Load Factors:** A graph that displays daily load factors for each day
 - **Daily Minimum/Maximum:** A graph that displays the minimum or maximum value (or both) for each day. Options include Minimum, Maximum, and Minimum/Maximum.
- **Start Time:** The start time for the graph.
- **Stop Time:** The stop time for the graph.
- **TOU Schedule:** The time of use schedule to apply to the graph.

Example: Display a graph of daily profiles for the selected cuts with a start time of April 1, 2001 00:00:00 and a stop time of April 30, 2001 23:59:59.

Parameter values:

- Graph Type: Daily Profiles
- Start Time: 04/01/2001 00:00:00
- Stop Time: 04/30/2001 23:59:59
- TOU Schedule: N/A

Day Profiles

Description: Displays a graph of the selected cuts based on the type of day (average day, peak day, or selected day).

Parameters: Available parameters include:

- **Graph Type:** The type of graph to display:
 - **Average Day:** A graph that displays average day profiles within a specified date range. This can be used to view an average day of a specific type.
 - **Peak Day:** A graph that displays a single day of data (per selected cut) based on a list of top ten peak intervals from a specified interval data cut. This can be used to display data from one cut that corresponds to peak usage in another cut.
 - **Select Day:** A graph that displays a single selected day from the selected cuts. This can be used to compare usage for the selected cuts for the same day.
- **Start Time:** The start time for the graph. Not applicable for the Peak Day graph type.
- **Stop Time:** The stop time for the graph. Not applicable for the Peak Day or Select Day graph types.
- **Aggregation:** The SPI to which the cut should be aggregated in the graph. Note: This option is applied to the graph only, and does NOT affect the cut itself.
- **Interval Source:** Cut used to determine peak days. Used only with the Peak Day graph type.
- **Avg Day Type:** The type of day for the Average Day graph. Used only with the Average Day graph type. Options include:
 - Avg Monday: Displays a graph for an average Monday
 - Avg Tuesday: Displays a graph for an average Tuesday
 - Avg Wednesday: Displays a graph for an average Wednesday
 - Avg Thursday: Displays a graph for an average Thursday
 - Avg Friday: Displays a graph for an average Friday
 - Avg Saturday: Displays a graph for an average Saturday
 - Avg Sunday: Displays a graph for an average Sunday
 - Avg Weekend: Displays a graph for an average weekend day
 - Avg Weekday: Displays a graph for an average weekday
 - Avg Daily: Displays a graph for an average day
- **Peaks:** A list of the peak dates/time from the cut specified in the **Interval Source** drop-down list. Select the peaks you wish to use as the day to graph. Used only with the Peak Day graph type.

Example: Display a graph of average Mondays and average weekdays from the selected cuts with a start time of April 1, 2001 00:00:00 and a stop time of April 30, 2001 23:59:59.

Parameter values:

- Graph Type: Average Day
- Start Time: 04/01/2001 00:00:00
- Stop Time: 04/30/2001 23:59:59
- Aggregation: Default
- Day Type: Monday, Avg Weekday

Scatter Plot (Available with Oracle Utilities Load Analysis Only)

Description: Displays a scatter plot from the selected cuts. A scatter plot displays values for pairs of variables as sets of plotted data, with the value of one variable represented on the horizontal axis and the value of the other variable represented on the vertical axis.

Parameters: Available parameters include:

- **Start Time:** The start time for the plot.
- **Stop Time:** The stop time for the plot.
- **Aggregation:** The SPI to which the cut should be aggregated in the plot. Note: This option is applied to the plot only, and does NOT affect the cut itself.
- **Special Plot:** The type of special plot to apply. Options include:
 - **None:** Do not apply any special plotting.
 - **Day of Week:** Plots data based on the type of day. For each day type selected, a separate set of plotted data appears for each series.
 - Monday: Plots data for Mondays
 - Tuesday: Plots data for Tuesdays
 - Wednesday: Plots data for Wednesdays
 - Thursday: Plots data for Thursdays
 - Friday: Plots data for Fridays
 - Saturday: Plots data for Saturdays
 - Sunday: Plots data for Sundays
 - Weekend: Plots data for weekend days
 - Weekday: Plots data for weekdays
 - Daily: Plots data for all days
 - **Average Day:** Creates a set of plotted data for the average day type. For each day type selected, a separate set of plotted data appears for each series.
 - Avg Monday: Plots data for an average Monday
 - Avg Tuesday: Plots data for an average Tuesday
 - Avg Wednesday: Plots data for an average Wednesday
 - Avg Thursday: Plots data for an average Thursday
 - Avg Friday: Plots data for an average Friday
 - Avg Saturday: Plots data for an average Saturday
 - Avg Sunday: Plots data for an average Sunday
 - Avg Weekend: Plots data for an average weekend day
 - Avg Weekday: Plots data for an average weekday
 - Avg Daily: Plots data for an average day
 - **Monthly:** Creates a set of plotted data for each month (or portion of a month) within the Start Time and Stop Time for each series.
- **Series:** One or more pairs of cuts, each used as a pair of independent/dependent variables for the plot. By default, the screen displays one series for each pair of cuts (or portion of a pair) selected on the Workset. To remove a series, click **Remove** next to the series you wish to remove. To add a series, click **Add**. Each series is defined by:

- **Series Name:** The name of the series that will appear on the scatter plot. Optional.
- **X Data:** The cut used as the independent variable for the plot.
- **Y Data:** The cut used as the dependent variable (dependent on the X data) for the plot.

Example: Display a scatter plot for one series of cuts (Cut 1 and Cut 2) with a start time of April 1, 2001 00:00:00 and a stop time of April 1, 2001 11:59:59.

Parameter values:

- Start Time: 04/01/2001 00:00:00
- Stop Time: 04/01/2001 11:59:59
- Aggregation: Default
- Series: Series 1
 - X Data: Cut 1
 - Y Data: Cut 2

Viewing Scatter Plots

The scatter plot displays each series as colored-coded shapes on the graph. A legend at the top of the screen indicates which symbol represents each series. To view the values of a specific data point in a series, hover the mouse cursor over the data point. A pop-up box will appear displaying the following:

- The name of the Series
- The value of the X Data for that series
- The value of the Y Data for that series
- The date and time of the data point

Note: The time is NOT displayed when using the Day of Week special plot option.

Changing Parameters

To change the settings of the scatter plot, expand the **Chart Source Data** section by clicking the arrow. This section allows you to change any or all of the parameters of the scatter plot. To change the parameters of the scatter plot, adjust each as appropriate and click **Apply**.

Graphing Options

The **Chart Source Data** section also includes a Graphing Options section that provides options for customizing the graph (see **Interval Data Manager Functions and Graphing Views** on page 9-28).

Data Report

Description: Creates spreadsheet reports based on the selected cuts.

Parameters: Available parameters include:

- **Start Time:** The start time for the graph.
- **Stop Time:** The stop time for the graph.
- **Aggregation:** The SPI to which the cut should be aggregated in the report. Note: This option is applied to the report only, and does NOT affect the cut itself.
- **TOU Schedule:** The time of use schedule to apply to the report.
- **Report Type:** The type of report (or reports) to create. Available reports include:
 - **Detail Data Report:** A report that lists all the intervals in the selected cuts. This report contains a row for each day within the specified date range, and columns for each interval within the day.
 - **Average Day Report:** A report that lists the average value for each interval for each type of day (Sunday through Saturday, Average Weekday, Average Weekend, Average Daily). This report contains a row for each type of day, and columns for each interval within the day.
 - **Daily Energy Report:** A report that totals the energy for each day within the specified date range. This report contains a row for each day within the specified date range. The interval total for the day appears in the adjacent column.
 - **Daily Maximum Report:** A report that lists the maximum value (and time at which the maximum value occurred) for each day within the specified date range. This report contains a row for each day within the specified date range. The maximum value for the day appears in the adjacent column. If the maximum value on a given day is repeated, the report lists only the first occurrence.
 - **Daily Minimum Report:** A report that lists the minimum value (and time at which the minimum value occurred) for each day within the specified date range. This report contains a row for each day within the specified date range. The minimum value for the day appears in the adjacent column. If the minimum value on a given day is repeated, the report lists only the first occurrence.

Example: Create Daily Maximum and Daily Minimum reports based on the selected cuts with a start time of April 1, 2001 00:00:00 and a stop time of April 30, 2001 23:59:59.

Parameter values:

- Start Time: 04/01/2001 00:00:00
- Stop Time: 04/01/2001 23:59:59
- Aggregation: Default
- Report Type: Daily Maximum Report, Daily Minimum Report

Viewing Data Reports

When you generate reports via the Data Report option, the reports open in the Data Report screen. This screen displays a tab for each cut selected when you ran the report (or reports). Each tab is labelled using the identity of the cut.

Header Information

The top portion of each tab contains header information, which includes the following:

- **Time Series:** The identity of the cut
- **UOM Name:** The cut's unit of measure
- **Descriptor:** The cut's descriptor
- **Category:** The category of the cut (if applicable)
- **Start Time:** The cut's start time
- **Stop Time:** The cut's stop time
- **Recorded Intervals:** The number of recorded intervals in the cut
- **Recorded Hours:** The number of recorded hours in the cut
- **Interval Total:** The total of all the intervals in the cut
- **Maximum:** The maximum interval value in the cut
- **Maximum Date:** The date and time of the maximum value
- **Interval Average:** The average of the interval values
- **Load Factor:** The cut's load factor

Report Data

The bottom portion of each tab displays a list of reports run for the cut. To view a report, open the report by clicking the arrow. The report data is displayed in a table.

The report display screen provides the following options for viewing report data:

- To highlight interval values by status code, click **Status Codes**.

The Highlight Status Code(s) options appear. Select the appropriate operator and status code and click **Apply** to highlight intervals within the report. Operators include "none," "equal to," and "worse than or equal to." Click the question mark ("?") to open a window displaying pre-defined status codes.

- To download the report to a comma-separated values file, click **Download CSV**.

The **File Download** dialog opens asking if you want to open or save the file.

To open the file in the main window, click **Open**.

To save the file to your local machine (or a network drive), click **Save**. The **Save As** dialog opens. Select the destination where you want to save the file and click **OK**.

- To open the report in a separate browser window, click **Detach**.

The report opens in a separate browser window.

Chapter 10

Working with Work Queues

This chapter describes how to work with Work Queues, including:

- **Viewing and Working with My Work Queue Items**
- **Viewing and Working with My Work Queue Approvals**
- **Searching Work Queue Items**
- **Viewing and Working with Work Queue Items**
- **Searching Work Queue Approvals**
- **Viewing and Working with Work Queue Approvals**
- **Searching Closed Work Queue Items**
- **Viewing and Working with Closed Work Queue Items**
- **Work Queues Reports**
 - **Aging Report**
 - **Open Items Report**
 - **Productivity Report**

Viewing and Working with My Work Queue Items

Work queue items can be filtered based on the user assigned to them. These are referred to as “My Work Queue Items”. This is the way in which users will most often first view work queue items.

Note: My Work Queue Items does not display items assigned to the user that are awaiting approval. To view these items, use the **My Work Queue Approvals** option. See **Viewing and Working with My Work Queue Approvals** on page 10-7 for more information.

How to view My Work Queue Items:

1. Select **Work Queues**→**My WQ Items**.

The **My Work Queue** window opens.

2. From this screen, you can perform the following operations on work queue items:
 - **Unassign:** unassigns the work queue item(s), and sets the Assigned to User and Assigned to Time attributes of the item to Null.
 - **Resolve:** resolves an item (or items) with an associated approval procedure when any necessary work on the work queue item(s) has been completed to satisfaction. In addition, this operation closes items that have no associated approval process.
 - **Close:** closes an open item (or items). Once an item is closed it can only be viewed using the Search WQ Closed option. See **Searching Closed Work Queue Items** on page 10-27 for more information.
3. You can view and work with your work queue items in three different views:
 - **Groups View** (default)
 - **Summary View**
 - **Details View**

To switch between these views, select the appropriate tab.

Groups View

The Groups view displays the user’s work queue items in groupings based on combinations of attributes. This view allows the user to Resolve, Unassign, or Close groups of work queue items currently assigned to them. Each line in the list represents a grouping of items, and includes the following information:

- **Count:** the number of work queue items in the grouping
- **Work Queue Type:** the Work Queue Type of the items in the grouping
- **Work Queue:** the Work Queue of the items in the grouping
- **Opened Time:** the Opened Time (date only) of the items in the grouping

By default, items are grouped based on Work Queue Type, Work Queue, and Opened Time. You can add up to five additional attributes to group items into smaller subsets.

If there is more than one page of work queue item groups, you can move between pages using the ◀ and ▶ buttons. To change the number of item groups that appears on each page, enter the number in the **Rows** field.

How to add a grouping attribute:

1. Select the attribute you wish to group items by from the **Add Group By** drop-down list.
2. Click the **Add Group** link. A column containing values for the new attribute appears in the list.

- To reset the groupings to the default (based on Work Queue Type, Work Queue, and Opened Time), click the **Reset Grouping** link.

How to unassign work queue items from the Groups tab:

- Select the group or groups of items you wish to unassign by checking the checkbox in the far left column of the groups list.
- Click the **Unassign** link. The **Please enter note for Unassigned Item(s)** dialog opens.
Enter an optional note regarding the items and click the **OK** button to unassign the group or groups of items. To close the dialog without unassigning the item(s), click the **Cancel** button.
- The selected groups of unassigned items no longer appear on the Groups tab.

How to resolve work queue items from the Groups tab:

- Select the group or groups of items you wish to resolve by checking the checkbox in the far left column of the groups list.
- Click the **Resolve** link. The **Please enter note for Resolved Item(s)** dialog opens.
Enter an optional note regarding the resolution of the items and click the **OK** button to resolve the group or groups of items. To close the dialog without resolving the item(s), click the **Cancel** button.
- The selected groups of resolved items no longer appear on the Groups tab.
If the resolved items have no associated Approval Procedure, resolving them also closes them.

How to close work queue items from the Groups tab:

- Select the group or groups of items you wish to close by checking the checkbox in the far left column of the groups list.
- Click the **Close** link. The **Please enter note for Closed Item(s)** dialog opens.
Enter an optional note regarding the closing of the items and click the **OK** button to close the group or groups of items. To close the dialog without closing the item(s), click the **Cancel** button.
- The selected groups of closed items no longer appear on the Groups tab.

Summary View

The Summary view displays the total number of the user's work queue items. This view allows the user to Resolve, Unassign, or Close all of the work queue items currently assigned to them.

How to unassign work queue items from the Summary tab:

- Click the **Unassign** link on the Summary tab. The **Please enter note for Unassigned Item(s)** dialog opens.
Enter an optional note regarding the items and click the **OK** button to unassign the items. To close the dialog without unassigning the item(s), click the **Cancel** button.
- The number of work queue items on the Summary tab changes to 0 (zero).

How to resolve work queue items from the Summary tab:

- Click the **Resolve** link on the Summary tab. The **Please enter note for Resolved Item(s)** dialog opens.
Enter an optional note regarding the resolution of the items and click the **OK** button to resolve the items. To close the dialog without resolving the item(s), click the **Cancel** button.
- The number of work queue items on the Summary tab changes to 0 (zero).

If the resolved items have no associated Approval Procedure, resolving them also closes them.

How to close work queue items from the Summary tab:

1. Click the **Close** link on the Summary tab. The **Please enter note for Closed Item(s)** dialog opens.

Enter an optional note regarding the closing of the items and click the **OK** button to close the items. To close the dialog without closing the item(s), click the **Cancel** button.

2. The number of work queue items on the Summary tab changes to 0 (zero).

Details View

The Details view displays the user's work queue items, and allows the user to Resolve, Unassign, or Close one or more work queue items currently assigned to them. You can also view Hint Details and an Item History for each work queue item, and view and/or edit individual work queue items from this view.

Each work queue item listed is defined by the following information:

- **UID:** the unique ID for the work queue item in the Oracle Utilities Data Repository.
- **Work Queue Type:** The work queue type associated with the item.
- **Work Queue:** The work queue associated with the item.
- **Priority:** the priority level for the item
- **Work By Time:** the time by which the item should be resolved
- **Hint:** an optional hint associated with the work queue item (based on the Work Queue Type associated with the item)

If there is more than one page of work queue items, you can move between pages using the ◀ and ▶ buttons. To change the number of items that appears on each page, enter the number in the **Rows** field.

How to view Hint Details and Item History for a work queue item:

1. Click the plus sign (+) next to the item you wish to view. The item view expands to include a list of Hint Details, and an Item History.

The screenshot shows the 'My Work Queue' interface with tabs for 'Groups', 'Summary', and 'Details'. The 'Details' tab is active, displaying a table of work queue items. Item 661 is expanded to show 'Hint Details' and 'Item History'.

UID	Work Queue Type	Work Queue	Priority	Work By Time	Hint
661	EXCEPTION	MODERATE	0	5/5/2004	
Hint Details:					
Hint: Details					
Item History: Add					
Date Performed	Performed By	Action	Work Timespan	Details	Note
5/5/2004 10:56:49		ASSIGNED		Assigned on open to user lou_p	
662	EXCEPTION	SLOW	0	5/5/2004	
700	EXCEPTION	MODERATE	0	5/12/2004	
720	BILLED	MODERATE	0	6/1/2004	

2. The Hint Details list displays Hints and associated details (such as text or links associated with the hint) for the item.
3. The Item History list displays a list of all the actions taken on the item. For each action, the item view lists the following information:
 - **Date Performed:** the date the action was performed

- **Performed By:** the user who performed the action
 - **Action:** the type of action performed
 - **Work Timespan:** the time spent on the action.
 - **Details:** the details of the action (i.e. Assigned to user karen)
 - **Note:** An optional note created when the action was performed
4. To add a note to the Item History list, click **Add**. The **Please enter note for History** dialog opens.
Enter the note and click the **OK** button. To close the dialog without adding the note, click the **Cancel** button.
 5. The note now appears in the Item History list (with an Action Type of UPDATED).

How to view and edit work queue items from the Details tab

1. Click the **UID** link for the item you wish to view. The Work Queue Item View screen opens.
This screen displays the entire record for the work queue item, including Hint Details and an Item History. The specific fields displayed for the item are based on the item's Work Queue Type and any custom parameters associated with that type.
You can Resolve, Unassign, Close, and Modify the item from this screen.
2. To unassign the item, click the **Unassign** link. The **Please enter note for Unassigned Item(s)** dialog opens.
Enter an optional note regarding the item and click the **OK** button to unassign the item. To close the dialog without unassigning the item, click the **Cancel** button.
3. To resolve the item, click the **Resolve** link. The **Please enter note for Resolved Item(s)** dialog opens.
Enter an optional note regarding the resolution of the item and click the **OK** button to resolve the item. To close the dialog without resolving the item, click the **Cancel** button.
If the resolved item has no associated Approval Procedure, resolving them also closes them.
4. To close the item, click the **Close** link. The **Please enter note for Closed Item(s)** dialog opens.
Enter an optional note regarding the closing of the item and click the **OK** button to close the item. To close the dialog without closing the item, click the **Cancel** button.
5. To modify the item, click the **Modify** link. The Work Queue Item View screen now allows you to edit values for the work queue item record.
6. Edit the values as appropriate.
To change the Work Queue, Product, or Business Process, click the **Browse** button (). A dialog opens with a list of records to choose from.
If there is more than one page of records, you can move between pages using the  and  buttons. Use the  button to return the first page, and the  button to navigate to the last page. To change the number of results that appears on each page, enter the number in the **Rows** field.
To search for a specific record, click **Search**. The dialog displays a search screen. Enter the appropriate parameters for your search and click **Search**. The dialog will display a list of records that match the search criteria.
To select a record, click the **[...]** link for the record. To clear the field, click the **[X] Clear** link.

To change a date/time field, either enter the date and time manually, or click the arrow to open a calendar control and select the appropriate date and enter the time manually.

7. Click the **Save** link to save the work queue item record. Click the **Cancel** link to close this screen without saving the changes.

How to unassign work queue items from the Details tab:

1. Select the item(s) you wish to unassign by checking the checkbox in the far left column of the item list.
2. Click the **Unassign** link. The **Please enter note for Unassigned Item(s)** dialog opens.
Enter an optional note regarding the items and click the **OK** button to unassign the item(s). To close the dialog without unassigning the item(s), click the **Cancel** button.
3. The unassigned item(s) no longer appear on the Details tab.

How to resolve work queue items from the Details tab:

1. Select the item(s) you wish to resolve by checking the checkbox in the far left column of the item list.
2. Click the **Resolve** link. The **Please enter note for Resolved Item(s)** dialog opens.
Enter an optional note regarding the resolution of the items and click the **OK** button to resolve the item(s). To close the dialog without resolving the item(s), click the **Cancel** button.
3. The resolved items no longer appear on the Details tab.
If the resolved items have no associated Approval Procedure, resolving them also closes them.

How to close work queue items from the Details tab:

1. Select the item(s) you wish to close by checking the checkbox in the far left column of the item list.
2. Click the **Close** link. The **Please enter note for Closed Item(s)** dialog opens.
Enter an optional note regarding the closing of the items and click the **OK** button to close the item(s). To close the dialog without closing the item(s), click the **Cancel** button.
3. The item(s) no longer appear on the Details tab.

Viewing and Working with My Work Queue Approvals

Work queue items can be filtered based on the user assigned to approve them. These are referred to as “My Work Queue Approvals”. This is the way in which users will most often first view work queue items that require their approval (referred to as work queue approvals).

Note: My Work Queue Approvals only display items assigned to the user that are awaiting approval. To view non-approval work queue items, use the **My Work Queue Items** option. See **Viewing and Working with My Work Queue Items** on page 10-2 for more information.

How to view My Work Queue Approvals:

1. Select **Work Queues**→**My WQ Approvals**.

The **My Work Queue Approvals** window opens.

2. From this screen, you can perform the following operations on work queue approvals:
 - **Approve:** approves an “awaiting approval” item or items. If this approval is the last required by the item’s approval procedure, the item is also closed.
 - **Reject:** rejects an “awaiting approval” item or items
 - **Close:** close an open item or items. Once an item is closed it can only be viewed using the Search WQ Closed option. See **Searching Closed Work Queue Items** on page 10-27 for more information.
3. You can view and work with your work queue approvals in three different views:
 - **Groups View** (default)
 - **Summary View**
 - **Details View**

To switch between these views, select the appropriate tab.

Groups View

The Groups view displays the user’s work queue approvals in groupings based on combinations of attributes. This view allows the user to Approve, Reject, or Close groups of work queue approvals currently assigned to them. Each line in the list represents a grouping of approvals, and includes the following information:

- **Count:** the number of work queue approvals in the grouping
- **Work Queue Type:** the Work Queue Type of the approvals in the grouping
- **Work Queue:** the Work Queue of the approvals in the grouping
- **Opened Time:** the Opened Time (date only) of the approvals in the grouping

By default, approvals are grouped based on Work Queue Type, Work Queue, and Opened Time. You can add up to five additional attributes to group approvals into smaller subsets.

If there is more than one page of work queue approvals, you can move between pages using the ◀ and ▶ buttons. To change the number of approvals that appears on each page, enter the number in the **Rows** field.

How to add a grouping attribute:

1. Select the attribute you wish to group approvals by from the **Add Group By** drop-down list.
2. Click the **Add Group** link. A column containing values for the new attribute appears in the list.

3. To reset the groupings to the default (based on Work Queue Type, Work Queue, and Opened Time), click the **Reset Grouping** link.

How to approve work queue approvals from the Groups tab:

1. Select the group or groups of approvals you wish to approve by checking the checkbox in the far left column of the groups list.
2. Click the **Approve** link. The **Please enter note for Approved Item(s)** dialog opens.
Enter an optional note regarding the approvals and click the **OK** button to approve the group or groups of approvals. To close the dialog without approving the approval(s), click the **Cancel** button.
3. The selected groups of approved approvals no longer appear on the Groups tab.

How to reject work queue approvals from the Groups tab:

1. Select the group or groups of approvals you wish to reject by checking the checkbox in the far left column of the groups list.
2. Click the **Reject** link. The **Please enter note for Rejected Item(s)** dialog opens.
Enter an optional note regarding the approvals and click the **OK** button to reject the group or groups of approvals. To close the dialog without rejecting the approval(s), click the **Cancel** button.
3. The selected groups of rejected approvals no longer appear on the Groups tab.

How to close work queue approvals from the Groups tab:

1. Select the group or groups of approvals you wish to close by checking the checkbox in the far left column of the groups list.
2. Click the **Close** link. The **Please enter note for Closed Item(s)** dialog opens.
Enter an optional note regarding the closing of the approvals and click the **OK** button to close the group or groups of approvals. To close the dialog without closing the approval(s), click the **Cancel** button.
3. The selected groups of closed approvals no longer appear on the Groups tab.

Summary View

The Summary view displays the total number of the user's work queue approvals. This view allows the user to Approve, Reject, or Close all of the work queue approvals currently assigned to them.

How to approve work queue approvals from the Summary tab:

1. Click the **Approve** link on the Summary tab. The **Please enter note for Approved Item(s)** dialog opens.
Enter an optional note regarding the approvals and click the **OK** button to approve the approvals. To close the dialog without approving the approval(s), click the **Cancel** button.
2. The number of work queue approvals on the Summary tab changes to 0 (zero).

How to reject work queue approvals from the Summary tab:

1. Click the **Reject** link on the Summary tab. The **Please enter note for Rejected Item(s)** dialog opens.
Enter an optional note regarding the approvals and click the **OK** button to reject the approvals. To close the dialog without rejecting the approval(s), click the **Cancel** button.
2. The number of work queue approvals on the Summary tab changes to 0 (zero).

How to close work queue approvals from the Summary tab:

1. Click the **Close** link on the Summary tab. The **Please enter note for Closed Item(s)** dialog opens.
Enter an optional note regarding the closing of the approvals and click the **OK** button to close the approvals. To close the dialog without closing the approval(s), click the **Cancel** button.
2. The number of work queue approvals on the Summary tab changes to 0 (zero).

Details View

The Details view displays the user's work queue approvals, and allows the user to Approve, Reject, or Close one or more work queue approvals currently assigned to them. You can also view Hint Details and an Item History for each work queue approval, and view and/or edit individual work queue approvals from this view.

Each work queue approvals listed is defined by the following information:

- **UID:** the unique ID for the work queue approval in the Oracle Utilities Data Repository.
- **Work Queue Type:** The work queue type associated with the approval.
- **Work Queue:** The work queue associated with the approval.
- **Priority:** the priority level for the approval.
- **Work By Time:** the time by which the approval should be resolved.
- **Hint:** an optional hint associated with the work queue approval (based on the Work Queue Type associated with the item)

If there is more than one page of work queue approvals, you can move between pages using the ◀ and ▶ buttons. To change the number of approvals that appears on each page, enter the number in the **Rows** field.

How to view Hint Details and Item History for a work queue approval:

1. Click the plus sign (+) next to the approval you wish to view. The item view expands to include a list of Hint Details, and an Item History.

The screenshot shows the 'My Work Queue Approvals' application. The 'Details' tab is active, displaying a table of approvals. The selected approval (UID 462) is expanded to show 'Hint Details' and 'Item History'.

UID	Work Queue Type	Work Queue	Priority	Work By Time	Hint
462	MAX RISK	FAST	1	12/4/2002	INVALIDRATE, ACCTADDR, NEEDAPPR,

Hint Details:

Hint	Details
INVALIDRATE	Review account start date and rate code start time,Rate Schedule no longer valid
ACCTADDR	Check account address information,Previous mailing returned
NEEDAPPR	Prepare full investigation sheet for management approval,Identify managers available for approvals

Item History: Add

Date Performed	Performed By	Action	Work Timespan	Details	Note
12/8/2002 15:26:09	dvitale	ASSIGNED		Assigned to user dvitale.	
12/26/2002 13:24:22	dvitale	APPROVED	19Day(s) 21Hour(s) 58Min(s)	Approved with level code RISKDIR.	
12/26/2002 13:25:38	dvitale	ASSIGNED		Assigned to user dvitale.	

2. The Hint Details list displays Hints and associated details (such as text or links associated with the hint) for the approval.
3. The Item History list displays a list of all the actions taken on the approval. For each action, the approval view lists the following information:
 - **Date Performed:** the date the action was performed
 - **Performed By:** the user who performed the action

- **Action:** the type of action performed
 - **Work Timespan:** the time spent on the action
 - **Details:** the details of the action (i.e. Assigned to user karen)
 - **Note:** An optional note created when the action was performed
4. To add a note to the Item History list, click **Add**. The **Please enter note for History** dialog opens.
Enter the note and click the **OK** button. To close the dialog without adding the note, click the **Cancel** button.
 5. The note now appears in the Item History list (with an Action Type of UPDATED).

How to view and edit work queue approvals from the Details tab

1. Click the **UID** link for the approval you wish to view. The Work Queue Item View screen opens.
This screen displays the entire record for the work queue approval, including Hint Details and an Item History. The specific fields displayed for the approval are based on the approval's Work Queue Type and any custom parameters associated with that type.
You can Approve, Reject, Close, and Modify the approval from this screen.
2. To approve the approval, click the **Approve** link. The **Please enter note for Approved Item(s)** dialog opens.
Enter an optional note regarding the approval and click the **OK** button to approve it. To close the dialog without approving, click the **Cancel** button.
3. To reject the approval, click the **Reject** link. The **Please enter note for Rejected Item(s)** dialog opens.
Enter an optional note regarding the approval and click the **OK** button to reject the approval. To close the dialog without rejecting the approval, click the **Cancel** button.
4. To close the approval, click the **Close** link. The **Please enter note for Closed Item(s)** dialog opens.
Enter an optional note regarding the closing of the approval and click the **OK** button to close the approval. To close the dialog without closing the approval, click the **Cancel** button.
5. To modify the approval, click the **Modify** link. The Work Queue Item View screen now allows you to edit values for the work queue item record.
6. Edit the values as appropriate.
To change the Work Queue, Product, or Business Process, click the **Browse** button (). A dialog opens with a list of records to choose from.
If there is more than one page of records, you can move between pages using the  and  buttons. Use the  button to return the first page, and the  button to navigate to the last page. To change the number of results that appears on each page, enter the number in the **Rows** field.
To search for a specific record, click **Search**. The dialog displays a search screen. Enter the appropriate parameters for your search and click **Search**. The dialog will display a list of records that match the search criteria.
To select a record, click the **[...]** link for the record. To clear the field, click the **[X] Clear** link.
To change a date/time field, either enter the date and time manually, or click the arrow to open a calendar control and select the appropriate date and enter the time manually.

7. Click the **Save** link to save the work queue item record. Click the **Cancel** link to close this screen without saving the changes.

How to approve work queue approvals from the Details tab:

1. Select the item(s) you wish to approve by checking the checkbox in the far left column of the approval list.
2. Click the **Approve** link. The **Please enter note for Approved Item(s)** dialog opens.
Enter an optional note regarding the approval and click the **OK** button to approve the approval(s). To close the dialog without resolving the approval(s), click the **Cancel** button.
3. The approved items no longer appear on the Details tab.

How to reject work queue approvals from the Details tab:

1. Select the approval(s) you wish to reject by checking the checkbox in the far left column of the approval list.
2. Click the **Reject** link. The **Please enter note for Rejected Item(s)** dialog opens.
Enter an optional note regarding the rejection and click the **OK** button to reject the approval(s). To close the dialog without rejecting the approval(s), click the **Cancel** button.
3. The rejected item(s) no longer appear on the Details tab.

How to close work queue items from the Details tab:

1. Select the approval(s) you wish to close by checking the checkbox in the far left column of the approval list.
2. Click the **Close** link. The **Please enter note for Closed Item(s)** dialog opens.
Enter an optional note regarding the approvals and click the **OK** button to close the approval(s). To close the dialog without closing the approval(s), click the **Cancel** button.
3. The approval(s) no longer appear on the Details tab.

Searching Work Queue Items

The **Search WQ Items** option allows users to search for work queue items in the Oracle Utilities Data Repository based on various search criteria.

How to search work queue items:

1. Select **Work Queues->Search WQ Items**.

The Work Queue Search window opens.

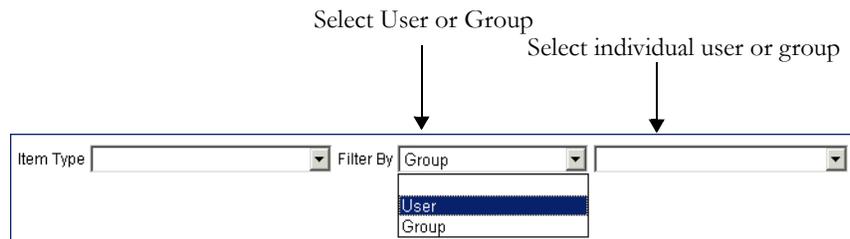
2. Enter the search criteria in the appropriate field. You can search based on the following:

- **Item Type:** the work queue type associated with the item. Select the work queue item type from the drop-down list. The remaining fields on the screen may change based on your selection. When you select a type, any custom parameters associated with the selected item type will appear on the screen, and those not associated will no longer appear.
- **UID:** the unique ID for the work queue item in the Oracle Utilities Data Repository.
- **Work Queue:** the work queue associated with the item. To select the work queue, click the **Browse** button (...). A dialog opens with a list of records to choose from. To select a record, click the [...] link for the record. To clear the field, click the [X] **Clear** link.
- **Priority Level:** the priority level for the item.
- **Work By Time:** the time by which the item should be resolved. You can enter either the date and time to search for items with an exact Work By Time, or you can enter a date (with 00:00:00 as the time) to search for items with the specified date. Enter the date and time manually, or click the arrow to open a calendar control and select the appropriate date and enter the time manually. You can search for work queue items whose Work By Times are Less Than (<), Greater Than (>), Less Than or Equal To (<=), or Greater Than or Equal To (>=) the supplied date and time by selecting the appropriate operand from the drop-down list.
- **Opened Time:** the time the item was opened. You can enter either the date and time to search for items with an exact Opened Time, or you can enter a date (with 00:00:00 as the time) to search for items with the specified date. Enter the date and time manually, or click the arrow to open a calendar control and select the appropriate date and enter the time manually. You can search for work queue items whose Opened Times are Less Than (<), Greater Than (>), Less Than or Equal To (<=), or Greater Than or Equal To (>=) the supplied date and time by selecting the appropriate operand from the drop-down list.
- **Assigned to User:** the user to whom the item is currently assigned.
- **Approval Step Number:** the current approval step number for the item.
- **Approval Level:** the current approval level for the item. To select the approval level, click the **Browse** button (...). A dialog opens with a list of records to choose from. To select a record, click the [...] link for the record. To clear the field, click the [X] **Clear** link.
- **Approval Only:** a flag that indicates that the work queue item requires an approval only. Select the appropriate value from the drop-down list.
- **Approved:** a flag that indicates if the item has been approved or rejected. This applies only to Approval Only items. Select the appropriate value from the drop-down list.
- **Product:** the Oracle Utilities product associated with the item. To select the product, click the **Browse** button (...). A dialog opens with a list of records to choose from. To select a record, click the [...] link for the record. To clear the field, click the [X] **Clear** link.

- **Process Name:** the business process associated with the item. To select the process, click the **Browse** button (...). A dialog opens with a list of records to choose from. To select a record, click the [...] link for the record. To clear the field, click the [X] **Clear** link.
3. In addition to the above, work queue items can also have custom parameters defined during the installation and configuration of the Work Queues application. Any custom parameters associated with the selected item type will also appear on this list on this screen.

You can use the percent sign (“%”) as a wildcard character when entering values in any of the text fields. For instance, if you want to search for all work queue whose assigned user ID begins with the letter G, you could enter “G%” in the Assigned to User field. You can use this wildcard before or after specified letters or numbers (i.e. you would use %t to search for all work queue items whose assigned users end with the letter t, etc.).

4. You can also (optionally) filter the search results based on users or groups of users. To apply this filter, select User or Group (as appropriate) from the **Filter By** drop-down list, and then select the appropriate user or group from the drop-down list to the immediate right. If you select “User” from the **Filter By** drop-down list, the drop-down list to the right displays a list of all users. If you select “Group” from the **Filter By** drop-down list, the drop-down list to the right displays a list of those groups of which the current (logged on) user is a member.



When you apply this filter, the search results are those work queue items that match the search criteria and that can be assigned to the selected user or a user within the selected group.

5. Specify how the search results are displayed.
 - Select the manner in which the results are sorted by clicking the **Sort by** plus (“+”) sign. See **Specifying How Results are Sorted** on page 2-7 for more information.
 - Specify how many results should appear on each page in the **Page Length** field.
 - Specify how you wish to view the result from the **Display** drop-down list. You can view the results in **Details View**, **Summary View**, or **Groups View**.
6. Click **Search** to perform the search. To clear all the search fields, click **Reset**.
7. The search results appear on the Work Queue Item Search Result screen. See **Viewing and Working with Work Queue Items** on page 10-14 for more information about viewing and working with the search results.
8. To perform another search, click **New Search**.

Viewing and Working with Work Queue Items

You can view and work with the search results in three different views:

- **Full Details View**
- **Summary View**
- **Groups View**

You can perform the following operations on work queue items:

- **Assign:** assigns the work queue item(s) to a specified user.
- **Unassign:** unassigns the work queue item(s), and sets the Assigned to User and Assigned to Time attributes of the item to Null.
- **Resolve:** resolves an item (or items) with an associated approval procedure when any necessary work on the work queue item(s) has been completed to satisfaction. In addition, this closes those items that have no associated approval procedure.
- **Close:** closes an open item (or items). Once an item is closed it can only be viewed using the Search WQ Closed option. See **Searching Closed Work Queue Items** on page 10-27 for more information.

Full Details View

The Full Details view displays individual work queue items, and allows the user to Assign, Unassign, Resolve, or Close them. You can also view and/or edit individual work queue items from this view.

Each work queue item listed is defined by the following information:

- **UID:** the unique ID for the work queue item in the Oracle Utilities Data Repository.
- **Work Queue Type:** the work queue type associated with the item.
- **Work Queue:** the work queue associated with the item.
- **Priority Level:** the priority level for the item.
- **Work By Time:** the time by which the item should be resolved.
- **Opened Time:** the time the item was opened.
- **Assigned to User:** the user to whom the item is currently assigned.
- **Approval Step Number:** the current approval step number for the item.
- **Approval Level:** the current approval level for the item. For items with an approval procedure, each time the item is approved, the Approval Level is updated to the next step in the approval process.
- **Approval Only:** a flag that indicates that the work queue item requires an approval only.
- **Approved:** a flag that indicates if the item has been approved or rejected. This applies only to Approval Only items.
- **Product:** the Oracle Utilities product associated with the item.
- **Process Name:** the business process associated with the item.
- **Opened Note:** An optional note created when the item was first opened.

In addition to the above, work queue items can also have custom parameters defined during the installation and configuration of the Work Queues application. Any custom parameters associated with items returned from the search will also appear on this list.

If there is more than one page of work queue items, you can move between pages using the ◀ and ▶ buttons. To change the number of items that appears on each page, enter the number in the **Rows** field.

How to view and edit work queue items from the Full Details view:

1. Click the **UID** link for the item you wish to view. The Work Queue Item View screen opens.

This screen displays the entire record for the work queue item, including Hint Details and an Item History. The specific fields displayed for the item are based on the item's Work Queue Type and any custom parameters associated with that type.

2. To assign the item, click **Assign**. The **Assign User(s)** dialog opens.

Click the link for the user you wish to assign the item to. If you applied a User or Group filter, you can assign items only to the selected user or a user within the selected group. The Assign User(s) dialog changes to list the selected user ID in the User ID field, and an optional note field.

Note: If you did not apply User or Group filter to the search, you can assign items only to yourself, and the Assign User(s) dialog opens with your user id in the User ID field.

Enter an optional note regarding the item and click **Assign** to assign the item. To close the dialog without assigning the item, click the **Cancel** button.

The assigned item now display the assigned user id.

3. To unassign the item, click **Unassign**. The **Please enter note for Unassigned Item(s)** dialog opens.

Enter an optional note regarding the item and click the **OK** button to unassign the item. To close the dialog without unassigning the item, click the **Cancel** button.

The unassigned item no longer display a user id in the Assigned to User or Assigned to Time fields.

4. To resolve the item, click **Resolve**. The **Please enter note for Resolved Item(s)** dialog opens.

Enter an optional note regarding the resolution of the item and click the **OK** button to resolve the item. To close the dialog without resolving the item, click the **Cancel** button.

If the resolved item has no associated Approval Procedure, resolving them also closes them.

5. To close the item, click **Close**. The **Please enter note for Closed Item(s)** dialog opens.

Enter an optional note regarding the closing of the item and click the **OK** button to close the item. To close the dialog without closing the item, click the **Cancel** button.

6. To modify the item, click **Modify**. The Work Queue Item View screen now allows you to edit values for the work queue item record.

7. Edit the values as appropriate.

To change the Work Queue, Product, or Business Process, click the **Browse** button (...). A dialog opens with a list of records to choose from.

If there is more than one page of records, you can move between pages using the ◀ and ▶ buttons. Use the ⏪ button to return the first page, and the ⏩ button to navigate to the last page. To change the number of results that appears on each page, enter the number in the **Rows** field.

To search for a specific record, click **Search**. The dialog displays a search screen. Enter the appropriate parameters for your search and click **Search**. The dialog will display a list of records that match the search criteria.

To select a record, click the [...] link for the record. To clear the field, click the [X] Clear link.

To change a date/time field, either enter the date and time manually, or click the arrow to open a calendar control and select the appropriate date and enter the time manually.

8. Click **Save** to save the work queue item record. Click **Cancel** to close this screen without saving the changes.

How to assign work queue items from the Full Details view:

1. Select the item(s) you wish to assign by checking the checkbox in the far left column of the item list.
2. Click **Assign**. The **Assign User(s)** dialog opens.

Click the link for the user you wish to assign the item to. If you applied a User or Group filter, you can assign items only to the selected user or a user within the selected group. The Assign User(s) dialog changes to list the selected user ID in the User ID field, and an optional note field.

Note: If you did not apply User or Group filter to the search, you can assign items only to yourself, and the Assign User(s) dialog opens with your user id in the User ID field.

Enter an optional note regarding the item and click **Assign** to assign the item. To close the dialog without assigning the item, click the **Cancel** button.

3. The assigned item(s) now display the assigned user id.

How to unassign work queue items from the Full Details view:

1. Select the item(s) you wish to unassign by checking the checkbox in the far left column of the item list.
2. Click **Unassign**. The **Please enter note for Unassigned Item(s)** dialog opens.

Enter an optional note regarding the items and click the **OK** button to unassign the item(s). To close the dialog without unassigning the item(s), click the **Cancel** button.

3. The unassigned item no longer displays a user id in the Assigned to User or Assigned to Time fields.

How to resolve work queue items from the Full Details view:

1. Select the item(s) you wish to resolve by checking the checkbox in the far left column of the item list.
2. Click the **Resolve** link. The **Please enter note for Resolved Item(s)** dialog opens.

Enter an optional note regarding the resolution of the items and click the **OK** button to resolve the item(s). To close the dialog without resolving the item(s), click the **Cancel** button.

If the resolved items have no associated Approval Procedure, resolving them also closes them.

How to close work queue items from the Full Details view:

1. Select the item(s) you wish to close by checking the checkbox in the far left column of the item list.
2. Click the **Close** link. The **Please enter note for Closed Item(s)** dialog opens.

Enter an optional note regarding the closing of the items and click the **OK** button to close the item(s). To close the dialog without closing the item(s), click the **Cancel** button.

3. The item(s) no longer appear on the Details view.

Summary View

The Summary view displays the total number of work queue items that match the search criteria. This view allows the user to Assign, Unassign, Resolve, or Close all of the work queue items returned from your search. You can move to the **Details View** by clicking the number link.

How to assign work queue items from the Summary view:

1. Click **Assign** on the Summary screen. The **Assign User(s)** dialog opens.

Click the link for the user you wish to assign the item to. If you applied a User or Group filter, you can assign items only to the selected user or a user within the selected group. The Assign User(s) dialog changes to list the selected user ID in the User ID field, and an optional note field.

Note: If you did not apply User or Group filter to the search, you can assign items only to yourself, and the Assign User(s) dialog opens with your user id in the User ID field.

Enter an optional note regarding the item and click **Assign** to assign the item. To close the dialog without assigning the item, click the **Cancel** button.

How to unassign work queue items from the Summary view:

1. Click **Unassign** on the Summary screen. The **Please enter note for Unassigned Item(s)** dialog opens.

Enter an optional note regarding the items and click the **OK** button to unassign the items. To close the dialog without unassigning the item(s), click the **Cancel** button.

How to resolve work queue items from the Summary view:

1. Click **Resolve** on the Summary screen. The **Please enter note for Resolved Item(s)** dialog opens.

Enter an optional note regarding the resolution of the items and click the **OK** button to resolve the items. To close the dialog without resolving the item(s), click the **Cancel** button.

If the resolved items have no associated Approval Procedure, resolving them also closes them.

How to close work queue items from the Summary screen:

1. Click **Close** on the Summary tab. The **Please enter note for Closed Item(s)** dialog opens.
Enter an optional note regarding the closing of the items and click the **OK** button to close the items. To close the dialog without closing the item(s), click the **Cancel** button.
2. The number of work queue items on the Summary screen changes to 0 (zero).

Groups View

The Groups view displays work queue items in groupings based on combinations of attributes. This view allows the user to Assign, Unassign, Resolve, or Close groups of work queue items. Each line in the list represents a grouping of items, and includes the following information:

- **Count:** the number of work queue items in the grouping
- **Work Queue Type:** the Work Queue Type of the items in the grouping
- **Work Queue:** the Work Queue of the items in the grouping
- **Opened Time:** the Opened Time of the items in the grouping

By default, items are grouped based on Work Queue Type, Work Queue, and Opened Time. You can add up to five additional attributes to group items into smaller subsets.

If there is more than one page of work queue item groups, you can move between pages using the ◀ and ▶ buttons. To change the number of item groups that appears on each page, enter the number in the **Rows** field.

How to add a grouping attribute:

1. Select the attribute you wish to group items by from the **Add Group By** drop-down list.
2. Click **Add Group**. A column containing values for the new attribute appears in the list.
3. To reset the groupings to the default (based on Work Queue Type, Work Queue, and Opened Time), click **Reset Grouping**.

How to assign work queue items from the Groups view:

1. Select the group or groups of items you wish to assign by checking the checkbox in the far left column of the groups list.
2. Click **Assign**. The **Assign User(s)** dialog opens.

Click the link for the user you wish to assign the item to. If you applied a User or Group filter, you can assign items only to the selected user or a user within the selected group. The Assign User(s) dialog changes to list the selected user ID in the User ID field, and an optional note field.

Note: If you did not apply User or Group filter to the search, you can assign items only to yourself, and the Assign User(s) dialog opens with your user id in the User ID field.

Enter an optional note regarding the item and click **Assign** to assign the item. To close the dialog without assigning the item, click the **Cancel** button.

How to unassign work queue items from the Groups view:

1. Select the group or groups of items you wish to unassign by checking the checkbox in the far left column of the groups list.
2. Click **Unassign**. The **Please enter note for Unassigned Item(s)** dialog opens.

Enter an optional note regarding the items and click the **OK** button to unassign the group or groups of items. To close the dialog without unassigning the item(s), click the **Cancel** button.

How to resolve work queue items from the Groups view:

1. Select the group or groups of items you wish to resolve by checking the checkbox in the far left column of the groups list.
2. Click **Resolve**. The **Please enter note for Resolved Item(s)** dialog opens.

Enter an optional note regarding the resolution of the items and click the **OK** button to resolve the group or groups of items. To close the dialog without resolving the item(s), click the **Cancel** button.

If the resolved items have no associated Approval Procedure, resolving them also closes them.

How to close work queue items from the Groups view:

1. Select the group or groups of items you wish to close by checking the checkbox in the far left column of the groups list.
2. Click **Close**. The **Please enter note for Closed Item(s)** dialog opens.

Enter an optional note regarding the closing of the items and click the **OK** button to close the group or groups of items. To close the dialog without closing the item(s), click the **Cancel** button.

3. The selected groups of closed items no longer appear on the Groups view.

Searching Work Queue Approvals

The **Search WQ Approvals** option allows users to search for work queue items that require approval in the Oracle Utilities Data Repository based on various search criteria.

How to search work queue approvals:

1. Select **Work Queues->Search WQ Approvals**.

The Work Queue Approval Search window opens.

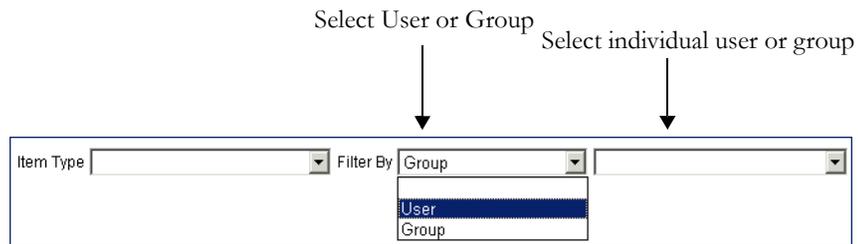
2. Enter the search criteria in the appropriate field. You can search based on the following:

- **Item Type:** the work queue type associated with the item. Select the work queue item type from the drop-down list. The remaining fields on the screen may change based on your selection. When you select a type, any custom parameters associated with the selected item type will appear on the screen, and those not associated will no longer appear.
- **UID:** the unique ID for the work queue item in the Oracle Utilities Data Repository.
- **Work Queue:** the work queue associated with the item. To select the work queue, click the **Browse** button (...). A dialog opens with a list of records to choose from. To select a record, click the [...] link for the record. To clear the field, click the [X] **Clear** link.
- **Priority Level:** the priority level for the item.
- **Work By Time:** the time by which the item should be resolved. You can enter either the date and time to search for items with an exact Work By Time, or you can enter a date (with 00:00:00 as the time) to search for items with the specified date. Enter the date and time manually, or click the arrow to open a calendar control and select the appropriate date and enter the time manually. You can search for work queue approvals whose Work By Times are Less Than (<), Greater Than (>), Less Than or Equal To (<=), or Greater Than or Equal To (>=) the supplied date and time by selecting the appropriate operand from the drop-down list.
- **Opened Time:** the time the item was opened. You can enter either the date and time to search for items with an exact Opened Time, or you can enter a date (with 00:00:00 as the time) to search for items with the specified date. Enter the date and time manually, or click the arrow to open a calendar control and select the appropriate date and enter the time manually. You can search for work queue approvals whose Opened Times are Less Than (<), Greater Than (>), Less Than or Equal To (<=), or Greater Than or Equal To (>=) the supplied date and time by selecting the appropriate operand from the drop-down list.
- **Assigned to User:** the user to whom the item is currently assigned
- **Approval Step Number:** the current approval step number for the approval.
- **Approval Level:** the current approval level for the item. To select the approval level, click the **Browse** button (...). A dialog opens with a list of records to choose from. To select a record, click the [...] link for the record. To clear the field, click the [X] **Clear** link.
- **Approval Only:** a flag that indicates that the work queue item requires an approval only. Select the appropriate value from the drop-down list.
- **Approved:** a flag that indicates if the item has been approved or rejected. This applies only to Approval Only items. Select the appropriate value from the drop-down list.
- **Product:** the Oracle Utilities product associated with the item. To select the product, click the **Browse** button (...). A dialog opens with a list of records to choose from. To select a record, click the [...] link for the record. To clear the field, click the [X] **Clear** link.

- **Process Name:** the business process associated with the item. To select the process, click the **Browse** button (...). A dialog opens with a list of records to choose from. To select a record, click the [...] link for the record. To clear the field, click the [X] **Clear** link.
3. In addition to the above, work queue items can also have custom parameters defined during the installation and configuration of the Work Queues application. Any custom parameters associated with the selected item type will also appear on this list on this screen.

You can use the percent sign (“%”) as a wildcard character when entering values in any of the text fields. For instance, if you want to search for all work queue whose assigned user ID begins with the letter G, you could enter “G%” in the Assigned to User field. You can use this wildcard before or after specified letters or numbers (i.e. you would use %t to search for all work queue items whose assigned users end with the letter t, etc.).

4. You can also (optionally) filter the search results based on users or groups of users. To apply this filter, select **User** or **Group** (as appropriate) from the **Filter By** drop-down list, and then select the appropriate user or group from the drop-down list to the immediate right. If you select “User” from the **Filter By** drop-down list, the drop-down list to the right displays a list of all users. If you select “Group” from the **Filter By** drop-down list, the drop-down list to the right displays a list of those groups of which the current (logged on) user is a member.



When you apply this filter, the search results are those work queue approvals that match the search criteria and that can be assigned to the selected user or a user within the selected group.

5. Specify how the search results are displayed.
 - Select the manner in which the results are sorted by clicking the **Sort by** plus (“+”) sign. See **Specifying How Results are Sorted** on page 2-7 for more information.
 - Specify how many results should appear on each page in the **Page Length** field.
 - Specify how you wish to view the result from the **Display** drop-down list. You can view the results in **Details View**, **Summary View**, or **Groups View**.
6. Click **Search** to perform the search. To clear all the search fields, click **Reset**.
7. The search results appear on the Work Queue Item Search Result screen. See **Viewing and Working with Work Queue Approvals** on page 10-21 for more information about viewing and working with the search results.
8. To perform another search, click **New Search**.

Viewing and Working with Work Queue Approvals

You can view and work with the search results in three different views:

- **Full Details View**
- **Summary View**
- **Groups View**

You can perform the following operations on work queue approvals:

- **Assign:** assigns the work queue item(s) to a specified user.
- **Unassign:** unassigns the work queue item(s), and sets the Assigned to User and Assigned to Time attributes of the item to Null.
- **Approve:** approves an “awaiting approval” item or items. If this approval is the last required by the item’s approval procedure, the item is also closed.
- **Reject:** rejects an “awaiting approval” item or items
- **Close:** close an open item or items. Once an item is closed it can only be viewed using the Search WQ Closed option. See **Searching Closed Work Queue Items** on page 10-27 for more information.

Full Details View

The Full Details view displays individual work queue approvals, and allows the user to Assign, Unassign, Approve, Reject, or Close individual work queue approvals. You can also view and/or edit individual work queue approvals from this view.

Each work queue approvals listed is defined by the following information:

- **UID:** the unique ID for the work queue item in the Oracle Utilities Data Repository.
- **Work Queue Type:** the work queue type associated with the item.
- **Work Queue:** the work queue associated with the item.
- **Priority Level:** the priority level for the item
- **Work By Time:** the time by which the item should be resolved
- **Opened Time:** the time the item was opened
- **Assigned to User:** the user to whom the item is currently assigned
- **Approval Step Number:** the current approval step number for the approval.
- **Approval Level:** the current approval level for the item. For items with an approval procedure, each time the item is approved, the Approval Level is updated to the next step in the approval process.
- **Approval Only:** a flag that indicates that the work queue item requires an approval only
- **Approved:** a flag that indicates if the item has been approved or rejected. This applies only to Approval Only items.
- **Product:** the Oracle Utilities product associated with the item
- **Process Name:** the business process associated with the item
- **Opened Note:** An optional note created when the item was first opened

In addition to the above, work queue items can also have custom parameters defined during the installation and configuration of the Work Queues application. Any custom parameters associated with items returned from the search will also appear on this list.

If there is more than one page of work queue approvals, you can move between pages using the ◀ and ▶ buttons. To change the number of approvals that appears on each page, enter the number in the **Rows** field.

How to view and edit work queue approvals from the Full Details view:

1. Click the **UID** link for the approval you wish to view. The Work Queue Item View screen opens.

This screen displays the entire record for the work queue approval, including Hint Details and an Item History. The specific fields displayed for the approval are based on the approval's Work Queue Type and any custom parameters associated with that type.

You can Assign, Unassign, Approve, Reject, Close, and Modify the approval from this screen.

2. To assign the item, click **Assign**. The **Assign User(s)** dialog opens.

Click the link for the user you wish to assign the item to. If you applied a User or Group filter, you can assign items only to the selected user or a user within the selected group. The Assign User(s) dialog changes to list the selected user ID in the User ID field, and an optional note field.

Note: If you did not apply User or Group filter to the search, you can assign items only to yourself, and the Assign User(s) dialog opens with your user id in the User ID field.

Enter an optional note regarding the item and click **Assign** to assign the item. To close the dialog without assigning the item, click **Cancel**.

The assigned item now display the assigned user id.

3. To unassign the item, click **Unassign**. The **Please enter note for Unassigned Item(s)** dialog opens.

Enter an optional note regarding the item and click the **OK** button to unassign the item. To close the dialog without unassigning the item, click the **Cancel** button.

The unassigned item no longer display a user id in the Assigned to User field or a value in the Assigned to Time field.

4. To approve the approval, click **Approve**. The **Please enter note for Approved Item(s)** dialog opens.

Enter an optional note regarding the approval and click the **OK** button to approve it. To close the dialog without approving, click the **Cancel** button.

5. To reject the approval, click **Reject**. The **Please enter note for Rejected Item(s)** dialog opens.

Enter an optional note regarding the approval and click the **OK** button to reject the approval. To close the dialog without rejecting the approval, click the **Cancel** button.

6. To close the approval, click **Close**. The **Please enter note for Closed Item(s)** dialog opens.

Enter an optional note regarding the closing of the approval and click the **OK** button to close the approval. To close the dialog without closing the approval, click the **Cancel** button.

7. To modify the approval, click **Modify**. The Work Queue Item View screen now allows you to edit values for the work queue item record.

8. Edit the values as appropriate.

To change the Work Queue, Product, or Business Process, click the **Browse** button (⋮). A dialog opens with a list of records to choose from.

If there is more than one page of records, you can move between pages using the ◀ and ▶ buttons. Use the ⏪ button to return the first page, and the ⏩ button to navigate to the

last page. To change the number of results that appears on each page, enter the number in the **Rows** field.

To search for a specific record, click **Search**. The dialog displays a search screen. Enter the appropriate parameters for your search and click **Search**. The dialog will display a list of records that match the search criteria.

To select a record, click the [...] link for the record. To clear the field, click the [X] **Clear** link.

To change a date/time field, either enter the date and time manually, or click the arrow to open a calendar control and select the appropriate date and enter the time manually.

9. Click **Save** to save the work queue item record. Click **Cancel** to close this screen without saving the changes.

How to assign work queue approvals from the Full Details view:

1. Select the item(s) you wish to assign by checking the checkbox in the far left column of the item list.
2. Click **Assign**. The **Assign User(s)** dialog opens.

Click the link for the user you wish to assign the item to. If you applied a User or Group filter, you can assign items only to the selected user or a user within the selected group. The Assign User(s) dialog changes to list the selected user ID in the User ID field, and an optional note field.

Note: If you did not apply User or Group filter to the search, you can assign items only to yourself, and the Assign User(s) dialog opens with your user id in the User ID field.

Enter an optional note regarding the item and click **Assign** to assign the item. To close the dialog without assigning the item, click **Cancel**.

3. The assigned item(s) now display the assigned user id.

How to unassign work queue approvals from the Full Details view:

1. Select the item(s) you wish to unassign by checking the checkbox in the far left column of the item list.
2. Click **Unassign**. The **Please enter note for Unassigned Item(s)** dialog opens.

Enter an optional note regarding the items and click the **OK** button to unassign the item(s). To close the dialog without unassigning the item(s), click the **Cancel** button.

3. The unassigned item no longer displays a user id in the Assigned to User field or a value in the Assigned to Time field.

How to approve work queue approvals from the Full Details view:

1. Select the item(s) you wish to approve by checking the checkbox in the far left column of the approval list.
2. Click **Approve**. The **Please enter note for Approved Item(s)** dialog opens.

Enter an optional note regarding the approval and click the **OK** button to approve the approval(s). To close the dialog without resolving the approval(s), click the **Cancel** button.

How to reject work queue approvals from the Full Details view:

1. Select the approval(s) you wish to reject by checking the checkbox in the far left column of the approval list.
2. Click **Reject**. The **Please enter note for Rejected Item(s)** dialog opens.

Enter an optional note regarding the rejection and click the **OK** button to reject the approval(s). To close the dialog without rejecting the approval(s), click the **Cancel** button.

How to close work queue items from the Full Details view:

1. Select the approval(s) you wish to close by checking the checkbox in the far left column of the approval list.
2. Click **Close**. The **Please enter note for Closed Item(s)** dialog opens.
Enter an optional note regarding the approvals and click the **OK** button to close the approval(s). To close the dialog without closing the approval(s), click the **Cancel** button.
3. The approval(s) no longer appear on the Details tab.

Summary View

The Summary view displays the total number of the work queue approvals returned by the search. This view allows the user to Assign, Unassign, Approve, Reject, or Close all of the work queue approvals. You can move to the **Details View** by clicking the number link.

How to assign work queue approvals from the Summary view:

1. Click **Assign** on the Summary screen. The **Assign User(s)** dialog opens.
Click the link for the user you wish to assign the item to. If you applied a User or Group filter, you can assign items only to the selected user or a user within the selected group. The Assign User(s) dialog changes to list the selected user ID in the User ID field, and an optional note field.
Note: If you did not apply User or Group filter to the search, you can assign items only to yourself, and the Assign User(s) dialog opens with your user id in the User ID field.
Enter an optional note regarding the item and click **Assign** to assign the item. To close the dialog without assigning the item, click the **Cancel** button.

How to unassign work queue approvals from the Summary view:

1. Click **Unassign** on the Summary screen. The **Please enter note for Unassigned Item(s)** dialog opens.
Enter an optional note regarding the items and click the **OK** button to unassign the item(s). To close the dialog without unassigning the item(s), click the **Cancel** button.

How to approve work queue approvals from the Summary view:

1. Click **Approve** on the Summary screen. The **Please enter note for Approved Item(s)** dialog opens.
Enter an optional note regarding the approvals and click the **OK** button to approve the approvals. To close the dialog without approving the approval(s), click the **Cancel** button.
2. The number of work queue approvals on the Summary tab changes to 0 (zero).

How to reject work queue approvals from the Summary view:

1. Click **Reject** on the Summary screen. The **Please enter note for Rejected Item(s)** dialog opens.
Enter an optional note regarding the approvals and click the **OK** button to reject the approvals. To close the dialog without rejecting the approval(s), click the **Cancel** button.
2. The number of work queue approvals on the Summary tab changes to 0 (zero).

How to close work queue approvals from the Summary view:

1. Click **Close** on the Summary screen. The **Please enter note for Closed Item(s)** dialog opens.
Enter an optional note regarding the closing of the approvals and click the **OK** button to close the approvals. To close the dialog without closing the approval(s), click the **Cancel** button.

- The number of work queue approvals on the Summary tab changes to 0 (zero).

Groups View

The Groups view displays work queue approvals in groupings based on combinations of attributes. This view allows the user to Assign, Unassign, Approve, Reject, or Close groups of work queue approvals currently assigned to them. Each line in the list represents a grouping of approvals, and includes the following information:

- **Count:** the number of work queue approvals in the grouping
- **Work Queue Type:** the Work Queue Type of the approvals in the grouping
- **Work Queue:** the Work Queue of the approvals in the grouping
- **Opened Time:** the Opened Time of the approvals in the grouping

By default, approvals are grouped based on Work Queue Type, Work Queue, and Opened Time. You can add up to five additional attributes to group approvals into smaller subsets.

If there is more than one page of work queue approvals, you can move between pages using the ◀ and ▶ buttons. To change the number of approvals that appears on each page, enter the number in the **Rows** field.

How to add a grouping attribute:

- Select the attribute you wish to group approvals by from the **Add Group By** drop-down list.
- Click **Add Group**. A column containing values for the new attribute appears in the list.
- To reset the groupings to the default (based on Work Queue Type, Work Queue, and Opened Time), click **Reset Grouping**.

How to assign work queue approvals from the Groups view:

- Select the group or groups of approvals you wish to assign by checking the checkbox in the far left column of the groups list.
- Click **Assign**. The **Assign User(s)** dialog opens.

Click the link for the user you wish to assign the item to. If you applied a User or Group filter, you can assign items only to the selected user or a user within the selected group. The Assign User(s) dialog changes to list the selected user ID in the User ID field, and an optional note field.

Note: If you did not apply User or Group filter to the search, you can assign items only to yourself, and the Assign User(s) dialog opens with your user id in the User ID field.

Enter an optional note regarding the item and click **Assign** to assign the item. To close the dialog without assigning the item, click **Cancel**.

How to unassign work queue approvals from the Groups view:

- Select the group or groups of approvals you wish to unassign by checking the checkbox in the far left column of the groups list.
- Click **Unassign**. The **Please enter note for Unassigned Item(s)** dialog opens.

Enter an optional note regarding the items and click the **OK** button to unassign the item(s). To close the dialog without unassigning the item(s), click the **Cancel** button.

How to approve work queue approvals from the Groups view:

- Select the group or groups of approvals you wish to approve by checking the checkbox in the far left column of the groups list.
- Click **Approve**. The **Please enter note for Approved Item(s)** dialog opens.

Enter an optional note regarding the approvals and click the **OK** button to approve the group or groups of approvals. To close the dialog without approving the approval(s), click the **Cancel** button.

3. The selected groups of approved approvals no longer appear on the Groups tab.

How to reject work queue approvals from the Groups tab:

1. Select the group or groups of approvals you wish to reject by checking the checkbox in the far left column of the groups list.
2. Click **Reject**. The **Please enter note for Rejected Item(s)** dialog opens.

Enter an optional note regarding the approvals and click the **OK** button to reject the group or groups of approvals. To close the dialog without rejecting the approval(s), click the **Cancel** button.

3. The selected groups of rejected approvals no longer appear on the Groups tab.

How to close work queue approvals from the Groups tab:

1. Select the group or groups of approvals you wish to close by checking the checkbox in the far left column of the groups list.
2. Click **Close**. The **Please enter note for Closed Item(s)** dialog opens.

Enter an optional note regarding the closing of the approvals and click the **OK** button to close the group or groups of approvals. To close the dialog without closing the approval(s), click the **Cancel** button.

3. The selected groups of closed approvals no longer appear on the Groups tab.

Searching Closed Work Queue Items

The **Search WQ Closed** option allows users to search for closed work queue items in the Oracle Utilities Data Repository based on various search criteria.

How to search closed work queue items:

1. Select **Work Queues->Search WQ Closed**.

The Work Queue Closed Item Search window opens.

2. Enter the search criteria in the appropriate field. You can search based on the following:

- **Item Type:** the work queue type associated with the item. Select the work queue item type from the drop-down list. The remaining fields on the screen may change based on your selection. When you select a type, any custom parameters associated with the selected item type will appear on the screen, and those not associated will no longer appear.
- **UID:** the unique ID for the work queue item in the Oracle Utilities Data Repository.
- **Work Queue:** the work queue associated with the item. To select the work queue, click the **Browse** button (...). A dialog opens with a list of records to choose from. To search for a specific record, click **Search**. The dialog displays a search screen. Enter the appropriate parameters for your search and click **Search**. The dialog will display a list of records that match the search criteria. To select a record, click the [...] link for the record. To clear the field, click the [X] **Clear** link.
- **Priority Level:** the priority level for the item.
- **Opened Time:** the time the item was opened. You can enter either the date and time to search for items with an exact Opened Time, or you can enter a date (with 00:00:00 as the time) to search for items with the specified date. Enter the date and time manually, or click the arrow to open a calendar control and select the appropriate date and enter the time manually. You can search for closed work queue items whose Opened Times are Less Than (<), Greater Than (>), Less Than or Equal To (<=), or Greater Than or Equal To (>=) the supplied date and time by selecting the appropriate operand from the drop-down list.
- **Closed Time:** the time the item was closed. You can enter either the date and time to search for items with an exact Closed Time, or you can enter a date (with 00:00:00 as the time) to search for items with the specified date. Enter the date and time manually, or click the arrow to open a calendar control and select the appropriate date and enter the time manually. You can search for closed work queue items whose Closed Times are Less Than (<), Greater Than (>), Less Than or Equal To (<=), or Greater Than or Equal To (>=) the supplied date and time by selecting the appropriate operand from the drop-down list.
- **Approval Only:** a flag that indicates that the work queue item requires an approval only. Select the appropriate value from the drop-down list.
- **Approved:** a flag that indicates if the item has been approved or rejected. This applies only to Approval Only items. Select the appropriate value from the drop-down list.
- **Product:** the Oracle Utilities product associated with the item. To select the product, click the **Browse** button (...). A dialog opens with a list of records to choose from. To search for a specific record, click **Search**. The dialog displays a search screen. Enter the appropriate parameters for your search and click **Search**. The dialog will display a list of records that match the search criteria. To select a record, click the [...] link for the record. To clear the field, click the [X] **Clear** link.
- **Process Name:** the business process associated with the item. To select the process, click the **Browse** button (...). A dialog opens with a list of records to choose from. To

search for a specific record, click **Search**. The dialog displays a search screen. Enter the appropriate parameters for your search and click **Search**. The dialog will display a list of records that match the search criteria. To select a record, click the [...] link for the record. To clear the field, click the [X] **Clear** link.

3. In addition to the above, work queue items can also have custom parameters defined during the installation and configuration of the Work Queues application. Any custom parameters associated with the selected item type will also appear on this list on this screen.

You can use the percent sign (“%”) as a wildcard character when entering values in any of the text fields. For instance, if you want to search for all work queue whose assigned user ID begins with the letter G, you could enter “G%” in the Assigned to User field. You can use this wildcard before or after specified letters or numbers (i.e. you would use %t to search for all work queue items whose assigned users end with the letter t, etc.).

4. Specify how the search results are displayed.
 - Select the manner in which the results are sorted by clicking the **Sort by** plus (“+”) sign. See **Specifying How Results are Sorted** on page 2-7 for more information.
 - Specify how many results should appear on each page in the **Page Length** field.
 - Specify how you wish to view the result from the **Display** drop-down list. You can view the results in **Details View**, **Summary View**, or **Groups View**.
5. Click **Search** to perform the search. To clear all the search fields, click **Reset**.
6. The search results appear on the Work Queue Item Search Result screen. See **Viewing and Working with Closed Work Queue Items** on page 10-29 for more information about viewing and working with the search results.
7. To perform another search, click **New Search**.

Viewing and Working with Closed Work Queue Items

You can view and work with the search results in three different views:

- **Full Details View**
- **Summary View**
- **Groups View**

You can perform the following operations on closed work queue items:

- **Reopen:** reopens the work queue item(s).

Full Details View

The Full Details view displays individual closed work queue items, and allows you to Reopen individual work queue items. You can also view and/or edit individual work queue items from this view.

Each work queue item listed is defined by the following information:

- **UID:** the unique ID for the work queue item in the Oracle Utilities Data Repository.
- **Work Queue Type:** the work queue type associated with the item.
- **Work Queue:** the work queue associated with the item.
- **Priority Level:** the priority level for the item.
- **Opened Time:** the time the item was opened.
- **Closed Time:** the time the item was closed.
- **Approval Only:** a flag that indicates that the work queue item requires an approval only.
- **Approved:** a flag that indicates if the item has been approved or rejected. This applies only to Approval Only items.
- **Product:** the Oracle Utilities product associated with the item.
- **Process Name:** the business process associated with the item.
- **Opened Note:** An optional note created when the item was first opened.

In addition to the above, work queue items can also have custom parameters defined during the installation and configuration of the Work Queues application. Any custom parameters associated with items returned from the search will also appear on this list.

If there is more than one page of work queue items, you can move between pages using the ◀ and ▶ buttons. To change the number of items that appears on each page, enter the number in the **Rows** field.

How to view and edit closed work queue items from the Full Details view:

1. Click the **UID** link for the item you wish to view. The Work Queue Item View screen opens.
This screen displays the entire record for the work queue item, including Hint Details and an Item History. The specific fields displayed for the item are based on the item's Work Queue Type and any custom parameters associated with that type.
2. To reopen the item, click **Reopen**. The **Please enter note for Reopened Item(s)** dialog opens.
Enter an optional note regarding the item and click the **OK** button to reopen the item. To close the dialog without reopening the item, click the **Cancel** button.
3. To modify the item, click **Modify**. The Work Queue Item View screen now allows you to edit values for the work queue item record.

4. Edit the values as appropriate.

To change the Work Queue, Work Queue Type, Product, or Business Process, click the **Browse** button (...). A dialog opens with a list of records to choose from.

If there is more than one page of records, you can move between pages using the ◀ and ▶ buttons. Use the ⏪ button to return the first page, and the ⏩ button to navigate to the last page. To change the number of results that appears on each page, enter the number in the **Rows** field.

To search for a specific record, click **Search**. The dialog displays a search screen. Enter the appropriate parameters for your search and click **Search**. The dialog will display a list of records that match the search criteria.

To select a record, click the [...] link for the record. To clear the field, click the [X] **Clear** link.

To change a date/time field, either enter the date and time manually, or click the arrow to open a calendar control and select the appropriate date and enter the time manually.

5. Click **Save** to save the work queue item record. Click **Cancel** to close this screen without saving the changes.

How to reopen work queue items from the Full Details view:

1. Select the item(s) you wish to reopen by checking the checkbox in the far left column of the item list.
2. Click **Reopen**. The **Please enter note for Reopened Item(s)** dialog opens.
Enter an optional note regarding the item and click the **OK** button to reopen the item. To close the dialog without reopening the item, click the **Cancel** button.
3. The reopened item(s) no longer appear on the Full Details view.

Summary View

The Summary view displays the total number of closed work queue items based on the search criteria, and allows you to reopen all of the work queue items returned from your search. You can move to the **Details View** by clicking the number link.

How to reopen work queue items from the Summary view:

1. Click **Reopen** on the Summary screen. The **Please enter note for Reopened Item(s)** dialog opens.
Enter an optional note regarding the items and click the **OK** button to unassign the items. To close the dialog without unassigning the item(s), click the **Cancel** button.
2. The number of closed work queue items on the Summary screen changes to 0 (zero).

Groups View

The Groups view displays closed work queue items in groupings based on combinations of attributes, and allows the user to Reopen groups of work queue items. Each line in the list represents a grouping of items, and includes the following information:

- **Count:** the number of work queue items in the grouping
- **Work Queue Type:** the Work Queue Type of the items in the grouping
- **Work Queue:** the Work Queue of the items in the grouping
- **Closed Time:** the Closed Time of the items in the grouping

By default, items are grouped based on Work Queue Type, Work Queue, and Closed Time. You can add up to five additional attributes to group items into smaller subsets.

If there is more than one page of work queue item groups, you can move between pages using the ◀ and ▶ buttons. To change the number of item groups that appears on each page, enter the number in the **Rows** field.

How to add a grouping attribute:

1. Select the attribute you wish to group items by from the **Add Group By** drop-down list.
2. Click **Add Group**. A column containing values for the new attribute appears in the list.
3. To reset the groupings to the default (based on Work Queue Type, Work Queue, and Opened Time), click **Reset Grouping**.

How to reopen work queue items from the Groups view:

1. Select the group or groups of items you wish to reopen by checking the checkbox in the far left column of the groups list.

2. Click **Reopen**. The **Please enter note for Reopened Item(s)** dialog opens.

Enter an optional note regarding the item and click the **OK** button to reopen the item. To close the dialog without reopening the item, click the **Cancel** button.

The selected groups of reopened items no longer appear on the Groups view.

Work Queues Reports

This section describes how to run and view reports used with Work Queues, including:

- **Aging Report**
- **Open Items Report**
- **Productivity Report**

Aging Report

The Aging report summarizes open work queue items according to the length of time the item(s) have been open.

How to run the Aging report:

1. Select **Work Queue Aging** on the **Run Reports** screen. The Enter Report Parameter screen opens.
2. Enter a **Report Title** for the report. This is the title that appears on the **View Reports** screen when the report is run.
3. Enter the criteria for the report. You can filter this report based on the following optional parameters:
 - **Type Code:** the work queue type associated with the items for the report. To select the work queue, click the **Browse** button (...). A dialog opens with a list of records to choose from. To select a record, click the [...] link for the record. To clear the field, click the [X] **Clear** link.
 - **Queue Code:** the work queue associated with the items for the report. To select the work queue, click the **Browse** button (...). A dialog opens with a list of records to choose from. To select a record, click the [...] link for the record. To clear the field, click the [X] **Clear** link.
 - **Assigned to User:** the user to whom the item is currently assigned. You can use an asterisk (“*”) as a wildcard character when entering values in this field. For instance, if you want a report to include all work queue items assigned to users whose ID begins with the letter G, you could enter “G*” in this field. You can use this wildcard before or after specified letters or numbers (i.e. you would use *t to include all work queue items assigned to users whose ID ends with the letter t, etc.).
 - **Product Code:** the Oracle Utilities product associated with the items for the report. To select the product, click the **Browse** button (...). A dialog opens with a list of records to choose from. To select a record, click the [...] link for the record. To clear the field, click the [X] **Clear** link.
 - **Start Time:** the start time of the reporting period. Items on the report will have an Opened Time greater than or equal to the Start Time provided.
 - **Stop Time:** the stop time of the reporting period. Items on the report will have an Opened Time less than or equal to the Stop Time provided.
4. Uncheck the **Shared Report** checkbox if you wish to make the results of the report private. If you leave this checkbox checked, the report results will be available to all users.
5. Click **Run** to run the report. Click **Schedule Report** to schedule the report. See **Run Reports** on page 7-74 and **Scheduling Reports** on page 7-75 for more information. The report will appear in the report viewer, and will appear as an item on the **View Reports** screen.

Once run, Aging reports are also available from the Reports List. See **View Reports** on page 7-77 for more information.

Open Items Report

The Open Items report summarizes open work queue items assigned to a user or users. The report specifies the number of type of items, as well as the length of time a work queue item has been open and assigned, and the difference between the Opened Time and Work By Time, if available.

How to run the Open Items report:

1. Select **Work Queue Open Items** on the **Run Reports** screen. The Enter Report Parameter screen opens.
2. Enter a **Report Title** for the report. This is the title that appears on the **View Reports** screen when the report is run.
3. Enter the criteria for the report. You can filter this report based on the following optional parameters:
 - **Type Code:** the work queue type associated with the items for the report. To select the work queue, click the **Browse** button (...). A dialog opens with a list of records to choose from. To select a record, click the [...] link for the record. To clear the field, click the **[X] Clear** link.
 - **Queue Code:** the work queue associated with the items for the report. To select the work queue, click the **Browse** button (...). A dialog opens with a list of records to choose from. To select a record, click the [...] link for the record. To clear the field, click the **[X] Clear** link.
 - **Assigned to User:** the user to whom the item is currently assigned. You can use an asterisk (“*”) as a wildcard character when entering values in this field. For instance, if you want a report to include all work queue items assigned to users whose ID begins with the letter G, you could enter “G*” in this field. You can use this wildcard before or after specified letters or numbers (i.e. you would use *t to include all work queue items assigned to users whose ID ends with the letter t, etc.).
 - **Product Code:** the Oracle Utilities product associated with the items for the report. To select the product, click the **Browse** button (...). A dialog opens with a list of records to choose from. To select a record, click the [...] link for the record. To clear the field, click the **[X] Clear** link.
 - **Start Time:** the start time of the reporting period. Items on the report will have an Opened Time greater than or equal to the Start Time provided.
 - **Stop Time:** the stop time of the reporting period. Items on the report will have an Opened Time less than or equal to the Stop Time provided.
4. Uncheck the **Shared Report** checkbox if you wish to make the results of the report private. If you leave this checkbox checked, the report results will be available to all users.
5. Click **Run** to run the report. Click **Schedule Report** to schedule the report. See **Run Reports** on page 7-74 and **Scheduling Reports** on page 7-75 for more information. The report will appear in the report viewer, and will appear as an item on the **View Reports** screen.

Once run, Open Items reports are also available from the Reports List. See **View Reports** on page 7-77 for more information.

Productivity Report

The Productivity report summarizes overall work queues activity. The report details the average number of work queue items by day, as well as the average time to close an item.

How to run the Productivity report:

1. Select **Work Queue Productivity** on the **Run Reports** screen. The Enter Report Parameters screen opens.
2. Enter a **Report Title** for the report. This is the title that appears on the **View Reports** screen when the report is run.
3. Enter the criteria for the report. You can filter this report based on the following optional parameters:
 - **Performed by UserID:** the user to whom the item was assigned. You can use an asterisk (“*”) as a wildcard character when entering values in this field. For instance, if you want a report to include all work queue items assigned to users whose ID begins with the letter G, you could enter “G*” in this field. You can use this wildcard before or after specified letters or numbers (i.e. you would use *t to include all work queue items assigned to users whose ID ends with the letter t, etc.).
 - **Type Code:** the work queue type associated with the items for the report. To select the work queue, click the **Browse** button (...). A dialog opens with a list of records to choose from. To select a record, click the [...] link for the record. To clear the field, click the [X] **Clear** link.
 - **Queue Code:** the work queue associated with the items for the report. To select the work queue, click the **Browse** button (...). A dialog opens with a list of records to choose from. To select a record, click the [...] link for the record. To clear the field, click the [X] **Clear** link.
 - **Start Time:** the start time of the reporting period. Items on the report will have an Opened Time greater than or equal to the Start Time provided.
 - **Stop Time:** the stop time of the reporting period. Items on the report will have an Opened Time less than or equal to the Stop Time provided.
4. Uncheck the **Shared Report** checkbox if you wish to make the results of the report private. If you leave this checkbox checked, the report results will be available to all users.
5. Click **Run** to run the report. Click **Schedule Report** to schedule the report. See **Run Reports** on page 7-74 and **Scheduling Reports** on page 7-75 for more information. The report will appear in the report viewer, and will appear as an item on the **View Reports** screen.

Once run, Productivity reports are also available from the Reports List. See **View Reports** on page 7-77 for more information.

Chapter 11

Setting Up and Configuring the Energy Information Platform Adapter

This chapter describes how to set up and configure the Energy Information Platform Adapter, including:

- **Configuring Oracle Utilities Adapter Components**
- **Configuring Oracle Utilities Adapter Services**
- **Defining Service Properties for Adapter Runtime Services**
- **Configuring Adapter Business Rules**
- **Configuring Rule Description Language**
- **RDL Configuration Examples**
- **Defining Properties and Parameters for Adapter Business Rules**
- **Searching Adapter Transactions**
- **Viewing Adapter Transactions**

Configuring Oracle Utilities Adapter Components

The Energy Information Platform Adapter (Adapter for short) and Oracle Utilities Transaction Management utilize several components such as servers, Java Messaging Service (JMS) servers, and other components. This section describes how to set up records that define these components in the Oracle Utilities Data Repository, including:

- **Servers**
- **JMS Servers**
- **JMS Queues**
- **Payload Types**
- **Exception Types**
- **Origination Systems**
- **System Properties**

Servers

Servers are the application servers which run the Adapter and Oracle Utilities Transaction Management applications. Note that only those application servers with corresponding Server records can run the Oracle Utilities Transaction Management/Adapter software.

How to search servers:

1. Select **Tools and Utilities->Adapter Components->Servers**.

The LTMH/Adapter Servers screen opens.

2. Enter the search criteria in the appropriate field.

You can search based on the UID (unique identifier for the record in the Oracle Utilities Data Repository), Name of the server, Certificate Alias, or Allow unsigned certificate flag.

See **Searching Database Tables** on page 8-7 for more information about searching records, including the use of operands and wildcards.

3. Click **Search** to perform the search. To reset the search fields to their previous values, click **Reset**. To clear all the search fields, click **Clear**. To add a new record, click **Add**. See **Adding Servers** on page 11-3 for more information about adding new servers.
4. The search results appear on the LTMH/Adapter Servers list screen.

The LTMH/Adapter Servers list screen displays the following information for each record:

- UID
- Name
- Certificate Alias
- Allow unsigned certificate

See **Viewing and Editing Servers** on page 11-3 for more information about viewing individual records.

5. To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by Name, click the Name column heading. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.
6. To view a record, click on the corresponding [...] link. The selected record will appear in the LTMH/Adapter Servers window. See **Viewing and Editing Servers** on page 11-3 for more information.

7. To perform another search, click **Search**. To refresh the contents of the list screen, click the refresh icon.
8. *Optional.* To delete one or more records, check the check boxes corresponding to the records to be deleted, and click **Delete**. To clear all the checkboxes, click **Clear**.
9. *Optional.* To add a new record, click **Add**. See **Adding Servers** on page 11-3 for more information about adding new servers.

Viewing and Editing Servers

Individual servers are viewed on the LTMH/Adapter Servers screen. This screen opens when you select a record from the LTMH/Adapter Servers search results screen.

How to view and edit servers:

1. Click on the [...] link for the server you wish to view. The selected record opens in the LTMH/Adapter Servers screen.

The LTMH/Adapter Servers screen displays the following information for the selected record:

- **UID:** The unique identifier for the record in the Oracle Utilities Data Repository.
- **Name:** The network name of the server.
- **Certificate Alias:** The certificate alias for the server. Used only when securing and encrypting the Adapter Server and Monitor. See **Securing and Encrypting the Adapter Server and Monitor** on page 6-79 in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information.
- **Allow unsigned certificate:** A flag that indicates if the server should allow the use of unsigned certificates. Used only when securing and encrypting the Adapter Server and Monitor. See **Securing and Encrypting the Adapter Server and Monitor** on page 6-79 in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information.

2. Edit data in the fields as appropriate. See **Working with Data Types** on page 8-4 for more information about editing data values.
3. To save changes made to the record, click **Save**. To save the edited record as a new record, click **Save As New**.

Note: The **Save As New** option only works if the identity of the record has been changed.

4. To perform a new search, click **Search**.
5. To open a list of records, click **List**.
6. To delete the current record, click **Delete**.
7. To navigate from the current record to one of its parent or lookup records, click the Name of the parent table on the record. Parent and lookup records appear underlined on the screen. Use the **Back** button to return to the record being viewed.
8. To view a list of child records, click the name of the child table you wish to view in the Children section of the screen. Use the **Back** button to return to the record being viewed.

Adding Servers

You can also add new servers.

How to add servers:

1. Click **Add** on either the LTMH/Adapter Servers search or list screens. A blank LTMH/Adapter Servers screen opens.
2. Enter the network name of the server in the **Name** field.

3. *Optional.* Enter the certificate alias for the server in the **Certificate Alias** field.
4. *Optional.* Specify whether or not to allow unsigned certificate from the **Allow unsigned certificate** drop-down list.
5. To save the record, click **Save**. The new server appears on the screen.

JMS Servers

JMS Servers are Java Messaging Service (JMS) compliant components used by Oracle Utilities Transaction Management and (optionally) by the Adapter. JMS Servers are linked to Servers in **System Properties** records. Note that even if JMS Servers are not being used, a placeholder record is required.

How to search JMS servers:

1. Select **Tools and Utilities->Adapter Components->JMS Servers**.

The JMS Server screen opens.

2. Enter the search criteria in the appropriate field.

You can search based on the UID (unique identifier for the record in the Oracle Utilities Data Repository) or Name of the JMS server(s).

See **Searching Database Tables** on page 8-7 for more information about searching records, including the use of operands and wildcards.

3. Click **Search** to perform the search. To reset the search fields to their previous values, click **Reset**. To clear all the search fields, click **Clear**. To add a new record, click **Add**. See **Adding JMS Servers** on page 11-5 for more information about adding new JMS servers.
4. The search results appear on the JMS Server list screen.

The JMS Server list screen displays the following information for each record:

- UID
- Name

See **Viewing and Editing JMS Servers** on page 11-4 for more information about viewing individual records.

5. To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by Name, click the Name column heading. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.
6. To view a record, click on the corresponding [...] link. The selected record will appear in the JMS Servers window. See **Viewing and Editing JMS Servers** on page 11-4 for more information.
7. To perform another search, click **Search**. To refresh the contents of the list screen, click the refresh icon.
8. *Optional.* To delete one or more records, check the check boxes corresponding to the records to be deleted, and click **Delete**. To clear all the checkboxes, click **Clear**.
9. *Optional.* To add a new record, click **Add**. See **Adding JMS Servers** on page 11-5 for more information about adding new JMS servers.

Viewing and Editing JMS Servers

Individual JMS servers are viewed on the JMS Server screen. This screen opens when you select a record from the JMS Server search results screen.

How to view and edit JMS servers:

1. Click on the [...] link for the JMS server you wish to view. The selected record opens in the JMS Server screen.

The JMS Server screen displays the following information for the selected record:

- **UID:** The unique identifier for the record in the Oracle Utilities Data Repository.
- **Name:** The name of the JMS server, from the selection key in the .bindings file in the jndi directory. See the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about this file.

2. Edit data in the fields as appropriate. See **Working with Data Types** on page 8-4 for more information about editing data values.
3. To save changes made to the record, click **Save**. To save the edited record as a new record, click **Save As New**.

Note: The **Save As New** option only works if the identity of the record has been changed.

4. To perform a new search, click **Search**.
5. To open a list of records, click **List**.
6. To delete the current record, click **Delete**.
7. To navigate from the current record to one of its parent or lookup records, click the Name of the parent table on the record. Parent and lookup records appear underlined on the screen. Use the **Back** button to return to the record being viewed.
8. To view a list of child records, click the name of the child table you wish to view in the Children section of the screen. Use the **Back** button to return to the record being viewed.

Adding JMS Servers

You can also add new JMS servers.

How to add JMS servers:

1. Click **Add** on either the JMS Server search or list screens. A blank JMS Servers screen opens.
2. Enter the name of the JMS server in the **Name** field. The name of the JMS server should come from the selection key in the .bindings file in the jndi directory. See the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about this file. Also, some JMS servers do not allow special characters such as dashes (-) in the Queue Name. Make sure that the queue name is a valid queue name for the JMS server being used. Refer to your JMS server documentation for more information.
3. To save the record, click **Save**. The new JMS server appears on the screen.

JMS Queues

JMS Queues are message queues used by JMS compliant components used by Oracle Utilities Transaction Management and (optionally) the Adapter. JMS Queues are associated to services in **Runtime Services** records.

How to search JMS queues:

1. Select **Tools and Utilities->Adapter Components->JMS Queues**.

The JMS Queues screen opens.

2. Enter the search criteria in the appropriate field.

You can search based on the UID (unique identifier for the record in the Oracle Utilities Data Repository), Name, or Description of the JMS queue(s).

See **Searching Database Tables** on page 8-7 for more information about searching records, including the use of operands and wildcards.

3. Click **Search** to perform the search. To reset the search fields to their previous values, click **Reset**. To clear all the search fields, click **Clear**. To add a new record, click **Add**. See **Adding JMS Queues** on page 11-7 for more information about adding new JMS queues.
4. The search results appear on the JMS Queues list screen.

The JMS Queues list screen displays the following information for each record:

- UID
- Name
- Description

See **Viewing and Editing JMS Queues** on page 11-6 for more information about viewing individual records.

5. To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by Name, click the Name column heading. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.
6. To view a record, click on the corresponding [...] link. The selected record will appear in the JMS Queues screen. See **Viewing and Editing JMS Queues** on page 11-6 for more information.
7. To perform another search, click **Search**. To refresh the contents of the list screen, click the refresh icon.
8. *Optional.* To delete one or more records, check the check boxes corresponding to the records to be deleted, and click **Delete**. To clear all the checkboxes, click **Clear**.
9. *Optional.* To add a new record, click **Add**. See **Adding JMS Queues** on page 11-7 for more information about adding new JMS queues.

Viewing and Editing JMS Queues

Individual JMS queues are viewed on the JMS Queues screen. This screen opens when you select a record from the JMS Queues list screen.

How to view and edit JMS queues:

1. Click on the [...] link for the JMS queue you wish to view. The selected record opens in the JMS Queues screen.

The JMS Queues screen displays the following information for the selected record:

- **UID:** The unique identifier for the record in the Oracle Utilities Data Repository.
- **Name:** The name of the JMS queue. If certain JMS queues have been registered with a secured JMS implementation, the Versions must match those registered.
- **Description:** A description of the JMS queue.

2. Edit data in the fields as appropriate. See **Working with Data Types** on page 8-4 for more information about editing data values.
3. To save changes made to the record, click **Save**. To save the edited record as a new record, click **Save As New**.

Note: The **Save As New** option only works if the identity of the record has been changed.

4. To perform a new search, click **Search**.
5. To open a list of records, click **List**.

6. To delete the current record, click **Delete**.
7. To navigate from the current record to one of its parent or lookup records, click the Name of the parent table on the record. Parent and lookup records appear underlined on the screen. Use the **Back** button to return to the record being viewed.
8. To view a list of child records, click the name of the child table you wish to view in the Children section of the screen. Use the **Back** button to return to the record being viewed.

Adding JMS Queues

You can also add new JMS queues.

How to add JMS queues:

1. Click **Add** on either the JMS Queues search or list screens. A blank JMS Queues screen opens.
2. Enter the name of the JMS queue in the **Name** field. If the JMS queue you are entered has been registered with a secured JMS implementation, the Name entered here must match the registered name. See the *Oracle Utilities Energy Information Platform Configuration Guide* for more information.
3. Enter a description for the queue in the **Description** field.
4. To save the record, click **Save**. The new queue appears on the screen.

Payload Types

Payload types represent different payloads used by Oracle Utilities Transaction Management and Adapter transactions. Payload types are used by the Adapter or Oracle Utilities Transaction Management Database Portal to indicate which payload type to monitor.

You must be create custom Payload Types if using the Database Portal. See **Database Portal Properties** on page 11-52 for more information.

How to search payload types:

1. Select **Tools and Utilities->Adapter Components->Payload Types**.
The Payload Types screen opens.
2. Enter the search criteria in the appropriate field.
You can search based on the Payload Type or Payload Type Description of the payload type(s).
See **Searching Database Tables** on page 8-7 for more information about searching records, including the use of operands and wildcards.
3. Click **Search** to perform the search. To reset the search fields to their previous values, click **Reset**. To clear all the search fields, click **Clear**. To add a new record, click **Add**. See **Adding Payload Types** on page 11-8 for more information about adding new payload types.
4. The search results appear on the Payload Types list screen.
The Payload Types list screen displays the following information for each record:
 - Payload Type
 - Payload Type Description
 See **Viewing and Editing Payload Types** on page 11-8 for more information about viewing individual records.
5. To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by Payload Type, click the Payload Type column heading. If there is more

than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.

6. To view a record, click on the corresponding [...] link. The selected record will appear in the Payload Types screen. See **Viewing and Editing Payload Types** on page 11-8 for more information.
7. To perform another search, click **Search**. To refresh the contents of the list screen, click the refresh icon.
8. *Optional.* To delete one or more records, check the check boxes corresponding to the records to be deleted, and click **Delete**. To clear all the checkboxes, click **Clear**.
9. *Optional.* To add a new record, click **Add**. See **Adding Payload Types** on page 11-8 for more information about adding new payload types.

Viewing and Editing Payload Types

Individual payload types are viewed on the Payload Types screen. This screen opens when you select a record from the Payload Types list screen.

How to view and edit payload types:

1. Click on the [...] link for the payload types you wish to view. The selected record opens in the Payload Types screen.

The Payload Types screen displays the following information for the selected record:

- **Payload Type:** The name of the payload type.
- **Payload Type Description:** A description of the payload type.

2. Edit data in the fields as appropriate. See **Working with Data Types** on page 8-4 for more information about editing data values.
3. To save changes made to the record, click **Save**. To save the edited record as a new record, click **Save As New**.

Note: The **Save As New** option only works if the identity of the record has been changed.

4. To perform a new search, click **Search**.
5. To open a list of records, click **List**.
6. To delete the current record, click **Delete**.
7. To navigate from the current record to one of its parent or lookup records, click the Name of the parent table on the record. Parent and lookup records appear underlined on the screen. Use the **Back** button to return to the record being viewed.
8. To view a list of child records, click the name of the child table you wish to view in the Children section of the screen. Use the **Back** button to return to the record being viewed.

Adding Payload Types

You can also add new payload types.

How to add payload types:

1. Click **Add** on either the Payload Types search or list screens. A blank Payload Types screen opens.
2. Enter the name of the payload type in the **Payload Type** field.
3. Enter a description for the payload type in the **Payload Type Description** field.
4. To save the record, click **Save**. The new payload type appears on the screen.

Exception Types

Exception types represent different types of custom exceptions that can be generated by Oracle Utilities Transaction Management and the Adapter. Exception types (and their corresponding severity types) are used for grouping and reporting purposes.

How to search exception types:

1. Select **Tools and Utilities->Adapter Components->Exception Types**.

The Exception Types screen opens.

2. Enter the search criteria in the appropriate field.

You can search based on the UID, Type, Description, or Severity Code of the exception type(s).

See **Searching Database Tables** on page 8-7 for more information about searching records, including the use of operands and wildcards.

3. Click **Search** to perform the search. To reset the search fields to their previous values, click **Reset**. To clear all the search fields, click **Clear**. To add a new record, click **Add**. See **Adding Exception Types** on page 11-10 for more information about adding new payload types.
4. The search results appear on the Exception Types list screen.

The Exception Types list screen displays the following information for each record:

- UID
- Description
- Type
- Severity Code

See **Viewing and Editing Exception Types** on page 11-9 for more information about viewing individual records.

5. To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by Payload Type, click the Payload Type column heading. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.
6. To view a record, click on the corresponding [...] link. The selected record will appear in the Payload Types screen. See **Viewing and Editing Exception Types** on page 11-9 for more information.
7. To perform another search, click **Search**. To refresh the contents of the list screen, click the refresh icon.
8. *Optional.* To delete one or more records, check the check boxes corresponding to the records to be deleted, and click **Delete**. To clear all the checkboxes, click **Clear**.
9. *Optional.* To add a new record, click **Add**. See **Adding Exception Types** on page 11-10 for more information about adding new exception types.

Viewing and Editing Exception Types

Individual exception types are viewed on the Exception Types screen. This screen opens when you select a record from the Exception Types list screen.

How to view and edit exception types:

1. Click on the [...] link for the exception type you wish to view. The selected record opens in the Exception Types screen.

The Exception Types screen displays the following information for the selected record:

- **UID:** The unique identifier for the record in the Oracle Utilities Data Repository.
 - **Type:** The name of the exception type.
 - **Description:** A description of the exception type.
 - **Severity Code:** The severity of the exception type (from the Exception Severity table).
2. Edit data in the fields as appropriate. See **Working with Data Types** on page 8-4 for more information about editing data values.
 3. To save changes made to the record, click **Save**. To save the edited record as a new record, click **Save As New**.
Note: The **Save As New** option only works if the identity of the record has been changed.
 4. To perform a new search, click **Search**.
 5. To open a list of records, click **List**.
 6. To delete the current record, click **Delete**.
 7. To navigate from the current record to one of its parent or lookup records, click the Name of the parent table on the record. Parent and lookup records appear underlined on the screen. Use the **Back** button to return to the record being viewed.
 8. To view a list of child records, click the name of the child table you wish to view in the Children section of the screen. Use the **Back** button to return to the record being viewed.

Adding Exception Types

You can also add new exception types.

How to add exception types:

1. Click **Add** on either the Exception Types search or list screens. A blank Exception Types screen opens.
2. Enter the name of the exception type in the **Type** field.
3. Enter a description for the exception type in the **Description** field.
4. Select a **Severity Code** by clicking the **Browse** button (**...**). This opens a dialog window that lists all the available Severity Codes.
5. To save the record, click **Save**. The new exception type appears on the screen.

Origination Systems

Origination Systems define the external data sources used by Oracle Utilities Transaction Management and the Adapter. Origination Systems are linked to services in **Runtime Services** records. In Oracle Utilities Transaction Management, Origination Systems indicate the system the transaction originated from.

How to search origination systems:

1. Select **Tools and Utilities->Adapter Components->Originating Systems**.

The Originating Systems screen opens.

2. Enter the search criteria in the appropriate field.

You can search based on the UID (unique identifier for the record in the Oracle Utilities Data Repository), or Name of the originating system.

See **Searching Database Tables** on page 8-7 for more information about searching records, including the use of operands and wildcards.

3. Click **Search** to perform the search. To reset the search fields to their previous values, click **Reset**. To clear all the search fields, click **Clear**. To add a new record, click **Add**. See **Adding Origination Systems** on page 11-12 for more information about adding new originating systems.
4. The search results appear on the Originating Systems list screen.
The Originating Systems list screen displays the following information for each record:
 - UID
 - Name
 See **Viewing and Editing Origination Systems** on page 11-11 for more information about viewing individual records.
5. To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by Name, click the Name column heading. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.
6. To view a record, click on the corresponding [...] link. The selected record will appear in the Originating Systems window. See **Viewing and Editing Origination Systems** on page 11-11 for more information.
7. To perform another search, click **Search**. To refresh the contents of the list screen, click the refresh icon.
8. *Optional.* To delete one or more records, check the check boxes corresponding to the records to be deleted, and click **Delete**. To clear all the checkboxes, click **Clear**.
9. *Optional.* To add a new record, click **Add**. See **Adding Origination Systems** on page 11-12 for more information about adding new originating systems.

Viewing and Editing Origination Systems

Individual origination systems are viewed on the Originating Systems screen. This screen opens when you select a record from the Originating Systems search results screen.

How to view and edit origination systems:

1. Click on the [...] link for the originating systems you wish to view. The selected record opens in the Originating Systems screen.
The Originating Systems screen displays the following information for the selected record:
 - **UID:** The unique identifier for the record in the Oracle Utilities Data Repository.
 - **Name:** The name of the originating system.
2. Edit data in the fields as appropriate. See **Working with Data Types** on page 8-4 for more information about editing data values.
3. To save changes made to the record, click **Save**. To save the edited record as a new record, click **Save As New**.
Note: The **Save As New** option only works if the identity of the record has been changed.
4. To perform a new search, click **Search**.
5. To open a list of records, click **List**.
6. To delete the current record, click **Delete**.
7. To navigate from the current record to one of its parent or lookup records, click the Name of the parent table on the record. Parent and lookup records appear underlined on the screen. Use the **Back** button to return to the record being viewed.

8. To view a list of child records, click the name of the child table you wish to view in the Children section of the screen. Use the **Back** button to return to the record being viewed.

Adding Origination Systems

You can also add new origination systems.

How to add origination systems:

1. Click **Add** on either the Originating Systems search or list screens. A blank Originating Systems screen opens.
2. Enter the name of the originating system in the **Name** field.
3. To save the record, click **Save**. The new originating system appears on the screen.

System Properties

System Properties represent specific Oracle Utilities Transaction Management and Adapter servers at runtime, defining how the LTMH/Adapter server will perform. System property records also link **Servers** with **JMS Servers** and provide basic information which the server needs to run properly.

How to search system properties:

1. Select **Tools and Utilities->Adapter Components->System Properties**.

The System Properties screen opens.

2. Enter the search criteria in the appropriate field.

You can search based on the UID, JMS Server, Server, JDK Path, Maximum Retry, Debug Level, Map Cache Size, Retry Interval, or JVM Parameter of the system properties.

See **Searching Database Tables** on page 8-7 for more information about searching records, including the use of operands and wildcards.

3. Click **Search** to perform the search. To reset the search fields to their previous values, click **Reset**. To clear all the search fields, click **Clear**. To add a new record, click **Add**. See **Adding System Properties** on page 11-15 for more information about adding new system properties.
4. The search results appear on the System Properties list screen.

The System Properties list screen displays the following information for each record:

- UID
- JMS Server
- Server
- JDK Path
- JVM Parameter
- Maximum Retry
- Debug Level
- Port
- Map Cache Size
- Retry Interval

See **Viewing and Editing System Properties** on page 11-13 for more information about viewing individual records.

5. To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by JMS Server, click the JMS Server column heading. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.
6. To view a record, click on the corresponding [...] link. The selected record will appear in the System Properties screen. See **Viewing and Editing System Properties** on page 11-13 for more information.
7. To perform another search, click **Search**. To refresh the contents of the list screen, click the refresh icon.
8. *Optional.* To delete one or more records, check the check boxes corresponding to the records to be deleted, and click **Delete**. To clear all the checkboxes, click **Clear**.
9. *Optional.* To add a new record, click **Add**. See **Adding System Properties** on page 11-15 for more information about adding new system properties.

Viewing and Editing System Properties

Individual system properties records are viewed on the System Properties screen. This screen opens when you select a record from the System Properties list screen.

How to view and edit system properties:

1. Click on the [...] link for the system properties record you wish to view. The selected record opens in the System Properties screen.

The System Properties screen displays the following information for the selected record:

- **UID:** The unique identifier for the record in the Oracle Utilities Data Repository.
- **JMS Server:** The JMS server that Oracle Utilities Transaction Management or the Adapter will use to route messages. If a JMS server is not in use, a “dummy” entry is required here. See **JMS Servers** on page 11-4 for more information about setting up JMS servers.
- **Server:** The server to which the system properties apply. See **Servers** on page 11-2 for more information about setting up servers.
- **JDK Path:** The file path to the Java executable. This may be either a fully qualified path, or a relative path from the LTMH/Runtime directory.
- **JVM Parameter:** Specific parameters for the Java Virtual Machines (JVM) used by the server. These parameters allow administrators to tune and configure the JVM as desired. For example, to increase the memory heap size in the Sun JVM, specify ‘-Xmx256MB’. JVM parameters can be specified at either the system level (defined in the System Properties), or at the service level (defined for each individual Runtime Service).

Parameters that begin with ‘-D’ are "environment variables." The table below outlines several environment variables available.

Variable	Description
ls.tempFolder	Controls the location of the temp folder used in some operations, such as processing large payloads (Default: LTMH/Runtime/temp) Example: -Dls.tempFolder=Lodestar/temp

Variable	Description
ls.config.source	Controls the configuration file loaded by the service (Default: Lodestar\cfg\ltmh.cfg or ltmh.cfg.xml) Example: -Dls.config.source=Lodestar\cfg\ltmh.cfg.custom.xml Note: This parameter can be used at the service level to specify that the service use a specific configuration file instead of the default LTMH.CFG.XML file, allowing the service to use specific configuration settings. For example, an implementation might need to specify a different RESTART_INTERVAL for one or more services than is used by other services.
ls.fwc.source	Controls the location of the template file converter's source file (Default: Lodestar\cfg\Templates.xml) Example: -Dls.fwc.source=Lodestar\custom\CustTemplate.xml
ls.delimiter	Controls separation character in csv parsing (Default: comma) Example: -Dls.delimiter=
ls.delimiter.escape	Controls the character used to indicate a literal usage of the delimiter character (Default: double quote)
ls.logDir	Controls the location to which the server will write log files (Default: LTMH\Runtime\log) Example: -Dls.logDir=Lodestar\log
ls.log_properties	Name of an alternative log4j configuration file (no default)

Two parameters are included by default. The '-server' parameter tunes the internal workings of the JVM to operate in a more efficient mode. The '-Djava.endorsed.dirs' parameter overrides the internal XML parsing packages in order to use the ones provided by the installation. Some Oracle Utilities Transaction Management and Adapter components, such as those that pertain to CSV parsing, use additional environment variables.

- **Maximum Retry:** The maximum number of times the server should restart after an error (database disconnection, JMS failure, etc.) before terminating. Setting this to -1 causes the server to continue restarting indefinitely.
- **Debug Level:** The level of debugging information produced by Oracle Utilities Transaction Management and the Adapter. Debugging output allows administrators to diagnose problems, but has a negative effect on performance. For the best performance, set this to 0 (zero). At level 1, output is sent to a log file, but not to the console. Levels 2 and 3 provide additional output. Levels 4 and higher are considered diagnostic modes, and should not be used unless under specific instruction from a technical support specialist. See **Oracle Utilities Energy Information Platform Adapter Logging** on page 14-8 in the *Oracle Utilities Energy Information Platform Configuration Guide* for more details concerning Adapter log files.
- **Port:** The port used by the service to connect to the database.
- **Map Cache Size:** The number of elements cached by the Oracle Utilities Transaction Management XML Map Service. Caching stylesheets allows for improved performance. By default, the system caches five (5) stylesheets. Note: This parameter is not used by the Adapter.

- **Retry Interval:** The number of seconds to wait after encountering a serious exception. For example, if the database server is not functioning, the server should not immediately retry its query, but should retry after a suitable time period has passed.
 - **Class Path:** A set of paths to directories (or to archive files) that control the classes that are available within the JVM. Each path specified should be separated by a semi-colon. The class path must include all the jars referenced by the Oracle Utilities Transaction Management configuration including the JMS jar, business rule jar(s), and custom converters developed in the context of the implementation.
2. Edit data in the fields as appropriate. See **Working with Data Types** on page 8-4 for more information about editing data values.
 3. To save changes made to the record, click **Save**. To save the edited record as a new record, click **Save As New**.
Note: The **Save As New** option only works if the identity of the record has been changed.
 4. To perform a new search, click **Search**.
 5. To open a list of records, click **List**.
 6. To delete the current record, click **Delete**.
 7. To navigate from the current record to one of its parent or lookup records, click the Name of the parent table on the record. Parent and lookup records appear underlined on the screen. Use the **Back** button to return to the record being viewed.
 8. To view a list of child records, click the name of the child table you wish to view in the Children section of the screen. Use the **Back** button to return to the record being viewed.

Adding System Properties

You can also add new system properties records.

How to add system properties:

1. Click **Add** on either the System Properties search or list screens. A blank System Properties screen opens.
2. Select the **JMS Server** by clicking the **Browse** button (...). This opens a dialog window that lists all the available JMS servers.
3. Select the **Server** by clicking the **Browse** button (...). This opens a dialog window that lists all the available servers.
4. Enter the path to the Java executable in the **JDK Path** field.
5. Enter appropriate parameters for the JVM in the **JVM Parameter** field.
6. Enter the maximum number of retries in the **Maximum Retry** field.
7. Enter the debugging level in the **Debug Level** field.
8. Enter the port in the **Port** field.
9. Enter the number of stylesheets to be cached in the **Map Cache Size** field (Oracle Utilities Transaction Management only).
10. Enter the number of seconds to wait after encountering a serious exception in the **Retry Interval** field.
11. Enter the path (or paths) to the classes or archive files used by the JVM in the **Class Paths** field. Each path should be separated by a semi-colon.
12. To save the record, click **Save**. The new system properties record appears on the screen.

Configuring Oracle Utilities Adapter Services

Services are the basic working components of the Adapter and Oracle Utilities Transaction Management. A service does a single unit of work, a series of which can be chained together in processing transactions. This section describes how to set up records that define these services in the Oracle Utilities Data Repository, including:

- **Runtime Services**
- **Service Activation**
- **XSLT Map Names**
- **XSLT Map Versions**
- **XSLT Maps**
- **Web Services**

Runtime Services

Runtime Services represent individual Oracle Utilities Transaction Management and Adapter services. When used with JMS, Runtime Services take input from **JMS Queues**.

How to search runtime services:

1. Select **Tools and Utilities->Adapter Components->Runtime Services**.

The Runtime Services screen opens.

2. Enter the search criteria in the appropriate field.

You can search based on the UID, Name, JMS Queues, JMS Filter, JVM Parameters, Origination Systems, Parameters, Internal Flag, Business Rule Flag, Output Flag, or Runtime Service Type of the runtime service(s).

See **Searching Database Tables** on page 8-7 for more information about searching records, including the use of operands and wildcards.

3. Click **Search** to perform the search. To reset the search fields to their previous values, click **Reset**. To clear all the search fields, click **Clear**. To add a new record, click **Add**. See **Adding Runtime Services** on page 11-19 for more information about adding new runtime services.
4. The search results appear on the Runtime Services list screen.

The Runtime Services list screen displays the following information for each record:

- UID
- Name
- JMS Queues
- JMS Filter
- JVM Parameters
- Origination Systems
- Parameters
- Internal Flag
- Output Flag
- Runtime Service Type

See **Viewing and Editing Runtime Services** on page 11-17 for more information about viewing individual records.

5. To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by JMS Queue, click the JMS Queue column heading. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.
6. To view a record, click on the corresponding [...] link. The selected record will appear in the Runtime Services screen. See **Viewing and Editing Runtime Services** on page 11-17 for more information.
7. To perform another search, click **Search**. To refresh the contents of the list screen, click the refresh icon.
8. *Optional.* To delete one or more records, check the check boxes corresponding to the records to be deleted, and click **Delete**. To clear all the checkboxes, click **Clear**.
9. *Optional.* To add a new record, click **Add**. See **Adding Runtime Services** on page 11-19 for more information about adding new runtime services.

Viewing and Editing Runtime Services

Individual runtime services are viewed on the Runtime Services screen. This screen opens when you select a record from the Runtime Services list screen.

How to view and edit runtime services:

1. Click on the [...] link for the runtime service you wish to view. The selected record opens in the Runtime Services screen.

The Runtime Services screen displays the following information for the selected record:

- **UID:** The unique identifier for the record in the Oracle Utilities Data Repository.
- **Name:** The identifier for the runtime service. **Note:** For runtime services of type “FPORAL” (file portal), the name of the runtime service is used to create a working directory on the file system and must not contain any of the following characters: / \ : * ? " < > | .
- **JMS Queues:** The JMS queue that serves as input for the service. This is not applicable to all services.
- **JMS Filter:** Filtering syntax used to limit the messages that will be available to the service. This filter is a feature of JMS that allows the ability to filter messages with a SQL-like query. For more information on how this works, see the following URL: <http://java.sun.com/j2ee/1.4/docs/tutorial/doc/JMS4.html#wp79145>. If the service does not require filtering, this field will be empty.
- **JVM Parameters:** Additional parameters (see Parameters under **System Properties** on page 11-12) used by the JVM for the individual service. Most commonly this is used to add memory for processing large documents. For available options, see the following URL: <http://java.sun.com/j2se/1.4.2/docs/tooldocs/windows/java.html>.
- **Origination Systems:** The type of system the service is associated with. See **Origination Systems** on page 11-10 for more information about setting up origination systems.
- **Parameters:** Additional command line parameters to be applied to the service. The most common parameter is the “-qs” parameter, which controls the JMS queue to which the service will write. Services that use a JMS queue require a “-qs” parameter.
- **Internal Flag:** A flag that indicates (Y or N) whether or not the service is an “internal system.”
- **Output Flag:** A flag that indicates (Y or N) whether or not the service produces output. The only currently supported output service the Outbound Gateway.

- **Runtime Service Type:** The general class of service (from the Runtime Service Type table). For the Adapter, this should be one of the following:
 - **FPORTAL:** The Adapter File Loader Service. This service loads payloads from a file in a specified directory.

Note: Runtime services of type FPORTAL that monitor a network location cannot be run on more than one application server at the same time.
 - **QPORTAL:** The Adapter Queue Loader Service. This service loads payloads from a specified JMS queue.
 - **DPORTAL:** The Adapter Database Loader Service. This service loads payloads from the Payload Table in the Oracle Utilities Data Repository.
 - **MDMPORTAL:** The MDM Web Transactions portal. This service executes operations performed by Oracle Utilities Meter Data Management users working with the application's web-based user interface.

Note: At least one service of type MDMPORTAL must be running in order for users to use the Oracle Utilities Meter Data Management application via the web-based user interface.

Note: MDMPORTAL services are used ONLY by Oracle Utilities Meter Data Management.
 - **Properties:** Properties associated with the service. Properties are defined in an XML structure. See **Defining Service Properties for Adapter Runtime Services** on page 11-31 for more information about Runtime Service Properties.
2. Edit data in the fields as appropriate. See **Working with Data Types** on page 8-4 for more information about editing data values.

When editing the Properties field, you can either edit the XML string in the text box, or upload an XML document that contains the properties in XML format. To upload a document, click **Upload Rule Properties**. The Properties text box is replaced by a text field.

Enter the path and file name of the document that contains the properties, or click the **Browse** button and select the appropriate file using the Choose File dialog. Click **Cancel** to restore the Properties text box. See the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about creating properties for runtime services.
 3. To save changes made to the record, click **Save**. To save the edited record as a new record, click **Save As New**.

Note: The **Save As New** option only works if the identity of the record has been changed.
 4. To perform a new search, click **Search**.
 5. To open a list of records, click **List**.
 6. To delete the current record, click **Delete**.
 7. To navigate from the current record to one of its parent or lookup records, click the Name of the parent table on the record. Parent and lookup records appear underlined on the screen. Use the **Back** button to return to the record being viewed.
 8. To view a list of child records, click the name of the child table you wish to view in the Children section of the screen. Use the **Back** button to return to the record being viewed.

Adding Runtime Services

You can also add new runtime services.

How to add runtime services:

1. Click **Add** on either the Runtime Services search or list screens. A blank Runtime Services screen opens.
2. Enter the identifier for the service in the **Name** field. **Note:** For runtime services of type “FPORTAL” (file portal), the name of the runtime service is used to create a working directory on the file system and must not contain any of the following characters: / \ : * ? " < > |.
3. Select the **JMS Queue** by clicking the **Browse** button (...). This opens a dialog window that lists all the available JMS queues. If a JMS queue is not applicable to the service, leave this blank.
4. Enter the filtering syntax used to limit the messages that will be available to the service in the **JMS Filter** field. This filter allows the ability to filter messages with a SQL-like query. For more information on how this works, see the following URL: <http://java.sun.com/j2ee/1.4/docs/tutorial/doc/JMS4.html#wp79145>. If the service does not require filtering, leave field empty.
5. Enter appropriate parameters for the JVM in the **JVM Parameter** field. For available options, see the following URL: <http://java.sun.com/j2se/1.4.2/docs/tooldocs/windows/java.html>.
6. Select the **Origination Systems** by clicking the **Browse** button (...). This opens a dialog window that lists all the available origination systems.
7. Enter any additional command line parameters to be applied to the service in the **Parameters** field.
8. Specify whether or not the service is an “internal system” by entering either “Y” (Yes) or “N” (No) in the **Internal Flag** field. This should always be set to “Y” (Yes) for Adapter services (File Portal, Queue Portal, and Database Portal).
9. Specify whether or not the service produces output. in the **Output Flag** field. The only currently supported output service the Outbound Gateway. This should always be set to “N” (No) for Adapter services (File Portal, Queue Portal, and Database Portal).
10. Select the **Runtime Service Type** by clicking the **Browse** button (...). This opens a dialog window that lists all the available runtime service types. For the Adapter, this should be one of the following:
 - **FPORTAL:** The Adapter File Loader Service. This service loads payloads from a file in a specified directory.

Note: Runtime services of type FPORTAL that monitor a network location cannot be run on more than one application server at the same time.
 - **QPORTAL:** The Adapter Queue Loader Service. This service loads payloads from a specified JMS queue.
 - **DPORTAL:** The Adapter Database Loader Service. This service loads payloads from the Payload Table in the Oracle Utilities Data Repository.
 - **MDMPORTAL:** The MDM Web Transactions portal. This service executes operations performed by Oracle Utilities Meter Data Management users working with the application’s web-based user interface.

Note: At least one service of type MDMPORTAL must be running in order for users to use the Oracle Utilities Meter Data Management application via the web-based user interface.

Note: MDMPORTAL services are used ONLY by Oracle Utilities Meter Data Management.

11. Enter properties (in XML) for the service in the **Properties** field. You can either enter text manually (or copy/paste), or upload an XML document that contains the properties in XML format. To upload a document, click **Upload Rule Properties**. The Properties text box is replaced by a text field.

Enter the path and file name of the document that contains the properties, or click the **Browse** button and select the appropriate file using the Choose File dialog. Click **Cancel** to restore the Properties text box. See **Defining Service Properties for Adapter Runtime Services** on page 11-31 for more information about creating properties for runtime services.

12. To save the record, click **Save**. The new runtime service appears on the screen.

Service Activation

Service Activation records define how individual Oracle Utilities Transaction Management and Adapter services will run on each server. Service Activation records link specific **Servers** to **Runtime Services**.

How to search service activation records:

1. Select **Tools and Utilities->Adapter Components->Service Activation**.

The Service Activation screen opens.

2. Enter the search criteria in the appropriate field.

You can search based on the Server, Runtime Services, Enabled flag, Run at Startup flag, or Keep Alive flag of the service activation record(s).

See **Searching Database Tables** on page 8-7 for more information about searching records, including the use of operands and wildcards.

3. Click **Search** to perform the search. To reset the search fields to their previous values, click **Reset**. To clear all the search fields, click **Clear**. To add a new record, click **Add**. See **Adding Service Activation Records** on page 11-21 for more information about adding new service activation records.
4. The search results appear on the Service Activation list screen.

The Service Activation list screen displays the following information for each record:

- Server
- Runtime Services
- Enabled
- Run at Startup
- Keep Alive

See **Viewing and Editing Service Activation Records** on page 11-21 for more information about viewing individual records.

5. To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by Server, click the Server column heading. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.
6. To view a record, click on the corresponding [...] link. The selected record will appear in the Service Activation screen. See **Viewing and Editing Service Activation Records** on page 11-21 for more information.

7. To perform another search, click **Search**. To refresh the contents of the list screen, click the refresh icon.
8. *Optional.* To delete one or more records, check the check boxes corresponding to the records to be deleted, and click **Delete**. To clear all the checkboxes, click **Clear**.
9. *Optional.* To add a new record, click **Add**. See **Adding Service Activation Records** on page 11-21 for more information about adding new service activation records.

Viewing and Editing Service Activation Records

Individual service activation records are viewed on the Service Activation screen. This screen opens when you select a record from the Service Activation list screen.

How to view and edit service activation records:

1. Click on the [...] link for the service activation record you wish to view. The selected record opens in the Service Activation screen.

The Service Activation screen displays the following information for the selected record:

- **Server:** The Server on which the service will run. See **Servers** on page 11-2 for more information about setting up servers.
- **Runtime Services:** The service to be run. See **Runtime Services** on page 11-16 for more information about setting up runtime services.
- **Enabled:** A flag that indicates (Yes or No) if the service is allowed to run on the server. Services must be enabled to run.
- **Run at Startup:** A flag that indicates (Yes or No) if the service will start as soon as the server starts.
- **Keep Alive:** A flag that indicates (Yes or No) whether or not the service will restart itself in the event it shuts down.

2. Edit data in the fields as appropriate. See **Working with Data Types** on page 8-4 for more information about editing data values.
3. To save changes made to the record, click **Save**. To save the edited record as a new record, click **Save As New**.
Note: The **Save As New** option only works if the identity of the record has been changed.
4. To perform a new search, click **Search**.
5. To open a list of records, click **List**.
6. To delete the current record, click **Delete**.
7. To navigate from the current record to one of its parent or lookup records, click the Name of the parent table on the record. Parent and lookup records appear underlined on the screen. Use the **Back** button to return to the record being viewed.
8. To view a list of child records, click the name of the child table you wish to view in the Children section of the screen. Use the **Back** button to return to the record being viewed.

Adding Service Activation Records

You can also add new service activation records.

How to add service activation records:

1. Click **Add** on either the Service Activation search or list screens. A blank Service Activation screen opens.
2. Select the **Server** by clicking the **Browse** button (...). This opens a dialog window that lists all the available servers.

3. Select the **Runtime Services** by clicking the **Browse** button (...). This opens a dialog window that lists all the available runtime services.
4. Specify whether or not the service should be allowed to run on the server by selecting either “Yes” or “No” on the **Enabled** drop-down list.
5. Specify whether or not the service will start as soon as the server starts by selecting either “Yes” or “No” on the **Run at Startup** drop-down list.
6. Specify whether or not the service will restart itself in the event it shuts down by selecting either “Yes” or “No” on the **Keep Alive** drop-down list.
7. To save the record, click **Save**. The new service activation record appears on the screen.

XSLT Map Names

XSLT Map Names are names and descriptions of XML stylesheets (or maps) used by Oracle Utilities Transaction Management and the Adapter. XSLT Maps Names are used to define **XSLT Map Versions**.

How to search XSLT map names:

1. Select **Tools and Utilities->Adapter Components->XSLT Map Names**.

The XSLT Map Names screen opens.

2. Enter the search criteria in the appropriate field.

You can search based on the UID (unique identifier for the record in the Oracle Utilities Data Repository), Name, or Description of the map name(s).

See **Searching Database Tables** on page 8-7 for more information about searching records, including the use of operands and wildcards.

3. Click **Search** to perform the search. To reset the search fields to their previous values, click **Reset**. To clear all the search fields, click **Clear**. To add a new record, click **Add**. See **Adding XSLT Map Names** on page 11-23 for more information about adding new XSLT map names.
4. The search results appear on the XSLT Map Names list screen.

The XSLT Map Names list screen displays the following information for each record:

- UID
- Name
- Description

See **Viewing and Editing XSLT Map Names** on page 11-23 for more information about viewing individual records.

5. To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by Name, click the Name column heading. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.
6. To view a record, click on the corresponding [...] link. The selected record will appear in the XSLT Map Names screen. See **Viewing and Editing XSLT Map Names** on page 11-23 for more information.
7. To perform another search, click **Search**. To refresh the contents of the list screen, click the refresh icon.
8. *Optional.* To delete one or more records, check the check boxes corresponding to the records to be deleted, and click **Delete**. To clear all the checkboxes, click **Clear**.

9. *Optional.* To add a new record, click **Add**. See **Adding XSLT Map Names** on page 11-23 for more information about adding new XSLT map names.

Viewing and Editing XSLT Map Names

Individual XSLT map names are viewed on the XSLT Map Names screen. This screen opens when you select a record from the XSLT Map Names list screen.

How to view and edit XSLT map names:

1. Click on the [...] link for the XSLT map name you wish to view. The selected record opens in the XSLT Map Names screen.

The XSLT Map Names screen displays the following information for the selected record:

- **UID:** The unique identifier for the record in the Oracle Utilities Data Repository.
- **Name:** The name of the XSLT map name.
- **Description:** A description of the XSLT map name.

2. Edit data in the fields as appropriate. See **Working with Data Types** on page 8-4 for more information about editing data values.
3. To save changes made to the record, click **Save**. To save the edited record as a new record, click **Save As New**.

Note: The **Save As New** option only works if the identity of the record has been changed.

4. To perform a new search, click **Search**.
5. To open a list of records, click **List**.
6. To delete the current record, click **Delete**.
7. To navigate from the current record to one of its parent or lookup records, click the Name of the parent table on the record. Parent and lookup records appear underlined on the screen. Use the **Back** button to return to the record being viewed.
8. To view a list of child records, click the name of the child table you wish to view in the Children section of the screen. Use the **Back** button to return to the record being viewed.

Adding XSLT Map Names

You can also add new XSLT map names.

How to add XSLT map names:

1. Click **Add** on either the XSLT Map Names search or list screens. A blank XSLT Map Names screen opens.
2. Enter the name of the XSLT map name in the **Name** field.
3. Enter a description for the map in the **Description** field.
4. To save the record, click **Save**. The new map record appears on the screen.

XSLT Map Versions

XSLT Map Versions represent specific versions of XML stylesheets (or maps) used by Oracle Utilities Transaction Management and the Adapter. XSLT Maps Versions are used to define **XSLT Maps**.

How to search XSLT map versions:

1. Select **Tools and Utilities->Adapter Components->XSLT Map Versions**.
The XSLT Map Versions screen opens.
2. Enter the search criteria in the appropriate field.

You can search based on the UID (unique identifier for the record in the Oracle Utilities Data Repository), XSLT Map Name, Description, Major Version, Minor Version, Begin Date, or End Date of the map version(s).

See **Searching Database Tables** on page 8-7 for more information about searching records, including the use of operands and wildcards.

3. Click **Search** to perform the search. To reset the search fields to their previous values, click **Reset**. To clear all the search fields, click **Clear**. To add a new record, click **Add**. See **Adding XSLT Map Versions** on page 11-25 for more information about adding new XSLT map versions.
4. The search results appear on the XSLT Map Versions list screen.

The XSLT Map Versions list screen displays the following information for each record:

- UID
- XSLT Map Name
- Description
- Major Version
- Minor Version
- Begin Date
- End Date

See **Viewing and Editing XSLT Map Versions** on page 11-24 for more information about viewing individual records.

5. To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by XSLT Map Name, click the XSLT Map Name column heading. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.
6. To view a record, click on the corresponding [...] link. The selected record will appear in the XSLT Map Versions screen. See **Viewing and Editing XSLT Map Versions** on page 11-24 for more information.
7. To perform another search, click **Search**. To refresh the contents of the list screen, click the refresh icon.
8. *Optional.* To delete one or more records, check the check boxes corresponding to the records to be deleted, and click **Delete**. To clear all the checkboxes, click **Clear**.
9. *Optional.* To add a new record, click **Add**. See **Adding XSLT Map Versions** on page 11-25 for more information about adding new XSLT map versions.

Viewing and Editing XSLT Map Versions

Individual XSLT map versions are viewed on the XSLT Map Versions screen. This screen opens when you select a record from the XSLT Map Versions list screen.

How to view and edit XSLT map versions:

1. Click on the [...] link for the XSLT map name you wish to view. The selected record opens in the XSLT Map Versions screen.

The XSLT Map Versions screen displays the following information for the selected record:

- **UID:** The unique identifier for the record in the Oracle Utilities Data Repository.

- **XSLT Map Name:** The XSLT Map Name record associated with the XSLT map version. See **XSLT Map Names** on page 11-22 for more information about XSLT Map Names.
 - **Description:** A description of the XSLT map version.
 - **Major Version:** Major version number for the XSLT map version.
 - **Minor Version:** Major version number for the XSLT map version.
 - **Begin Date:** The date and time at which the XSLT map version goes into effect.
 - **End Date:** The date and time after which the XSLT map version is no longer in effect.
2. Edit data in the fields as appropriate. See **Working with Data Types** on page 8-4 for more information about editing data values.
 3. To save changes made to the record, click **Save**. To save the edited record as a new record, click **Save As New**.
Note: The **Save As New** option only works if the identity of the record has been changed.
 4. To perform a new search, click **Search**.
 5. To open a list of records, click **List**.
 6. To delete the current record, click **Delete**.
 7. To navigate from the current record to one of its parent or lookup records, click the Name of the parent table on the record. Parent and lookup records appear underlined on the screen. Use the **Back** button to return to the record being viewed.
 8. To view a list of child records, click the name of the child table you wish to view in the Children section of the screen. Use the **Back** button to return to the record being viewed.

Adding XSLT Map Versions

You can also add new XSLT map versions.

How to add XSLT map versions:

1. Click **Add** on either the XSLT Map Versions search or list screens. A blank XSLT Map Versions screen opens.
2. Enter the name of the XSLT map version in the **Name** field.
3. Select the appropriate **XSLT Map Name** for the map version by clicking the **Browse** button (...). This opens a dialog window that lists all the available XSLT map names. See **XSLT Map Names** on page 11-22 for more information about setting up XSLT Map Names.
4. Enter a description for the map version in the **Description** field.
5. Enter the major version number for the map version in the **Major Version** field.
6. Enter the minor version number for the map version in the **Minor Version** field.
7. Enter the date and time at which the map version goes into effect in the **Begin Date**. You can enter the date either by typing the date manually or clicking the drop-down arrow to the right of the date field. This opens a calendar dialog that you can use to select the start date. You can enter the time either by typing the time manually, or by using the default time of 00:00:00. If appropriate, enter the date and time at which the map version is no longer in effect in the **End Date** field in the same manner.
8. To save the record, click **Save**. The new map version record appears on the screen.

XSLT Maps

XSLT Maps are records which store the actual XML stylesheets (or maps) used by Oracle Utilities Transaction Management and the Adapter. XSLT Maps are defined by **XSLT Map Versions**.

How to search XSLT maps:

1. Select **Tools and Utilities->Adapter Components->XSLT Maps**.

The XSLT Maps screen opens.

2. Enter the search criteria in the appropriate field.

You can search based on the UID (unique identifier for the record in the Oracle Utilities Data Repository) or XSLT Map Version of the map(s).

See **Searching Database Tables** on page 8-7 for more information about searching records, including the use of operands and wildcards.

3. Click **Search** to perform the search. To reset the search fields to their previous values, click **Reset**. To clear all the search fields, click **Clear**. To add a new record, click **Add**. See **Adding XSLT Maps** on page 11-27 for more information about adding new XSLT maps.

4. The search results appear on the XSLT Maps list screen.

The XSLT Maps list screen displays the following information for each record:

- UID
- XSLT Map Version

See **Viewing and Editing XSLT Maps** on page 11-26 for more information about viewing individual records.

5. To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by XSLT Map Version, click the XSLT Map Version column heading. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.
6. To view a record, click on the corresponding [...] link. The selected record will appear in the XSLT Maps screen. See **Viewing and Editing XSLT Maps** on page 11-26 for more information.
7. To perform another search, click **Search**. To refresh the contents of the list screen, click the refresh icon.
8. *Optional.* To delete one or more records, check the check boxes corresponding to the records to be deleted, and click **Delete**. To clear all the checkboxes, click **Clear**.
9. *Optional.* To add a new record, click **Add**. See **Adding XSLT Maps** on page 11-27 for more information about adding new XSLT maps.

Viewing and Editing XSLT Maps

Individual XSLT maps are viewed on the XSLT Maps screen. This screen opens when you select a record from the XSLT Maps list screen.

How to view and edit XSLT maps:

1. Click on the [...] link for the XSLT map you wish to view. The selected record opens in the XSLT Maps screen.

The XSLT Maps screen displays the following information for the selected record:

- **UID:** The unique identifier for the record in the Oracle Utilities Data Repository.
- **XSLT Map Version:** The XSLT Map Version record associated with the XSLT map. See **XSLT Map Versions** on page 11-23 for more information about XSLT Map Versions.
- **XML Map:** The XML map.

2. Edit data in the fields as appropriate. See **Working with Data Types** on page 8-4 for more information about editing data values.

When editing the XML Map field, you can either edit the XML string in the text box, or upload an XML document that contains the XML map. To upload a document, click **Upload an XSLT**. The XML Map text box is replaced by a text field.

Enter the path and file name of the document that contains the map, or click the **Browse** button and select the appropriate file using the Choose File dialog. Click **Cancel** to restore the XML Map text box. See the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about creating XML maps.

3. To save changes made to the record, click **Save**. To save the edited record as a new record, click **Save As New**.

Note: The **Save As New** option only works if the identity of the record has been changed.

4. To perform a new search, click **Search**.
5. To open a list of records, click **List**.
6. To delete the current record, click **Delete**.
7. To navigate from the current record to one of its parent or lookup records, click the Name of the parent table on the record. Parent and lookup records appear underlined on the screen. Use the **Back** button to return to the record being viewed.
8. To view a list of child records, click the name of the child table you wish to view in the Children section of the screen. Use the **Back** button to return to the record being viewed.

Adding XSLT Maps

You can also add new XSLT maps.

How to add XSLT maps:

1. Click **Add** on either the XSLT Maps search or list screens. A blank XSLT Maps screen opens.
2. Select the appropriate **XSLT Map Version** for the map by clicking the **Browse** button (...). This opens a dialog window that lists all the available XSLT map names. See **XSLT Map Versions** on page 11-23 for more information about setting up XSLT Map Versions.

3. Enter the XML map in the **XML Map** field. You can either enter text manually (or copy/paste), or upload an XML document that contains the map. To upload a document, click **Upload an XSLT**. The XML Map text box is replaced by a text field.

Enter the path and file name of the document that contains the map, or click the **Browse** button and select the appropriate file using the Choose File dialog. Click **Cancel** to restore the XML Map text box. See the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about creating XML maps.

4. To save the record, click **Save**. The new map record appears on the screen.

Web Services

Web Service records define individual web services, and link web services to Business Rules.

How to search web services:

1. Select **Tools and Utilities->Adapter Components->Web Services**.

The Web Service screen opens.

2. Enter the search criteria in the appropriate field.

You can search based on the Web Service ID, Description, Web Service Type Code, or Business Rule.

See **Searching Database Tables** on page 8-7 in the *Oracle Utilities Energy Information Platform User's Guide* for more information about searching records, including the use of operands and wildcards.

3. Click **Search** to perform the search. To reset the search fields to their previous values, click **Reset**. To clear all the search fields, click **Clear**. To add a new record, click **Add**. See **Adding Web Services** on page 11-30 for more information about adding new web services.
4. The search results appear on the Web Service list screen.

The Web Service list screen displays the following information for each record:

- UID
- Web Service ID
- Description
- Web Service Type Code
- Runtime Service
- Business Rule

See **Viewing and Editing Web Services** on page 11-28 for more information about viewing individual records.

5. To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by Web Service ID, click the Web Service ID column heading. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.
6. To view a record, click on the corresponding [...] link. The selected record will appear in the Web Service screen. See **Viewing and Editing Web Services** on page 11-28 for more information.
7. To perform another search, click **Search**. To refresh the contents of the list screen, click the refresh icon.
8. *Optional.* To delete one or more records, check the check boxes corresponding to the records to be deleted, and click **Delete**. To clear all the checkboxes, click **Clear**.
9. *Optional.* To add a new record, click **Add**. See **Adding Web Services** on page 11-30 for more information about adding new web services.

Viewing and Editing Web Services

Individual web service records are viewed on the Web Service screen. This screen opens when you select a record from the Web Service list screen.

How to view and edit web services:

1. Click on the [...] link for the web service you wish to view. The selected record opens in the Web Service screen.

The Web Service screen displays the following information for the selected record:

- **Web Service ID:** An ID that defines the web service. The Web Service ID is used when calling the web service.
- **Description:** A description of the service.
- **Web Service Type Code:** The type of web service, from the Web Service Type table. Web service types include ABR (Adapter Business Rule) and ARS (Adapter Runtime Service).
- **Runtime Service:** The Runtime Service, from the Runtime Service table, that will be executed by the web service.

- **Business Rule:** The Business Rule, from the Business Rule table, that will be executed by the web service.
2. Edit data in the fields as appropriate. See **Working with Data Types** on page 8-4 for more information about editing data values.
 3. To save changes made to the record, click **Save**. To save the edited record as a new record, click **Save As New**.

Note: The **Save As New** option only works if the identity of the record has been changed.

4. To perform a new search, click **Search**.
5. To open a list of records, click **List**.
6. To delete the current record, click **Delete**.
7. To navigate from the current record to one of its parent or lookup records, click the Name of the parent table on the record. Parent and lookup records appear underlined on the screen. Use the **Back** button to return to the record being viewed.
8. To view a list of child records, click the name of the child table you wish to view in the Children section of the screen. Use the **Back** button to return to the record being viewed.

Adding Web Services

You can also add new web services.

How to add web services:

1. Click **Add** on either the Web Service search or list screens. A blank Web Service screen opens.
2. Enter the **Web Service ID** for the web service.
3. Enter a description for the web service.
4. Select the **Web Service Type Code** by clicking the **Browse** button (). This opens a dialog window that lists all the available web service types.
5. Select the **Runtime Service** by clicking the **Browse** button (). This opens a dialog window that lists all the available business rules.
6. Select the **Business Rule** by clicking the **Browse** button (). This opens a dialog window that lists all the available runtime services.
7. To save the record, click **Save**. The new web service appears on the screen.

Note: Business Rules of type “Rate” should not be used with web services.

Defining Service Properties for Adapter Runtime Services

Service Properties define how Adapter Runtime Services function during runtime. Service properties are used to associate a business rule to a service property, to specify the data source(s) that the service will interact with, to specify how the service creates output based on exceptions, and other properties.

This section describes Service Properties used by Adapter Runtime Services, including:

- **Properties Format**
- **Common Properties**
- **File Portal Properties**
- **Database Portal Properties**
- **Sample Properties**

Properties Format

Adapter services are defined in the Runtime Service table in the Oracle Utilities Data Repository. The Properties column in this table defines specific properties expected and/or required by the service. This column should contain an XML string listing the properties used by the service.

The Properties XML string should be in the following form:

```
<PROPERTIES>
  <PROPERTY NAME="PropertyName1" VALUE="PropertyValue1"/>
  <PROPERTY NAME="PropertyName2" VALUE="PropertyValue2"/>
  .
  .
  .
</PROPERTIES>
```

Element Descriptions

Each of the data elements used by this structure are described below.

Elements:

- **PROPERTIES:** Root element that contains one or more PROPERTY elements.
- **PROPERTY:** Element that defines a specific Property used by the service.

Attributes:

- **NAME:** The name of the Property.
- **VALUE:** The value for the Property.

Names and appropriate values for each property are listed in the descriptions below.

Property Descriptions

Each of the properties used by the services are described in the following format:

NAME: The name of the Property.

- **Required:** Is the Property required?
- **Possible Values:** Possible values for the Property.
- **Description:** A description of the Property.
- **Default Value:** The default value for the Property.
- **Example:** An example of the Property.

Common Properties

All Adapter Runtime Services can use the following Properties, including:

- **General Properties**
- **Data Source Properties**
- **Output Properties**
- **Exception Output Properties**
- **Work Queue Properties**

General Properties

General properties define general attributes of the service.

STORAGE_LEVEL

- **Required:** No
- **Possible Values:** 0,1, or 2
- **Description:** Optional parameter that controls how much data will be stored in the database. Valid values are:
 - 0 - No storage
 - 1 - Data is saved in its raw format
 - 2 - Data is saved in its raw format and again after all input data conversions have been performed (but before any call to the RDL engine).

- **Default Value:** 1

- **Example:**

```
<PROPERTY NAME="STORAGE_LEVEL" VALUE="2"/>
```

DC_DELIMITER

- **Required:** No
- **Possible Values:** Any string or character
- **Description:** Optional parameter that specifies an alternative character to use as a delimiter in the DataConverter property lists. Note that this property applies to all DataConverter property listings. Specify “\t” for the Tab character.

- **Default Value:** “,”

- **Example:**

```
<PROPERTY NAME="DC_DELIMITER" VALUE="|" />
```

MAX_ERRORS

- **Required:** No
- **Possible Values:** Any integer
- **Description:** Optional parameter that limits the number of exceptions logged to the Inbound Exception table.

- **Default Value:** None

- **Example:**

```
<PROPERTY NAME="MAX_ERRORS" VALUE="10"/>
```

INPUT_DC_0 (INPUT_DC_1, ..., INPUT_DC_n)

- **Required:** No
- **Possible Values:** Any valid DataConverter class name with appropriate parameters, separated with the value specified by the **DC_DELIMITER** property.
- **Description:** Optional parameter specifying the full class name of a DataConverter to use in the data input phase. Further parameters are dependent on the type of DataConverter required and should also be listed in the value attribute delimited by commas or the character specified in the **DC_DELIMITER** property. Note that parameters must be specified in the order expected by the particular DataConverter. Multiple DataConverters can be "chained" together by listing each class in a separate service property with the desired ordinal number appended to the property name. When listing multiple converters, the first **must** be "0".
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="INPUT_DC_0"
VALUE="com.lodestarcorp.core.xml.parsers.RowIdentifyingCSVParser"/>

<PROPERTY NAME="INPUT_DC_1"
VALUE="com.lodestarcorp.portal.data.XSLConverter,C:\Interval\CSVMap.xslt"/>

...

<PROPERTY NAME="INPUT_DC_14"
VALUE="com.lodestarcorp.portal.data.SchemaValidator,C:\Interval\
IntdUsage.xsd"/>
```

CONVERTER_TIMEOUT

- **Required:** No
- **Possible Values:** Any positive integer
- **Description:** A diagnostic property for detecting deadlocks in data converters. The value of this property is the number of seconds the system will wait for a data converter to finish processing a payload.
- **Default Value:** 0
- **Example:**

```
<PROPERTY NAME="CONVERTER_TIMEOUT" VALUE="600"/>
```

RULE_NAME

- **Required:** No
- **Possible Values:** Any valid RDL name
- **Description:** Optional parameter that specifies the name of the Business Rule that should be run. If this parameter is not specified, no RDL processing will occur.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="RULE_NAME" VALUE="UsageRule"/>
```

RDL_MEMORY_BUFFER_SIZE

- **Required:** No
- **Possible Values:** An integer value that will not exceed available memory.
- **Description:** Optional parameter that indicates how much memory should be allocated to the incoming payload prior to RDL processing. If the payload is larger than the set amount, it will be written to a temporary file on the disk.

- **Default Value:** 5 (MB)

- **Example:**

```
<PROPERTY NAME="RDL_MEMORY_BUFFER_SIZE" VALUE="3"/>
```

Data Source Properties

Data source properties define the data source(s) used by the Runtime Service, including the default data source, as well as optional RDL-specific data sources.

DEFAULT_DSN

- **Required:** No
- **Possible Values:** Any valid DSN
- **Description:** The name of an ODBC data source that can be used as a default for other parameters such as the RDL_DSNn parameters or the WQ_DSN parameter.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="DEFAULT_DSN" VALUE="MyDB"/>
```

DEFAULT_INITIALCATALOG

- **Required:** No
- **Possible Values:** A server name or IP address
- **Description:** The initial catalog for the database connection. Used only with MS SQL Server.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="DEFAULT_INITIALCATALOG" VALUE="PWRLINE"/>
```

DEFAULT_DDBQUALIFIER

- **Required:** No
- **Possible Values:** Any valid database qualifier
- **Description:** A default qualifier that can be used in place of other parameters such as the RDL_DDBQUALIFIER_1 and the WQ_DDBQUALIFIER.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="DEFAULT_DBQUALIFIER" VALUE="QualName"/>
```

DEFAULT_USER

- **Required:** No
- **Possible Values:** Any valid user ID
- **Description:** A default for the database user. This parameter can be used in place of other parameters such as the RDL_USER_1 and WQ_USER parameters.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="DEFAULT_USER" VALUE="UserName"/>
```

DEFAULT_PASSWORD

- **Required:** No
- **Possible Values:** Any valid user password
- **Description:** A default for the database password. This parameter can be used in place of other parameters such as the **RDL_PASSWORD_1** and **WQ_PASSWORD** parameters.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="DEFAULT_PASSWORD" VALUE="somePassword"/>
```

DEFAULT_PROVIDER

- **Required:** No
- **Possible Values:** "sqloledb"
- **Description:** OLEDB is required to connect to a SQL Server database. Setting this parameter to "sqloledb" enables the OLEDB connection. This parameter may not be used with a connection to an Oracle database. Other service properties that are used with OLEDB are **DEFAULT_USER**, **DEFAULT_PASSWORD**, **DEFAULT_DBQUALIFIER**, **DEFAULT_DATASOURCE**, and **DEFAULT_INITIALCATALOG**.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="DEFAULT_PROVIDER" VALUE ="sqloledb"/>
```

DEFAULT_DATASOURCE

- **Required:** No
- **Possible Values:** A server name or IP address
- **Description:** When using an OLEDB connection, this parameter specifies the database server.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="DEFAULT_DATASOURCE" VALUE="MDM105"/>
```

DEFAULT_USERNAME

- **Required:** No
- **Possible Values:** Any valid web user ID. This value is case-sensitive.
- **Description:** A web user ID from Security Administration. It is used with the **DEFAULT_PWD** property for accessing the Oracle Utilities Data Repository. The default datasource that is configured in the security database is used as the database connection. The **DEFAULT-x** parameters apply to both Work Queue and Adapter operations. These parameters supersede all properties where the database connection is explicitly specified, such as **RDL_DSN_1**, **WQ_DSN**, and **DEFAULT_DSN**.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="DEFAULT_USERNAME" VALUE="UserName"/>
```

DEFAULT_PWD

- **Required:** No
- **Possible Values:** Any valid user password. This value is case-sensitive.
- **Description:** A password for a web user from Security Administration. Used with the DEFAULT_USERNAME property for accessing the Oracle Utilities Data Repository. The default datasource that is configured in the security database is used to establish the connection. The DEFAULT-x parameters apply to both Work Queue and Adapter operations. These parameters supersede all properties where the database connection is explicitly specified, such as RDL_DSN_1, WQ_DSN, and DEFAULT_DSN.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="DEFAULT_PWD" VALUE="somePassword"/>
```

DEFAULT_ALTERNATE_DATASOURCE

- **Required:** No
- **Possible Values:** Any data source name
- **Description:** Optional parameter used in conjunction with DEFAULT_USERNAME and DEFAULT_PWD to provide a secondary connection beyond the default datasource to those applications that may require it. The DEFAULT-x parameters apply to both Work Queue and Adapter operations. These parameters supersede all properties where the database connection is explicitly specified, such as RDL_DSN_1, WQ_DSN, and DEFAULT_DSN.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="DEFAULT_ALTERNATE_DATASOURCE" VALUE="MDM105"/>
```

ADAPTER_USERNAME

- **Required:** No
- **Possible Values:** Any valid web user ID. This value is case-sensitive.
- **Description:** A web user ID from Security Administration. It is used with the ADAPTER_PWD property for accessing the Oracle Utilities Data Repository. The default datasource that is configured in the security database is used as the database connection. These parameters supersede all RDL_x_1 and RDL_x_2 properties.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="ADAPTER_USERNAME" VALUE="UserName"/>
```

ADAPTER_PWD

- **Required:** No
- **Possible Values:** Any valid user password. This value is case-sensitive.
- **Description:** A password for a web user from Security Administration. Used with the ADAPTER_USERNAME property for accessing the Oracle Utilities Data Repository. The default datasource that is configured in the security database is used to establish the connection. These parameters supersede all RDL_x_1 and RDL_x_2 properties.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="ADAPTER_PWD" VALUE="somePassword"/>
```

ADAPTER_ALTERNATE_DATASOURCE

- **Required:** No
- **Possible Values:** Any data source name
- **Description:** Optional parameter used in conjunction with ADAPTER_USERNAME and ADAPTER_PWD to provide a secondary connection beyond the default datasource to those applications that may require it. This parameter supersedes all and RDL_x_2 properties.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="ADAPTER_ALTERNATE_DATASOURCE" VALUE="MDM105"/>
```

RDL_DSN_1

- **Required:** Conditional
- **Possible Values:** Any valid DSN
- **Description:** The name of the primary ODBC data source that the RDL Engine should use. This property controls the database location from which RDL rules will be acquired and, if not overridden by **RDL_DSN_2**, the location on which the RDL will operate. Either this parameter or **DEFAULT_DSN** is required if the **RULE_NAME** property is specified.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="RDL_DSN_1" VALUE="MyDB"/>
```

RDL_INITIALCATALOG_1

- **Required:** No
- **Possible Values:** A server name or IP address
- **Description:** The initial catalog for the database connection. Used only with MS SQL Server.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="RDL_INITIALCATALOG_1" VALUE="PWRLINE"/>
```

RDL_DDBQUALIFIER_1

- **Required:** Conditional
- **Possible Values:** Any valid database qualifier
- **Description:** The primary qualifier for the database for the RDL process used to determine where the RDL rules will be acquired. Either this parameter or **DEFAULT_DDBQUALIFIER** is required if the **RULE_NAME** is specified.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="RDL_DBQUALIFIER_1" VALUE="QualName"/>
```

RDL_USER_1

- **Required:** Conditional
- **Possible Values:** Any valid user ID
- **Description:** The primary database user for the RDL process that will determine the access privileges of the RDL operations. Either this parameter or **DEFAULT_USER** is required if the **RULE_NAME** is specified.
- **Default Value:** None

- **Example:**

```
<PROPERTY NAME="RDL_USER_1" VALUE="UserName"/>
```

RDL_PASSWORD_1

- **Required:** Conditional
- **Possible Values:** Any valid user password
- **Description:** The primary database user's password. This will determine the privileges in effect for the RDL operations. Either this parameter or the **DEFAULT_PASSWORD** is required if the **RULE_NAME** is specified.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="RDL_PASSWORD_1" VALUE="somePassword"/>
```

RDL_PROVIDER_1

- **Required:** No
- **Possible Values:** "sqloledb"
- **Description:** OLEDB is required to connect to a SQL Server database. Setting this parameter to "sqloledb" enables the OLEDB connection. This parameter may not be used with a connection to an Oracle database. Other service properties that are used with OLEDB are RDL_USER_1, RDL_PASSWORD_1, RDL_DBQUALIFIER_1, RDL_DATASOURCE_1, and RDL_INITIALCATALOG_1.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="RDL_PROVIDER_1" VALUE="sqloledb"/>
```

RDL_DATASOURCE_1

- **Required:** No
- **Possible Values:** A server name or IP address
- **Description:** When using an OLEDB connection, this parameter specifies the database server.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="RDL_DATASOURCE_1" VALUE="MDM105"/>
```

RDL_DSN_2

- **Required:** No
- **Possible Values:** Any valid DSN
- **Description:** The name of the secondary ODBC data source that the RDL Engine should use. This property can provide an alternate database location on which the RDL will operate.
- **Default Value:** **RDL_DSN_1** (which could be **DEFAULT_DSN**)
- **Example:**

```
<PROPERTY NAME="RDL_DSN_2" VALUE="MyOtherDB"/>
```

RDL_INITIALCATALOG_2

- **Required:** No
- **Possible Values:** A server name or IP address

- **Description:** The initial catalog for the database connection. Used only with MS SQL Server. This can override **RDL_INITIALCATALOG_1** to provide an alternate location on which the RDL will operate.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="RDL_INITIALCATALOG_2" VALUE="PWRLINE"/>
```

RDL_DDBQUALIFIER_2

- **Required:** No
- **Possible Values:** Any valid database qualifier
- **Description:** The secondary qualifier for the database for the RDL process. This can override **RDL_DDBQUALIFIER_1** to provide an alternate location on which the RDL will operate.
- **Default Value:** **RDL_DDBQUALIFIER_1** (which could be **DEFAULT_DDBQUALIFIER**)
- **Example:**

```
<PROPERTY NAME="RDL_DBQUALIFIER_2" VALUE="QualName"/>
```

RDL_USER_2

- **Required:** No
- **Possible Values:** Any valid user ID
- **Description:** The secondary database user overriding **RDL_USER_1**. This can supply an alternate login for the database location on which the RDL will operate.
- **Default Value:** **RDL_USER_1** (which could be **DEFAULT_USER**)
- **Example:**

```
<PROPERTY NAME="RDL_USER_2" VALUE="UserName"/>
```

RDL_PASSWORD_2

- **Required:** No
- **Possible Values:** Any valid user password
- **Description:** The secondary database user's password overriding **RDL_PASSWORD_1**. This can supply an alternate login for locating RDL rules.
- **Default Value:** **RDL_PASSWORD_1** (which could be **DEFAULT_PASSWORD**)
- **Example:**

```
<PROPERTY NAME="RDL_PASSWORD_2" VALUE="somePassword"/>
```

RDL_PROVIDER_2

- **Required:** No
- **Possible Values:** "sqloledb"
- **Description:** OLEDB is required to connect to a SQL Server database. Setting this parameter to "sqloledb" enables the OLEDB connection. This parameter may not be used with a connection to an Oracle database. Other service properties that are used with OLEDB are RDL_USER_2, RDL_PASSWORD_2, RDL_DBQUALIFIER_2, RDL_DATASOURCE_2, and RDL_INITIALCATALOG_2.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="RDL_PROVIDER_2" VALUE="sqloledb"/>
```

RDL_DATASOURCE_2

- **Required:** No
- **Possible Values:** A server name or IP address
- **Description:** When using an OLEDB connection, this parameter specifies the database server.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="RDL_DATASOURCE_2" VALUE="MDM105"/>
```

Output Properties

Output properties define how services create output, including how services uses data converters and details of the output mechanism used by the service.

OUTPUT_DC_0 (OUTPUT_DC_1, ..., OUTPUT_DC_n)

- **Required:** No
- **Possible Values:** Any valid DataConverter class name with appropriate parameters, separated with the value specified by the **DC_DELIMITER** property.
- **Description:** Optional parameter specifying the full class name of the DataConverter to use in the data output phase for non-exceptional data. The source for this output will be either the XML that is the source for the RDLEngine or the "streamed" instruction set that can be optionally produced by the RDL. Further parameters are dependent on the type of DataConverter required and should also be listed in the value attribute delimited by commas or the character specified in the **DC_DELIMITER** property. Note that parameters must be specified in the order expected by the particular DataConverter. Output will be produced only when this parameter is specified. Multiple DataConverters can be "chained" together by listing each class in a separate service property with the desired ordinal number appended to the property name. When listing multiple converters, the first **must** be "0".
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="OUTPUT_DC_0"  
VALUE="com.lodestarcorp.portal.data.XSLConverter,C:\Interval\  
OutMap.xslt"/>  
  
<PROPERTY NAME="OUTPUT_DC_1" VALUE="com.user.convert.Custom,extra  
info1,extra info2"/>  
  
...
```

```
<PROPERTY NAME="OUTPUT_DC_14"
VALUE="com.lodestarcorp.portal.data.SchemaValidator,C:\Interval\
IntUsage.xsd"/>
```

OUTPUT_MECHANISM

- **Required:** No
- **Possible Values:** Q, F, or D
- **Description:** Optional parameter for writing the outgoing data to an external target. The value can be “F” (File), “Q” (Queue), or “D” (Database). No output will be produced when this parameter is not provided. If a JMS-compliant messaging system is not available, “Q” is not allowed. If set to “D”, output is inserted into the Payload Extension table (ICEPAYLOAEXT).

- **Default Value:** None

- **Example:**

```
<PROPERTY NAME="OUTPUT_MECHANISM" VALUE="F"/>
```

OUTPUT_FILE_DIR

- **Required:** Conditional
- **Possible Values:** A location on disk (either absolute or relative path to the C:\LODESTAR\LTMH\Runtime directory)
- **Description:** Specifies the directory to which the Adapter will write output. Required if **OUTPUT_MECHANISM** is set to “F”.

Note: If specifying a directory on a mapped network drive via a UNC naming convention (\\<server>\<directory>), the IIS user (the default is IUSER_<machine_name>) must have valid permissions for the mapped drive.

- **Default Value:** None

- **Example:**

```
<PROPERTY NAME="OUTPUT_FILE_DIR" VALUE="C:\Out\Data"/>
```

OUTPUT_FILE_PREFIX

- **Required:** No
- **Possible Values:** Any string (subject to operating system file name restrictions)
- **Description:** Optional parameter used in conjunction with **OUTPUT_MECHANISM** being set to “F”, that provides a prefix to prepend to the names of outputted files. If less than three characters, it will be padded.

- **Default Value:** out_

- **Example:**

```
<PROPERTY NAME="OUTPUT_FILE_PREFIX" VALUE="adapter"/>
```

OUTPUT_FILE_SUFFIX

- **Required:** No
- **Possible Values:** Any string
- **Description:** Optional parameter used in conjunction with **OUTPUT_MECHANISM** being set to “F” that provides a suffix to append to the names of outputted files.

- **Default Value:** None

- **Example:**

```
<PROPERTY NAME="OUTPUT_FILE_SUFFIX" VALUE=".xml"/>
```

OUTPUT_QUEUE

- **Required:** No
- **Possible Values:** Any valid queue name
- **Description:** Optional parameter used in conjunction with **OUTPUT_MECHANISM** being set to “Q”. Specifies the name of the queue to which to write. If not specified, the queue is specified by the “-qs” service parameter in the Parameters field of the Runtime Service record for the service.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="OUTPUT_QUEUE" VALUE="QADAPTER"/>
```

OUTPUT_QUEUE_MSGTYPE

- **Required:** No
- **Possible Values:** T or B
- **Description:** Optional parameter specifying whether to write text or byte messages to the queue when **OUTPUT_MECHANISM** is set to “Q”. Valid entries are “T” (text) or “B” (byte).
- **Default Value:** B
- **Example:**

```
<PROPERTY NAME="OUTPUT_QUEUE_MSGTYPE" VALUE="T"/>
```

OUTPUT_DATABASE_PAYLOADTYPE

- **Required:** Conditional
- **Possible Values:** Any string
- **Description:** When **OUTPUT_MECHANISM** = “D,” this parameter specifies the Payload Type in the Payload Type column of the Payload Extension table (ICEPAYLOADEXT). Required if **OUTPUT_MECHANISM** is set to “D”.
- **Default Value:** MDM
- **Example:**

```
<PROPERTY NAME="OUTPUT_DATABASE_PAYLOADTYPE" VALUE="METERREAD"/>
```

OUTPUT_DIVIDING_STRING

- **Required:** No
- **Possible Values:** A series of XML Element names separated by vertical pipe characters (“|”). The series should start with a pipe and end with an element name.
- **Description:** A mechanism to separate large XML files into smaller ones. This is used with an outputter to write pieces of the original input data to files, JMS queues, or the database.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="OUTPUT_DIVIDING_STRING" VALUE="|METERREADS|METERREAD"/>
```

OUTPUT_ENCODING

- **Required:** No
- **Possible Values:** A character set name (such as UTF-8)
- **Description:** A mechanism to allows payload splits with the **OUTPUT_DIVIDING_STRING** property to be written in a specified character set.
- **Default Value:** UTF-8
- **Example:**

```
<PROPERTY NAME="OUTPUT_ENCODING" VALUE="UTF-16"/>
```

OUTPUT_DIVIDING_XPATH

- **Required:** No
- **Possible Values:** A valid Xpath string
- **Description:** A nodeset formed from the evaluation of the provided Xpath creates one or more new payloads. These are sent to an outputter and exported as new files, JMS messages, or database records. Namespace prefixes are defined with the **OUTPUT_NAMESPACES** property.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="OUTPUT_DIVIDING_XPATH" VALUE="//METERREADS/METERREAD"/>
```

OUTPUT_NAME_COUNT

- **Required:** No
- **Possible Values:** A positive integer
- **Description:** A parameter that may be used in conjunction with the **OUTPUT_DIVIDING_STRING** to group sets of elements together in a single output document. It represents the number of elements that should be grouped under a common parent node.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="OUTPUT_NAME_COUNT" VALUE="10"/>
```

OUTPUT_NAMESPACES

- **Required:** No
- **Possible Values:** Space separated string in the form prefix=namespace. The default namespace can be specified with a URI.
- **Description:** A set of space-separated namespace entries can be used to define them for the program. Used if namespace prefixes are required in the **OUTPUT_DIVIDING_XPATH** property,
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="OUTPUT_NAMESPACES" VALUE="http://default.ns cust=http://custom.ns"/>
```

Exception Output Properties

Exception output properties define how services generate exception output, including data converters and details of the exception output mechanism used by the service.

EXCEPTION_OUTPUT_DC_0 (EXCEPTION_OUTPUT_DC_1, ..., EXCEPTION_OUTPUT_DC_n)

- **Required:** No
- **Possible Values:** Any valid DataConverter class name with appropriate parameters, separated with the value specified by the **DC_DELIMITER** property.
- **Description:** Optional parameter specifying the full class name of the DataConverter to use in the data output phase for exceptions data. The source for this output will be the XML that is the source for the RDL Engine, but this output will only be produced when an exception occurs within the RDL. Further parameters are dependent on the type of DataConverter required and should also be listed in the value attribute delimited by commas or the character specified in the **DC_DELIMITER** property. Note that parameters must be specified in the order expected by the particular DataConverter. Exception output will be produced only when this parameter is specified. Multiple DataConverters can be "chained" together by listing each class in a separate service property with the desired ordinal number appended to the property name. When listing multiple converters, the first **must** be "0".
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="EXCEPTION_OUTPUT_DC_0"
VALUE="com.lodestarcorp.portal.data.XSLConverter,C:\Interval\
ExMap.xslt"/>

<PROPERTY NAME="EXCEPTION_OUTPUT_DC_1" VALUE="com.user.convert.Custom,extra
info1,extra info2"/>

...

<PROPERTY NAME="EXCEPTION_OUTPUT_DC_14"
VALUE="com.lodestarcorp.portal.data.SchemaValidator,C:\Interval\
ExIntUsage.xsd"/>
```

EXCEPTION_OUTPUT_MECHANISM

- **Required:** No
- **Possible Values:** Q or F
- **Possible Values:** Q, F, or D
- **Description:** Optional parameter for writing the outgoing exception data to an external target. The value can be "F" (File), "Q" (Queue), or "D" (Database). No output will be produced when this parameter is not provided. If a JMS-compliant messaging system is not available, "Q" is not allowed. If set to "D", exception output is inserted into the Payload Extension table (ICEPAYLOADEXT).
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="EXCEPTION_OUTPUT_MECHANISM" VALUE="F"/>
```

EXCEPTION_OUTPUT_FILE_DIR

- **Required:** Conditional
- **Possible Values:** A location on disk (either absolute or relative path to the C:\LODESTAR\LTMH\Runtime directory)
- **Description:** Specifies the directory to which to write output. Required if **EXCEPTION_OUTPUT_MECHANISM** is set to "F".

Note: If specifying a directory on a mapped network drive via a UNC naming convention (\\<server>\<directory>), the IIS user (the default is IUSER_<machine_name>) must have valid permissions for the mapped drive.

- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="EXCEPTION_OUTPUT_FILE_DIR" VALUE="C:\Out\Errors"/>
```

EXCEPTION_OUTPUT_FILE_PREFIX

- **Required:** No
- **Possible Values:** Any string (subject to operating system file name restrictions)
- **Description:** Optional parameter used in conjunction with **EXCEPTION_OUTPUT_MECHANISM** being set to “F”, that provides a prefix to prepend to the names of outputted files. If less than three characters, it will be padded.
- **Default Value:** out_
- **Example:**

```
<PROPERTY NAME="EXCEPTION_OUTPUT_FILE_PREFIX" VALUE="ERR_"/>
```

EXCEPTION_OUTPUT_FILE_SUFFIX

- **Required:** No
- **Possible Values:** Any string
- **Description:** Optional parameter used in conjunction with **EXCEPTION_OUTPUT_MECHANISM** being set to “F” that provides a suffix to append to the names of outputted files.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="EXCEPTION_OUTPUT_FILE_SUFFIX" VALUE=".xml"/>
```

EXCEPTION_OUTPUT_QUEUE

- **Required:** No
- **Possible Values:** Any valid queue name
- **Description:** Optional parameter used in conjunction with **EXCEPTION_OUTPUT_MECHANISM** being set to “Q”. Specifies the name of the queue to which to write. If not specified, the queue is specified by the “-qs” service parameter in the Parameters field of the Runtime Service record for the service.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="EXCEPTION_OUTPUT_QUEUE" VALUE="QADAPTEREX"/>
```

EXCEPTION_OUTPUT_QUEUE_MSGTYPE

- **Required:** No
- **Possible Values:** T or B
- **Description:** Optional parameter specifying whether to write text or byte messages to the queue when the **EXCEPTION_OUTPUT_MECHANISM** is set to “Q”. Valid entries are “T” (text) or “B” (byte).
- **Default Value:** B
- **Example:**

```
<PROPERTY NAME="EXCEPTION_OUTPUT_QUEUE_MSGTYPE" VALUE="T"/>
```

EXCEPTION_OUTPUT_DATABASE_PAYLOADTYPE

- **Required:** Conditional
- **Possible Values:** Any string
- **Description:** When EXCEPTION_OUTPUT_MECHANISM = "D," this parameter specifies the Payload Type in the Payload Type column of the Payload Extension table (ICEPAYLOAEXT). Required if **EXCEPTION_OUTPUT_MECHANISM** is set to "D".
- **Default Value:** MDM
- **Example:**

```
<PROPERTY NAME="EXCEPTION_OUTPUT_DATABASE_PAYLOADTYPE" VALUE="METERREAD"/>
```

EXCEPTION_OUTPUT_DIVIDING_STRING

- **Required:** No
- **Possible Values:** A series of XML Element names separated by vertical pipe characters ("|"). The series should start with a pipe and end with an element name.
- **Description:** A mechanism to separate large XML files into smaller ones. This is used with an outputter to write pieces of the original input data to files, JMS queues, or the database.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="EXCEPTION_OUTPUT_DIVIDING_STRING  
VALUE="|METERREADS|METERREAD"/>
```

EXCEPTION_OUTPUT_ENCODING

- **Required:** No
- **Possible Values:** A character set name (such as UTF-8)
- **Description:** A mechanism to allows payload splits with the EXCEPTION_OUTPUT_DIVIDING_STRING property to be written in a specified character set.
- **Default Value:** UTF-8
- **Example:**

```
<PROPERTY NAME="EXCEPTION_OUTPUT_ENCODING" VALUE="UTF-16"/>
```

EXCEPTION_OUTPUT_DIVIDING_XPATH

- **Required:** No
- **Possible Values:** A valid Xpath string
- **Description:** A nodeset formed from the evaluation of the provided Xpath creates one or more new payloads. These are sent to an outputter and exported as new files, JMS messages, or database records. Namespace prefixes are defined with the **EXCEPTION_OUTPUT_NAMESPACES** property.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="EXCEPTION_OUTPUT_DIVIDING_XPATH" VALUE="//METERREADS/  
METERREAD"/>
```

EXCEPTION_OUTPUT_NAME_COUNT

- **Required:** No
- **Possible Values:** A positive integer
- **Description:** A parameter that may be used in conjunction with the **EXCEPTION_OUTPUT_DIVIDING_STRING** to group sets of elements together in a single output document. It represents the number of elements that should be grouped under a common parent node.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="EXCEPTION_OUTPUT_NAME_COUNT" VALUE="10"/>
```

EXCEPTION_OUTPUT_NAMESPACES

- **Required:** No
- **Possible Values:** Space separated string in the form prefix=namespace. The default namespace can be specified with a URL.
- **Description:** A set of space-separated namespace entries can be used to define them for the program. Used if namespace prefixes are required in the **EXCEPTION_OUTPUT_DIVIDING_XPATH** property,
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="EXCEPTION_OUTPUT_NAMESPACES" VALUE="http://default.ns
cust=http://custom.ns"/>
```

Work Queue Properties

Work Queue properties allow the service and RDL Engine to use Work Queues for exceptions, including the Work Queue Type, Work Queue, and work queue data source information. Note: When the Adapter is configured to create work queue items, the Opened Note column is automatically populated with the first error message (if more than one) returned.

WQ_TYPE

- **Required:** No
- **Possible Values:** Any valid Work Queue type.
- **Description:** Optional parameter that causes exceptions from the RDL Engine to generate open work queue items of this type. Other optional Work Queue parameters may be included, but only this one is required to open a work queue item.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="WQ_TYPE" VALUE="ADAPTER_EXCEPTION"/>
```

WQ_QUEUE

- **Required:** No
- **Possible Values:** Any valid Work Queue.
- **Description:** Optional Work Queue for work queue items generated by the service.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="WQ_QUEUE" VALUE="ADAPTER"/>
```

WQ_PRIORITY_LEVEL

- **Required:** No
- **Possible Values:** Any priority level
- **Description:** Optional “Priority Level” attribute for work queue items generated by the service.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="WQ_PRIORITY_LEVEL" VALUE="3"/>
```

WQ_WORK_HOURS

- **Required:** No
- **Possible Values:** Integer (number of hours)
- **Description:** Optional “Work By Hours” attribute for work queue items generated by the service.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="WQ_WORK_HOURS" VALUE="3"/>
```

WQ_ASSIGNED_TO_USERID

- **Required:** No
- **Possible Values:** Any valid UserID
- **Description:** Optional “Assigned to User ID” attribute for work queue items generated by the service.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="WQ_ASSIGNED_TO_USERID" VALUE="pwrline"/>
```

WQ_APPR_STEP_NUM

- **Required:** No
- **Possible Values:** Number of the approval level
- **Description:** Optional “Approval Step Number” attribute for work queue items generated by the service. This overrides the normal starting point in the approval process
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="WQ_APPR_STEP_NUM" VALUE="3"/>
```

WQ_APPR_STEP_COUNT

- **Required:** No
- **Possible Values:** Number of approval steps.
- **Description:** Optional “Approval Step Count” attribute for work queue items generated by the service.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="WQ_APPR_STEP_COUNT" VALUE="1"/>
```

WQ_APPR_LEVEL

- **Required:** No
- **Possible Values:** Any valid approval level
- **Description:** Optional “Approval Level” attribute for work queue items generated by the service.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="WQ_APPR_LEVEL" VALUE="ADMIN"/>
```

WQ_DSN

- **Required:** Conditional
- **Possible Values:** Any valid DSN
- **Description:** The name of an ODBC data source that should be used by the Work Queues. Either this parameter or **DEFAULT_DSN** is required if the **WQ_TYPE** is specified.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="WQ_DSN" VALUE="MyDB"/>
```

WQ_INITIALCATALOG

- **Required:** No
- **Possible Values:** A server name or IP address
- **Description:** The initial catalog for the database connection. Used only with MS SQL Server. Either this parameter or **DEFAULT_DSN** is required if the **WQ_TYPE** is specified.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="WQ_INITIALCATALOG" VALUE="PWRLINE"/>
```

WQ_DDBQUALIFIER

- **Required:** Conditional
- **Possible Values:** Any valid database qualifier
- **Description:** A default qualifier that should be used by Work Queues. Either this parameter or **DEFAULT_DDBQUALIFIER** is required if the **WQ_TYPE** is specified.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="WQ_DBQUALIFIER" VALUE="QualName"/>
```

WQ_USER

- **Required:** Conditional
- **Possible Values:** Any valid user ID
- **Description:** A database user that should be used by Work Queues. Either this parameter or **DEFAULT_USER** is required if the **WQ_TYPE** is specified.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="WQ_USER" VALUE="UserName"/>
```

WQ_PASSWORD

- **Required:** Conditional
- **Possible Values:** Any valid user password
- **Description:** A database password that should be used by Work Queues. Either this parameter or **DEFAULT_PASSWORD** is required if the **WQ_TYPE** is specified.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="WQ_PASSWORD" VALUE="somePassword"/>
```

WQ_USERNAME

- **Required:** No
- **Possible Values:** Any valid web user ID. This value is case-sensitive.
- **Description:** A web user ID from Security Administration. It is used with the **WQ_PWD** property for accessing the Oracle Utilities Data Repository. The default datasource that is configured in the security database is used as the database connection. The **DEFAULT-x** parameters apply to both Work Queue and Adapter operations. These parameters supersede all **WQ_x** properties where the database connection is explicitly specified, such as **WQ_DSN**.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="WQ_USERNAME" VALUE="UserName"/>
```

WQ_PWD

- **Required:** No
- **Possible Values:** Any valid user password. This value is case-sensitive.
- **Description:** A password for a web user from Security Administration. Used with the **DEFAULT_USERNAME** property for accessing the Oracle Utilities Data Repository. The default datasource that is configured in the security database is used to establish the connection. The **DEFAULT-x** parameters apply to both Work Queue and Adapter operations. These parameters supersede all **WQ_x** properties where the database connection is explicitly specified, such as **WQ_DSN**.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="DEFAULT_PWD" VALUE="somePassword"/>
```

File Portal Properties

The File Portal periodically examines a directory for files matching a certain file extension that contain the payloads to be processed. The File Portal uses the following properties:

POLL_DIRECTORY

- **Required:** Yes
- **Possible Values:** Any valid directory
- **Description:** The directory in which to check for files. If defined, the Adapter will be dedicated to reading the file system. When specifying a local directory, this path must be either fully-qualified or relative to the **user.dir** directory (the location from which java is started).

Note: If specifying a directory on a mapped network drive via a UNC naming convention (\\<server>\<directory>), the IIS user (the default is IUSER_<machine_name>) must have valid permissions for the mapped drive.

- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="POLL_DIRECTORY" VALUE="C:\Poll\Data"/>
```

POLL_EXTENSION

- **Required:** No
- **Possible Values:** Any string
- **Description:** The file extension the service looks for in the directory specified in the **POLL_DIRECTORY** property.
- **Default Value:** LTMH
- **Example:**

```
<PROPERTY NAME="POLL_EXTENSION" VALUE="csv"/>
```

POLL_INTERVAL

- **Required:** No
- **Possible Values:** Number of seconds
- **Description:** The number of seconds between polling cycles.
- **Default Value:** 30
- **Example:**

```
<PROPERTY NAME="POLL_INTERVAL" VALUE="60"/>
```

WORKING_SET_SIZE

- **Required:** No
- **Possible Values:** Positive integer
- **Description:** The number of files that the service locks each time it polls. For multiple, concurrently polling services, this should be a relatively low number to allow more than one service to lock files within the set.
- **Default Value:** 50
- **Example:**

```
<PROPERTY NAME="WORKING_SET_SIZE" VALUE="5"/>
```

Database Portal Properties

The Database Portal periodically queries the ICE Payload (ICEPAYLOAD) or Payload Extension (ICEPAYLOADEXT) tables in a database for records that have not yet been processed. New records should have a customized PAYLOADTYPE. If this column matches the PAYLOAD_TYPE property, the record is selected and updated. The Database Portal uses the following properties:

PAYLOAD_FORMAT

- **Required:** No
- **Possible Values:** C (character) or B (binary)
- **Description:** Defines whether the service should expect binary or character data. Acceptable values are 'C' for character data or 'B' for binary data. By default, the service expects character data. This has a direct effect on which table the service polls. Binary data should arrive in the ICEPAYLOAD table, while character data should arrive in the ICEPAYLOADEXT table.
- **Default Value:** C
- **Example:**

```
<PROPERTY NAME="PAYLOAD_FORMAT" VALUE="B"/>
```

PAYLOAD_TYPE

- **Required:** Yes
- **Possible Values:** A custom payload type defined in the Payload Type table. See **Payload Types** on page 11-7 for more information about setting up custom payload types.
- **Description:** A required parameter used to select a subset of the payloads in the database.
- **Default Value:** None
- **Example:**

```
<PROPERTY NAME="PAYLOAD_TYPE" VALUE="INT"/>
```

POLL_DRIVER

- **Required:** No
- **Possible Values:** A fully qualified name of a driver class.
- **Description:** The class name of a JDBC driver. Used in an alternate connection for polling.
- **Default Value:** The database driver specified in the LTMH.CFG configuration file.
- **Example:**

```
<PROPERTY NAME="POLL_DRIVER" VALUE="oracle.jdbcdriver"/>
```

POLL_DBTYPE

- **Required:** No
- **Possible Values:** ORACLE or SQLSERVER.
- **Description:** An alternate type of database connection. Connections to Oracle and SQL Server are supported.
- **Default Value:** The database type specified in the LTMH.CFG configuration file.
- **Example:**

```
<PROPERTY NAME="POLL_DBTYPE" VALUE="ORACLE"/>
```

POLL_QUALIFIER

- **Required:** No
- **Possible Values:** A valid qualifier.
- **Description:** An alternate qualifier for the secondary database connection.
- **Default Value:** The qualifier specified in the LTMH.CFG configuration file.
- **Example:**

```
<PROPERTY NAME="POLL_QUALIFIER" VALUE="qual"/>
```

POLL_USER

- **Required:** No
- **Possible Values:** Any valid User ID
- **Description:** Optional user ID for the database connection.
- **Default Value:** Taken from the service's database connection
- **Example:**

```
<PROPERTY NAME="POLL_USER" VALUE="UserID"/>
```

POLL_PASSWORD

- **Required:** No
- **Possible Values:** Any valid user password
- **Description:** Optional password for the user specified in the **POLL_USER** property.
- **Default Value:** Taken from the service's database connection
- **Example:**

```
<PROPERTY NAME="POLL_PASSWORD" VALUE="somePassword"/>
```

POLL_INTERVAL

- **Required:** No
- **Possible Values:** Number of seconds
- **Description:** The number of seconds between polling cycles.
- **Default Value:** 30
- **Example:**

```
<PROPERTY NAME="POLL_INTERVAL" VALUE="60"/>
```

POLL_COUNT

- **Required:** No
- **Possible Values:** Number of records
- **Description:** The number of records to lock during each polling cycle.
- **Default Value:** 50
- **Example:**

```
<PROPERTY NAME="POLL_COUNT" VALUE="1000"/>
```

Sample Properties

Below are sample properties for a runtime service that uses the File Portal to poll the C:\Demo\Account directory for files ending in “XML”, and sends exceptions to Work Queues.

```
<PROPERTIES>
  <PROPERTY NAME="STORAGE_LEVEL" VALUE="2"/>
  <PROPERTY NAME="RULE_NAME" VALUE="DEMO_ACCOUNT"/>
  <PROPERTY NAME="POLL_DIRECTORY" VALUE="c:\demo\account"/>
  <PROPERTY NAME="POLL_EXTENSION" VALUE="xml"/>
  <PROPERTY NAME="POLL_INTERVAL" VALUE="10"/>
  <PROPERTY NAME="WQ_TYPE" VALUE="PORTAL"/>
  <PROPERTY NAME="WQ_QUEUE" VALUE="PORTAL"/>
  <PROPERTY NAME="WQ_PRIORITY_LEVEL" VALUE="4"/>
  <PROPERTY NAME="WQ_WORK_HOURS" VALUE="3"/>
  <PROPERTY NAME="WQ_ASSIGNED_TO_USERID" VALUE="Demo"/>
  <PROPERTY NAME="WQ_APPR_STEP_NUM" VALUE="1"/>
</PROPERTIES>
```

Configuring Adapter Business Rules

The Adapter uses defined business rules when processing transactions. This section describes how to set and configure business rules used by the Adapter, including:

- **Global Functions**
- **Rule Description Language**
- **Business Rules**
- **Commands**

Global Functions

Global functions are snippets of application code that can be used with multiple RDLs. Each global function is related to a particular Business Rule Type (Import and Import Interval), and is available during configuration of an RDL of the same Business Rule Type.

How to search global functions:

1. Select **Tools and Utilities->Configure Adapter Rules->Global Functions**.

The Global Function screen opens.

2. Enter the search criteria in the appropriate field.

You can search based on the UID (unique identifier for the record in the Oracle Utilities Data Repository), Function Name, Description, or Business Rule Type of the global function(s).

See **Searching Database Tables** on page 8-7 for more information about searching records, including the use of operands and wildcards.

3. Click **Search** to perform the search. To reset the search fields to their previous values, click **Reset**. To clear all the search fields, click **Clear**. To add a new record, click **Add**. See **Adding Global Functions** on page 11-57 for more information about adding new global functions.
4. The search results appear on the Global Function list screen.

The Global Function list screen displays the following information for each record:

- UID
- Function Name
- Description
- Business Rule Type

See **Viewing and Editing Global Functions** on page 11-56 for more information about viewing individual records.

5. To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by Function Name, click the Function Name column heading. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.
6. To view a record, click on the corresponding [...] link. The selected record will appear in the Global Function screen. See **Viewing and Editing Global Functions** on page 11-56 for more information.
7. To perform another search, click **Search**. To refresh the contents of the list screen, click the refresh icon.
8. *Optional.* To delete one or more records, check the check boxes corresponding to the records to be deleted, and click **Delete**. To clear all the checkboxes, click **Clear**.

9. *Optional.* To add a new record, click **Add**. See **Adding Global Functions** on page 11-57 for more information about adding new global functions.

Viewing and Editing Global Functions

Individual global functions are viewed on the Global Function screen. This screen opens when you select a record from the Global Function search results screen.

How to view and edit global functions:

1. Click on the [...] link for the global function you wish to view. The selected record opens in the Global Function screen.

The Global Function screen displays the following information for the selected record:

- **UID:** The unique identifier for the record in the Oracle Utilities Data Repository.
 - **Function Name:** The name of the global function. The function name should be the same name given in the function definition (constructor). See **Viewing and Editing Global Function Versions** on page 11-56 for more information about function definition.
 - **Description:** A description of the global function.
 - **Business Rule Type:** The type of business rule to which the global function is related. This can be one of the following:
 - **Import:** The global function is available with Rule Description Language (RDL) of type Import. See **Rule Description Language** on page 11-58 for more information about Rule Description Language.
 - **Import Interval:** The global function is available with Rule Description Language (RDL) of type Import Interval. See **Rule Description Language** on page 11-58 for more information about Rule Description Language.
2. Edit data in the fields as appropriate. See **Working with Data Types** on page 8-4 for more information about editing data values.
 3. To save changes made to the record, click **Save**. To save the edited record as a new record, click **Save As New**.

Note: The **Save As New** option only works if the identity of the record has been changed.
 4. To perform a new search, click **Search**.
 5. To open a list of records, click **List**.
 6. To delete the current record, click **Delete**.
 7. To navigate from the current record to one of its parent or lookup records, click the Name of the parent table on the record. Parent and lookup records appear underlined on the screen. Use the **Back** button to return to the record being viewed.
 8. To view a list of child records, click the name of the child table you wish to view in the Children section of the screen. Use the **Back** button to return to the record being viewed.

Viewing and Editing Global Function Versions

Global Function Versions represent specific versions of a global function. Global function versions contain the actual function code that is executed during runtime. Note that only one global function version can be active at one time.

How to view and edit global function versions:

1. Click **Global Function Versions** in the Children section of the Global Function screen.

If more than one versions exist, the Global Function Version list screen opens.

Click on the [...] link for the global function version you wish to view. The selected record opens in the Global Function Version screen.

If only one version exists, the record opens on the Global Function Version screen.

This screen displays the following information:

- **Function Name:** The name of the global function, from the parent Global Function record. Note that the Function Name must match the name of the function defined in the Code field.
 - **Start Date:** The date and time at which the global function version goes into effect.
 - **Stop Date:** The date and time after which the global function version is no longer in effect.
 - **Function Type:** The language the function is written in. This can be one of the following:
 - **PVBScript:** VB Script code
 - **PJscript:** JavaScript code
 - **Note:** A description of what the function will do. This note appears when configuring RDLs that use this function.
 - **Syntax:** The calling syntax of the function. This syntax appears when configuring RDLs that use this function.
 - **Code:** The function code that is executed at runtime. The code cannot contain any RDL memory space tokens. Multiple functions can be defined with the Code field, so that they can be referenced at runtime from the RDL.
2. Edit data in the fields as appropriate. See **Working with Data Types** on page 8-4 for more information about editing data values.
 3. To validate the function, click **Validate**. This process checks the syntax of function code and returns the result.
 4. To save changes made to the record, click **Save**. To save the edited record as a new record, click **Save As New**.

Note: The **Save As New** option only works if the identity of the record has been changed.
 5. To perform a new search, click **Search**.
 6. To open a list of records, click **List**.
 7. To delete the current record, click **Delete**.

Adding Global Functions

You can also add new Global Functions.

How to add global functions:

1. Click **Add** on either the Global Function search or list screens. A blank Global Function screen opens.
2. Enter a name for the business rule in the **Function Name** field.
3. Enter a description of the business in the **Description** field.
4. Select a **Business Rule Type** from the drop-down list.
5. To save the record, click **Save**. The new global function appears on the screen.

Adding Global Function Versions

Global Function Versions represent specific versions of a global function. Global function versions contain the actual function code that is executed during runtime. Note that only one global function version can be active at one time.

How to create a new global function version:

1. Click **Global Function Versions** in the Children section of the Global Function screen. An empty Global Function Version screen opens.
2. Click **Add**. A blank Global Function Version screen opens. The Function Name field will be populated.
3. Enter the date and time at which the version goes into effect in the **Start Date** field. You can enter the date either by typing the date manually or clicking the drop-down arrow to the right of the date field. This opens a calendar dialog that you can use to select the start date. You can enter the time either by typing the time manually, or by using the default time of 00:00:00. If appropriate, enter the date and time at which the version is no longer in effect in the **Stop Date** field in the same manner.
4. Select the appropriate **Function Type** by clicking the **Browse** button (...). This opens a dialog window that lists all the available function types.

This can be one of the following:

- **PVBScript**: VB Script code
 - **PJscript**: JavaScript code
5. Enter a description of the function in the **Note** field.
 6. Enter the calling syntax of the function in the **Syntax** field.
 7. Enter the function code in the **Code** field.
 8. To validate the function, click **Validate**. This process checks the syntax of function code and returns the result.
 9. To save the record, click **Save**. The new record appears on the screen.

Rule Description Language

Rule Description Language (RDL) scripts define specific units of work for business rules. RDL scripts describe what actions will be taken with an incoming payload, such as whether or not to insert particular pieces of data into the Oracle Utilities Data Repository based on a set of validations. RDL scripts are used only with Import, ImportInterval, and Interval Business Rule Types.

How to search rule description language records:

1. Select **Tools and Utilities->Configure Adapter Rules->Rule Description Language**.

The Rule Description Language screen opens.

2. Enter the search criteria in the appropriate field.

You can search based on the UID (unique identifier for the record in the Oracle Utilities Data Repository), RDL Name, or Rule Type Code of the RDL(s).

See **Searching Database Tables** on page 8-7 for more information about searching records, including the use of operands and wildcards.

3. Click **Search** to perform the search. To reset the search fields to their previous values, click **Reset**. To clear all the search fields, click **Clear**. To add a new record, click **Add**. See **Adding Rule Description Language Records** on page 11-61 for more information about adding new RDLs.

- The search results appear on the Rule Description Language list screen.

The Rule Description Language list screen displays the following information for each record:

- UID
- RDL Name
- Rule Type Code

See **Viewing and Editing Rule Description Language Records** on page 11-59 for more information about viewing individual records.

- To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by RDL Name, click the RDL Name column heading. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.
- To view a record, click on the corresponding [...] link. The selected record will appear in the Rule Description Language screen. See **Viewing and Editing Rule Description Language Records** on page 11-59 for more information.
- To perform another search, click **Search**. To refresh the contents of the list screen, click the refresh icon.
- Optional.* To delete one or more records, check the check boxes corresponding to the records to be deleted, and click **Delete**. To clear all the checkboxes, click **Clear**.
- Optional.* To add a new record, click **Add**. See **Adding Rule Description Language Records** on page 11-61 for more information about adding new RDLs.

Viewing and Editing Rule Description Language Records

Individual RDLs are viewed on the Rule Description Language screen. This screen opens when you select a record from the Rule Description Language list screen.

How to view and edit rule description language records:

- Click on the [...] link for the RDL you wish to view. The selected record opens in the Rule Description Language screen.

The screenshot shows the 'Rule Description Language' screen. At the top, there are navigation links: Search, List, Save, and Delete. Below this is a 'History' section with a breadcrumb: Rule Description Language > RDL Version. The search criteria are: UID (1), RDL Name (Import_Demo), Rule Type Code (Import), User ID (TR450), and Timestamp (4/7/2006 11:06:27). A '* Required' label is present. Below the search criteria is the 'RDL Version' section with links: Clear, Clear All, Delete, and Add. The main area displays a table with 2 rows and 8 columns: RDL Name, Start Time, Stop Time, Note, User ID, and Timestamp. The first row is for 'Import_Demo' Version 2, and the second is for 'Import_Demo' Version 1.

		RDL Name	Start Time	Stop Time	Note	User ID	Timestamp
[...]	<input type="checkbox"/>	Import_Demo	5/25/2005 0:00:00	5/24/2005 23:59:59	Version 2	lou_p	6/6/2007 17:00:43
[...]	<input type="checkbox"/>	Import_Demo	8/1/2004 0:00:00		Version 1	Jeff	1/23/2007 14:13:05

The Rule Description Language screen displays the following information for the selected record:

- **UID:** The unique identifier for the record in the Oracle Utilities Data Repository.
- **RDL Name:** The name of the RDL.
- **Rule Type Code:** The type of business rule to which the RDL is related. This can be one of the following:

- **Import**
 - **Import/Interval**
 - **Import/Usage (used with Oracle Utilities Meter Data Management)**
 - **Interval**
 - **RDL Version:** A list of all the RDL versions of the RDL. See **Editing and Viewing RDL Versions** on page 11-60 for more information about editing and viewing RDL versions.
2. Edit data in the fields as appropriate. See **Working with Data Types** on page 8-4 for more information about editing data values.
 3. To save changes made to the record, click **Save**. To save the edited record as a new record, click **Save As New**.
Note: The **Save As New** option only works if the identity of the record has been changed.
 4. To perform a new search, click **Search**.
 5. To open a list of records, click **List**.
 6. To delete the current record, click **Delete**.
 7. To navigate from the current record to one of its parent or lookup records, click the Name of the parent table on the record. Parent and lookup records appear underlined on the screen. Use the **Back** button to return to the record being viewed.
 8. To view a list of child records, click the name of the child table you wish to view in the Children section of the screen. Use the **Back** button to return to the record being viewed.

Editing and Viewing RDL Versions

RDL Versions represent specific versions of an RDL. RDL versions contain the actual script that is used during runtime. Note that only one RDL version can be active at one time.

The RDL Versions pane (directly below the Rule Description Language pane) lists all the RDL versions for the selected RDL.

To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by RDL Name, click the RDL Name column heading. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.

To view a record, click on the corresponding [...] link. The selected record will appear in the RDL Version screen.

To configure the RDL, click the Configure RDL icon (⚙️). The Rule Description Language Configuration screen opens. See **Configuring Rule Description Language** on page 11-69 for more information about configuring RDLs.

To delete one or more records, check the check boxes corresponding to the records to be deleted, and click **Delete**. To clear all the checkboxes, click **Clear**.

To add a new record, click **Add**. See **Adding RDL Versions** on page 11-62 for more information about adding new RDL Versions.

How to view and edit RDL versions:

1. Click on the [...] link for the RDL version you wish to view. The selected record opens in the RDL Version screen.

This screen displays the following information:

- **RDL Name:** The name of the RDL, from the parent RDL record.
- **Start Time:** The date and time at which the RDL version goes into effect.
- **Stop Time:** The date and time after which the RDL version is no longer in effect.
- **Note:** A note regarding the RDL version.

2. Edit data in the fields as appropriate. See **Working with Data Types** on page 8-4 for more information about editing data values.
3. To configure the RDL, click **Configure RDL**. The Rule Description Language Configuration screen opens. See **Configuring Rule Description Language** on page 11-69 for more information about configuring RDLs.
4. To save changes made to the record, click **Save**. To save the edited record as a new record, click **Save As New**.

Note: The **Save As New** option only works if the identity of the record has been changed.

5. To search RDL versions, click **Search**.
6. To open a list of records, click **List**.
7. To delete the current record, click **Delete**.

Adding Rule Description Language Records

You can also add new Rule Description Language records.

How to add rule description language records:

1. Click **Add** on either the Rule Description Language search or list screens. A blank Rule Description Language screen opens.
2. Enter a name for the RDL in the **RDL Name** field.
3. Select a **Rule Type Code** from the drop-down list.
4. To save the record, click **Save**. The new RDL appears on the screen.

The screenshot displays the 'Rule Description Language' configuration interface. At the top, there is a navigation bar with the title 'Rule Description Language' and links for 'Search', 'List', 'Save', and 'Delete'. Below this is a 'History' section for 'Rule Description Language' with a sub-section for 'RDL Version'. The main form contains the following fields and controls:

- UID:** A text input field containing the value '321'.
- * Rule Type Code:** A dropdown menu with 'Import' selected.
- * RDL Name:** A text input field containing the value 'Import_Test'.
- * Required:** A label indicating that the RDL Name field is required.

At the bottom of the screen, there is an 'RDL Version' section with an 'Add' button. Below the 'Add' button, it shows 'Total 25' and 'No items found'.

This screen also includes the RDL Version pane (directly below the Rule Description Language pane). This pane allows you to create RDL Versions for the RDL.

Adding RDL Versions

RDL Versions represent specific versions of an RDL. RDL versions contain the actual script that is used during runtime. Note that only one RDL version can be active at one time.

How to create a new RDL version:

1. Click **Add** in the RDL Version pane of the Rule Description Language screen. A blank RDL Function Version screen opens. The RDL Name field will be populated.
2. Enter the date and time at which the version goes into effect in the **Start Time** field. You can enter the date either by typing the date manually or clicking the drop-down arrow to the right of the date field. This opens a calendar dialog that you can use to select the start date. You can enter the time either by typing the time manually, or by using the default time of 00:00:00. If appropriate, enter the date and time at which the version is no longer in effect in the **Stop Time** field in the same manner.
3. Enter a description of the version in the **Note** field.
4. To save the record, click **Save**. The new record appears on the screen.
5. To search RDL versions, click **Search**.
6. To open a list of records, click **List**.
7. To delete the current record, click **Delete**.
8. To configure the RDL, click **Configure RDL**. The Rule Description Language Configuration screen opens. See **Configuring Rule Description Language** on page 11-69 for more information about configuring RDLs.

Business Rules

Business rules are individual business rules that are available to Oracle Utilities Transaction Management and the Adapter. In specific, they define the business logic that will be applied to data being processed by Oracle Utilities Transaction Management and/or the Adapter.

How to search business rules:

1. Select **Tools and Utilities->Configure Adapter Rules->Business Rule**.

The Business Rules screen opens.

2. Enter the search criteria in the appropriate field.

You can search based on the UID (unique identifier for the record in the Oracle Utilities Data Repository), Class Name, Rule Name, Description, Rule Type, and Properties of the business rule(s).

See **Searching Database Tables** on page 8-7 for more information about searching records, including the use of operands and wildcards.

3. Click **Search** to perform the search. To reset the search fields to their previous values, click **Reset**. To clear all the search fields, click **Clear**. To add a new record, click **Add**. See **Adding Business Rules** on page 11-65 for more information about adding new business rules.

4. The search results appear on the Business Rules list screen.

The Business Rules screen displays the following information for each record:

- UID
- Class Name
- Rule Name
- Description
- Rule Type
- Time Expire

See **Viewing and Editing Business Rules** on page 11-64 for more information about viewing individual records.

5. To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by Class Name, click the Class Name column heading. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.
6. To view a record, click on the corresponding [...] link. The selected record will appear in the Business Rules window. See **Viewing and Editing Business Rules** on page 11-64 for more information.
7. To perform another search, click **Search**. To refresh the contents of the list screen, click the refresh icon.
8. *Optional.* To delete one or more records, check the check boxes corresponding to the records to be deleted, and click **Delete**. To clear all the checkboxes, click **Clear**.
9. *Optional.* To add a new record, click **Add**. See **Adding Business Rules** on page 11-65 for more information about adding new business rules.

Viewing and Editing Business Rules

Individual business rules are viewed on the Business Rules screen. This screen opens when you select a record from the Business Rules search results screen.

How to view and edit business rules:

1. Click on the [...] link for the business rule you wish to view. The selected record opens in the Business Rules screen.

The Business Rules list screen displays the following information for the selected record:

- **UID:** The unique identifier for the record in the Oracle Utilities Data Repository.
 - **Class Name:** Class name (package) to class for JAVA type business rules. This field appears only if the Rule Type is JAVA.
 - **Rule Name:** The name of the business rule.
 - **Description:** A description of the business rule.
 - **Rule Type:** The type of business rule (from the Business Rule Type table). The Rule Type can be one of the following:
 - **Assembly:** The business rule calls a configured DOT NET assembly.
 - **COM:** The business rule calls a COM method.
 - **CustomQuery:** The business rule calls a custom stored procedure and return the results.
 - **Import:** The business rule uses a Rule Description Language (RDL) to insert relational data into the Oracle Utilities Data Repository. See **Rule Description Language** on page 11-58 for more information about Rule Description Language.
 - **Import Interval:** The business rule uses a Rule Description Language (RDL) to insert relational and interval data into the Oracle Utilities Data Repository. See **Rule Description Language** on page 11-58 for more information about Rule Description Language.
 - **Interval:** The business rule uses a Rule Description Language (RDL) to post interval data into the Interval Data interfaces (LSINTD). This rule type assumes the data is in the correct format used by LSINTD, including the Oracle Utilities Enhanced Input/Output (*LSE) format (described in the *Data Manager User's Guide*). See **Rule Description Language** on page 11-58 for more information about Rule Description Language.
 - **Rate:** The business rule calls a rate schedule.
 - **Oracle Utilities Meter Data Management Business Rules** These are business rules used by the Oracle Utilities Meter Data Management application. Refer to the *Oracle Utilities Meter Data Management Installation and Configuration Guide* for more information about Oracle Utilities Meter Data Management business rules.
 - **Time Expire:** The amount of time (in seconds) after which commands based on this Business Rule (tracked in the Command Instance table), will expire. Used by the Command Tracking Interface.
 - **Optional Parameters:** Values that can be passed to Rate or COM (or JAVA) business rules. This field appears only if the Rule Type is Rate or COM (or JAVA). See **Defining Properties and Parameters for Adapter Business Rules** on page 11-114 for more information about parameters used by business rules.
 - **Properties:** Properties associated with the business rule. Properties are defined in an XML structure.
2. Edit data in the fields as appropriate. See **Working with Data Types** on page 8-4 for more information about editing data values.

When editing the Properties field, you can either edit the XML string in the text box, or upload an XML document that contains the properties in XML format. To upload a document, click **Upload Rule Properties**. The Properties text box is replaced by a text field. See **Defining Properties and Parameters for Adapter Business Rules** on page 11-114 for more information about creating properties for business rules.

Enter the path and file name of the document that contains the properties, or click the **Browse** button and select the appropriate file using the Choose File dialog. Click **Cancel** to restore the Properties text box.

3. To save changes made to the record, click **Save**. To save the edited record as a new record, click **Save As New**.

Note: The **Save As New** option only works if the identity of the record has been changed.

4. To perform a new search, click **Search**.
5. To open a list of records, click **List**.
6. To delete the current record, click **Delete**.
7. To navigate from the current record to one of its parent or lookup records, click the Name of the parent table on the record. Parent and lookup records appear underlined on the screen. Use the **Back** button to return to the record being viewed.
8. To view a list of child records, click the name of the child table you wish to view in the Children section of the screen. Use the **Back** button to return to the record being viewed.

Business Rules to RDL Association

Import, Import Interval, and Interval business rules can be associated to Rule Description Language (RDL) records. Rule Description Language is a script type that allows users to define data validations and locations in the Oracle Utilities Data Repository by mapping data from an inbound transaction to specific database tables. See **Rule Description Language** on page 11-58 for more information about Rule Description Language.

Only one RDL can be associated to a business rule. To view the Business Rule to RDL Association record, click **Rule Association**. The record opens on the Business Rule to RDL Association screen.

This screen includes the following information:

- **Business Rule:** The Business Rule.
- **RDL Name:** The Rule Definition Language (RDL) name associated with the Business rule.

Adding Business Rules

You can also add business rules.

How to add business rules:

1. Click **Add** on either the Business Rules search or list screens. A blank Business Rules screen opens.
2. Enter a name for the business rule in the **Rule Name** field.
3. Enter a description of the business in the **Description** field.
4. Select a **Rule Type** by clicking the **Browse** button (...). This opens a dialog window that lists all the available Business Rule Types.
5. Enter the amount of time, in seconds after which commands based on this Business Rule (tracked in the Command Instance table), will expire in the **Time Expire** field. Used by the Command Tracking Interface.
6. *Optional.* If the Rule Type is either Rate or COM (or JAVA), the **Optional Parameters** field appears on the screen. Enter any optional parameters required by the business rule in this

field. See **Defining Properties and Parameters for Adapter Business Rules** on page 11-114 for more information about parameters used by business rules.

7. Enter properties (in XML) for the business rule in the **Properties** field. You can either enter text manually (or copy/paste), or upload an XML document that contains the properties in XML format. To upload a document, click **Upload Rule Properties**. The Properties text box is replaced by a text field.

Enter the path and file name of the document that contains the properties, or click the **Browse** button and select the appropriate file using the Choose File dialog. Click **Cancel** to restore the Properties text box. See **Defining Properties and Parameters for Adapter Business Rules** on page 11-114 for more information about creating properties for business rules.

8. To save the record, click **Save**. The new business rule appears on the screen.

Associating Business Rules to Rule Description Language

Import, Import Interval, and Interval business rules can be associated to Rule Description Language (RDL) records. Rule Description Language is a script type that allows users to define data validations and locations in the Oracle Utilities Data Repository by mapping data from an inbound document to specific database tables. See **Rule Description Language** on page 11-58 for more information about Rule Description Language. Only one RDL can be associated to a business rule.

How to associate a business rule to an RDL record:

1. Click **Rule Association** on the Business Rule screen. An empty Business Rule to RDL Association screen opens.
2. Click **Add**. A blank Business Rule to RDL Association screen opens. The business rule field will be populated.
3. Select the appropriate **Rule Description Language** (RDL) by clicking the **Browse** button (**...**). This opens a dialog window that lists all the available RDL.
4. To save the record, click **Save**. The new record appears on the screen.

Commands

Commands are individual commands that can be invoked via the Command Tracking Interface. In specific, they define the business rules executed by each command.

How to search commands:

1. Select **Tools and Utilities->Configure Adapter Rules->Commands**.

The Command Interfaces screen opens.

2. Enter the search criteria in the appropriate field.

You can search based on the UID (unique identifier for the record in the Oracle Utilities Data Repository), Interface Name, Business Rule, and Action of the command(s).

See **Searching Database Tables** on page 8-7 for more information about searching records, including the use of operands and wildcards.

3. Click **Search** to perform the search. To reset the search fields to their previous values, click **Reset**. To clear all the search fields, click **Clear**. To add a new record, click **Add**. See **Adding Commands** on page 11-68 for more information about adding new business rules.

4. The search results appear on the Command Interfaces list screen.

The Command Interfaces screen displays the following information for each record:

- UID
- Interface Name
- Business Rule
- Action

See **Viewing and Editing Commands** on page 11-68 for more information about viewing individual records.

5. To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by Command Name, click the Command Name column heading. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.
6. To view a record, click on the corresponding [...] link. The selected record will appear in the Command Interfaces window. See **Viewing and Editing Commands** on page 11-68 for more information.
7. To perform another search, click **Search**. To refresh the contents of the list screen, click the refresh icon.
8. *Optional.* To delete one or more records, check the check boxes corresponding to the records to be deleted, and click **Delete**. To clear all the checkboxes, click **Clear**.
9. *Optional.* To add a new record, click **Add**. See **Adding Commands** on page 11-68 for more information about adding new commands.

Viewing and Editing Commands

Individual commands are viewed on the Command Interfaces screen. This screen opens when you select a record from the Command Interfaces search results screen.

How to view and edit commands:

1. Click on the [...] link for the command you wish to view. The selected record opens in the Command Interfaces screen.

The Command Interfaces list screen displays the following information for the selected record:

- **UID:** The unique identifier for the record in the Oracle Utilities Data Repository.
 - **Interface Name:** The name of the command that will appear on the user interface.
 - **Business Rule:** The name of the business rule to be executed by the command.
 - **Action:** The path and file name of the Active Server Page (ASP) page invoked by the command.
2. Edit data in the fields as appropriate. See **Working with Data Types** on page 8-4 for more information about editing data values.
 3. To save changes made to the record, click **Save**. To save the edited record as a new record, click **Save As New**.
Note: The **Save As New** option only works if the identity of the record has been changed.
 4. To perform a new search, click **Search**.
 5. To open a list of records, click **List**.
 6. To delete the current record, click **Delete**.
 7. To navigate from the current record to one of its parent or lookup records, click the Name of the parent table on the record. Parent and lookup records appear underlined on the screen. Use the **Back** button to return to the record being viewed.
 8. To view a list of child records, click the name of the child table you wish to view in the Children section of the screen. Use the **Back** button to return to the record being viewed.

Adding Commands

You can also add commands.

How to add commands:

1. Click **Add** on either the Command Interfaces search or list screens. A blank Command Interfaces screen opens.
2. Enter a name for the command in the **Interface Name** field.
3. Enter the name of the business rule to be executed by the command in the **Business Rule** field.
4. Enter the path and file name for the ASP page to be invoked by the command in the **Action** field.
5. To save the record, click **Save**. The new command appears on the screen.

Configuring Rule Description Language

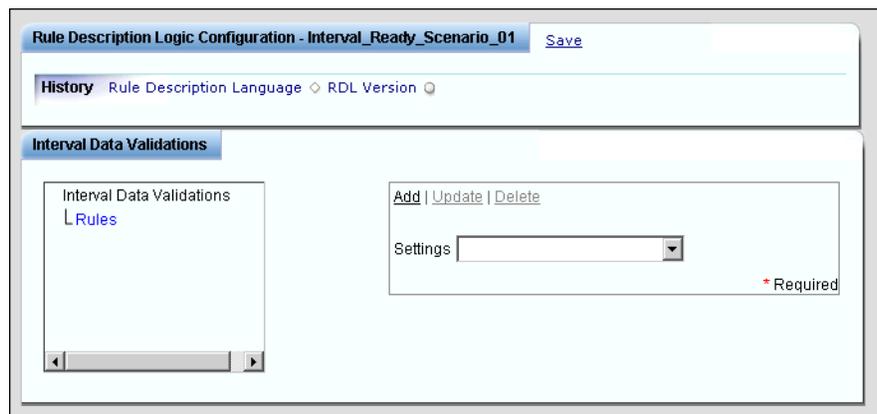
This section describes how to configure Rule Description Language (RDL) to perform the appropriate business logic for the associated Business Rule. Configuring an RDL involves the following steps:

- **Open the Rule Description Language Configuration Screen**
- **Define Template Source and Destination**
- **Define RDL Mappings**
- **Define Table Actions**
- **Define Table Validations**
- **Define Column Mappings**
- **Validate RDL**
- **Define Interval Data Validations** (if applicable)

Open the Rule Description Language Configuration Screen

The first step when configuring a Rule Description Language (RDL) is to open the Rule Description Language Configuration screen. This screen opens when the user clicks either the Configure RDL icon (🔧) in the RDL Version pane of the Rule Description Language screen, or the **Configure RDL** link on the RDL Version screen. The specific version of the Rule Description Language Configuration screen that opens is dependent on the Rule Type Code of the RDL being configured.

- If the Rule Type Code of the RDL is “Import”, “Import/Interval”, or “Import/Usage”, the RDL Mapping window opens on the Rule Description Language Configuration screen.
- If the Rule Type Code of the RDL is “Interval”, the Interval Data Validations pane opens on the Rule Description Language Configuration screen.



See **Define Interval Data Validations** on page 11-102 for information about configuring Interval Data Validations.

Define Template Source and Destination

For Rule Description Language (RDL) with a Rule Type Code of either Import or Import Interval, the next step when configuring the RDL is to define the template source and template destination of the incoming data.

- **Define Template Source**
- **Define Template Destination**

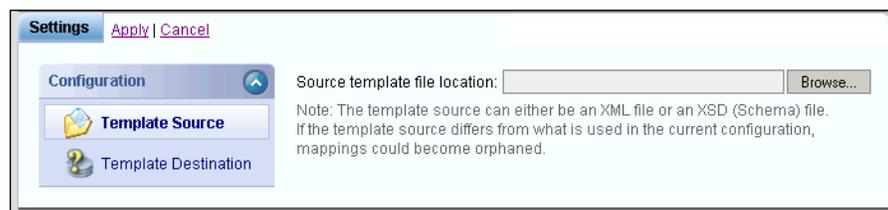
Define Template Source

The Template Source is a representation of what the incoming XML payload will look like when it is processed by the Adapter. The template source XML file must be a valid XML file or XML schema. All data will be stripped upon upload and any elements that repeat within the source document will only be displayed once. XML element names within the XML source document are limited to 256 characters.

Note: Use caution when modifying the template source for an existing RDL. If the template source is modified with an existing RDL and elements or attributes are moved from their original location (or removed), the original action mappings (see **Table Mappings** on page 11-75 and **Column Mappings** on page 11-76 for more information about mappings) will remain in the RDL but will not be displayed.

How to define the template source for an RDL:

1. Click **Settings** on the Rule Description Language Configuration screen. The Template Source screen opens, below the RDL Mapping window.



2. Enter the path and file name of the XML source document, or click the **Browse** button and select the appropriate file using the Choose File dialog.
3. Click **Apply** to upload the XML document. Click **Cancel** to close the Template Source screen without uploading the template source document.

Upon upload, a graphical representation of the XML document will be displayed on the left hand side of the RDL Mapping window. In this representation, elements are surrounded by angle brackets (< >) and attributes prefixed with an equal sign (=). If the element or attribute is part of a namespace other than the default, the namespace will be prefixed to the attribute or element name along with a colon.



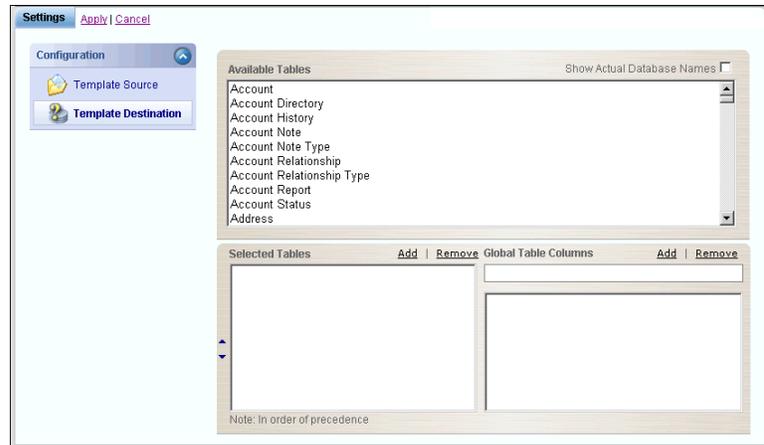
- Click **Save** to save the RDL configuration.

Define Template Destination

The Template Destination is a representation of the tables and columns in the Oracle Utilities Data Repository that the incoming data will be mapped to.

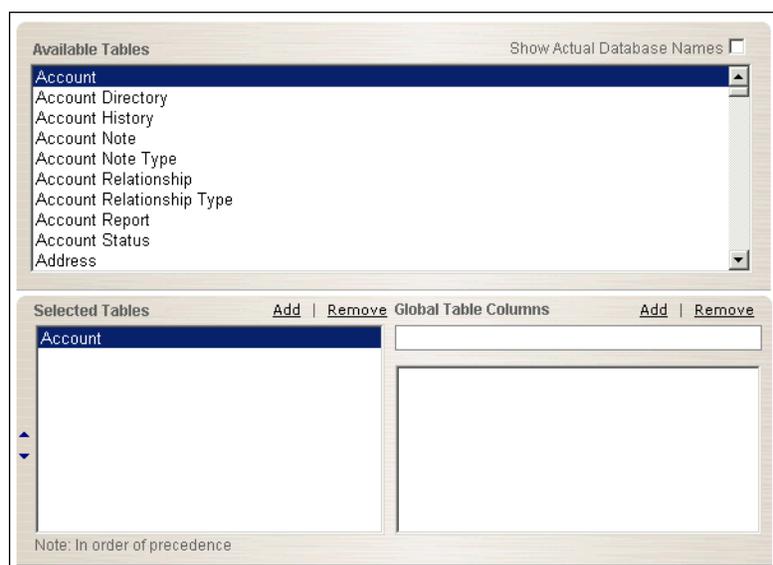
How to define the template destination for an RDL:

- Click **Settings** on the Rule Description Language Configuration screen. The Settings pane opens, below the RDL Mapping window, displaying the Template Source screen.
- Select **Template Destination** on the Configuration navigation pane. The Settings pane will display the Template Destination screen.



The top list box shows all the available tables within the Oracle Utilities Data Repository. The lower left list box shows the tables that have been selected for the template destination. The lower right list box shows the columns defined for the Global Table (see **Global Table** on page 11-73 for more information).

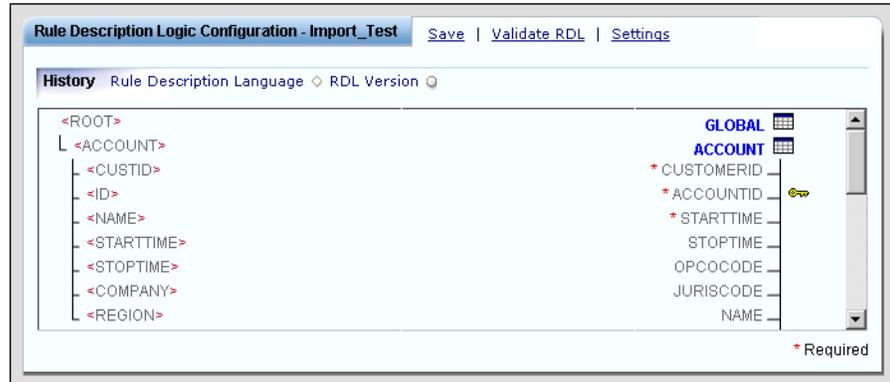
- Select the table you wish to add to the template destination in the **Available Tables** box.
- Click the **Add** link that appears above the **Selected Tables** box. The selected table now appears in the **Selected Tables** box.



Note: The tables in the Selected Tables box must be in the order of precedence for record inserts, if it is necessary.

- To change the order of the tables in the **Selected Tables** box, select the table you wish to move and click the Up (▲) or Down (▼) arrow as appropriate.
- To remove a table from the template destination, select the table in the **Selected Tables** box and click the **Remove** link.
- Click **Apply** to save the template destination. Click **Cancel** to close the Template Destination screen without saving the template destination.

A list of the selected tables (and their respective columns) will be displayed on the right hand side of the RDL Mapping window.



In this list, tables appear in **Blue** text and are indicated by a table icon, followed by a list of columns. Required columns are denoted by an asterisk (*). Columns that are part of the identity are indicated by a key icon.

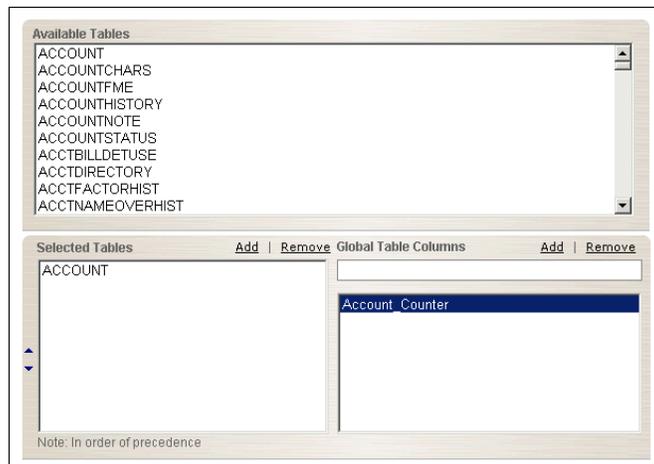
- Click **Save** to save the RDL configuration.

Global Table

The Global table is used to store any number of user-configured columns that may contain data needed for processing of the entire payload. A column within the Global table can be used for data such as counters, results of a query, code snippets, SQL statement snippets, etc. For example, when importing customer and account data, you might configure a “Customer Name” column that will store the customer name for each record imported during payload processing. You can then use this “Customer Name” column in code snippets such as defining an error message.

How to define columns for the Global Table:

1. Click **Settings** on the Rule Description Language Configuration screen. The Settings pane opens, below the RDL Mapping window, displaying the Template Source screen.
2. Select Template Destination on the Configuration navigation pane. The Settings pane will display the Template Destination screen.
3. Select the name of the column you wish to add to the Global table in the **Global Table Columns** text field.
4. Click the **Add** link that appears above the **Global Table Columns** text field. The column now appears in the **Global Table Columns** list box.



5. To remove a Global table column from the template destination, select the table in the **Global Table Columns** list box and click the **Remove** link.
6. Click **Apply** to save the template destination. Click **Cancel** to close the Template Destination screen without saving the template destination.

A listed of the entered columns will be displayed on the right hand side of the RDL Mapping window, below the Global table.



7. Click **Save** to save the RDL configuration.

Import/Interval Type Rules

If the Rule Type Code for the RDL is Import/Interval, two additional default tables, the Interval Cut table and the Interval Read table appear on the right hand side of the RDL Mapping window, below the Global table. Both tables must be populated in order for interval data to be processed.



- Interval Cut:** The Interval Cut table is used to store the interval cut header information, including meter information, and includes the following columns.

Column	Description	Required
RECORDER	Recorder ID	Yes
CHANNEL	Channel Number	Yes
STARTTIME	Cut Start Time	Yes
STOPTIME	Cut Stop Time	Yes
START_READ	Meter Start Reading	No
STOP_READ	Meter Stop Reading	No
M_MULT	Meter Multiplier	No
M_OFFSET	Meter Offset	No
POP	Population	No
SPI	Seconds-Per-Interval	Yes
UOM	Unit-of-Measure	Yes
DESC	Descriptor	No
TZSN	Time Zone Standard Name	No
DST	DST Participant	No

- Interval Read:** The Interval Read table is used to store individual interval values, and includes the following columns.

Column	Description	Required
V	Interval Value	Yes
S	Status Code	No

Define RDL Mappings

For Rule Type Codes of either Import or Import Interval, the next step is to create mappings between the template source and template destinations. There are two types of mappings:

- **Table Mappings**
- **Column Mappings**

Mapping Legend

The RDL Mapping screen uses a number of icons and symbols. The meanings of these icons and symbols are as follows:

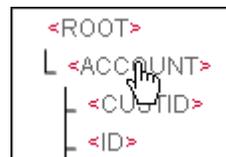
Icon	Description
	Blue Line: Table Action Mapping
	Blank Line: Regular Column Mapping
	Red Line: Update Identity Mapping
	Table
	Identity Column
	Required Column (red asterisk)
	Source Element (red brackets)
	Source Attribute (red equal sign)

Table Mappings

Table mappings define the action performed on the table (insert, update, insert/update), and the specific element defined in the Template Source triggers the table action. Table mappings are created by dragging-and-dropping an element (NOT an attribute) from the Template Source to a specific table (NOT column) on the Template Destination on the RDL Mappings window.

How to create table mappings:

1. Move the cursor over the **element** (NOT attribute) you wish to map. The cursor will change to a hand pointing a finger.

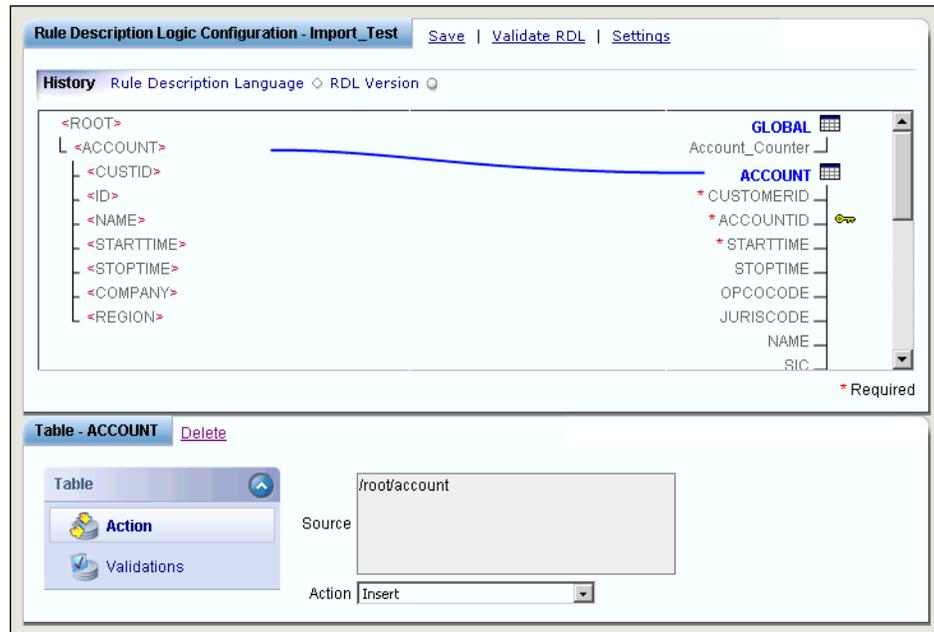


2. Click the mouse button, and drag the cursor across the RDL Mapping window to the **table** (NOT column) you wish to map to. The cursor will change to an arrow with a plus sign (“+”).



3. Release the mouse button. A blue line will be displayed, joining the source element and destination table. In addition, the Table pane will appear below the RDL Mapping window.

This pane is used to define the type of action that will be performed on the table and any validations that might be checked before the action is performed. See **Define Table Actions** on page 11-79 and **Define Table Validations** on page 11-81 for more information about table actions and validations.



4. Click **Save** to save the RDL configuration or continue with other Table and/or Column mappings.

Column Mappings

Column mappings indicate how data elements or attributes defined in the Template Source XML structure map to specific columns in the Oracle Utilities Data Repository defined in the Template Destination. Column mappings are created by dragging-and-dropping an element or attribute from the Template Source to a specific column on the Template Destination on the RDL Mappings window.

How to create regular table mappings:

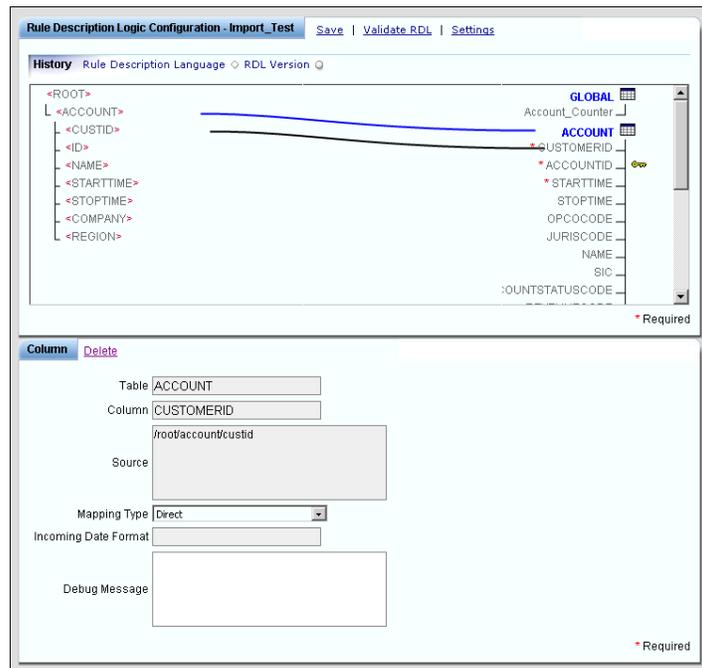
1. Move the cursor over the **element** or **attribute** you wish to map. The cursor will change to a hand pointing a finger.



2. Click the mouse button, and drag the cursor across the RDL Mapping window to the **column** you wish to map to. The cursor will change to an arrow with a plus sign (“+”).



- Release the mouse button. A black line will be displayed, joining the source element/attribute and destination column. In addition, the Column pane will appear below the RDL Mapping window. This pane is used to define the mapping type for the column. See **Define Column Mappings** on page 11-91 for more information about column mapping types.



- Click **Save** to save the RDL configuration or continue with other Table and/or Column mappings.

Update Identity Mappings

Update identity mappings allow you to update the value of an identity column when performing an “Update” and “Insert or Update” action on the table. Update identity mappings are created by dragging-and-dropping an element or attribute from the Template Source to a specific column on the Template Destination on the RDL Mappings window that is an identity column (denoted by the key icon) and already has a mapping created. The value of the original (regular) mapping (denoted by the black line) is used during the table update action to lookup the record to be modified. The value of the identity column is then updated with the value of update identity mapping.

How to create update identity table mappings:

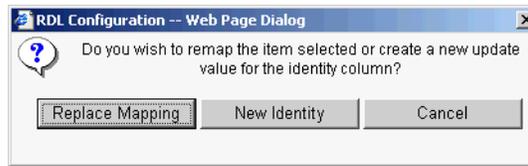
- Move the cursor over the **element** or **attribute** you wish to map. The cursor will change to a hand pointing a finger.



- Click the mouse button, and drag the cursor across the RDL Mapping window to the **identity column** (denoted with a key icon) you wish to map to. The cursor will change to an arrow with a plus sign (“+”).



3. Release the mouse button. A dialog will open, asking if you want to remap the item selected, or create a new update value for the identity column.



Click **New Identity** to create a new update value for the column. Click **Replace Mapping** to replace the mapping. Click **Cancel** to close the dialog without saving the mapping.

4. A red line will be displayed, joining the source element/attribute and destination identity column. In addition, the Column pane will appear below the RDL Mapping window. This pane is used to define the mapping type for the column. See **Define Column Mappings** on page 11-91 for more information about column mapping types.

5. Click **Save** to save the RDL configuration or continue with other Table and/or Column mappings.

Token Values

Once values have been mapped into Template Destination columns, those values can be referenced by using a token value.

Table-Column References

Table-column reference tokens are created by using two percent signs (%%) before and after a table.column reference. The token needs to be in all caps. When referencing a column in the Global table, the column name must match exactly (case-sensitive). For example:

Table	Column	Token
METER	METERID	%%METER.METERID%%
GLOBAL	Account_Count	%%GLOBAL.Account_Count%%

Note: When creating tokens for the Interval Cut and Interval Read tables, you must refer to these tables as follows:

- **Interval Cut:** HEADER (Example: %%HEADER.RECORDER%%)
- **Interval Read:** I (Example: %%I.VALUE%%)

Current Mapping Value References

Sometimes the value that needs to be referenced has not been mapped, but is the actual value from the Template Source that is causing the current action. In that case, the value is referenced with the following special token: %%THIS%%

Database Qualifiers References

Some database setups require a qualifier precede all database objects used in stored procedure calls and SQL statements. To reference the qualifier that will be in use at runtime, use the token oF%%QUAL%% followed by a dot (.) before the database object name. For example:

Type of Object	Example
Stored Procedure	%%QUAL%%.LSP_CHECKMETERID
SQL Statement	SELECT SERIALNO FROM %%QUAL%%.METER WHERE METERID = '%%METER.METERID%%'

Define Table Actions

For Rule Type Codes of either Import or Import Interval, the next step is to define table actions. These specify the action to be performed on the table when the specified source element is reached during processing.

Note: Only an element from the Template Source can trigger the selected action to be performed.

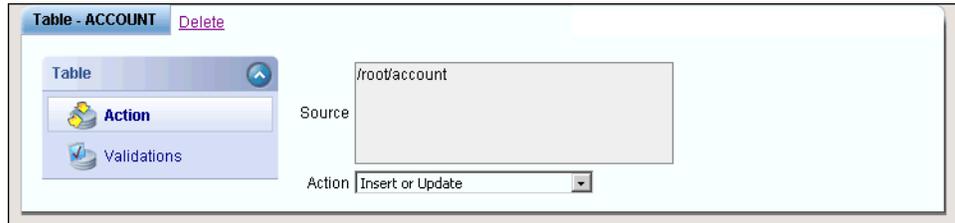
Table Action types include:

- (Empty) – No action is performed
- **Insert:** Inserts a record into the selected table
- **Update:** Updates an existing record in the selected table
- **Insert or Update:** Inserts a record if it does not exist, otherwise it updates an existing record in the selected table
- **Insert Cut:** (Import Interval only) Inserts a cut of interval reads. Used when inserting cuts into the **Header** table (see **Import/Interval Type Rules** on page 11-74 for more information).

- **Insert Read:** – Stores interval reads until the Insert Cut action is processed. Used when inserting interval values into the **I** table (see **Import/Interval Type Rules** on page 11-74 for more information).
- **Debug Output:** – Sends all values that have been currently been mapped to the Template Destination to the output log.

How to define table actions:

1. Click the table you wish define on the right hand side of the RDL Mapping window.
The **Table** pane appears below the RDL Mapping window.



2. Select **Table: Action** (this should be the default).
3. Select the appropriate Table Action from the **Action** drop-down list on the Table pane. Table Actions include:
 - **(Empty):** No action is performed.
 - **Insert:** Inserts a record into the selected table.
 - **Update:** Updates an existing record in the selected table.
 - **Insert or Update:** Inserts a record if it does not exist, otherwise it updates an existing record in the selected table.
 - **Insert Cut:** (Import Interval only) Inserts a cut of interval reads. Used when inserting cuts into the **Header** table (see **Import/Interval Type Rules** on page 11-74 for more information).
 - **Insert Read:** – Stores interval reads until the Insert Cut action is processed. Used when inserting interval values into the **I** table (see **Import/Interval Type Rules** on page 11-74 for more information).
 - **Debug Output:** – Sends all values that have been currently been mapped to the Template Destination to the output log.
4. Click **Save** to save the RDL configuration or continue with other Table Actions.

Note: When a table action currently set to **Update** or **Insert or Update** and the action is changed to **Insert** or **(Empty)**, all Identity Update mappings (denoted by a red line in the RDL display window) are removed.

Define Table Validations

For Rule Type Codes of either Import or Import Interval, the next step is to define validations that (if any) will be performed prior to the table action (see **Define Table Actions** on page 11-79) being processed. This section includes:

- **Validations Tree**
- **Viewing Validations**
- **Validation Types and Parameters**
- **Understanding Validations**
- **Adding, Editing, and Deleting Validations**

Validations Tree

Validations can be viewed on the Validations screen in the Table pane (displayed below the RDL Mapping window after selecting a table). The tree displays groupings of validations. The top element in the tree, and first Group Parent is always “Validations.” Below this is the “Validation Groups” element, which is the parent of individual groups. Below this you can define multiple validation groups and individual validations. Once defined, individual validation groups can also be the parent of other validation groups (see **Understanding Validations** on page 11-88 for examples).

In the validations tree:

- Validation Groups are displayed in **Green** text.
- Names of individual validations are displayed in **Blue** text.

Viewing Validations

To view a validation, click the Validation Name on the tree display in the top box of the Validation window.

The screenshot shows the configuration interface for a validation rule. The top-left pane shows the 'Table - METERREAD' context with a 'Validations' button. The main area is divided into two sections: a 'Validations' tree and a 'Validation' configuration form.

Validations Tree:

- Validations (Green text)
- Validation Groups (Green text)
- Meter (Green text)
 - MeterID (Blue text)

Validation Configuration Form:

- Name:** MeterID
- Group Parent:** Validations
- Member Of Group:** Meter
- Type:** SQL
- Error Code:** 100
- Error Description:** Meter ID %%METERID%% do
- Enabled:**
- SQL Statement:**

```
select meterid from meter
where meterid = '%%
METERREAD.METERID%%'
```

Note: Include qualifier code or token %%QUAL%%

Validations are defined by the following:

- **Name:** the name of the validation. Validation names are displayed in **Blue** text in the Validations tree.
- **Group Parent:** the parent of the Validation Group to which the validation belongs.
- **Member of Group:** the Validation Group to which the validation belongs. Validation Groups are displayed in **Green** text in the Validations tree.

- **Type:** the type of validation. Validation types include:
 - **Global Function**
 - **JavaScript**
 - **JavaScript Evaluation**
 - **SQL**
 - **SQL (No Records)**
 - **Stored Procedure**
 - **VB Script**
 - **VB Script Evaluation**
 - **Rate Schedule (and Rate Schedule Queued)**

See **Validation Types and Parameters** on page 11-82 for more information about validation types.
- **Error Code:** the error code that will be raised if the validation returns FALSE.
- **Error Description:** a description corresponding to the error code raised if the validation returns FALSE. Error descriptions can contain token values (see **Token Values** on page 11-79 for more information about token values). Error descriptions can contain up to 256 characters.
- **Enabled:** a checked that indicates if the validation is enabled.
- **Parameters:** Parameters for the validation, based on the validation Type. See **Validation Types and Parameters**, below for details about type-specific parameters.

Validation Types and Parameters

Each type of validation has its own set of parameters that define the validation. This section outlines the parameters specific to each type of validation, and provides an example of each.

Global Function

Global functions are JavaScript or VB Script global functions that return a Boolean or a “TRUE” or “FALSE” string. Global function parameters can contain references to token values (see **Token Values** on page 11-79). See **Global Functions** on page 11-55 for more information about creating global functions.

Global function validations are defined by the following:

- **Global Function Name:** The name of the Global Function. When creating a Global Function validation, select the functions from the drop-down list of defined global functions for this RDL Rule Type (Import or Import Interval).
- **Description:** a description of selected global function (automatically populated when the global function is selected)
- **Syntax:** the syntax of selected global function (automatically populated when the global function is selected)
- **Parameters:** parameters for the Global Function separated by commas

Example:

- **Global Function Name:** CheckMeterID
- **Parameters:** “%%METER.METERID%%”

JavaScript

JavaScript validations are JavaScripts that return a Boolean or a “TRUE” or “FALSE” string. Both the function call and the function code can contain references to token values (see **Token Values** on page 11-79).

The screenshot shows a web form titled "Validation" with sub-headers "Add | Update | Delete". The form contains the following fields:

- Name**: Text input field.
- Group Parent**: Dropdown menu.
- Member Of Group**: Dropdown menu.
- Type**: Dropdown menu with "JavaScript" selected.
- Error Code**: Text input field.
- Error Description**: Text input field.
- Enabled**: Check box, currently checked.
- Function Call**: Text input field.
- Function Code**: Large text area.

A red asterisk and the word "Required" are located at the bottom right of the form.

JavaScript validations are defined by the following:

- **Function Call**: the name of the script function to call
- **Function Code**: the script function definition that will be called. Scripts can contain up to 4,000 characters.

Example:

- **Function Call**: CheckMeterID(%METER.METERID%)
- **Function Code**:

```
function CheckMeterID(sMeterID) {
    return sMeterID = 'METER1';
}
```

JavaScript Evaluation

JavaScript Evaluation validations are JavaScripts that return a Boolean or a “TRUE” or “FALSE” string based on whether a supplied evaluation is “TRUE” or “FALSE”. The function call can contain references to token values (see **Token Values** on page 11-79).

The screenshot shows a web form titled "Validation" with sub-headers "Add | Update | Delete". The form contains the following fields:

- Name**: Text input field.
- Group Parent**: Dropdown menu.
- Member Of Group**: Dropdown menu.
- Type**: Dropdown menu with "JavaScript Evaluation" selected.
- Error Code**: Text input field.
- Error Description**: Text input field.
- Enabled**: Check box, currently checked.
- Function Call**: Text input field.

A red asterisk and the word "Required" are located at the bottom right of the form.

JavaScript Evaluation validations are defined by the following:

- **Function Call**: Name of the script function to call

Example:

- **Function Call**: 'METER1' = %METER.METERID%

SQL

SQL validations are SQL statements that return “TRUE” if records are returned, and return “FALSE” if no records are returned. SQL statements can contain references to token values (see **Token Values** on page 11-79).

Validation
[Add](#) | [Update](#) | [Delete](#)

* Name

* Group Parent

* Member Of Group

* Type

* Error Code

* Error Description

Enabled

* SQL Statement

Note: Include qualifier code or token %%QUAL%%

* Required

SQL validations are defined by the following:

- **SQL Statement:** the SQL statement to be processed. Make sure to surround any tokens with the appropriate data type identifiers (i.e. put single quotes around a token that is of string data type). SQL statements can contain up to 4,000 characters.

Example:

- **SQL:** SELECT METERID FROM METER WHERE METERID = '%%METER.METERID%%'

SQL (No Records)

SQL (No Records) validations are SQL statements that return “FALSE” if records are returned, and return “TRUE” if no records are returned. SQL statements can contain references to token values (see **Token Values** on page 11-79).

Validation
[Add](#) | [Update](#) | [Delete](#)

* Name

* Group Parent

* Member Of Group

* Type

* Error Code

* Error Description

Enabled

* SQL Statement

Note: Include qualifier code or token %%QUAL%%

* Required

SQL (No Records) validations are defined by the following:

- **SQL Statement:** the SQL statement to be processed. Make sure to surround any tokens with the appropriate data type identifiers (i.e. put single quotes around a token that is of string data type). SQL statements can contain up to 4,000 characters.

Example:

- **SQL:** SELECT METERID FROM METER WHERE METERID = '%%METER.METERID%%'

Stored Procedure

Stored procedure validations are database stored procedures that return a “TRUE” or “FALSE” string. If it is a function, the return value must be set. If it is a procedure, the first parameter must be set. The parameters can contain references to token values (see **Token Values** on page 11-79).

Stored Procedure validations are defined by the following:

- **Stored Procedure:** Name of the stored procedure to be executed. Note: Provide the qualifier token (%%QUAL%%) before the call if necessary.
- **Parameters:** All IN and IN/OUT parameters needed by the stored procedure separated by a semi-colon. Do not surround any parameters with quotes to denote string data type. Data type of parameter will automatically be identified when stored procedure is referenced at runtime.

Example:

- **Stored Procedure:** %%QUAL%%.CheckMeterID
- **Parameters:** %%METER.METERID%%

VB Script

VB Script validations are VB Scripts that return a Boolean or a “TRUE” or “FALSE” string. Both the function call and the function code can contain references to token values (see **Token Values** on page 11-79).

VB Script validations are defined by the following:

- **Function Call:** Name of the script function to call
- **Function Code:** Script function definition that will be called. Scripts can contain up to 4,000 characters.

Example:

- **Function Call:** CheckMeterID(“%%METER.METERID%%”)
- **Function Code:** Function CheckMeterID(sMeterID)
 CheckMeterID = (sMeterID = "METER1")
 End Function

VB Script Evaluation

VB Script Evaluation validations are VB Scripts that return a Boolean or a “TRUE” or “FALSE” string based on whether a supplied evaluation is “TRUE” or “FALSE”. The function call can contain references to token values (see **Token Values** on page 11-79).

VB Script Evaluation validations are defined by the following:

- **Function Call:** Name of the script function to call

Example:

- **Function Call:** 'METER1' = '%%METER.METERID%%'

Rate Schedule (and Rate Schedule Queued)

Rate Schedule (and Rate Schedule Queued) validations are Oracle Utilities Rules Language rate schedules that return a “PASS” (TRUE) or “FAIL” (FALSE) string. Rate Schedule validations are run synchronously. Rate Schedule Queued validations are run asynchronously. Rate schedule parameters can contain references to token values (see **Token Values** on page 11-79).

Rate Schedule (and Rate Schedule Queued) validations are defined by the following:

- **Rate Schedule:** The name of the rate schedule to execute. When creating a Rate Schedule validation, select the rate schedule to execute from the drop-down list or manually enter it in the following format:

```
<OPCO>:<JURIS>:<RATEFORMCODE>[:<VERSION>]
```

where:

- **<OPCO>** is the Operating Company for the rate schedule.
- **<JURIS>** is the Jurisdiction for the rate schedule.
- **<RATEFORMCODE>** is the Rate Form Code for the rate schedule.
- **<VERSION>** is an optional version number (for Trial Versions of rate schedules). The version defaults to the most recent version if not specified.
- **Parameters:** parameters for the rate schedule separated by semicolons, in one of the following formats:

```
<NAME>:<TYPE>:<VALUE>
```

```
<NAME>:<VALUE>
```

```
<VALUE>
```

where:

- **<NAME>** is the name of the identifier in the rate schedule to which the parameter value is passed. If not specified, the parameter name defaults to PARAM concatenated with the index number of the parameter (PARAM1, PARAM2, PARAM3, etc.).
- **<TYPE>** is the type of date that the parameter value is. Possible values are “S” (string) and “D” (date). If not specified, the <TYPE> defaults to “S”.
- **<VALUE>** is the value to be passed to the identifier. Parameter values can contain references to token values (see **Token Values** on page 11-79).

Example:

- **Rate Schedule:** LODESTAR:LODESTAR:IDR_VALIDATION:0(2006/04/01)
- **Parameters:**
RECORDER:S:%%RECORDER.ID%%;CHANNEL_NUM:S:1;START:D:2005-01-01T00:00:00;STOP:D:2005-01-31T23:59:59

Rate Schedule Requirements

To interface a rate schedule with the Adapter, the rate schedule must create a return XML string at the end of the rate schedule execution. This return XML string must indicate the completion status as either PASS or FAIL, and any applicable error messages.

Using the Rules Language, the below set of instructions is one way to create the required XML.

```
VALIDATION.STATUS = "PASS";
VALIDATION.MESSAGE = "";
SAVE VALIDATION TO XML;
```

It's also possible to create the required XML using the XML Rules Language statements and functions. See **Appendix B: XML Statements and Functions** in the *Oracle Utilities Rules Language Reference Guide* for more information about using these functions.

The example below is what actually is returned from the Rules Language after processing the instructions above.

```
<RSID_VALUES>
  <RSID_STEM NAME="VALIDATION">
    <RSID_VALUE NAME="STATUS" TYPE="S" VALUE="PASS"/>
    <RSID_VALUE NAME="MESSAGE" TYPE="S" VALUE=""/>
  </RSID_STEM>
</RSID_VALUES>
```

Understanding Validations

This section describes how validations performed and the rules the Adapter uses to determine if a groups of validations is considered TRUE or FALSE.

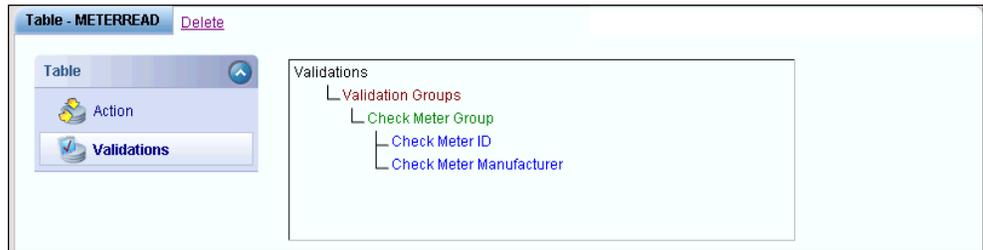
General Rules

Individual validation groups use “AND” logic to determine if the group is considered TRUE. In other words, all validations within a group must return TRUE for an entire group to be TRUE.

The “Validation Groups” element uses “OR” logic to determine if the group is considered TRUE. In other words, only one group within the “Validation Groups” element must return TRUE for the entire Validation Groups to be TRUE.

Example 1

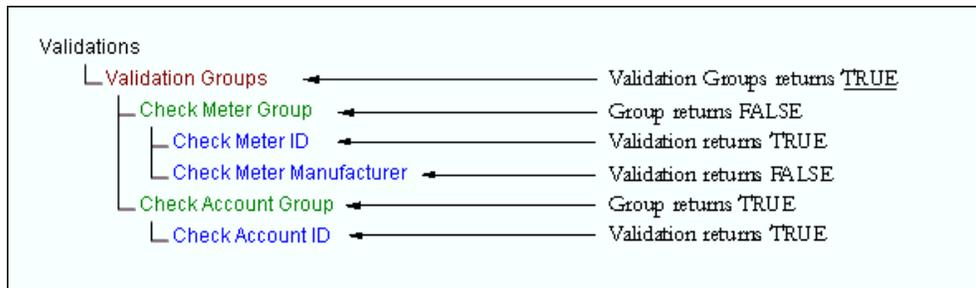
A simple validation might have only one group, and only one or two validations.



This validation was created under the “Check Meter Group,” which was set to the main group parent “Validations.”

Example 2

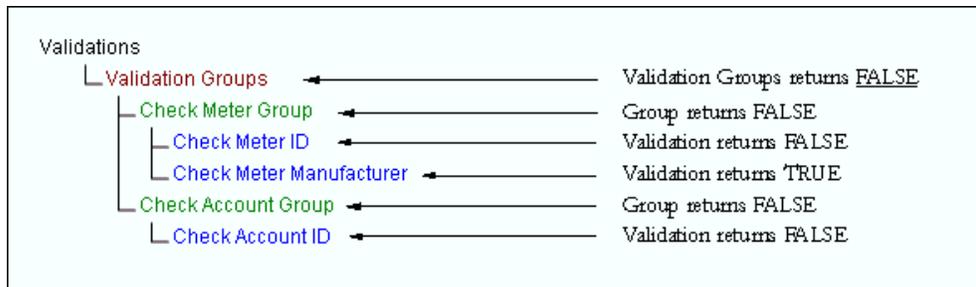
A more advanced validation might have many groups defined under the main “Validation Groups” element.



Validations within groups

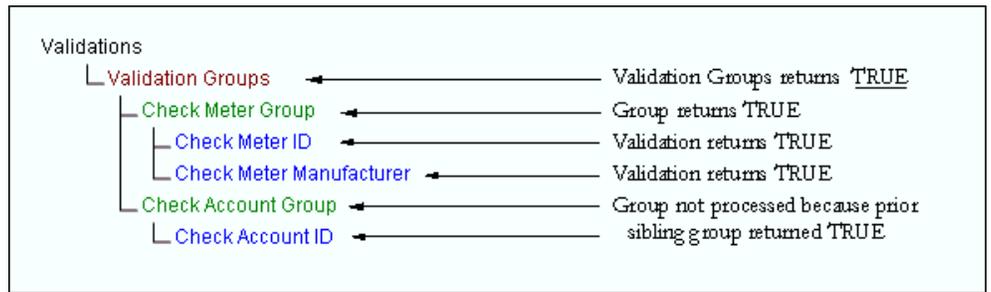
Within a group of validations, all validations are processed, even if one of the validations returns FALSE.

Example 3



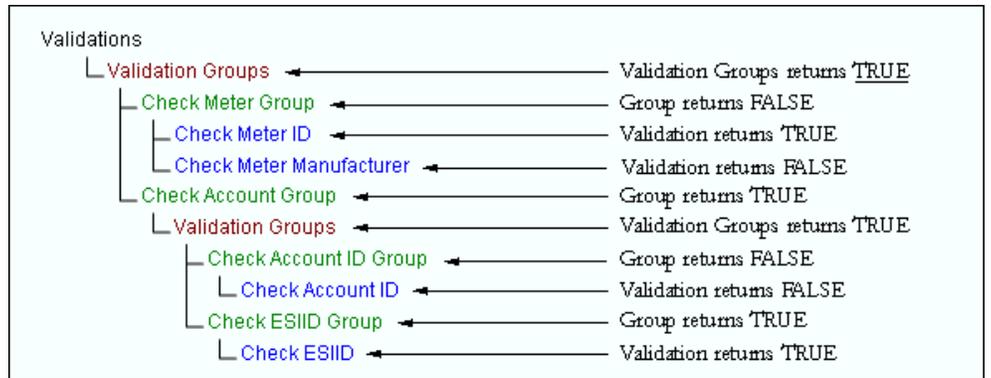
Once a group of validations is found to be TRUE, processing skips to the next parent element (skipping sibling groups).

Example 4



Example 5

An even more advanced validation might have many groups defined under the main “Validation Groups” element, as well as additional “Validation Groups” under an existing group.



In the above example, the “Check ESIID” validation was created under the “Check ESIID Group”, which was set to “Check Account Group, the parent group of an existing group, instead of “Validations.” This allows for multiple layers of logic to be created.

Adding, Editing, and Deleting Validations

How to create a table validation:

1. Click the table you wish define on the right hand side of the RDL Mapping window.
The **Table** pane appears below the RDL Mapping window.
2. Select **Table: Validations**.
The **Validations** screen pane appears in the Table pane.
3. Enter a **Name** for the validation.
4. Enter a **Group Parent** for the validation, or select an existing group parent from the drop-down list.
5. Enter a Group to which the validation will below in the **Member of Group** field, or select an existing group from the drop-down list.
6. Select the appropriate validation type from the **Type** drop-down list in the Validations box. See **Validation Types and Parameters** on page 11-82 for more information about validation types.
7. Enter parameters for the validation, based on the validation Type. See **Validation Types and Parameters** on page 11-82 for details of type-specific parameters.
8. Enter an **Error Code** that will be raised if the validation returns FALSE.

If you leave the Error Code and Error Description (see below) blank, if the validation returns FALSE, the Table Action on the table is not performed, but not all other Table Actions within the RDL rolled back.

9. Enter an **Error Description** corresponding to the error code that will be raised if the validation returns FALSE. Error descriptions can contain token values (see **Token Values** on page 11-79 for more information about token values).
10. Check the **Enabled** checkbox to enable the validation. This is checked by default.
11. Click **Add** in the Validations box to add the validation.

How to edit a table validation:

1. Click the table you wish define on the right hand side of the RDL Mapping window.
The **Table** pane appears below the RDL Mapping window.
2. Select **Table: Validations**.
The **Validations** screen pane appears in the Table pane.
3. Click the Validation Name of the validation you wish to edit.
4. Edit the validation as needed, and click **Update** in the Validations box.

How to delete a table validation:

1. Click the table you wish define on the right hand side of the RDL Mapping window.
The **Table** pane appears below the RDL Mapping window.
2. Select **Table: Validations**.
The **Validations** screen pane appears in the Table pane.
3. Click the Validation Name of the validation you wish to delete.
4. Click **Delete** in the Validations box.

The selected validation no longer appears in the Validations tree. If the validation was the only child of its parent group, the validation group is also deleted from the Validations tree.

Define Column Mappings

For Rule Type Codes of either Import or Import Interval, the next step is to define the type of column mapping that will be performed on each column. This section includes:

- **Viewing Column Mappings**
- **Column Mapping Types and Parameters**
- **Adding and Editing Column Mappings**

Viewing Column Mappings

To view a column mapping, click the appropriate column on the right hand side of the RDL Mapping window.

The screenshot shows the 'Column' configuration window in the RDL Mapping tool. It contains the following fields:

- Table:** ACCOUNT
- Column:** ACCOUNTID
- Source:** /root/account/id
- Mapping Type:** Direct (selected in a dropdown menu)
- Incoming Date Format:** (empty text box)
- Debug Message:** (empty text box)

A red asterisk and the word 'Required' are visible in the bottom right corner of the window.

Column mappings are defined by the following:

- **Table:** the name of the table that the selected column is associated with (automatically populated)
- **Column:** the name of the column to which the mapping applies (automatically populated)
- **Source:** a valid XPath expression of the element or attribute that is triggering the mapping (from the Template Source, automatically populated)
- **Mapping Type:** the type of mapping. Mapping types include:
 - **Direct**
 - **Global Function**
 - **JavaScript**
 - **JavaScript Evaluation**
 - **SQL**
 - **SQL**
 - **VB Script**
 - **VB Script Evaluation**
 - **Rate Schedule**

See **Column Mapping Types and Parameters** on page 11-93 for more information about validation types.

- **Incoming Date Format:** the date format of the incoming data. This field is only accessible if the data type of the column is a date type (DATE or DATETIME), and is only necessary if the incoming date is of a non-standard date format which is not recognized by Windows.

The table below lists tokens represent each value in the date. Use these tokens, along with any date separators such as “/” or “-“, to specify how the date if formatted.

Token	Token Representation	Number of Digits
%Y	Year	4
%M	Month	2
%D	Day	2
%H	Hour	2
%m	Minute	2
%S	Second	2

The table below lists examples of incoming date formats based on incoming values.

Incoming Value	Incoming Date Format	Mapped Value
20040524	%Y%M%D	2004-05-24 00:00:00
20040524052500	%Y%M%D%H%m%S	2004-05-24 05:25:00
2004-05-24T05:25:00	%Y-%M-%DT%H:%m:%S	2004-05-24 05:25:00
24/05/2004 05:25:00	%D/%M/%Y %H:%m:%S	2004-05-24 05:25:00

- **Debug Message:** a message that will be output to the log file. Debug messages can contain token values (see **Token Values** on page 11-79 for more information about token values).
- **Parameters:** Parameters for the mapping, based on the Mapping Type. See **Column Mapping Types and Parameters**, below for details about type-specific parameters.

Column Mapping Types and Parameters

Each type of mapping has its own set of parameters that define it. This section outlines the parameters specific to each type of mapping, and provides an example of each.

Direct

Direct mappings set the value from the Template Source to the selected column of the Template Destination. This is the default mapping type when an element or attribute is mapped.

Direct mappings do not have any parameters.

Example:

Column	Pre-Map Value	Post-Map Value
METERID	''	'Meter1'
MANUFACTURER	''	'Meters, Inc.'
SERIALNO	''	'12345'
UNINUMBER	''	'54321'

Global Function

Global function mappings set the return value from the function call to the selected column of the Template Destination. Parameters can contain references to token values (see **Token Values** on page 11-79)

Global function mappings are defined by the following:

- **Global Function Name:** The name of the Global Function. When creating a Global Function mapping, select the functions from the drop-down of defined global functions for this RDL Rule Type (Import or Import Interval).
- **Description:** a description of selected global function (automatically populated when the global function is selected)
- **Syntax:** the syntax of selected global function (automatically populated when the global function is selected)
- **Parameters:** parameters for the Global Function separated by commas

Example:

- **Global Function Name:** GetMeterSerialNo
- **Parameters:** “%%METER.METERID%%”

Column	Pre-Map Value	Post-Map Value
METERID	‘Meter1’	‘Meter1’
MANUFACTURER	”	”
SERIALNO	”	‘12345’
UNINUMBER	”	”

JavaScript

JavaScript mappings set the return value from function call to the selected column of the Template Destination. Both the function call and the function code can contain references to token values (see **Token Values** on page 11-79).

JavaScript mappings are defined by the following:

- **Function Call:** the name of the script function to call
- **Function Code:** the script function definition that will be called. Scripts can contain up to 4,000 characters.

Example:

- **Function Call:** GetMeterSerialNo(%%METER.METERID%%)
- **Function Code:**

```
function GetMeterSerialNo(sMeterID) {
    if (sMeterID = ‘Meter1’)return ‘12345’;
}
```

Column	Pre-Map Value	Post-Map Value
METERID	‘Meter1’	‘Meter1’
MANUFACTURER	”	”
SERIALNO	”	‘12345’
UNINUMBER	”	”

JavaScript Evaluation

JavaScript Evaluations mappings set the return value from function call to the selected column of the Template Destination. The function call can contain references to token values (see **Token Values** on page 11-79). JavaScript Evaluation mappings can be used to insert hard-coded values, or to reference previously mapped values (see **Token Values** on page 11-79).

The screenshot shows a configuration window titled "Column" with a "Delete" button. It contains several input fields: "Table" with the value "ACCOUNT", "Column" with "ACCOUNTID", "Source" with "/root/account/id", "Mapping Type" set to "JavaScript Evaluation", "Incoming Date Format", and "Debug Message". A "Function Call" field is present and marked with an asterisk as required. A small "* Required" label is also visible in the bottom right corner of the form area.

JavaScript Evaluation mappings are defined by the following:

- **Function Call:** Name of the script function to call

Example:

- **Function Call:** `if ('Meter1' = '%%METER.METERID%%')return '12345'`

Column	Pre-Map Value	Post-Map Value
METERID	'Meter1'	'Meter1'
MANUFACTURER	"	"
SERIALNO	"	'12345'
UNINUMBER	"	"

SQL

SQL mappings, like stored procedure mappings, can return more than one value. Every column that is returned in the statement becomes a column in the memory space. If multiple records are returned from the statement, only the first record is used. Statements can contain references to token values (see **Token Values** on page 11-79).

SQL mappings are defined by the following:

- **SQL Statement:** the SQL statement to be processed. Make sure to surround any tokens with the appropriate data type identifiers (i.e. put single quotes around a token that is of string data type). SQL statements can contain up to 4,000 characters.

Example:

- **SQL:** SELECT METERID, SERIALNO, UNINUMBER, METERNAME FROM METER WHERE METERID = '%THIS%'
- **SQL Statement Output**
 - METERID = 'Meter1'
 - SERIALNO = '12345'
 - UNINUMBER = '54321'
 - METERNAME = 'Meter01'

Column	Pre-Map Value	Post-Map Value
METERID	"	'Meter1'
MANUFACTURER	"	"
SERIALNO	"	'12345'
UNINUMBER	"	'54321'
METERNAME	"	'Meter01'

Stored Procedure

Stored Procedure mappings set the value of the RETURN parameter from the stored procedure call to the selected column of the Template Destination. If there are any OUT and/or IN/OUT parameters, new columns are created in the memory space (if they do not already exist) from the parameter's name. The value of the parameter is then set into the column. The Template Destination display will not display any newly created columns. Inbound parameters can contain references to token values (see **Token Values** on page 11-79).

Stored Procedure mappings are defined by the following:

- **Stored Procedure:** Name of the stored procedure to be executed. Note: Provide the qualifier token (%%QUAL%%) before the call if necessary.
- **Parameters:** All IN and IN/OUT parameters needed by the stored procedure separated by a semi-colon. Do not surround any parameters with quotes to denote string data type. Data type of parameter will automatically be identified when stored procedure is referenced at runtime.

Example:

- **Stored Procedure:** %%QUAL%%.GetMeterInfo
- **Parameters:** %%THIS%%
- **Stored Procedure Output**
 - IN/OUT - METERID = 'Meter1'
 - OUT - SERIALNO = '12345'
 - OUT - UNINUMBER = '54321'
 - OUT - METERNAME = 'Meter01'

Column	Pre-Map Value	Post-Map Value
METERID	⌘	'Meter1'
MANUFACTURER	⌘	⌘
SERIALNO	⌘	'12345'
UNINUMBER	⌘	'54321'
METERNAME	⌘	'Meter01'

VB Script

VB Script mappings set the return value from function call to the selected column of the Template Destination. Both the function call and the function code can contain references to token values (see **Token Values** on page 11-79).

VB Script mappings are defined by the following:

- **Function Call:** Name of the script function to call
- **Function Code:** Script function definition that will be called. Scripts can contain up to 4,000 characters.

Example:

- **Function Call:** GetMeterSerialNo(““%%METER.METERID%%””)
- **Function Code:** Function GetMeterSerialNo(sMeterID)

```

If sMeterID = "Meter1" Then
    GetMeterSerialNo = "12345"
End If

End Function
    
```

Column	Pre-Map Value	Post-Map Value
METERID	'Meter1'	'Meter1'
MANUFACTURER	“	“
SERIALNO	“	'12345'
UNINUMBER	“	“

VB Script Evaluation

VB Script Evaluations set the return value from function call to the selected column of the Template Destination. The function call can contain references to token values (see **Token Values** on page 11-79).

VB Script Evaluation mappings are defined by the following:

- **Function Call:** Name of the script function to call

Example:

- **Function Call:** SelectSingleValue("METER", "SERIALNO", "METERID=" & %%METER.METERID%% & "'")

Column	Pre-Map Value	Post-Map Value
METERID	'Meter1'	'Meter1'
MANUFACTURER	"	"
SERIALNO	"	'12345'
UNINUMBER	"	"

Rate Schedule

Rate Schedule mappings are Oracle Utilities Rules Language rate schedules that return values to specified column(s) in the Template Destination. Rate schedule parameters can contain references to token values (see **Token Values** on page 11-79). Rate schedule mappings can return multiple values, each of which can be mapped to individual columns in the destination table.

Rate Schedule mappings are defined by the following:

- **Rate Schedule:** The name of the rate schedule to execute. When creating a Rate Schedule mapping, select the rate schedule to execute from the drop-down list or manually enter it in the following format:

<OPCO>:<JURIS>:<RATEFORMCODE>[:<VERSION>]

where:

- <OPCO> is the Operating Company for the rate schedule.
- <JURIS> is the Jurisdiction for the rate schedule.
- <RATEFORMCODE> is the Rate Form Code for the rate schedule.
- <VERSION> is an optional version number (for Trial Versions of rate schedules). The version defaults to the most recent version if not specified.

- **Parameters:** parameters for the rate schedule separated by semicolons, in one of the following formats:

<NAME>:<TYPE>:<VALUE>

<NAME>:<VALUE>

<VALUE>

where:

- <NAME> is the name of the identifier in the rate schedule to which the parameter value is passed. If not specified, the parameter name defaults to PARAM concatenated with the index number of the parameter (PARAM1, PARAM2, PARAM3, etc.).
- <TYPE> is the type of date that the parameter value is. Possible values are "S" (string) and "D" (date). If not specified, the <TYPE> defaults to "S".
- <VALUE> is the value to be passed to the identifier. Parameter values can contain references to token values (see **Token Values** on page 11-79).

Example:

- **Rate Schedule:** LODESTAR:LODESTAR:METER_AT*TR:0(2006/04/01)
- **Parameters:** METER_ID:S:%%METER.METERID%%

Example:

Column	Pre-Map Value	Post-Map Value
METERID	"	'Meter1'
MANUFACTURER	"	'Meters, Inc.'
SERIALNO	"	'12345'
UNINUMBER	"	'54321'

Rate Schedule Requirements

To interface a rate schedule with the Adapter, the rate schedule must create a return XML string at the end of the rate schedule execution. This return XML string must pass values to one or more mapped columns in the destination table.

Using the Rules Language, the below set of instructions is one way to create the required XML.

```
MAPPING.METERID = "Meter1";
MAPPING.MANUFACTURER = "Meters, Inc.";
MAPPING.SERIALNO = "12345";
MAPPING.UNINUMBER = "54321";
SAVE MAPPING TO XML;
```

It's also possible to create the required XML using the XML Rules Language statements and functions. See **Appendix B: XML Statements and Functions** in the *Oracle Utilities Rules Language Reference Guide* for more information about using these functions.

The example below is what actually is returned from the Rules Language after processing the instructions above.

```
<RSID_VALUES>
  <RSID_STEM NAME="MAPPING">
    <RSID_VALUE NAME="METERID" VALUE="Meter1"/>
    <RSID_VALUE NAME="MANUFACTURER" VALUE="Meters, Inc."/>
    <RSID_VALUE NAME="SERIALNO" VALUE="12345"/>
    <RSID_VALUE NAME="UNINUMBER" VALUE="54321"/>
  </RSID_STEM>
</RSID_VALUES>
```

Adding and Editing Column Mappings

How to create a column mapping:

1. Click the column you wish map on the right hand side of the RDL Mapping window.
The **Column** pane appears below the RDL Mapping window.
The **Table**, **Column**, and **Source** for the mapping will be automatically populated.
2. Select the appropriate mapping type from the **Mapping Type** drop-down list in the Validations box. See **Column Mapping Types and Parameters** on page 11-93 for more information about mapping types.
3. Enter parameters for the mapping, based on the selected Mapping Type. See **Validation Types and Parameters** on page 11-82 for details of type-specific parameters.
4. Enter a Debug Message corresponding to the mapping. Debug messages can contain token values (see **Token Values** on page 11-79 for more information about token values).
5. Click **Save** to save the RDL configuration.

How to edit a column mapping:

1. Click the column you wish to map on the right hand side of the RDL Mapping window.
The **Column** pane appears below the RDL Mapping window.
2. Edit the mapping as needed, and click **Save** (top of screen).

Validate RDL

The next step in configuring an RDL is to validate the RDL. This function performs a validation on all SQL, Stored Procedures, and scripts in mappings and validations and returns any errors or warnings that are found.

Define Interval Data Validations

For Rule Type Codes of either Import Interval or Interval, the next step is to define the type of interval data validations (if any) that will be performed on the incoming interval data. This section includes:

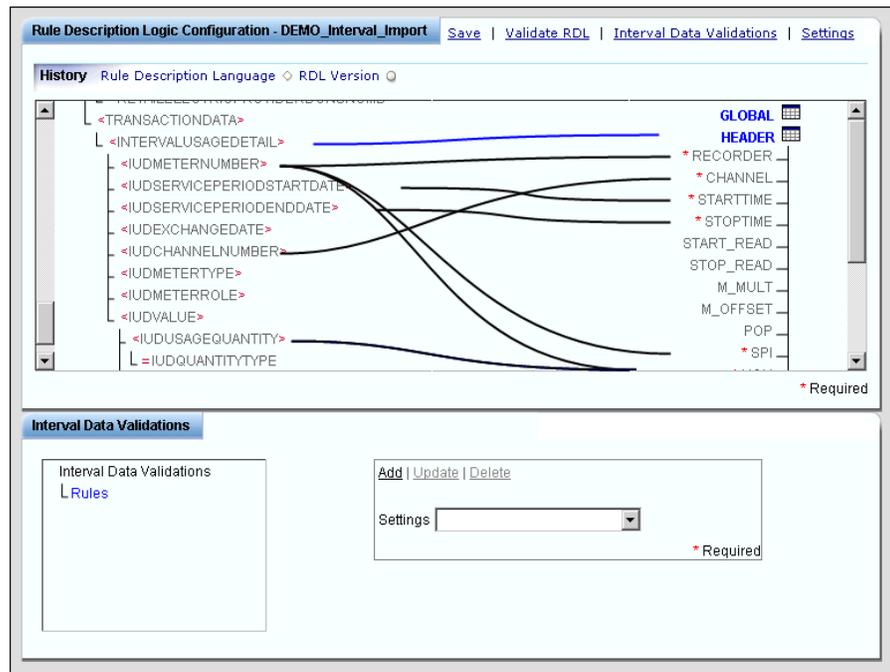
- **Viewing Interval Data Validations**
- **Interval Data Validation Types and Parameters**
- **Adding, Editing, and Deleted Interval Data Validations**

Viewing Interval Data Validations

Interval Data Validations can be viewed on the Interval Data Validations screen (displayed below the RDL Mapping window after clicking Interval Data Validations). The tree displays all the interval data validations defined for the RDL. The top element in the tree is always “Rules.” In the validations tree, names of individual validations are displayed in **Blue** text.

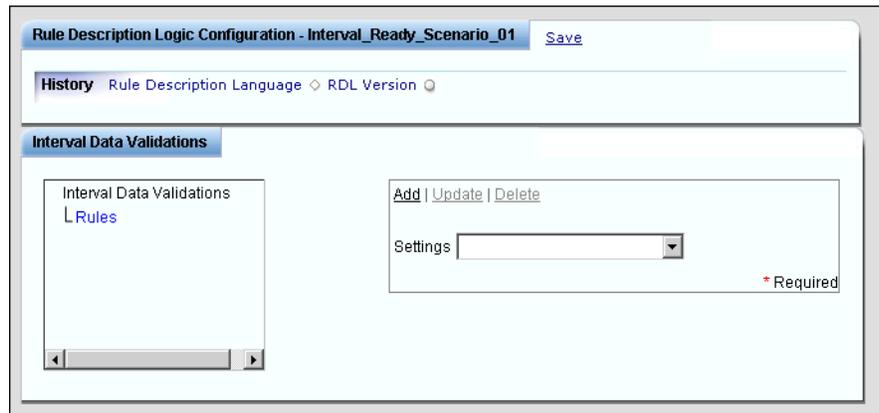
Import Interval

For Import Interval RDLs, the Interval Data Validations screen opens when the user clicks **Interval Data Validations** at the top of the screen.



Interval

For Interval RDLs, the Interval Data Validations screen automatically displays. RDLs of this type do not use the RDL Mapping window.



Interval Data Validations are defined by the following:

- **Settings:** the type of validation. Interval Data Validation types include:
 - **Validate INTD**
 - **Validate SPI**
 - **Validate UOM**
 - **Time Zone Conversions**
 - **Behaviors**

See **Validation Types and Parameters** on page 11-82 for more information about validation types.
- **Parameters:** Parameters for the validation, based on the validation Settings. See **Interval Data Validation Types and Parameters**, below for details about type-specific parameters.

Interval Data Validation Types and Parameters

Each type of interval data validation has its own set of parameters that define the validation. This section outlines the parameters specific to each type of validation.

Validate INTD

Validate INTD validations ensure that the incoming interval data has the correct number of intervals based on the supplied Start and Stop time.

Validate INTD validations use the following parameters:

- **Start/Stop Hour:** a flag that indicates how the Adapter should handle exceptions related to the Start Time, or Stop Time of the incoming interval data (Ignore or Reject).
- **Missing Intervals:** a flag that indicates how the Adapter should handle exceptions related to missing intervals in the incoming interval data (Ignore or Reject).

Validate SPI

Validate SPI validations ensure that the Seconds-Per-Interval (SPI) of the incoming interval data matches a defined value.

Validate SPI validations use the following parameters:

- **Seconds:** the specified SPI for incoming interval data. Possible values include:
 - 60 (one minute)

- 300 (5 minutes)
- 900 (15 minutes)
- 1800 (30 minutes)
- 3600 (one hour)
- 86400 (one day)

Validate UOM

Validate UOM validations ensure that the Unit-of-Measure (UOM) of the incoming interval data matches a defined value.

Validate UOM validations use the following parameters:

- **UOM Code:** the specified UOM code for incoming interval data.
- **UOM Unit:** the specified UOM unit for incoming interval data.

Time Zone Conversions

Time Zone Conversion validations change the time zone of the incoming interval data to a specified time zone.

Time Zone Conversion validations use the following parameters:

- **Target Timezone:** the target time zone for the incoming interval data. After processing, the time zone for the interval data will be set to this.
- **Source Timezone:** the original time zone of the incoming interval data.

Behaviors

Behaviors validations allow you specify certain interval data behaviors, similar to those defined in the INTDCONFIG.CFG.XML configuration file.

Behaviors validations use the following parameters:

- **OverCount:** Controls the behavior of import functions when an incoming cut has too many recorded intervals for the time span defined by the cut start time and the cut stop time and the DST_Participant flag. Valid values include:
 - **Reject:** Directs the function to produce an error and disallow the import of any incoming/uploaded when cut has too many recorded intervals (Expected < Recorded).
 - **BE:** Behaves exactly like Reject, except in the case where a cut that crosses the beginning of a DST period, and has its recorded interval count equal to the expected intervals count without the hour adjusted for DST.
 - **As Is:** Allow the storage of any incoming cuts with a number of expected intervals less than the number of recorded intervals. The stop times of these cuts will remain unchanged.
- **UnderCount:** Controls the behavior of import functions when an incoming cut has too few recorded intervals for the time span defined by the cut start time and the cut stop time and the DST Participant flag. Valid values include:
 - **Reject:** Directs the function to produce an error and disallow the import of any incoming/uploaded cut when it has too few recorded intervals (Expected > Recorded).
 - **BE:** Directs the function to behave similar to the default behavior observed in previous installations and versions. This setting works exactly like Fill in most cases. When a cut being processed spans the end of the DST period, usually the fall DST hour, if viewed directly from the raw flat file, the cut will appear to be filled using DST calculations, yet if the cut is saved to any binary data source (RDB or BTE), it will only be filled with missings as if the DST_Participant flag is set to "N". For example, if a cut is supplied that crosses the Fall DST change and has only 92 intervals (23 hours), the system will fill

to only 96 not 100. If 100 intervals are supplied, then 100 will be stored. Also, if 97 - 99 intervals are supplied and the DST = "Y", then the system will Reject the incoming cut.

- **Fill:** Fills all incoming cuts with missings (value = 0, Status = "9") to the stop time of the cut using DST adjustments if appropriate (DST_Participant = "Y").
- **As Is:** Allows the storage of any incoming cuts with a number of expected intervals greater than the number of recorded intervals. The stop times of these cuts will remain unchanged.
- **DST_Participant:** Controls any Daylight Saving Time conversions that will be applied to the cut as it is imported into the system. Valid values include:
 - **Yes:** Converts all incoming cuts to follow the default DST rules set in LSCalendar.xml or uses the incoming cut's Time Zone Standard Name (TZSN) if available. This setting changes all incoming cuts with DST_Participant flags set to "A" or "N" to "Y" and converts the cuts using the DST conversion algorithm for that TZSN.
 - **No:** Converts all incoming cuts not to follow the DST rules associated with them via the TZSN or by using the default set in LSCalendar.xml. This setting changes all incoming cuts with DST_Participant flags set to "A" or "Y" to "N".
 - **As Is:** Allows cuts to be entered into the system without using any conversions. The DST_Participant flags remain as they are supplied. This can result in databases that have mixed DST_Participant cuts, and is not recommended if the data source will be used with Oracle Utilities Load Analysis.
- **Force Valid:** Controls the behavior of how the system sets the Validate_Record_Flag. Valid values include:
 - **Yes:** Sets the Validate_Record_Flag to "Y" indicating that the record should be validated after importing.
 - **No:** Sets the Validate_Record_Flag to "N" indicating that the cut needs no further validation when imported.
 - **Flag:** Uses the cuts' Internal_Validation and Merge flag to set the Validate_Record_Flag. If either are set to "Y", then the Validate_Record_Flag is set to "N", otherwise it is set to "Y".
- **Set DST A Records:** Sets rules on how to import cuts with the Participant flag set to "A". Valid values include:
 - **Yes:** Convert the cut from a properly formatted "A" record to one that follows DST rules, provided the TZSN is also supplied. If the TZSN is not supplied, the function uses the default TZSN. The cut will be transformed into the original DST = "Y". When using Time Zone Conversions in Data Manager or the INTDIMP.EXE command line program, the program will only import cuts in the LSE, XML, CSV file formats that originally have the requested DST_Participant flag. All others produce an error. For Example, if an incoming file has a mixture of DST_Participant cuts, and the Input/Meter Time Zone is EDTA, then only cuts in the file with DST_Participant flags of A will be imported. The cuts will be converted to DST = "Y" in this case.
 - **No:** Results in the same processing as the "Y" setting, followed by a conversion of start and/or stop times by one hour to create a non-DST cut.
 - **Reject:** Results in the cut being rejected and produces an error.
 - **As Is:** Imports as Data Manager has always done it.
- **Set Missing DST Participant:** Controls the default value assigned to the DST_Participant Flag when the incoming cut does not contain the flag. Valid values include:
 - **Y:** Sets the DST_Participant flag to "Y".
 - **N:** Sets the DST_Participant flag to "N".

- **Set Invalid DST Participant:** Controls the behavior of the import and loading of cuts when the DST_Participant flag in the source cut is not an A, N, or Y. Valid values include:
 - **Y:** Sets the DST_Participant flag of an incoming cut with an invalid DST_Participant flag to Y.
 - **N:** Sets the DST_Participant flag of an incoming cut with an invalid DST_Participant flag to N.
 - **Reject:** Does not allow the cut to be imported.

Adding, Editing, and Deleted Interval Data Validations

How to create an interval data validation:

1. Click **Interval Data Validations**.

The **Interval Data Validations** window appears below the RDL Mapping window. This window is automatically displayed when configuring RDLs of Rule Type Interval.

2. Select the appropriate interval data validation type from the **Type** drop-down list in the interval data validations box. See **Interval Data Validation Types and Parameters** on page 11-103 for more information about interval data validation types.
3. Enter parameters for the validation, based on the validation Type. See **Interval Data Validation Types and Parameters** on page 11-103 for details of type-specific parameters.
4. Click **Add** in the interval data validations box to add the validation.

The validation appears in the Interval Data Validations tree, under the Rules element.

How to edit an interval data validation:

1. Click **Interval Data Validations**.

The **Interval Data Validations** window appears below the RDL Mapping window. This window is automatically displayed when configuring RDLs of Rule Type Interval.

2. Click the Validation Name of the validation you wish to edit.
3. Edit the validation as needed, and click **Update** in the interval data validations box.

How to delete an interval data validation:

1. Click **Interval Data Validations**.

The **Interval Data Validations** window appears below the RDL Mapping window. This window is automatically displayed when configuring RDLs of Rule Type Interval.

2. Click the Validation Name of the validation you wish to delete.
3. Click **Delete** in the interval data validations box.

The selected validation no longer appears in the Interval Data Validations tree.

RDL Configuration Examples

This section includes examples of common tasks and how they can be performed with RDL mappings and validations, and includes:

- **Mapping Examples**
- **Validation Examples**

Mapping Examples

Mapping examples illustrate how to configure column mappings to insert specific values into the Oracle Utilities Data Repository based on data from the incoming payload and other sources. See **Define Column Mappings** on page 11-91 for more information.

Looking Up Values

There can be situations when a table requires a value that is not in the payload but exists in another table in the Oracle Utilities Data Repository. A SQL statement can perform a lookup for one or more values to be inserted into the database.

The following SQL statement retrieves the MARKETID and SERVICETYPE from the LSMARKET table to complete the database update.

Rule Description Language Configuration - Enrollment_Response

History Rule Description Language RDL Version

Column Delete

Table: Service Order

Column: LS Market - Market ID

Source: /ENROLLMENT/row_SH

Mapping Type: SQL

* SQL Statement

```
select MARKETID, SERVICETYPE from %%QUAL%%.LSMARKET where uidmarket = (select uidmarket from %%QUAL%%.LSSERVICEPOINT where servicepointid = '%%GLOBAL.SP_ID%%')
```

Sample SQL Statement

```
select MARKETID, SERVICETYPE from %%QUAL%%.LSMARKET where uidmarket = (select uidmarket from %%QUAL%%.LSSERVICEPOINT where servicepointid = '%%GLOBAL.SP_ID%%')
```

Converting and Enriching Date Values

Date values in the Oracle Utilities Data Repository use a standard format. In the cases where date formats in the payload are not in an acceptable format, you can convert and/or enrich the date value.

The following JAVA Script evaluation is used to enrich a date and convert it to a new format. The time "23:59:59" is added to the date string.

The screenshot shows the 'Rule Description Language Configuration - Post_Scalar_Usage' interface. The 'History' pane on the left shows a tree structure for '<USAGE_DATA>' containing '<SCALAR>' and '<TRANSACTION>' nodes. The 'Column' pane on the right shows a mapping configuration for the 'Bill History' table, specifically for the 'Stop Time' column. The 'Source' is identified as '/USAGE_DATA/SCALAR/USAGE/row_15/row_15_col_3'. The 'Mapping Type' is set to 'JavaScript Evaluation'. The 'Function Call' field contains the JavaScript code: `'%THIS%.substring(4,6)+'/'+'%THIS%.substring(8,10)+'/'+'%THIS%.substring(6,9)+'/'+'%THIS%.substring(10,12)+'23:59:59'`. The 'Incoming Date Format' field is empty.

Stop Time Java Script Enrichment

```
'%THIS%.substring(5,7)+'/'+'%THIS%.substring(8,10)+'/'+'%THIS%.substring(6,9)+'/'+'%THIS%.substring(10,12)+'23:59:59'
```

The following VB Script evaluation is used to parse a date and convert it to a new format (yyyy-m-d 00:00:00).

The screenshot shows the 'Rule Description Language Configuration - Adapter_Load_Profile_Data' interface. The 'History' pane on the left shows a tree structure for '<TRANSCOLLECTION>' containing nodes like '=DOCFID', '=SENDERID', '=RECEIVERID', '=VERSION', '=SENDERNAME', '=SENDERTYPE', '=RECEIVERNAME', '=RECEIVERTYPE', '=TRANSACTIONCOUNT', and '=TRANSEFFID'. The 'Column' pane on the right shows a mapping configuration for the 'Interval Cut' table, specifically for the 'Start Time' column. The 'Source' is identified as '/TRANSCOLLECTION/TRANSACTION/PAYLOAD/rowDATE'. The 'Mapping Type' is set to 'VB Script Evaluation'. The 'Function Call' field contains the VB Script code: `DatePart("d", "%THIS%") & "-" & DatePart("m", "%THIS%") & "-" & DatePart("d", "%THIS%") & " 00:00:00"`. The 'Incoming Date Format' field is empty.

VB Script Function Call

```
DatePart("yyyy","%%THIS%%") & "-" & DatePart("m","%%THIS%%") & "-" &
DatePart("d","%%THIS%%") & " 00:00:00"
```

Converting Values

Sometimes data values in an incoming payload may not match those used by Oracle Utilities applications. For instance, Oracle Utilities applications use specific codes for different units of measure. In such cases, a mapping can convert incoming values to Oracle Utilities-compatible values.

The following JAVA Script converts the unit of measure in the payload to standard Unit-of-Measure codes. Note that there are more codes than shown in this example.

The screenshot shows a configuration window for a column mapping. The 'Table' is 'Interval Cut' and the 'Column' is 'Unit of Measure'. The 'Source' is '/USAGE_DATA/INTERVALUSAGE/row_17/row_17_col_6'. The 'Mapping Type' is 'JavaScript'. The 'Function Call' is 'UOM('%%THIS%%')'. The 'Function Code' is a JavaScript function that maps input codes to output codes. The 'Debug Message' field is empty. A 'Required' indicator is visible in the bottom right corner.

JavaScript Code

```
UOM('%%THIS%%')

function UOM(sUOM) {
  var retval;
  switch (sUOM) {
    case 'K1':
      retval='02';
      break;

    case 'K2':
      retval='22';
      break;

    case 'K3':
      retval='04';
      break;

    case 'KH':
      retval='01';
      break;
  }
  return retval;
}
```

Selecting a Single Value from a Delimited Field

Values in incoming payloads can be delimited fields from which you might need to extract a single value.

The following JAVA Script Evaluation parses a delimited string to pull out a particular value. The following code takes the mapped value "%%THIS%" and pulls out the fourth item (base zero). Note that the "," denotes the delimiter used.

The screenshot shows the RDL configuration interface for a JavaScript Evaluation mapping. The 'Table' field is set to 'ACCTRATECODEHIST', the 'Column' is 'RATECODE', and the 'Source' is 'JENROLLMENT/TRANSACTION/CUSTOMER/ACCOUNT/RATECODE'. The 'Mapping Type' is 'JavaScript Evaluation'. A 'Function Call' box contains the code: `("%%THIS%%").split(",")[3]`.

Java Script Evaluation Code #1

```
("%%THIS%%").split(",")[3]
```

Input

XXX, YYY, ZZZ, AAA

Output

AAA

Using the System Date

You can use the database system date as a mapped value.

The following SQL statement uses the Oracle system date as a mapped value. Note that the system will require you to map a "dummy" source element. The SQL will override the mapping value.

The screenshot shows the RDL configuration interface for an SQL Statement mapping. The 'Table' is 'LSSERVICEORDER', the 'Column' is 'TXNPROCESSDATE', and the 'Source' is 'JENROLLMENT/TRANSACTION/TRASDATA/OFFCYCLESWITCH'. The 'Mapping Type' is 'SQL'. The 'SQL Statement' box contains the query: `SELECT SYSDATE as TXNPROCESSDATE FROM DUAL`. There is a note at the bottom right: 'Note: Include qualifier code or token %%QUAL%%'. The 'Incoming Date Format' and 'Debug Message' fields are empty.

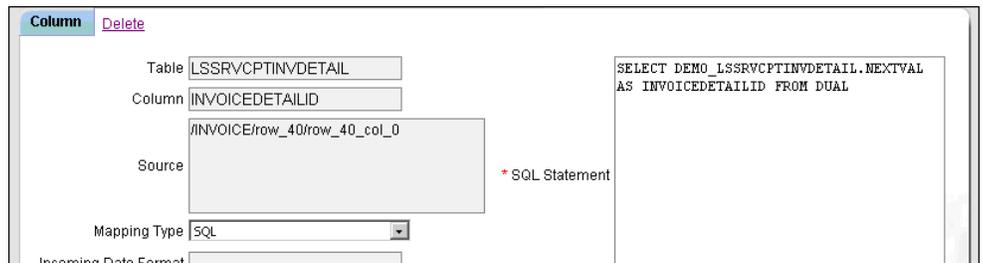
Sample SQL Statement

```
SELECT SYSDATE as TXNPROCESSDATE FROM DUAL
```

Calling an Oracle Sequence

SQL mappings can call Oracle sequences.

The following SQL statement calls an Oracle sequence to generate a unique reference when required. Note that the sequence to be called must have been previously built in Oracle.



The screenshot shows a configuration window for a column mapping. The window has a title bar with 'Column' and a 'Delete' button. The main area contains the following fields:

- Table: LSSRVCPINVDDETAIL
- Column: INVOICEDETAILID
- Source: /INVOICE/row_40/row_40_col_0
- Mapping Type: SQL (selected in a dropdown menu)

On the right side of the window, there is a text area labeled 'SQL Statement' containing the following SQL code:

```
SELECT DEMO_LSSRVCPINVDDETAIL.NEXTVAL  
AS INVOICEDETAILID FROM DUAL
```

Sample SQL Statement

```
SELECT DEMO_LSSRVCPINVDDETAIL.NEXTVAL AS INVOICEDETAILID FROM DUAL
```

Validation Examples

Validation examples illustrate how to configure table validations when inserting records into the Oracle Utilities Data Repository. See **Define Table Validations** on page 11-81 for more information.

Validating a Customer ID using SQL

SQL validations can check that a look up or parent record exists prior to inserting a record into the Oracle Utilities Data Repository. For example, you might want to check that the Customer ID associated with an Account to be inserted exists.

The following SQL statement checks the Customer ID in the Customer table prior to inserting the account record.

The screenshot displays the configuration interface for a table validation. The main window is titled "Table - Account" and includes a "Delete" link. On the left, there is a "Table" section with "Action" and "Validations" buttons. The "Validations" section shows a tree structure: "Validations" (red), "Customer" (green), and "Customer" (blue). Below this, the "Validation" configuration form is visible, with tabs for "Add", "Update", and "Delete". The form includes the following fields:

- * Name: Customer
- * Group Parent: Validations
- * Member Of Group: Customer
- * Type: SQL
- * Error Code: 25
- * Error Description: Invalid Customer: %%ACCOU
- Enabled:

The "SQL Statement" field contains the following query:

```
SELECT CUSTOMERID FROM
CUSTOMER WHERE
CUSTOMERID= ' %%
ACCOUNT.CUSTOMERID%% '
```

A note at the bottom right of the form reads: "Note: Include qualifier code or token %"

Sample SQL Statement

```
SELECT CUSTOMERID FROM CUSTOMER WHERE CUSTOMERID= ' %%ACCOUNT.CUSTOMERID%% '
```

Calling a Stored Procedure

Table validations can use stored procedures.

The following stored procedure checks to ensure the METER ID is correct. Note that the SQL returns TRUE or FALSE to the adapter.

The screenshot shows the RDL configuration interface. At the top, a tree view shows 'Validations' > 'Validation Groups' > 'Rules' with sub-items 'SP Check', 'Meter Check', and 'Complete Drop'. Below this is a 'Validation' form with the following fields:

- Name:** Meter Check
- Group Parent:** Validations
- Member Of Group:** Rules
- Type:** Stored Procedure
- Error Code:** 83
- Error Description:** Invalid Meter ID %%GLOBAL.METER_ID%%
- Enabled:**
- Stored Procedure:** %%QUAL%%.FN_METER_CHECK
- Parameters (semicolon separated):** %%GLOBAL.METER_ID%%

A note below the Stored Procedure field reads: 'Note: Include qualifier code or token %%QUAL%%'.

Sample Stored Procedure

```
CREATE OR REPLACE function FN_METER_CHECK(sMETERID varchar2) return varchar2 is
ErrorDate varchar2(64);
iCount number;
statusmsg varchar2(64);

begin
    dbms_output.enable;
    dbms_output.put_line('in stored procedure');

    statusMsg := 'TRUE';
    iCount := 0;

    select count(METERID) into iCount
    from METER
    where METERID = sMETERID;

    if iCount = 0 then
        statusmsg:= 'FALSE';
    end if;

    dbms_output.put_line(StatusMsg);
    RETURN STATUSMSG;

end FN_METER_CHECK;
/
```

Defining Properties and Parameters for Adapter Business Rules

This section describes the Properties and Parameters used by Adapter Business Rules, including:

- **Properties Format**
- **Import Properties and Parameters**
- **Import/Interval Properties and Parameters**
- **Interval Properties and Parameters**
- **Assembly Properties and Parameters**
- **COM Properties and Parameters**
- **CustomQuery Properties and Parameters**
- **Rate Properties and Parameters**

Properties Format

Adapter Business Rules are defined in the Business Rules table in the Oracle Utilities Data Repository. The Properties column in this table defines specific properties expected and/or required by the business rule. This column should contain an XML string listing the properties used by the service.

The Properties XML string should be in the following form:

```
<PROPERTIES>
  <PROPERTY NAME="PropertyName1" VALUE="PropertyValue1"/>
  <PROPERTY NAME="PropertyName2" VALUE="PropertyValue2"/>
  .
  .
  .
</PROPERTIES>
```

Element Descriptions

Each of the data elements used by this structure are described below.

Elements:

- **PROPERTIES:** Root element that contains one or more PROPERTY elements.
- **PROPERTY:** Element that defines a specific Property used by the service.

Attributes:

- **NAME:** The name of the Property.
- **VALUE:** The value for the Property.

Names and appropriate values for each property are listed in the descriptions below.

Property Descriptions

Each of the properties used by the services are described in the following format:

PROPERTY: NAME: The name of the Property.

- **Required:** Is the Property required?
- **Possible Values:** Possible values for the Property.
- **Description:** A description of the Property.
- **Example:** An example of the Property.

Import Properties and Parameters

Import business rules use the following properties. Import business rules do not use parameters. See **Chapter 6: Setting Up, Configuring, and Running the Energy Information Platform Adapter** in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about implementing Import business rules.

PROPERTY: xmlstream

- **Required:** Yes
- **Possible Values:** “y” or “n”
- **Description:** Instructs the Adapter parsing engine to keep the XML data that is to be sent to the database engine. Valid values are:
 - y - Yes, keep the XML data sent to the database engine.
 - n - No, do not keep the XML data sent to the database engine.

- **Example:**

```
<PROPERTY NAME='xmlstream' VALUE='y' />
```

PROPERTY: mode

- **Required:** Yes
- **Possible Values:** “event” or “batch”
- **Description:** Instructs the Adapter parsing engine to perform database operations on a per table basis (“event”) or as a batch done at the end of the incoming payload document (“batch”).

- **Example:**

```
<PROPERTY NAME='mode' VALUE='event' />
```

PROPERTY: XslConverter

- **Required:** No
- **Possible Values:** string containing valid network path
- **Description:** Optional property specifying the full class name of an XML converter to apply to the payload. See **XML Converters** on page 6-31 in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about XML Converters.

- **Example:**

```
<PROPERTY NAME='XslConverter' VALUE='c:\lodestar\bin\billing.xslt' />
```

Example of Import properties:

```
<PROPERTIES>
  <PROPERTY NAME='xmlstream' VALUE='y' />
  <PROPERTY NAME='mode' VALUE='event' />
</PROPERTIES>
```

Import/Interval Properties and Parameters

Import/Interval business rules use the same properties as Import business rules, but can also use other properties for processing interval data. Import/Interval business rules do not use parameters. See **Chapter 6: Setting Up, Configuring, and Running the Energy Information Platform Adapter** in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about implementing Import/Interval business rules.

PROPERTY: **intdheadertable**

- **Required:** No
- **Possible Values:** Table name for interval data header information.
- **Description:** Specifies that interval data header information should be inserted into the table specified by this property instead of into the Channel Cut Header (LSCHANNELCUTHEADER) table.

- **Example:**

```
<PROPERTY NAME='intdheadertable' VALUE='LSCHCLDB' />
```

PROPERTY: **intddatatable**

- **Required:** No
- **Possible Values:** Table name for interval data information.
- **Description:** Specifies that interval data information should be inserted into the table specified by this property instead of into the Channel Cut Data (LSCHANNELCUTDATA) table.

- **Example:**

```
<PROPERTY NAME='intddatatable' VALUE='LSCHCLDBDATA' />
```

PROPERTY: **XslConverter**

- **Required:** No
- **Possible Values:** string containing valid network path
- **Description:** Optional property specifying the full class name of an XML converter to apply to the payload. See **XML Converters** on page 6-31 in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about XML Converters.

- **Example:**

```
<PROPERTY NAME='XslConverter' VALUE='c:\lodestar\bin\billing.xslt' />
```

Example of Import Interval properties:

```
<PROPERTIES>
  <PROPERTY NAME='xmlstream' VALUE='y' />
  <PROPERTY NAME='mode' VALUE='event' />
  <PROPERTY NAME='intdheadertable' VALUE='LSCHCLDB' />
  <PROPERTY NAME='intddatatable' VALUE='LSCHCLDBDATA' />
</PROPERTIES>
```

Interval Properties and Parameters

Interval business rules use the following properties. Interval business rules allow import of interval data to either standard or enhanced interval data tables. Interval business rules support the Oracle Utilities Enhanced Input/Output (*.LSE) format or the Oracle Utilities Compact XML Format when importing to standard interval data tables, and the Oracle Utilities Compact XML Format when importing to enhanced interval data tables. Interval business rules do not use parameters. See **Chapter 6: Setting Up, Configuring, and Running the Energy Information Platform Adapter** in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about implementing Import Ready business rules.

Properties

PROPERTY: intdheadertable

- **Required:** No
- **Possible Values:** Table name for interval data header information.
- **Description:** Specifies that interval data header information should be inserted into the table specified by this property instead of into the Channel Cut Header (LSCHANNELCUTHEADER) table. This property is used when importing data into either standard or enhanced interval data tables.

- **Example:**

```
<PROPERTY NAME='intdheadertable' VALUE='LSCHCLDB' />
```

PROPERTY: intdatatable

- **Required:** No
- **Possible Values:** Table name for interval data information.
- **Description:** Specifies that interval data information should be inserted into the table specified by this property instead of into the Channel Cut Data (LSCHANNELCUTDATA) table. **Note:** This property is NOT used when importing data into enhanced interval data tables.

- **Example:**

```
<PROPERTY NAME='intdatatable' VALUE='LSCHCLDBDATA' />
```

PROPERTY: filetype

- **Required:** No (only applicable when importing interval data in LSE format).
- **Possible Values:** "LSE"
- **Description:** Instructs the Adapter that the interval data payload is in the Oracle Utilities Enhanced Input/Output (LSE) format.

- **Example:**

```
<PROPERTY NAME='filetype' VALUE='LSE' />
```

PROPERTY: XslConverter

- **Required:** No
- **Possible Values:** string containing valid network path
- **Description:** Optional property specifying the full class name of an XML converter to apply to the payload. See **XML Converters** on page 6-31 in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about XML Converters.

- **Example:**

```
<PROPERTY NAME='XslConverter' VALUE='c:\lodestar\bin\billing.xslt' />
```

Examples of Interval properties:

Importing LSE data into a standard interval data table:

```
<PROPERTIES>
  <PROPERTY NAME='intdheadertable' VALUE='LSCHCLDB' />
  <PROPERTY NAME='intdatatable' VALUE='LSCHCLDBDATA' />
  <PROPERTY NAME='filetype' VALUE='LSE' />
</PROPERTIES>
```

Importing XML data into an enhanced interval data table:

```
<PROPERTIES>
  <PROPERTY NAME='intdheadertable' VALUE='LSWEATHERDATA' />
</PROPERTIES>
```

Assembly Properties and Parameters

Assembly business rules use the following properties and parameters. See **Chapter 6: Setting Up, Configuring, and Running the Energy Information Platform Adapter** in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about implementing Assembly business rules.

Properties

PROPERTY: assembly

- **Required:** Yes
- **Description:** .NET assembly
- **Example:**

```
<PROPERTY NAME='assembly' VALUE='Lodestar.MDM' />
```

PROPERTY: class

- **Required:** Yes
- **Description:** .NET class name
- **Example:**

```
<PROPERTY NAME='class' VALUE='Lodestar.MDM.BusinessRules.MeterPingTWACS' />
```

PROPERTY: method

- **Required:** Yes
- **Description:** Method name to execute.
- **Example:**

```
<PROPERTY NAME='method' VALUE='Execute' />
```

PROPERTY: WQUEUE

- **Required:** Yes
- **Description:** Work Queue queue code for function calls and errors
- **Example:**

```
<PROPERTY NAME='WQUEUE' VALUE='TWACS' />
```

PROPERTY: WQTYPE

- **Required:** Yes
- **Description:** Work Queue type used to identify function calls
- **Example:**

```
<PROPERTY NAME='WQTYPE' VALUE='METERPING' />
```

PROPERTY: WQEXCEPTIONTYPE

- **Required:** Yes
- **Description:** Work Queue type used to identify failures
- **Example:**

```
<PROPERTY NAME='WQEXCEPTIONTYPE' VALUE='METERPINGEXCEPTION' />
```

PROPERTY: XslConverter

- **Required:** No
- **Possible Values:** string containing valid network path
- **Description:** Optional property specifying the full class name of an XML converter to apply to the payload. See **XML Converters** on page 6-31 in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about XML Converters.
- **Example:**

```
<PROPERTY NAME='XslConverter' VALUE='c:\lodestar\bin\billing.xslt' />
```

Example of Assembly properties:

```
<PROPERTIES>
  <PROPERTY NAME='assembly' VALUE='Lodestar.MDM' />
  <PROPERTY NAME='class' VALUE='Lodestar.MDM.BusinessRules.MeterPingTWACS' />
  <PROPERTY NAME='method' VALUE='Execute' />
  <PROPERTY NAME='WQQUEUE' VALUE='TWACS' />
  <PROPERTY NAME='WQTYPE' VALUE='METERPING' />
  <PROPERTY NAME='WQEXCEPTIONTYPE' VALUE='METERPINGEXCEPTION' />
</PROPERTIES>
```

Parameters

Parameters for Assembly business rules are based on the parameters used by the assembly method to be called.

COM Properties and Parameters

COM business rules use the following properties and parameters. See **Chapter 6: Setting Up, Configuring, and Running the Energy Information Platform Adapter** in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about implementing COM business rules.

Properties**PROPERTY: progid**

- **Required:** No
- **Possible Values:** A valid progid for the COM method to be called.
- **Description:** The progid used by the Adapter to locate the COM component itself. The Adapter cannot run the COM method if it cannot find the COM component. If either the progid or the method name cannot be found, then an error is reported.
- **Example:**

```
<PROPERTY NAME='progid' VALUE='LSACCT.Remittance' />
```

PROPERTY: method

- **Required:** No
- **Possible Values:** A valid COM method

- **Description:** A valid COM method with the appropriate number of parameters and the correctly formatted return XML.
- **Example:**

```
<PROPERTY NAME='method' VALUE='PostPayment' />
```

PROPERTY: xmlstream

- **Required:** No
- **Possible Values:** “y” or “n”
- **Description:** Used to return the completion status of the COM method call. If the user would like to be able to pass data back to a file or a message queue, then the outbound data and the xmlstream property are important.
- **Example:**

```
<PROPERTY NAME='xmlstream' VALUE='y' />
```

PROPERTY: XslConverter

- **Required:** No
- **Possible Values:** string containing valid network path
- **Description:** Optional property specifying the full class name of an XML converter to apply to the payload. See **XML Converters** on page 6-31 in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about XML Converters.
- **Example:**

```
<PROPERTY NAME='XslConverter' VALUE='c:\lodestar\bin\billing.xslt' />
```

Example of COM properties:

```
<PROPERTIES>
  <PROPERTY NAME='progid' VALUE='LSACCT.Remittance' />
  <PROPERTY NAME='method' VALUE='PostPayment' />
  <PROPERTY NAME='xmlstream' VALUE='y' />
</PROPERTIES>
```

Parameters

Parameters for COM business rules include the parameters used by the COM method to be called.

CustomQuery Properties and Parameters

CustomQuery business rules use the following properties and parameters. See **Chapter 6: Setting Up, Configuring, and Running the Energy Information Platform Adapter** in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about implementing CustomQuery business rules.

Properties

PROPERTY: STORED_PROCEDURE_NAME

- **Required:** Yes
- **Description:** The name of the custom query to call
- **Example:**

```
<PROPERTY NAME='STORED_PROCEDURE_NAME' VALUE='sp-get-meters' />
```

PROPERTY: XslConverter

- **Required:** No
- **Possible Values:** string containing valid network path

- **Description:** Optional property specifying the full class name of an XML converter to apply to the payload. See **XML Converters** on page 6-31 in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about XML Converters.
- **Example:**

```
<PROPERTY NAME='XslConverter' VALUE='c:\lodestar\bin\billing.xslt' />
```

Example of CustomQuery properties:

```
<PROPERTIES>
  <PROPERTY NAME='STORED_PROCEDURE_NAME' VALUE='sp-get-meters' />
</PROPERTIES>
```

Parameters

Parameters for CustomQuery business rules are based on the parameters used by the stored procedure method to be called.

Parameters for a custom query can be passed in through the payload or as part of the Optional Parameter field in the business rule configuration. The parameters must be in the form of "NAME" and "VALUE" pairs of "ATTRIBUTE" elements like below.

```
<ATTRIBUTES>
  <ATTRIBUTE NAME="ACCOUNTID" VALUE="9485763-2" />
  <ATTRIBUTE NAME="CUSTOMERID" VALUE="102853AEG" />
  <ATTRIBUTE NAME="METERID" VALUE="000452-432" />
</ATTRIBUTES>
```

Creating Custom Stored Procedures

The stored procedure executed by a CustomQuery business rule is defined in a file named **Procedures.*.xsl** in the C:\LODESTAR\CFG directory on the Adapter server, where the asterisk (*) is a user-defined name for the file.

In addition, the SQL statement executed by some business rules can be overridden by a user defined SQL statement. Allowing these queries to be modified enables the rules to function in environments where the customer has user defined meta-data.

To create a new custom stored procedure, locate one of the pre-installed **Procedures.*.xsl** files in the C:\LODESTAR\Bin directory and copy it to the C:\LODESTAR\CFG directory, and then rename the file. You can edit existing stored procedures, or add new stored procedures.

To edit an existing stored procedure, find the stored procedure in the file and edit the SQL contained within the <sql> node. If adding a new stored procedure, insert a new <stored-procedure> node within the <stored-procedures> node. See example template:

```
<stored-procedure id="sp-YourProcedureName">
  <xsl:stylesheet version="1.0" xmlns:spbc="urn:lsapps.spbccontext" exclude-
result-prefixes="spbc">
  <xsl:output omit-xml-declaration="yes" />
  <xsl:template match="node()|/|@"*>
    <query name="ResultNodeName">
      <sql>
        SELECT
        FROM
        WHERE
      </sql>
    </query>
  </xsl:template>
</xsl:stylesheet>
</stored-procedure>
```

Add the appropriate SQL statements within the <sql> node.

All parameters passed into the stored procedure are attributes of the template match. For example, to use the Serial Number parameter use the following syntax in the stored procedure:

```
<xsl:value-of select="@SERIALNUMBER" />
```

Rate Properties and Parameters

Rate (Oracle Utilities Rules Language) business rules use the following properties and parameters. See **Chapter 6: Setting Up, Configuring, and Running the Energy Information Platform Adapter** in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about implementing Rate business rules.

Properties

PROPERTY: **turnoffratecaching**

- **Required:** No
- **Possible Values:** “y” or “true”
- **Description:** Used to turn off rate schedule caching for rate schedules executed by the Adapter. This property should not be used with the Adapter web service interface.
 - y - Yes, turn off rate schedule caching for rate schedules executed by the Adapter.
 - true - Yes, turn off rate schedule caching for rate schedules executed by the Adapter.
- **Example:**

```
<PROPERTY NAME='turnoffratecaching' VALUE='y' />
```

PROPERTY: **useclserver**

- **Required:** No
- **Possible Values:** “y” or “true”
- **Description:** Used to direct Adapter rate business rules to execute using the Rules Language COM server as a separate process. This is an out of process COM server than will run the request and then exit.
 - y - Yes, execute using the Rules Language COM server as a separate process.
 - true - Yes, execute using the Rules Language COM server as a separate process.
- **Example:**

```
<PROPERTY NAME='useclserver' VALUE='y' />
```

PROPERTY: **xmlstream**

- **Required:** No
- **Possible Values:** “y” or “n”
- **Description:** Used to return an outbound payload to the client process. It is not mandatory to return a outbound payload.
 - y - Yes, return an outbound payload to the client process.
 - n - No, do not return an outbound payload to the client process.
- **Example:**

```
<PROPERTY NAME='xmlstream' VALUE='y' />
```

PROPERTY: **XslConverter**

- **Required:** No
- **Possible Values:** string containing valid network path
- **Description:** Optional property specifying the full class name of an XML converter to apply to the payload. See **XML Converters** on page 6-31 in the *Oracle Utilities Energy Information Platform Configuration Guide* for more information about XML Converters.
- **Example:**

```
<PROPERTY NAME='XslConverter' VALUE='c:\lodestar\bin\billing.xslt' />
```

Example of Rate properties:

```
<PROPERTIES>
  <PROPERTY NAME='xmlstream' VALUE='y' />
</PROPERTIES>
```

Parameters

Parameters for Rate business rules include an XML structure that indicates the rate schedule to be run.

Example:

```
<LODESTAR_RUNSCHEDULE>
  <DATASOURCE>
    <NAME>Local</NAME>
    <CONNECTSTRING>DSN=local;UID=User1;PWD=password;</CONNECTSTRING>
    <QUALIFIER>testq</QUALIFIER>
  </DATASOURCE>
  <TIMEOUT>3600</TIMEOUT>
  <CONFIG_FILE_NAME>c:\lodestar\cfg\lodestar.cfg</CONFIG_FILE_NAME>
  <SCHEDULE_ARGUMENTS>
    <INTERVAL_DATABASE>RDB</INTERVAL_DATABASE>
    <RATE_FORM_IDENTIFIER>GLOBAL:GLOBAL:TEST_SCHEDULE</RATE_FORM_IDENTIFIER>
    <START_DATE>2003/11/25</START_DATE>
    <SAVE_RESULTS/>
    <INTERVAL_DATA_ERROR>3</INTERVAL_DATA_ERROR>
    <ACCOUNT><ALL/></ACCOUNT>
    <RSID_VALUES>
      <RSID_VALUE NAME="TEST" TYPE="S" VALUE="TEST VALUE" />
    </RSID_VALUES>
  </SCHEDULE_ARGUMENTS>
</LODESTAR_RUNSCHEDULE>
```

Element Definitions:

Each of the data elements used in this structure is described below.

LODESTAR_RUNSCHEDULE: Root element containing a DATASOURCE and SCHEDULE_ARGUMENTS element that define the rate schedule to be run.

Elements:

DATASOURCE: Element containing connection information for the data source to be accessed by the rate schedule.

Elements:

NAME: Name of the data source.

CONNECTSTRING: Connection string to the data source, using the following syntax:
DSN=local;UID=User1;PWD=password;

QUALIFIER: Qualifier for the data source.

TIMEOUT: Number of seconds after which the process will time out.

USERID: User name of the user initiating the rate schedule.

CONFIG_FILE_NAME: The name of the configuration file that defines the working environment of the software (e.g., directs the software where to find and place the application data files and so on). If you do not supply a value for *configfilename*, the system uses the default, which is LODESTAR.CFG. For information about the contents of this configuration file, please refer to the *Oracle Utilities Energy Information Platform Configuration Guide*.

SCHEDULE_ARGUMENTS: Element containing specific arguments and parameters used by the rate schedule.

Elements:

INTERVAL_DATABASE_NAME: The name of the Interval Database (btrieve file) that contains the interval data for the calculations. RDB indicates the rate schedule use the interval data stored in the LSChannel Cut Header table in the Oracle Utilities Data Repository.

RATE_FORM_IDENTIFIER: The identifier for the rate form. **Required.** OPCO:JUR:RS[:VER] are the operating company code, jurisdiction code, rate form code, and optional version number that together identify the rate form. If you do not supply a version number, the program automatically uses the rate form that was applicable on the stop date of the analysis period (see STOP_DATE). If you do supply a version number, the program uses the trial version indicated (typically used only for testing).

START_DATE: The start date of the date range for the calculations. You can specify the date as an absolute or relative value, as described in **Chapter 8: Setting Up Processing to run in Batch Mode** in the *Oracle Utilities Energy Information Platform Configuration Guide*.

STOP_DATE: The stop date of the date range for the calculations. You can specify the date as an absolute or relative value, as described in **Chapter 8: Setting Up Processing to run in Batch Mode** in the *Oracle Utilities Energy Information Platform Configuration Guide*.

SAVE_RESULTS: Tells the program to save the results, as specified in the rate form. If you leave this switch out of the command, the program ignores all SAVE statements in the rate form (this is useful if you want to debug the rate form before using it in a production mode, for example). If you supply the switch, the program saves interval data, table saves, and CIS records. Since RUNRS does not input an account, there is no saving of determinants to a Bill History record, unless -ai is specified (see below).

INTERVAL_DATA_ERROR: Sets interval data handling. Uses the same values as the INTD_ERROR_STOP configuration parameter (0,1,2,3). Default # is 1 (error stop).

ACCOUNT: Optional Account All/ID/List name - default is no account. If you specify **ID** you can save to the Bill History Table.

CUSTOMER: Optional Customer All/ID/List name - default is no customer.

Elements: (apply to either ACCOUNT or CUSTOMER)

ALL: Specifies whether or not to process all Accounts/Customers. See ACCOUNT/CUSTOMER above.

ID: Specifies the Account/Customer ID to process. See ACCOUNT/CUSTOMER above.

LIST_NAME: Specifies the list name of Accounts/Customers to process. See ACCOUNT/CUSTOMER above.

RSID_VALUES: Element that contains rate schedule identifiers values.

Elements:

RSID_VALUE: Element containing a single rate schedule identifier value.

Attributes:

NAME: The name of the identifier value.

TYPE: The type of the identifier value. Can be "S" (string), "D" (date), or "F" (float).

VALUE: The value for the identifier.

Searching Adapter Transactions

The Search Adapter Runtime option allows users to search for inbound transactions handled by the Adapter.

How to search inbound Adapter transactions:

1. Select **Tools and Utilities->Adapter Runtime->Search**.

The Inbound screen opens.

2. Enter the search criteria in the appropriate field.

You can search based on the ID, Inbound Source, Inbound Filename, Payload Type (ADAPTER), Receive Date, and Status code of the transaction(s).

See **Searching Database Tables** on page 8-7 for more information about searching records, including the use of operands and wildcards.

To include child records, check the **Include Child Records** checkbox.

3. Click **Search** to perform the search. To reset the search fields to their previous values, click **Reset**. To clear all the search fields, click **Clear**.
4. The search results appear on the Inbound screen.

The Inbound screen displays the following information for each transaction:

- ID
- Inbound Source
- Inbound Filename
- Receive Date
- Status Code

See **Viewing Adapter Transactions** on page 11-126 for more information about viewing individual transactions.

5. To sort the results by one of the columns, click the appropriate column heading. For example, to sort the results by Inbound Source, click the Inbound Source column heading. If there is more than one page of results, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.
6. To view a transaction, click on the corresponding [...] link. The selected transaction will appear in the Inbound window. See **Viewing Adapter Transactions** on page 11-126 for more information.
7. To perform another search, click **Search**. To refresh the contents of the Inbound screen, click the refresh icon.

Viewing Adapter Transactions

Individual inbound transactions are viewed on the Inbound screen. This screen opens when you select a transaction from the Inbound search results screen.

The screenshot shows the 'Inbound' screen with the following sections:

- History:** Inbound (dropdown), navigation arrows, and a form with fields: ID (2203), Status Code (E), Inbound Source (Import_Demo), User ID (TR450), Inbound Filename (C:\Training\Import\Coppy of BXT), Timestamp (4/11/2006 14:46:55), and Receive Date (4/11/2006 14:46:54). A '* Required' note is present.
- Child Records:** A section with the text 'No items found'.
- Exceptions:** A table with a header row: ID, Exception Source, Exception Date, Exception Message. Below the header is one row: 1401, Import_Demo, 4/11/2006, BRE: Meter ID BXT02_RES10 does not exist.

The Inbound screen displays the following information for the transaction displayed:

- **ID:** The ID of the inbound transaction. IDs are generated by the Adapter when processed.
- **Inbound Source:** The source of the inbound transaction. This is the name of the Runtime Service that processes the payload.
- **Inbound Filename:** The filename, payload type, or JMS queue name of the inbound transaction.
- **Receive Date:** The date the inbound transaction was received.
- **Status Code:** The status code of the inbound transaction. The status code can be one of the following:
 - C: Completed
 - E: Error
- **Child Records:** A list of child records associated with the inbound transaction. Child records are only created if using the Adapter Payload Splitter. See **Viewing Child Records** on page 11-127 for more information.
- **Exceptions:** A list of exceptions associated with the inbound transaction. Exceptions are stored in the Inbound Exception table. See **Viewing Exceptions** on page 11-127 for more information about viewing exceptions on the Inbound screen.

Viewing Child Records

Child records associated with the inbound payload are listed in the Child Records pane. These are portions of the incoming payload that have been created by the Adapter Payload Splitter. If there is more than one page of child records, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.

The Child Record pane displays the following information for each child record:

- **ID:** The ID of the child record. IDs are generated by the Adapter when processed.
- **Inbound Source:** The source of the inbound child record. This is the name of the Runtime Service that processes the payload.
- **Inbound Filename:** The filename, payload type, or queue name of the inbound child record.
- **Receive Date:** The date the inbound child record was received.
- **Status Code:** The status code of the inbound child record. The status code can be one of the following:
 - C: Completed
 - E: Error

To view a child record, click on the corresponding [...] link. The selected record will appear in the Inbound window.

Viewing Exceptions

Exceptions associated with the inbound payload are listed in the Exceptions pane. If there is more than one page of exceptions, you can move between pages using the ◀ and ▶ buttons. To change the number of results that appears on each page, enter the number in the **Rows** field.

The Exceptions pane displays the following information for each exception:

- **ID:** The ID of the exception.
- **Exception Source:** The source of the exception.
- **Exception Date:** The date on which the exception occurred.
- **Exception Message:** The message associated with the exception.

Viewing Payloads

To view the transaction's payload, click **View Payload**. The Payload window opens, displaying the transaction's payload in XML format.

Note that a transaction's payload is only viewable if the `STORAGE_LEVEL` property for the Runtime Service used to process the payload is set to 1 or 2. See **Common Properties** on page 11-32 for more information.

If a delimited file is not converted to XML, attempts to view the payload will return an error. To view the payload, right-click in the error page and select **View Source**.

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