**Oracle Utilities
Application Framework**

Business Process Guide

Release 4.3.0.0

E52575-01

March 2015

ORACLE®

Oracle Utilities Application Framework Business Process Guide

Release 4.3.0.0

E52575-01

March 2015

Documentation build: 4.4.2015 6:30:28 [F1_1428154228000]

Contents

Chapter 1

Overview

The Business Process Guide describes how to use the Oracle Utilities Application Framework including the standard features of the framework. This includes:

System-Wide Standards

Configurable User Interface Features

Batch Jobs

Reports

Running Your XAI Environment

To Do Processing

This guide contains the same content as the Framework Business Process section of the online help.

Chapter 2

System-Wide Standards

This document is the central reference to basic system concepts, features, and standards.

Page Components

This section serves as a central reference to the basic building blocks of all pages used in the system.

Characteristics Common to All Pages

Oracle Utilities Application Framework screens comprise the following main areas:

1. *The Application Toolbar*
2. *The Page Title Area*
3. *The Object Display Area*
4. *The Dashboard Area*
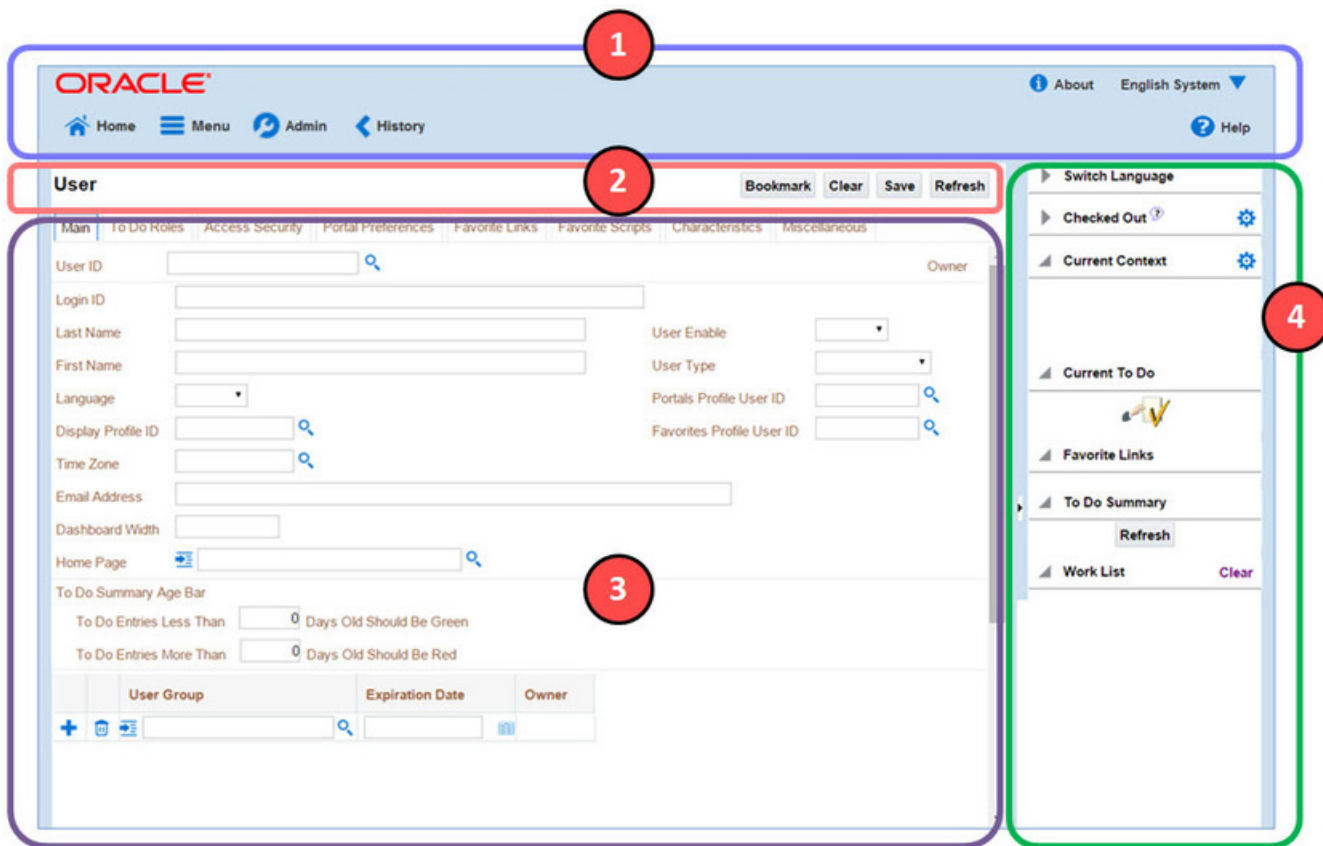
NOTE: The look and feel of the application may be modified after the product is installed. See *Custom Look and Feel Options* for customization information, including how to change colors, fonts, and other system features. The information provided in this document represents features and functionality available only in the delivered product.

The Application Toolbar

This section describes the features available on the application toolbar.

Home Button

Click the **Home** button, [Home], on the Application Toolbar to open your home page. Your home page is defined in *User Preferences*.

Keyboard shortcut: `Alt+O`

Menu

Menu is available in the application toolbar to help you navigate to the different pages of the system

The keyboard shortcut to open the Menu: `Ctrl+Alt+M`

The menu list is organized by functional area. Clicking the Menu button displays each functional area. Clicking a functional area, in turn, displays a submenu that contains pages within that area.
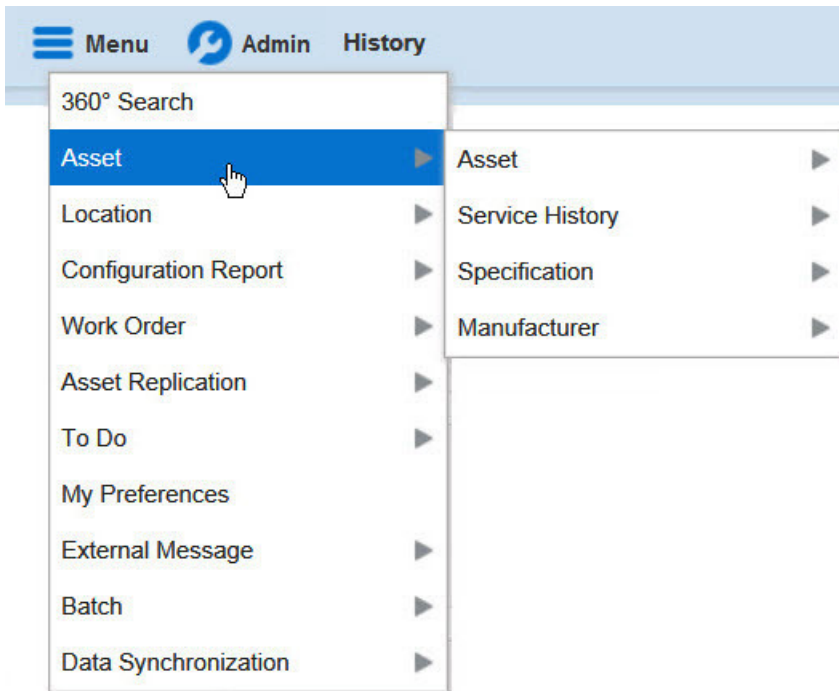
The pages within each functional area *typically* have two options: Add and Search. If the menu item does not have an Add or Search option, select the menu item itself.

How the Add and Search option behaves depends upon whether the maintenance page is fixed or portal-based.

Fixed:

- **Add:** Displays the maintenance page with empty fields so that the user can complete the information and save the entity.
- **Search:** Displays a pop-up search window for the user to enter the search criteria and select the entity to display. Once the entity is selected, the user is taken to the maintenance map with the data populated in the fields.

Portal-Based:

- **Add:** Either navigates to a page where the user can select the entity type or business object, or directly to the input map where the user can enter and save the entity.
- **Search:** Displays a search portal where the user can enter the search criteria and select the desired entity. Once the entity is selected, the user is typically taken to a maintenance portal or the information is broadcast to other zones within the same portal.
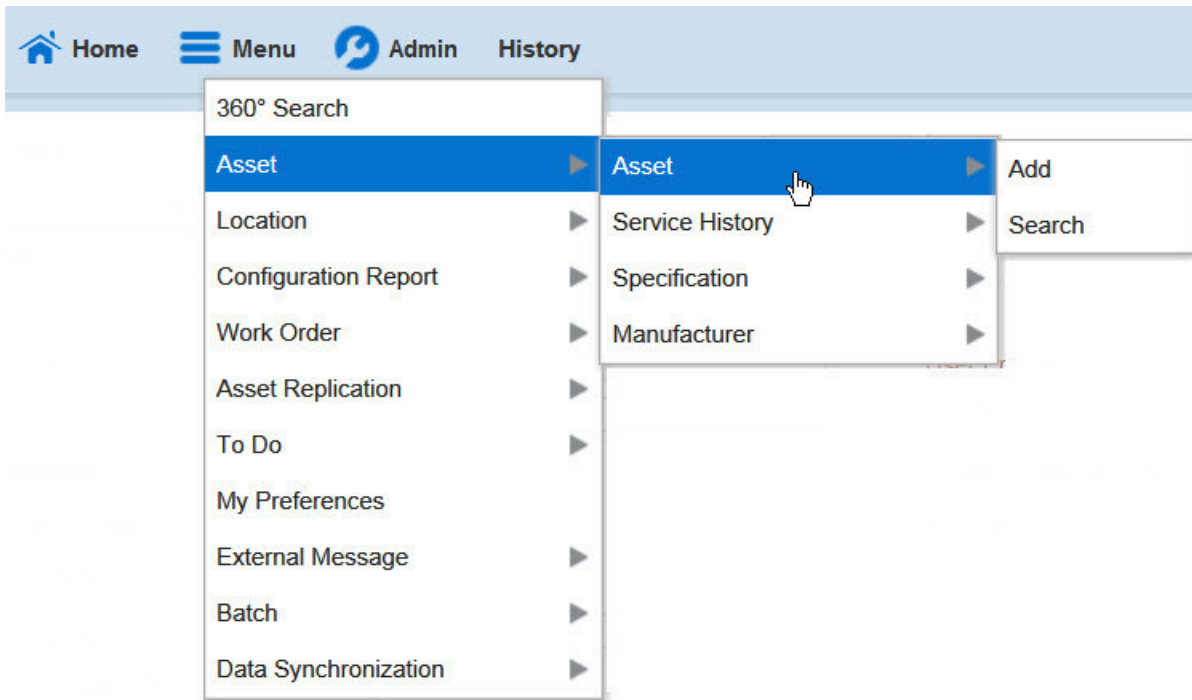
Admin Menu

The Admin dropdown is available in the application toolbar to help you navigate to the different pages of the system.

The keyboard shortcut to open Admin: `Ctrl+Alt+A`

Depending on how your implementation has configured the Admin menu list, it may be organized either by functional area or alphabetically.

Clicking the Admin button displays each functional area or alphabetical list. Clicking one of the options, in turn, displays a submenu that contains pages within that area. The following is an example of the Admin menu organized alphabetically.
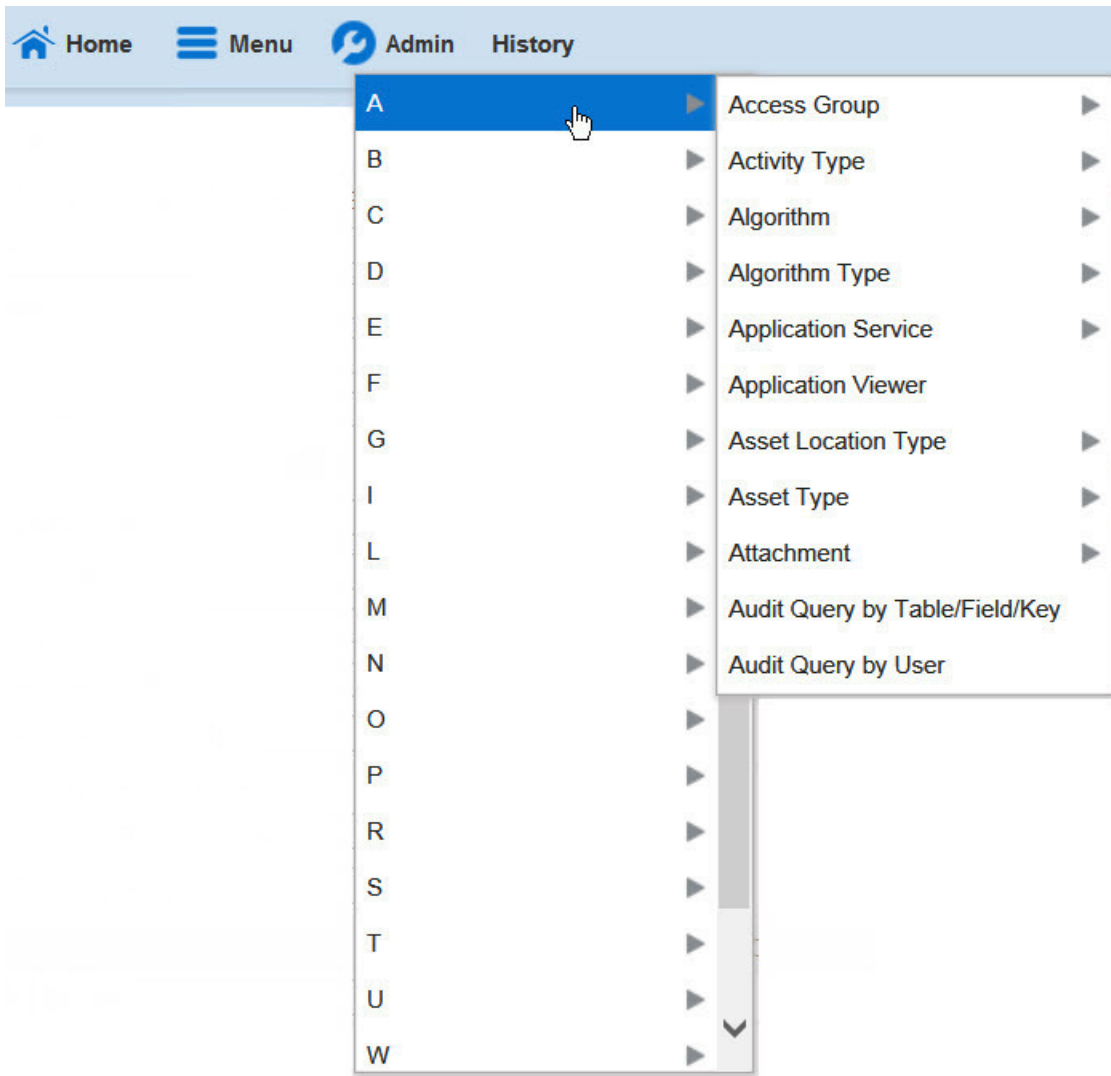
NOTE: Refer to *Installation Options* for information about the admin menu configuration options.

The menu lines displayed for each functional area *typically* have two options: Add and Search. If the menu item does not have an Add or Search option, select the menu item itself. See *Menu* for more information about these options.
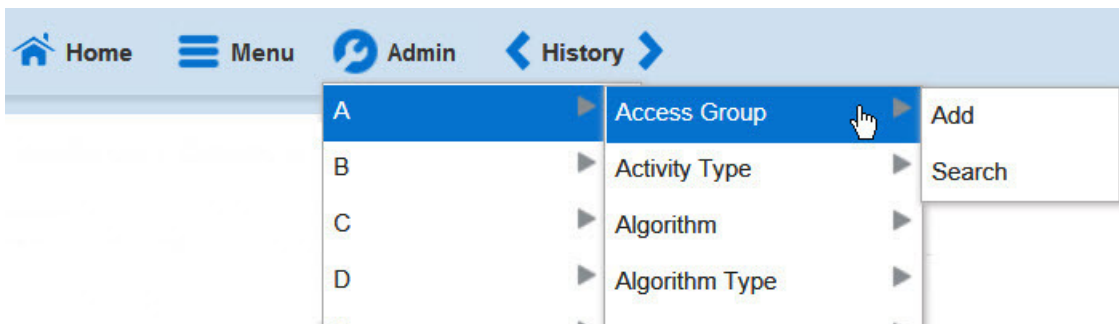
Back Button

Click the **Back** button on the application toolbar to open the previously visited page.

Keyboard shortcut: `Alt+B`.

The **back** and **forward** navigation buttons, as well as the **History** list, appear in the application toolbar only when page use warrants their appearance.

NOTE: Under certain circumstances, such as revisiting a page that was left unsaved after being loaded with default data, a page may not appear as it did when you left it.

History Button

Click the **History** button to display a list of previously visited pages. When you click on an entry in the list to return to an earlier page, all items above the selected page are removed from the list.

The **back** and **forward** navigation buttons, as well as the **History** list, appear in the application toolbar only when page use warrants their appearance.

Keyboard shortcut: `Ctrl+Alt+H`

Forward Button

Click the **Forward** button to return to the page that was most recently dismissed.

Keyboard shortcut: `Alt+G`.

The **back** and **forward** navigation buttons, as well as the **History** list, appear in the application toolbar only when page use warrants their appearance.

NOTE: Under certain circumstances, such as revisiting a page that was left unsaved after being loaded with default data, a page may not appear as it did when you left it.

About Button

Click the **about** button to display a window that describes the current and release information for your version of your product.

The about window shows a variety of information including:

- Who the system is licensed to

- The user ID that is logged in
- The release ID of the product
- The release ID of the framework used to construct the product
- The release ID of any customer specific modifications (this comes from the *installation record*)

User Menu

The User menu is available in the application toolbar to provide access to user-specific options.

Through this dropdown, the user can access their *User Preferences* or *Logout* of their current session.

> **NOTE: Configurable Menu.** Additional menu entries may be visible in your implementation as this menu configuration allows for additional options to be defined.

Preferences

Click the **Preferences** menu item in the User Menu to view or modify your settings in a form that appears in the **Main** tab in the object display area.
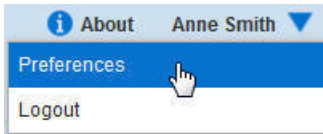
Logout

Click the **Logout** menu item in the User Menu to complete your current session of the application. Clicking this item logs the current user out and displays the Welcome page so that another user can login.
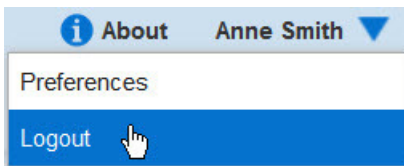
Help Button

Click the **Help** button in the Application Toolbar to open context-sensitive Help in a new browser window.
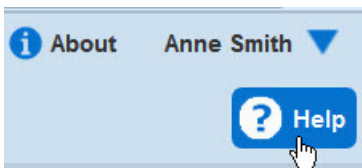
Keyboard shortcut: Alt+F1

Page Title Area

The Page Title Area displays the page title and the page actions toolbar.

For certain pages in the system, the page title may be followed by an information string. It is only applicable to portal-based pages that display a single record. This information is only visible if the portal has been configured to display the primary key's information string. Typically only "stand alone" maintenance portals are configured to show the information string, whereas "all-in-one" portals are not configured this way.

> **FASTPATH:** Refer to *Portals and Zones Common to Base Product Pages* for more information about standard base product portals.

> **NOTE:** If an information string is long and would interfere with a page actions button, the information string will automatically be truncated and suffixed by an ellipsis, "…", indicating that more information is available. In this situation, the missing text can be viewed if the user hovers their mouse over the string.

The Page Actions Toolbar displays standard control options, such as Save and Duplicate. More detail about the actions that may appear are described in the following section.

Page Actions Toolbar

In the Page Title Area, control functions appear in the Page Actions Toolbar; such as, Clear, Save, Duplicate, Delete and Refresh buttons.

> **NOTE:**
> Buttons in the Page Title Area appear as the function is available to the user; for example, the Delete button will not appear if the user has made any changes to the page's content, or does not have the necessary security rights for this action.
>
> In addition, other functions that are specific to a portal-based page may appear in the toolbar, if configured. For example, the ability to navigate to the Search zone for a specific maintenance object may be visible on the maintenance portal.

This section describes the standard features that are available in the Page Actions Toolbar.

Bookmark Button

Click the Bookmark button on the Page Actions Toolbar to save the current page and context to the bookmarks list.

> **NOTE: Secured.** This button is secured using the application service **F1–BOOKMARKS**. Users that do not have security for the application service will not see the Bookmark button (or the corresponding dashboard zone).

After clicking the Bookmark button, you are prompted to provide a name for the bookmark. After saving, it is visible in the *Bookmarks Zone*, allowing you to return to this page with this context loaded with one click.
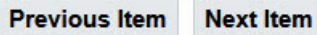
NOTE: Unsaved data will not be included in the bookmark. If you view a record and make changes to data without saving the changes and then bookmark the page, the unsaved changes are not included in the bookmark information.

You may change the name of the bookmark or change the sequence of the bookmarks by navigating to the *User — Bookmarks* in the user preferences.

Next/Previous Item Buttons

Previous Item   Next Item

The (**Previous Item** and **Next Item** buttons appear in the Page Actions Toolbar under these conditions:

- You access a fixed page, meaning that it is not portal-based.
- You use a search page to display an item.
- There are multiple items in the search results list *below* or *above* the selected item.

If, for example, you enter search criteria of "Smith" on the User Search page, you might see the following results:

- Smith, Albert
- Smith, Peter
- Smith, Zane

If you select **Smith, Peter**, Peter's user information is displayed on the User page. If you then click the **Next Item** button, **Smith, Zane** will be displayed. In addition, because **Smith, Zane** is the last entry in the search results, the **Next Item** button is no longer needed and will not appear in the Page Actions Toolbar.

If you then click the **Previous Item** button, **Smith, Peter** will be displayed; click again and the **Smith, Albert** record will appear, and, because **Smith, Albert** is the first entry in the search results, the **Next Item** button is no longer needed and will not appear in the Page Actions Toolbar.

Keyboard shortcuts: `Alt+P, Alt+N`.

Duplicate Button

Click the **Duplicate** button in the Page Actions Toolbar to create a duplicate of the currently selected object.

Duplicate

Duplicate (Ctrl+Alt+D)
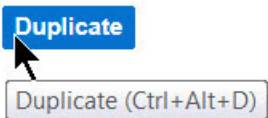
Before the new object is added to the database, a dialog appears in which you must enter the unique identifier for the duplicate object. When you click OK, the system creates the record by copying the original record. It may be helpful to think of the duplication function as the equivalent of a "save as" action.

Keyboard shortcut: `Ctrl+Alt+D`.

NOTE: Copying ancillary information for a record sometimes requires confirmation during a duplication request. If so, you may also be asked if you also want to duplicate ancillary information. If, for example, you duplicate a user group, besides supplying the ID of the new user group, you are asked if all users in the original user group should be linked to the new user group.

This button does not appear in the Page Actions Toolbar when:

- Duplication is not supported for the current object.

- You are on a portal based page. (For these types of pages, if duplication is supported, the actions are defined in a zone on the portal.)
- You have made changes to the object without committing the changes to the database by clicking Save. (After making changes, you must either discard them using the **Refresh** button, or save them.)

Delete Button

Not all transactions have the capability to be deleted. Deletion is related to the business impact of the action. In some transactions, Delete is present for some scenarios and unavailable for others; for example, you may not be able to delete a record at a certain status level.

NOTE:

If you make a change to an object and do not save the changes to the database, you cannot delete the object until you either save the changes or refresh the object with the contents on the database.

Before you delete an object, the system verifies that the object is not referenced anywhere in the system. If it is, you cannot delete it. If, for example, you attempt to delete a user, the system ensures this user has not been referenced in a user group or on a To Do.

Depending on the type of page that you are using, the option to delete may vary.

- Fixed pages display a Delete button in the page actions toolbar when the option is available.
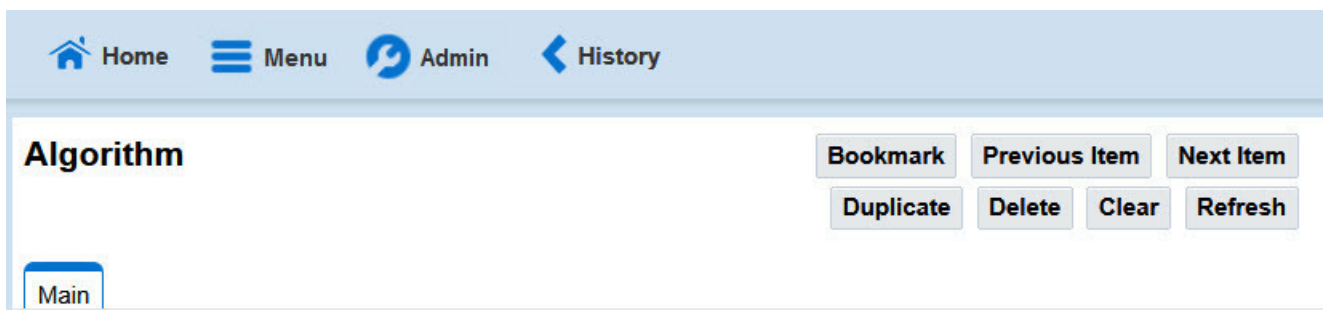
- Portal-based pages display the Delete button in the object-related map.
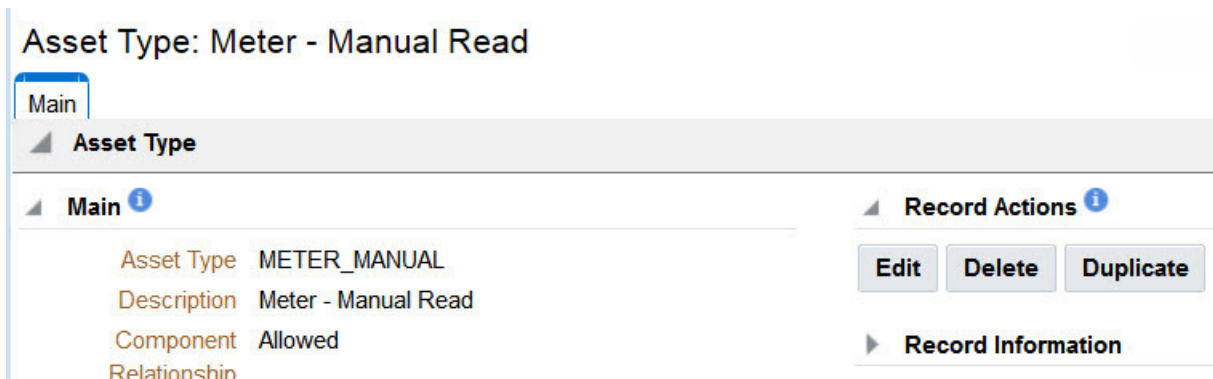
- List zones on All in One portals commonly display the Delete button (garbage can icon) next to the entity in the search results.

In all cases, before the object is deleted, a confirmation dialog is displayed.

CAUTION: A timeout situation could occur as the system attempts to verify the use of the deleted object if the object is referenced in many places *and* involves large volumes of production data. If this timeout situation occurs, you must with your database administration group to delete the offending object.

Clear Button

Click the **Clear** button to remove the values from the currently displayed object's fields. This action is typically used to clear input fields when adding a new object.

Keyboard shortcut: `Ctrl+Alt+C`.
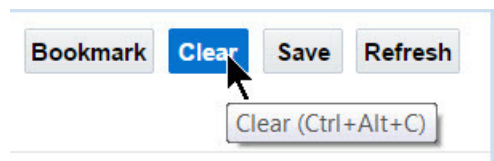
Save Button

Clicking the **Save** button saves any changes you have made in the data on the current object.
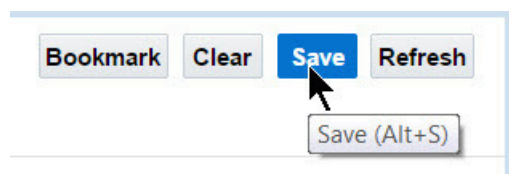
Keyboard shortcut: `Alt+S`.

The button does not appear unless:

- You enter a page in add mode and default values are loaded.
- You make changes to an object after it is displayed (note that you must tab or click out of the field before the Save button appears).

Refresh Button

Click the Refresh button to reload the values on the page with those from the database.

CAUTION: All unsaved changes are discarded.

Keyboard shortcut: `Alt+R`.
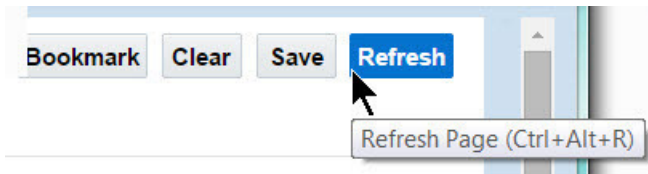
Object Display Area

The Object Display Area contains the details of the object(s) currently being viewed or maintained. For example, if you display a portal, its zones are displayed in this area.

Special Comments about the Components that May Appear

Because many of the page components follow Internet standards of operation, it seems redundant to describe their function. Instead, this section describes special features, or enhancements, that appear within the framework.

Text Box

The following is an example of a basic text box:

If the text box is a large field, the text box may be configured to enable scrolling. In this situation, an *Expanded Edit* icon, pencil, will appear adjacent to it.
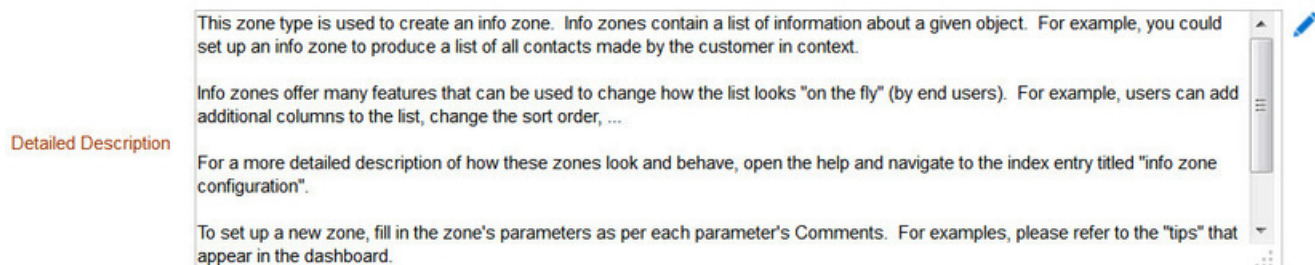
Additional capabilities are provided to display and edit data in these text boxes:

- If the field contains more text than is visible, a pop-up that displays the full text appears when you hover your mouse over the text box. The text in the pop-up can be selected and copied.
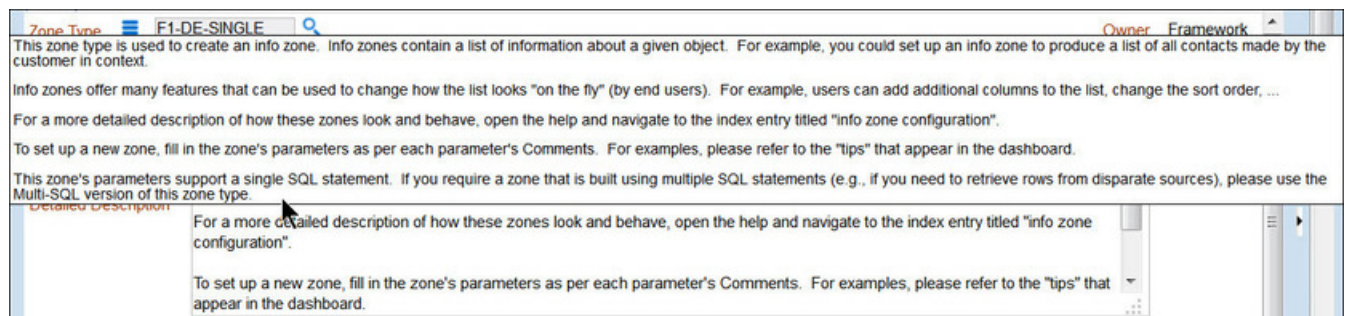
- If you click the Expanded Edit icon, an editable pop-up window appears. If the field is not protected as a result of business rules for the page, you may modify the text in this window.
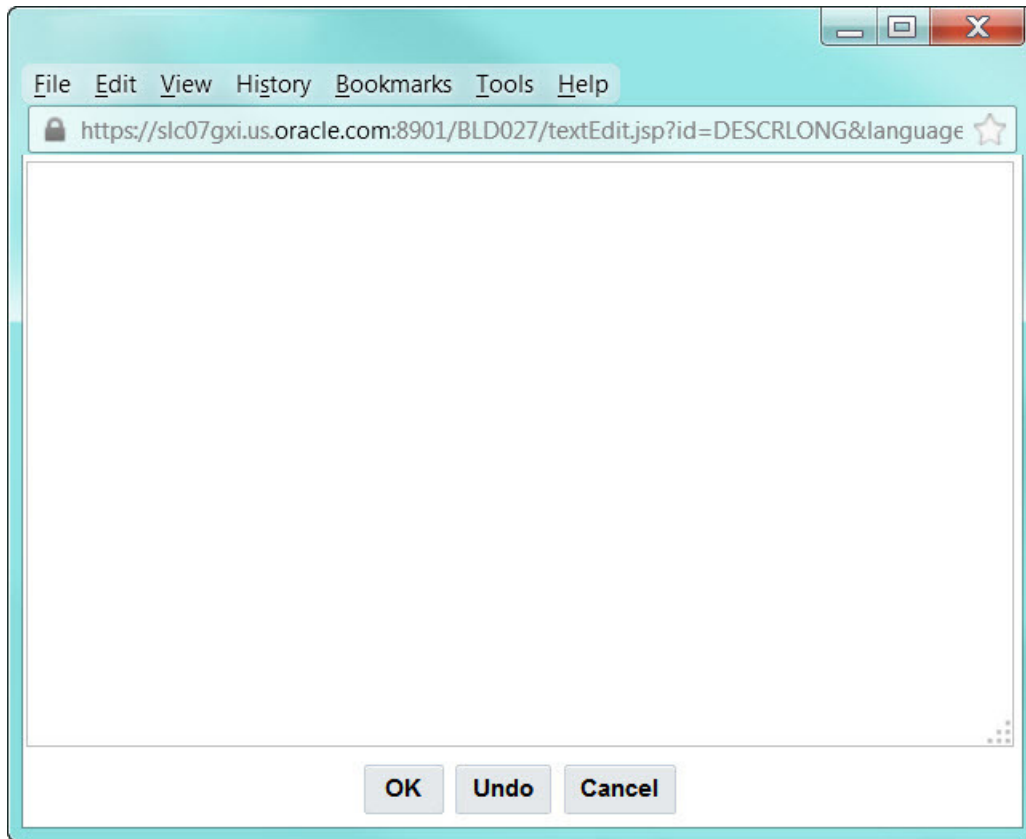
NOTE:

Special characters are converted to equivalent standard characters when entered in a text box:

Entered Character Description	Unicode	Converted Character Description
Curly left double quote.	U+201D	Straight double quote.
Curly right double quote.	U+201C	Straight double quote.
Curly left single quote.	U+2019	Straight single quote.
Curly right single quote.	U+2018	Straight single quote.
En dash.	U+2013	Simple hyphen.
Em dash.	U+2014	Simple hyphen.
Ellipse	U+2026	Three dots.
Middle dot (bullet / centered dot)	U+00B7	Asterisk.
Fraction 1/4 (using 1 character).	U+00BC	1/4 (using three separate characters).
Fraction 1/2 (using 1 character).	U+00BD	1/2 (using three separate characters).
Fraction 3/4 (using 1 character).	U+00BE	3/4 (using three separate characters).

Date Only Field

When only the date is required, the Date field looks as follows:
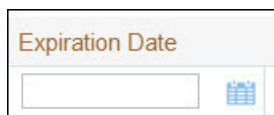
If you click the calendar icon next to the date field, or you double-click inside the date field, the following window appears:
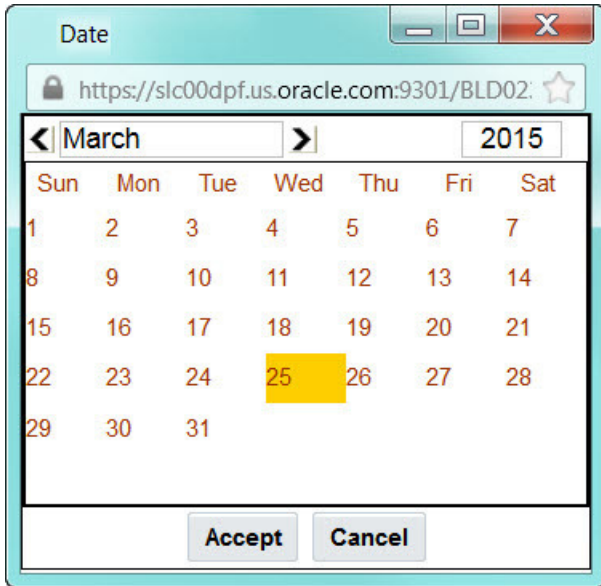
If the date field was blank, the current date is highlighted when the window first appears. If the date field contained a date, it is displayed.

You can double-click the desired date, or you can select a date and click Accept to close the date window and populate the date field.

Date and Time Field

When both the date and time are required, the Date and Time fields typically look as follows:
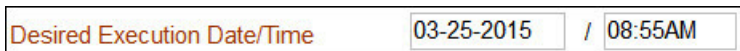
If you double-click or press the Enter key while the cursor is in a Date and Time field, the following window appears:
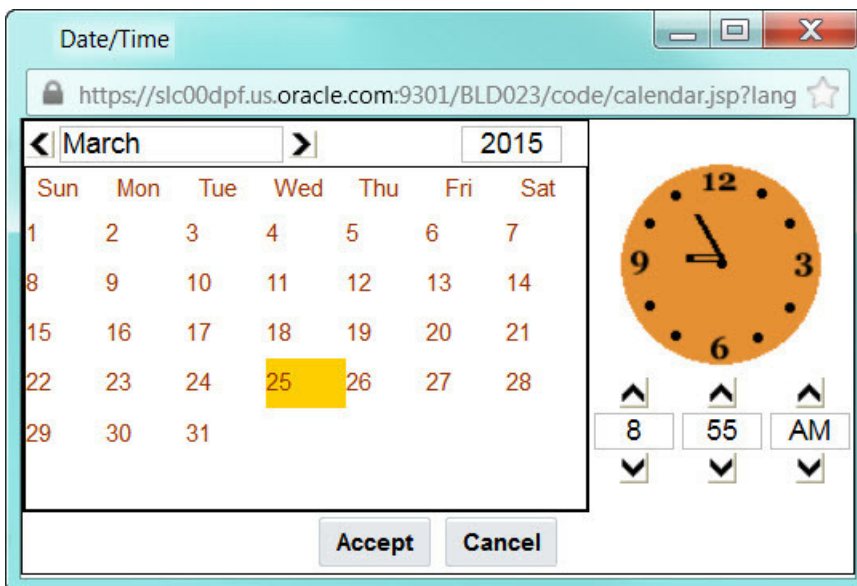
Select the date and use the toggle buttons (or enter) the time and then click **Accept** to populate the original fields.

NOTE: The user cannot select and move the hands on the clock to set the time.
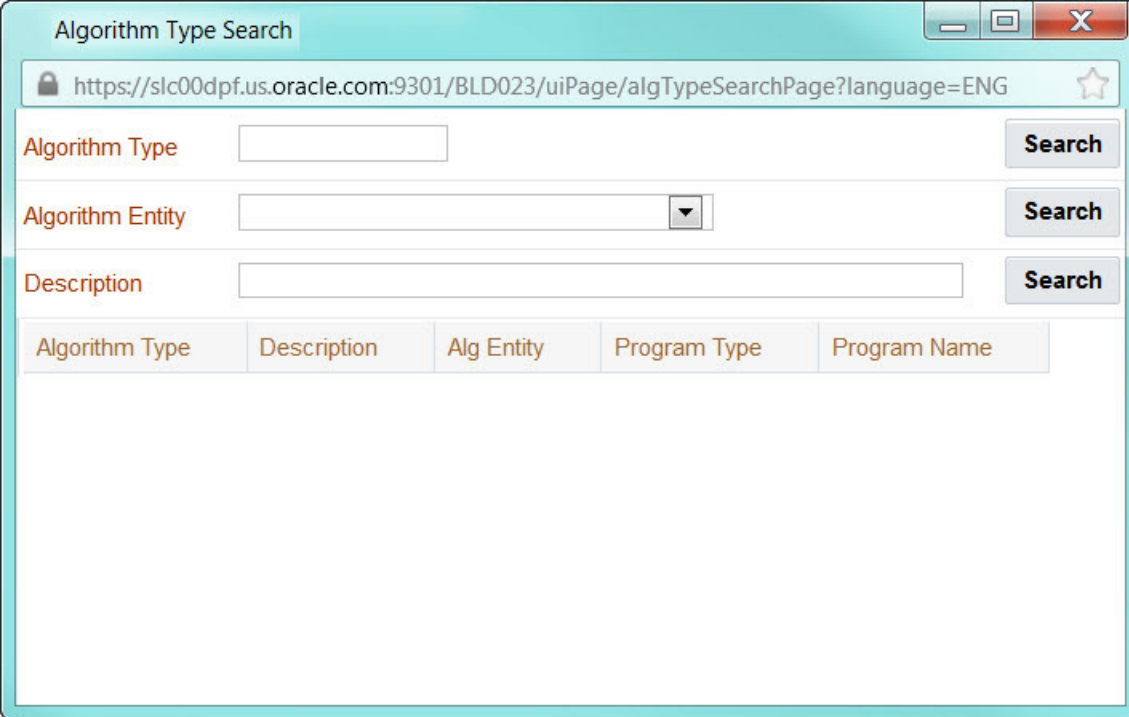
Search Button

The search button appears primarily as a magnifying glass.

Zone Type   ≡   F1-DE-SINGLE   🔍

When using a pop-up search window, the search button can appear as a button with its function labeled.

You can have the system search for an item that matches the data you entered using any of the following methods:

- Enter a value in the search field and press **Enter** while the cursor is in the search field. The system assumes you want to search for the value entered and pre-populates it in the search window's search criteria. If a unique match can be found, the system automatically populates the field with details corresponding to the record found. If a unique match cannot be found (either no matches or multiple matches), a search page opens containing selectable items.

- Click the Search button without entering a criteria. This will typically cause a pop-up search window to appear so that you can further refine your search.

- Enter a value and tab out of the search field. The system looks for a value that exactly matches what you entered. If it cannot find such a value, the search dialog will not be presented.

When an item is selected in the search page, the search page closes and the input field is populated with the value selected.

NOTE: Sorting columns within the search grid. You may click on the column heading of columns in a search grid to cause the contents of the grid to be sorted. Refer to *Sorting Functionality* for more information.

Context Menu Button

The Context Menu button is a small version of the Menu button from the Application Toolbar. An example is shown below:

Algorithm Type
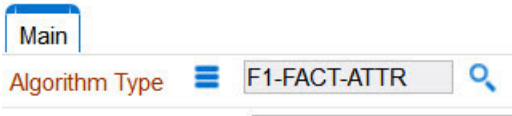
Context menus exist to help you navigate to other pages and populating the page with the current context (by passing the ID of the related object). In addition, the menu items offered in a Context Menu differ depending on the entity that the menu is related to; for example, when you click the Algorithm Type context menu, a pop-up menu similar to this appears:

Algorithm Type
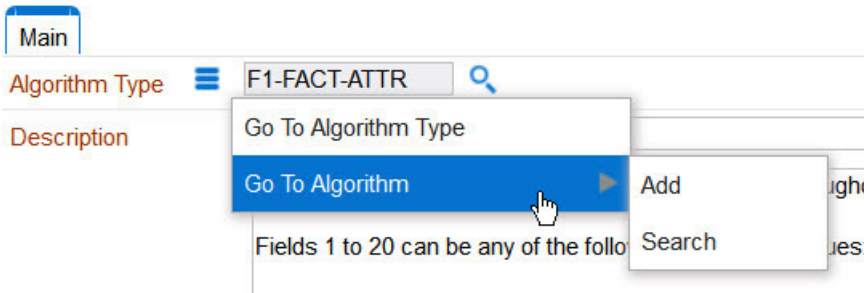
Different context menus exist for each of the major objects in the system; for example, in Customer Care and Billing, the context menu for Premise contains premise-oriented menu items, whereas the context menu for Account contains account-oriented menu items.

Go To Button

Clicking a Go To button, , opens the page for the related object - it functions like a hyperlink.
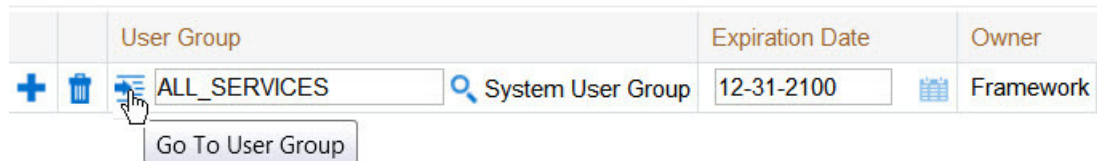
Broadcast Button

Some zones have been configured to "broadcast" unique identifiers to other zones within the portal; if so, you'll see a broadcast tower icon, , in the first column. Clicking the icon causes specific zones to reload — these zones that have been configured to rebuild when the unique identifier is received. For example, you might have configured a zone to display the image of a bill when a bill ID is broadcast from an info zone.

Work Lists

The work list buttons can appear in a zone's column heading, .

Clicking the icon results in populating the dashboard *Work List Zone* with the entire column. The user may use the Work List zone to easily process entries one at a time without returning back to the source query zone. The work list stays populated until the user overlays the work list by clicking a different column's icon.

When a user clicks on a work list entry in the dashboard, the system behaves as if the user clicked on the hyperlink in the zone. In addition, the system adds a check mark next to the item showing that the user has "worked on" or visited the entry.

NOTE: The Work List zone is populated only upon user request.

Scroll Bars with Dynamic Height

Sometimes the height of a grid isn't sufficient to display a grid's rows. When this occurs, a vertical scroll bar appears and an "expand button" appears above this bar, ⬇. For example, the following grid is not high enough to show all of a the available dashboard zones:

If you want to view all of the person's phone numbers without using the vertical scroll bar, you can you click the expand button. When clicked, the height of the grid expands to show all rows in the grid:

Notice, after the grid is expanded, the grid's vertical scroll bar disappears and the button in the upper corner becomes a Collapse Button, ⬆. If you click the collapse button, the grid will return to its original height.

NOTE: Search grids. Expand all functionality is not available in search grids.

Sorting Functionality

Grids have a heading row that contains labels for the columns. By clicking a column heading, you cause the rows to be sorted in the order of the selected column. By clicking on a column more than once, you cause the rows to be sorted in <u>reverse</u> order. Clicking the heading a third time removes the sorting function and returns the grid to its default display organization.

The following shows how information look after organizing the grid, clicking the column heading, by algorithm type (notice the icon in the column name).

Algorithm Code	Description	Algorithm Type ▲
F1-ACTIVEWS	Web Service - Verify Active Operations	F1-ACTIVEWS
F1-ATCHM-INF	Attachment Information	F1-ATCHM-INF
F1-BAT-LSDEF	Batch Level of Service Algorithm	F1-BAT-LVSVC
F1-BNDL-INFO	Bundle Information	F1-BNDL-INFO
F1-BNEXVALID	Bundle Export Validation	F1-BNEXVALID
F1-BOSTATFS	Take BO Status/Reason Final Snapshot	F1-BOSTATFS
F1-BUNEXPBUN	Prepare bundle XML	F1-BUNEXPBUN
F1-BUNIMPAPP	Apply a bundle	F1-BUNIMPAPP
F1-BUNLOGUSR	Log user updating an export bundle	F1-BUNLOGUSR
F1-CMPSNAPSR	Compare Sync Request Snapshots, populate status reason if discarded.	F1-CMPSNAPSR
F1-COMPSNAPS	Compare Initial and Final Snapshots	F1-COMPSNAPS
F1-DECRT-INF	Decision Report Information	F1-DECRT-INF
F1-FINALSNAP	Take Final Snapshot	F1-FINALSNAP

NOTE: Sorting on dropdown values. If you attempt to sort a column that contains a dropdown value, the information is sorted in the order of the unique identifier associated with the dropdown value, not the description you see on the screen; for example, if you sort on a column containing unit of measure, the information will be sorted in the order of the unit of measure code, not the description that appears in the drop down. This means that the resultant sort will appear incorrect and therefore we discourage you from doing this.

Get More Functionality

Grids that can potentially contain a large number of rows have special processing that we refer to as Get More functionality. We'll use an example from Oracle Utilities Customer Care and Billing to explain - consider the grid that contains all payments that have been added to a cash drawer. By the end of the day, this grid could contain hundreds of rows (one for each payment remitted during the day). Rather than show every payment in the grid, the system retrieves the first X payments (where X varies from grid to grid, and from release to release) and appends a Get More button to the bottom of the grid as illustrated below:

	Tender Amount	Tender Type	Account	Check N
	$123.90	Cash	4172150879 - Rodehaver, Gary - Residential - M-D1	
	$69.76	Cash	5983360951 - Nicholson, Edvard Paige - Res - M-D1	
	$10.00	Cash	4438465447 - Richie, Kate - Residential - - ALOP	
	$10.00	Cash	2609586025 - Richie, Harry - Residential - - ALOP	
	$10.00	Cash	8593641982 - Richie, Girlie - Residential - ALOP	
	$10.00	Cash	0401455188 - Richie, Iris - Residential - - ALOP	

Get More...

When you click the **Get More** button, the system appends the next X rows to the bottom of the grid.

> **NOTE: The absence of a "get more" button.** If no button appears at the bottom of the grid, this means you are seeing all of the rows.

> **NOTE: Search grids.** The Get More function is not available in search grids.

Adding and Removing Rows Using Arrows

In some editable grids, a new row can be added to another editable grid (the grid on the left) by clicking the Add item button, ⬅, of the desired row in the grid on the right:

	Sequence	Description			Sequence	Description
➡	10	Winter kWh charge, first 500		⬅	30	Winter subtotal
➡	20	Winter kWh charge, remaining		⬅	60	Summer subtotal
➡	40	Summer kWh charge, first 300				
➡	50	Summer kWh charge, remaining				
➡	70	Employee discount				

When the Remove item button is clicked, ➡, the row is transferred from the grid on the right to the grid on the left. This change will not be committed to the database until you save the object being maintained

Reorganizing Items Using the Up and Down Arrows

Occasionally, rows can be repositioned in an editable grid by clicking up and down arrows. The following is an example of such a grid:

		Merge Type	Sequence	Step Type	Description
🗑	⬆ ⬇	Original	10	Edit data	Edit data - Perform State Transition
🗑	⬆ ⬇	Original	20	Edit data	Edit data - Perform Main Processing
🗑	⬆ ⬇	Original	30	Label	Label - End of script

Notice the following about such a grid:

- The up arrow is dim in the first row. This is because it can't be moved further to the top.

- The down arrow is dim in the last row. This is because it can't be moved further down.

- The up and down arrows are usable in all other rows. Each time you click one of these arrows, the respective row is moved up or down one row.

  NOTE: Reminder. When you move rows into a grid, the system does not apply the change to the database until you click the Save button (which commits the entire object to the database).

Trees

Trees are used to illustrate complex relationships between objects. The following is an example from Oracle Utilities Customer Care and Billing of a page with a tree that is expanded:

The following points describe how to use trees:

You can expand and contract the nodes in a tree by clicking on the icon that prefixes the node (you can also click the + and - button to expand and contract a node).

  NOTE: Expand all. If you press `Ctrl` while clicking on an icon that prefixes a node, all child nodes (and their children) expand.

You can click the context menu button to cause a context menu to appear. You can navigate to any of the pages that are presented on this menu. Refer to *Context Menu Button* for more information.

You can click on the information that appears in an underlined node to drill into the page in which the object is maintained. For example, if you click on the account information, you will be transferred to the Account - Main page.

  NOTE: Important! If you make changes after expanding a tree's nodes (e.g., by drilling down on a Premise and changing the premise's address), the tree will contract to the first node if you return to the page.

Nodes in trees fit into two broad categories:

- **Information nodes.** Information nodes highlight the existence of other data. For example, on the Control Central - Bill Payment Tree, a node exists to highlight the existence of new financial transactions that were created since the last bill was completed.

- **Data nodes.** Data nodes show information about objects in the system. For example, data nodes exist on the Control Central - Bill Payment Tree that show bills and payments.

Accordion Windows

Accordion windows are used when the data held in an object's rows does not comfortably fit into a grid.

Each row in an accordion has a header that summarizes a row's details. When you click a header, the row expands to show the details. The following is an example of an accordion where all headers are collapsed (meaning that only summaries of the rows' details are shown):
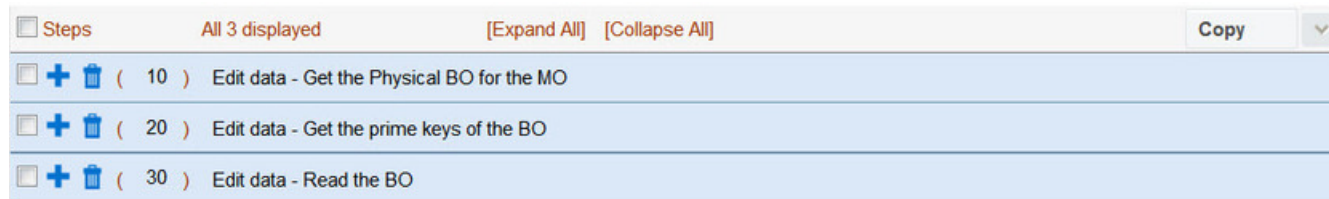
When you expand a header, its details are exposed. For example, the following shows the same accordion after the third row is expanded:
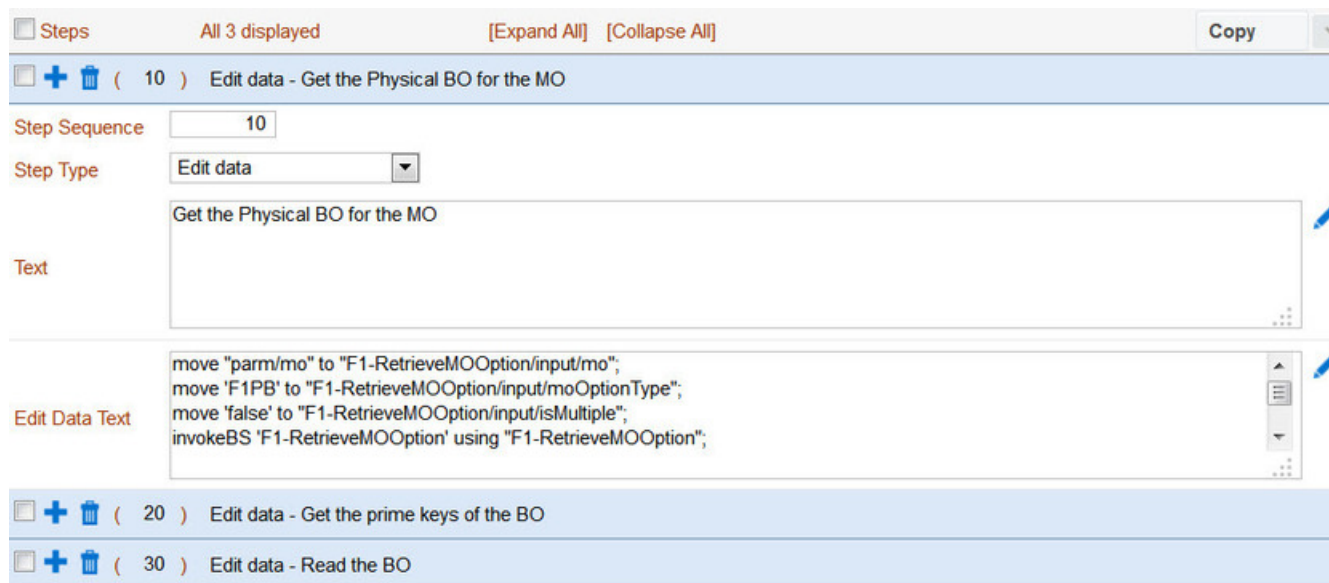
NOTE: You must expand to update. In order to update a row in an accordion, you must expand it.

Row Summary and Chunk Management

At the top of an accordion you'll find a summary of its rows. The format of this information differs depending on the number of rows and the size of the accordion:

- If the accordion contains every row, a summary of the total number of rows is displayed.

- If the accordion contains a subset of rows, you are presented with a summary of the rows AND you are provided with options to display different "chunks" of rows.

  - Click **First** to display the first "chunk" of rows (the size of a chunk differs depending on the accordion). This option is dimmed if the first chunk is in the accordion.

  - Click **Previous** to display the previous chunk of rows. This option is dimmed if the first chunk is in the accordion.

  - Click **Next** to display the next chunk of rows. This option is dimmed if the last chunk is in the accordion.

- Click **Last** to display the last chunk of rows. This option is dimmed if the last chunk is in the accordion.

Dashboard Area

The dashboard is a *portal* that contains zones. These zones appear regardless of the object being displayed in the *Object Display Area*. Refer to *Dashboard Portal* for a description of these zones.

NOTE: User configurable. Every user has control over the zones that appear in their dashboard. Refer to *Portal Preferences* for more information about how a user can customize the contents of the dashboard.

Script Area

When *a script is initiated*, the *object display area* shifts down to make room for the script area.

The information in the script area takes you through the steps in the selected business process (provided by your implementation team).
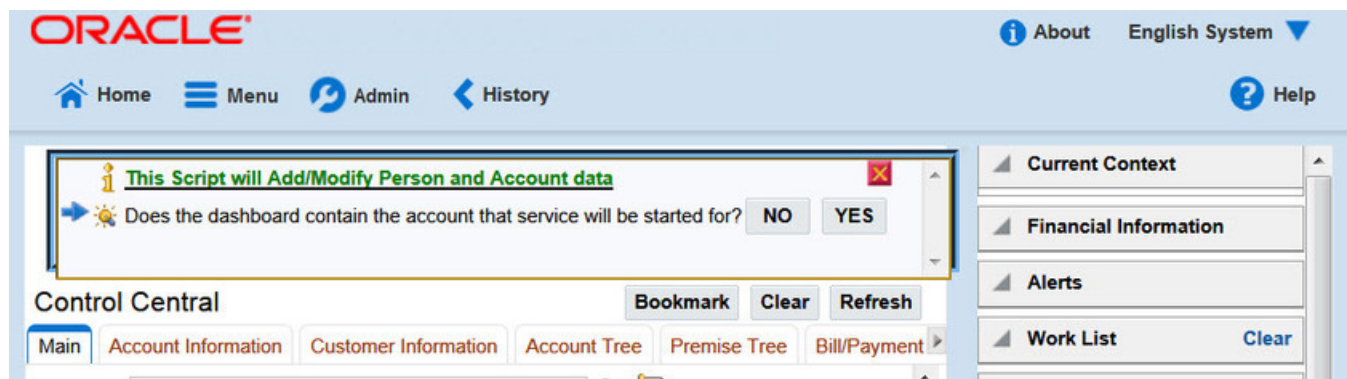
Maintenance Pages

Maintenance pages are used to maintain (add, change, etc.) the information in the system using a fixed page metaphor. All user interfaces implemented in this way function in a similar manner. This section focuses on functionality common to all maintenance pages using this metaphor.

NOTE: Not all maintenance pages in the application use this style of maintenance page. The preferred metaphor for maintenance pages, however, is to use portal-based pages. For more information see *Portals and Zones Common to Base Product Pages*.

The Unique Identifier Area

Every object in the system must have a unique identifier. For some objects, typically administrative or control table data, the unique identifier is defined by the user creating the record. Other objects, typically master or transaction entities, the unique identifier is assigned by the system after the record is saved.

Where the identifier is displayed depends upon whether the ID is user-defined or system generated.

Pages displaying objects with a user defined identifier (such as To Do Type) typically display the identifier on the left along with a search button. For master and transaction tables, (such as To Do Entry) the unique identifier is typically found in

the upper right corner of the screen along with a search button and is labeled as the entity's ID. In this case, if there is an information string associated with the object, it is displayed on the left.

If the object being maintained has an associated context menu, a *Context Menu Button* is displayed appear.

Confirmation & Error Messages

Whenever a database modification action is requested, the system first validates the data to be put on the database.

First, the system validates the information. If there are errors, the first error encountered is displayed in a window. In addition to the error message, the error window also contains the error number and the identities of the programs that detected the error. If you don't understand an error and you have to call product support, please supply them with this information.

If there are no errors, the system is modified.

Warning If Unsaved Changes Exist

If you make any changes to an object and you don't commit these changes to the database, the following warning appears: "You have unsaved changes that will be lost if you continue. Press OK to continue anyway."

If you want to commit the changes, click **Cancel**. You will then return to the page and can make further changes or press Save. If you want to discard your changes and transfer to the new page, click **OK**.

> **CAUTION:** This warning is not displayed if you are working on a *new* object on a fixed page and you navigate to a different page. Information about new objects is preserved in memory in anticipation of your return to the page. For example, if you are in the middle of adding a new user and you want to quickly reference information on a different page, you will not receive the above warning because your information will be saved. If you use the back button to return to the user page, all of the information you were adding will be present and you can enter the rest of the new user's data.

Query Pages

Query pages are used to display record sets in the system. Most query pages function in a similar manner. This section focuses on functionality common to all of the system's query pages.

The Search Area

The upper right corner of the screen is almost always the identifier of the object associated with the search. In Oracle Utilities Customer Care and Billing for example, the unique identifier on the Account Financial History page is the Account ID.

To the right of the unique identifier is a *Search button*. This button is used to search for a different object than the one whose data is being displayed in the page.

If the object being displayed has an associated context menu, a *Context Menu Button* is displayed.

Portals

This section describes certain types of portals provided in the system where a user may control the content, for example the dashboard.

Portals used for base product query and maintenance pages are typically configured to not allow user customization. Refer to *Portals and Zones Common to Base Product Pages*.

In most base products, there are several pages whose content can be customized by individual users. These portals exist because different users have different data requirements. For example, in Oracle Utilities Customer Care and Billing a billing clerk might prefer the customer information portal to show a customer's bills and payments. However, a credit and collection supervisor might prefer the same page to show an account's collection activity. Portals allow each user to define what they want to see.

The contents of this section provide background information about portals.

Portals Are Made Up Of Zones

The term "zone" is used to describe a section on a portal. For example, the following is a portal with seven zones:

- Switch Language
- Bookmarks
- Checked Out
- Current Context
- Current To Do
- Favorite Links
- Favorite Scripts

> **NOTE:** This example may not be available in your application; it is used for illustration purposes only.
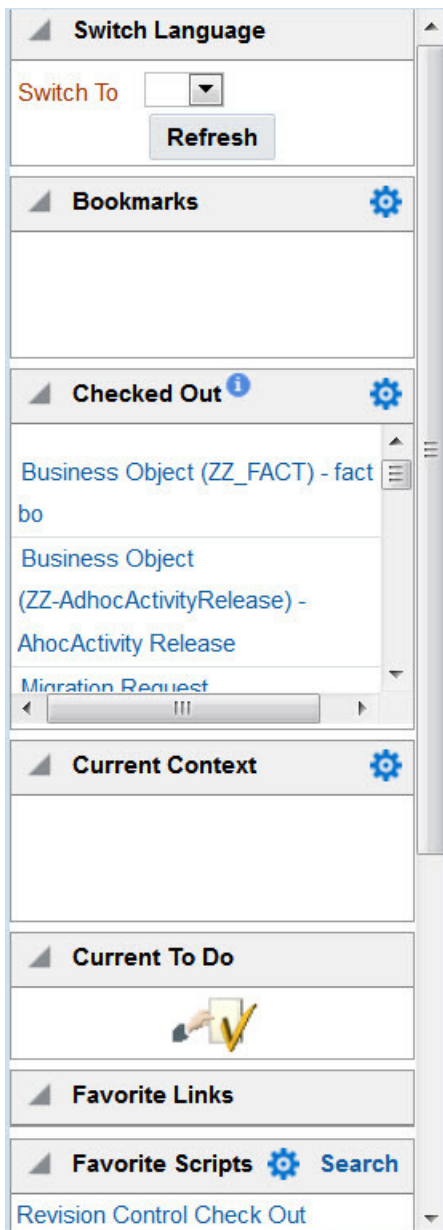
Each User Can Customize Which Zones Appear

For any portal that is configured to show on portal preferences, each user has control over the following:

- Which zones appear on their portal
- The order in which the zones appear
- Whether the zones should be "collapsed" (i.e., minimized) when the portal opens.

Users define their preferences by clicking the *User Preferences* button. Pressing this button transfers the user to the *User Preferences* page on which their *Portal Preferences* can be defined.

CAUTION: Recommendation. We strongly recommend that you set your preferences to collapse zones that you don't use often. Why? Because we don't perform the processing necessary to build collapsed zones until you ask to expand a zone. Opening a page with zones collapsed accelerates the response times of portal.

Users Must Be Granted Security Access To Each Zone

An *application service* is associated with each zone. A user must be granted access rights to the respective application service in order to see a zone on a portal.

FASTPATH: Refer to *The Big Picture of Application Security* for information about granting users access rights to an application service.

Application security impacts a user's zones in the following ways:

- A user's *Portal Preferences* page contains a row for every zone on every portal regardless of whether the user has access rights to the zone. Because of this, the system displays an indication of the user's access rights to each zone.
- If a user's access rights to a zone are revoked, the zone will be suppressed when the user navigates to the respective portal.
- Revoking a user's access rights does not change the user's *Portal Preferences* (e.g., a user can indicate they want to see a zone even if they don't have access to the zone - such a zone just won't appear when the respective portal appears).

Zones May Appear Collapsed When A Page Opens

Portal Preferences allows the user to collapse a zone (or minimized) when a portal appears to reduce space for the zone while keeping the data easily available. To view the information in a collapsed zone, the user can press the zone's expansion button, ◢ , to either expand or collapse the zone:
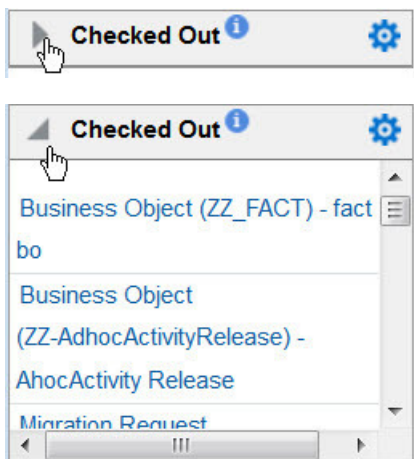
CAUTION: Recommendation. We strongly recommend that preferences be set up to collapse zones that may contain data that is only needed upon a user's request. The system doesn't perform the processing necessary to build collapsed zones until a user asks to expand a zone. As a result, indicating a zone is collapsed improves response times.

Dashboard Portal

The dashboard is a portal that always appears on the desktop. Its zones contain tools and data that are useful regardless of the object being displayed.

> **NOTE: Minimize the dashboard**. You can minimize the dashboard by clicking on the vertical bar on the left side of the dashboard. This causes the dashboard portal to disappear allowing more of the page area to display. The vertical dashboard bar is then displayed on the right side of the page. Clicking the dashboard bar restores the display of the dashboard portal. Rather than clicking, you may press Alt+J to toggle the display of the dashboard.

The contents of this section describe the zones that are provided by the framework product for this portal. Please note the following additional information about the dashboard portal that may impact how it appears.

- **Additional zones may be available in other products.** The zones described below are available in every base product. Please refer to the product-specific documentation for additional dashboard zones available in your product (open the help and navigate to the index entry labeled **Dashboard**).

- **Context Sensitive Zones may appear.** Some pages may define additional zones that should appear in the dashboard only if that page is displayed. These are referred to as Context Sensitive Zones.

- **Dashboard zones are configurable.** The dashboard portal is configured to allow a user to define preferences for it. Refer to *Portal Preferences* for more information.

> **NOTE: Security.** As a general rule, dashboard zones each refer to a unique application service so that a security administrator may configure which users are allowed to have access to which zones. Note that the user portal preferences indicates which zones a user has security access to.

Bookmarks Zone

After clicking the *Bookmark* button and saving a bookmark, it is visible in the **Bookmarks** zone. Clicking one of the links in the zone navigates to the page where the bookmark was saved and loads the information related to the record that was displayed when the bookmark was saved.

Click the trash can icon to delete the bookmark.

Note that a user may change the name of the bookmark or change the sequence of the bookmarks by navigating to the *User — Bookmarks* in the user preferences.

Current To Do Zone

The **Current To Do** zone is designed to streamline the process of working on To Do entries from assignment to completion. It displays key information about the user's current To Do entry and provides functions that help minimize the number of steps it takes to resolve the entry and potentially other entries related to it.

The following sections provide more detail about the zone.

Next To Do Assignment

Users may have the option to click the To Do icon to request the next To Do entry they should work on. This functionality is optional and can be configured to follow your organization's business rules in determining the next task for a user. For example, if your organization practices work distribution "on demand", this feature can be configured to find the

highest priority entry a user can work on and assign it to the user. Refer to *work distribution* for more information on this business practice.

> **NOTE: Next Assignment Rules Are In A Plug-in.** Refer to *Next Assignment Algorithm* for more information on how to configure the system to take advantage of this function.

If the system is successful in determining the next entry the user should work on, this entry becomes the user's current To Do and its information is displayed on the zone.

User's Current To Do

The user's current To Do may be set using the Next Assignment algorithm, or by drilling in on a To Do from the To Do List or To Do Search page as described in *A User's Current To Do*. Once a current To Do has been set, the zone displays details related to the To Do.

The **Message** describes why the entry exists. The message description allows the user to drill into the page on which the entry's respective object is displayed. For example, if the entry is associated with an asset that needs review, the user is brought to the asset page to view the information and potentially take action. If the *To Do type* has been configured to associate a *script* with this To Do entry's message number, then instead of being taken to the respective page, the associated script is launched.

Info displays the standard To Do information. An Info icon 💬 appears if there are comments on the To Do and a Description icon 🖼 appears if there is a log entry of type **Forwarded**, **Sent Back** or **User Details** on the To Do. The description drills into the *To Do entry* page allowing the user to view more information about the entry or make changes to it as needed.

The user may use the **Complete** button in the zone to complete the current entry.

Next / Previous To Do Buttons

The **Previous To Do** and **Next To Do** buttons are enabled on this zone under the following conditions:

- The user selected an entry either on the *To Do List* page or the *To Do Search* page.

- At least one other entry exists *below* (for Next) or *above* the entry selected (for Previous).

Clicking **Next To Do** or **Previous To Do** will bring the user to the transaction indicated on the To Do Entry's message, where its respective object is displayed. It also makes that To Do the Current To Do displayed in the zone.

The keyboard shortcut to simulate Previous To Do: `Alt+Y`

The keyboard shortcut to simulate Next To Do: `Alt+Z`

> **NOTE:** When a user drills down on a To Do entry from the To Do List page, the system automatically changes the status of the entry to **Being Worked**. If **Next To Do** or **Previous To Do** is subsequently used to scroll through this list, the system does *not* change the To Do entry's status. To change the status of these entries, the user must navigate to the *To Do List*. On this page, multiple entries may be selected and their status changed with a single user-interface action.

Related To Do Entries

If the To Do entry has non-complete *related entries* a summary **Related To Do** description appears. The description states the total number of related entries, how many are still in **Open**, how many are assigned to current user and how many assigned to others. This hyperlink navigates to the *To Do Search* query allowing the user to review the related entries. At this point the user may decide to assign entries that can be positively identified as being caused by the same problem as the current To Do also to himself.

If the user determines that all related To Do entries have been resolved with the appropriate action taken, the **Complete All** button may be used to complete in one step the current entry and all its truly related entries assigned to the current user.

If the related entries are not resolved with one action, the user may opt to use the **Complete** button to complete the current entry alone and work on related entries one at a time. Using the related To Do information hyperlink the user may navigate to the To Do search page and drill into the first related To Do to work on using the message hyperlink. This entry now becomes the user's current To Do and the **Next To Do** and **Previous To Do** action buttons are set to scroll through the related entries list.

Favorite Links Zone

Each line in the **Favorite Links Zone** corresponds with one of the user's favorite links (e.g., transactions). Clicking on a line invokes the transaction. A number appears adjacent to the first nine entries to highlight that these links can be invoked by pressing an accelerator key (`Ctrl` + a number). Note that the numeric keypad on your keyboard cannot be used to implement this function.

Users define their favorite links by clicking the *User Preferences* button. Clicking this button transfers the user to the *User Preferences* page on which their *Favorite Links* can be defined.

Favorite Scripts Zone

The Favorite Scripts zone lists the business process assistant (BPA) scripts that you have defined on your *user preferences*. You can click on a script to *execute* it. You can click the **Search** button in the zone to search for other scripts.

> **NOTE:** If you do not see the Favorite Scripts zone in your dashboard, navigate to User Menu and click the **Preferences** menu item to display the *User - Portal Preferences* page. Under the Dashboard Portal row, select the **Display** option for the Favorite Scripts zone.

Favorite Searches Zone

If you marked a saved search as a favorite using *Saved Searches* functionality, the search is visible in the **Favorite Searches** zone. Clicking one of the links in the zone navigates to the page where the search was saved and populates the filter values and executes the search.

Switch Language Zone

The **Switch Language** zone is used to switch the application's language. Only languages that are supported by your implementation will appear.

To switch the application's language, choose the desired language and press the **Refresh** button.

> **NOTE: If your implementation uses a single language.** If your implementation uses a single language, you should suppress this zone by *not granting security rights* to the zone's application service.

To Do Summary Zone

The **To Do Summary Zone** has several purposes:

- It presents a summary of the *To Do entries* that have been assigned to you and are **Being Worked On**.
- The colored "age bars" highlight the age of the To Do entries. The colors red, yellow and green are used to highlight the relative number of old, middle-aged and new To Do entries. The age associated with each of these colors is *user-configurable*. Note, you can hover the cursor over an "age bar" to see the number of To Do entries.

- If you click on the To Do Type description or on an "age bar", you'll be transferred to the *To Do List* transaction where these To Do entries will be displayed. From this page, you can drill down to the specific entries.

  NOTE: Time saver! After you drill down on entry from the *To Do List* page, if you have the *Current To Do* zone configured in the dashboard, you can use the **Previous To Do** and **Next To Do** buttons in the zone to scroll through additional To Do list entries without returning to the **To Do List** page.

Work List Zone

The **Work List** zone provides quick access to an entire column of an info or query zone. When a user clicks on a work list entry, the system will do whatever it would have done if they'd clicked on the hyperlink in the zone. In addition, the system ticks off that they've worked on the entry (this feature is mostly so users know that they've at least looked at something). Refer to *Work Lists* to better understand how to configure query columns to support work lists.

User Preferences

The Preferences (or My Preferences) transaction and the User Maintenance transactions are the same except that with My Preferences, only the following items can be modified:

- Main Tab
  - Login ID
  - Email Address
  - Dashboard Width
  - Home Page
  - To Do Summary Age Bar Parameters
- Bookmarks
  - All information can be modified
- Portal Preferences
  - All information can be modified
- Favorite Links
  - All information can be modified
- Favorite Scripts
  - All information can be modified

User - Main

This page lets you view or define user information and access settings.

To open the page, either:

- Choose the **Admin** > **Users** > **Search** menu item.
- Choose the **Menu** > **My Preferences** menu item; or,
- Choose the **User Menu** > **Preferences** menu item in the application toolbar;

Note that some fields are only modifiable when the page is opened from the from the **Admin** menu.

Description of Page

Basic user identification information is viewed or set in the **First Name**, **Last Name**, **User ID**, and **Login ID** fields, all of which are modifiable only when the page is opened from the **Admin** menu. User and logon IDs must be unique. An example of a long ID is a single sign-on ID in an LDAP system.

Language Code defines the language in which the user's screen prompts and messages appear.

Set **User Enabled** to allow the user to access the system.

NOTE: This field, available only when the page is accessed through the **Admin** menu, provides special field-level security. A user can change the field only if the **Enable/Disable** access mode is set.

Display Profile ID defines the *display options* for the user.

The next group of fields is used to view or set user preferences. For example, you can set up *portal preferences* on a "template user" and indicate that specified users will inherit their portal preferences from the template. Doing so provides consistency in the application of account information and dashboard zones. This fields are modifiable only when the page is accessed through the **Admin** menu.

- Set **User Type** to **Template User** if the user's preferences are to match those of other users.

- If a user's *portal preferences* are to be inherited from a "template user", use the **Portals Profile User ID** to define the user ID of the template user. If applied, the specified user will inherit portal preferences from the **Portals Profile User ID** and will be unable to customize those preferences.

- If a user's *favorite links* are to be inherited from a "template user", use the **Favorites Profile User ID** to define the user ID of the template user. If applied, the specified user will inherit favorites preferences from the **Favorites Profile User ID** and will be unable to customize those preferences.

The **Time Zone** associated with the user may be defined. Implementations may use this information for features and functions where the user's time zone impacts display of data.

Email ID captures the user's email address.

Dashboard Width defines the number of pixels to use for the user's *dashboard* area. A setting of 200 is recommended as a minimum. Depending on the width of a user's monitor, a higher setting (such as 250) will display more information without compromising the space on the main area of the application.

Home Page defines the page that appears when the user starts a session or clicks the *Home* link.

The To Do entry fields control how To Do entries are aged in respect of the "age bars" that appear on *To Do Summary*, *To Do Supervisor Summary* and the *To Do Summary Dashboard Zone*. Specifically:

- Use **To Do Entries Less Than ___ Days Old Should be Green** to define the maximum number of days old a To Do entry can be to be considered "green" in the age bar.

- Use **To Do Entries More That ___ Days Old Should be Red** to define the cutoff days after which a To Do entry is considered "red" in the age bar.

- Please note that any To Do entry whose age isn't "red" or "green" is considered "yellow" in the age bar.

The **User Group** collection defines the group(s) with which the user is associated and the date (if any) when the user's association expires. This feature is modifiable only when the page is accessed through the **Admin** menu. For more information, see *The Big Picture Of Application Security*. Assignments of users in a user group can also be established or maintained through the *User Group - Users* page.

User - To Do Roles

Open the User page and then navigate to the **To Do Roles** tab to define the To Do roles assigned to the user.

The information on this page cannot be modified if accessed through **My Preferences**.

Description of Page

The grid contains the user's To Do roles. To modify a To Do role linked to the user, simply move to a field and change its value. To remove a To Do role, click the **-** (minus) button. To add a new To Do role, click the + (plus) button and enter the role.

Where Used

Every **To Do** entry references a role. A To Do role has one or more users (and a user may belong to many To Do roles). Users who are part of the To Do role assigned to a To Do entry may work on the To Do entry. For more information on this feature, see *The Big Picture Of To Do Lists*.

User - Access Security

Open the User page and then navigate to the **Access Security** tab to define a user's security rights. You cannot modify this page if you accessed it through **My Preferences**.

Description of Page

Use the **Default Access Group** to define the access group that is defaulted on new records added by this user that are subject to *row security*.

The scroll area contains the **Data Access Roles** to which this user belongs. A user's data access roles play a part in determining the accounts whose data they can access. Refer to *Access Groups, Data Access Roles and Users* for more information.

To add additional data access roles to this user, click the + button and specify the following:

Enter the **Data Access Role**. Keep in mind that when you add a **Data Access Role** to a **User**, you are granting this user access to all of the accounts linked to the data access role's access groups.

Use **Expiration Date** to define when the user's membership in this data access role expires.

NOTE: You can also use *Data Access Role - Main* to maintain a data access role's users.

The tree highlights the **Access Groups** to which the above **Data Access Roles** provide access.

User - Bookmarks

This page is used to manage a user's bookmarks that are created when a user clicks the *Bookmark* button and saves a bookmark. From this page the user can delete a bookmark, change the name of the bookmark or change the sort sequence.

Open the User page and then navigate to the **Bookmarks** tab to modify or delete a bookmark.

Description of Page

Sequence is the sort sequence associated with the bookmark. Bookmarks with the same sequence are then sorted alphabetically.

Name is the user-defined name assigned to the bookmark. This is the text that is visible in the *Bookmarks* dashboard zone.

NOTE: Favorite Links vs. Bookmarks. Favorite links are configured through the user page and define pages that a user can navigate to. They do not define context (although some pages may use information currently in global context when navigating). Some users may not be allowed to configure their own favorite links and would see the favorite links associated with a profile user. Bookmarks are created using a bookmark button available on each page. The bookmark saves navigation information, context information and also captures some information about the state of a page. Bookmarks are not governed by any user profile configuration.

User - Portal Preferences

The base product contains several *portals* that allow users to customize them via portal preferences. Portal preferences allow users to control:

- Which zones appear on the portal
- The order in which the zones appear
- Whether the zones should be "collapsed" (i.e., minimized) when the portal opens.

NOTE: You may not be able to change your portal preferences. If a note appears immediately before the list of portals, a system administrator has configured your user ID to reference a **Portals Profile User ID** (this is defined on the **Main** tab). Preferences set in this way cannot be modified. System administrators do this in order to enforce a common look-and-feel throughout the user community.

Open the User page and then navigate to the **Portal Preferences** tab to modify a user's preferences.

Description of Page

The *accordion* contains a row for every portal configured to show on user preferences and to which you have access. To change how a portal's zones appear, *expand* the respective row and change the elements accordingly. The remainder of this section describes how you can configure how a portal's zones appear.

Zone lists all of the *zones* in the portal.

Place a check under **Display** if the zone should be displayed on the portal.

Place a check under **Initially Collapsed** if the zone should be minimized when the portal is initially opened. Setting zones as initially collapsed is a good idea to save space and to help pages to load more quickly. Refer to *Zones May Appear Collapsed When A Page Opens* for more information.

Use **Sequence** to control the position of the zone in respect of the other zones. This field is disabled if **Display** is not checked. Duplicate **Sequence** numbers are allowed.

For zones displaying data that is changing often, use **Refresh Seconds** to define in seconds how often the zone is refreshed. The minimum valid value is 15. The maximum valid value is 3600 (1 hour). A value of 0 indicates no automatic refresh.

Security Access indicates whether the user has access rights to a zone. Refer to *Granting Access To Zones* for more information.

User - Favorite Links

This page is used to define a user's favorite transactions and URLs. Each such link appears as an entry in the *Favorite Links Zone* in the *Dashboard* area.

NOTE: `Ctrl + a number` can be used to execute a favorite link. Rather than clicking a button in the favorite links zone, you can invoke your first nine favorite links by pressing `Ctrl` + a number (where the number corresponds

with the relative position of the transaction in your list of favorites). Note that the numeric keypad on your keyboard cannot be used to implement this function.

Open the User page and then navigate to the **Favorite Links** tab to modify a user's favorite links.

Description of Page

NOTE: You may not be able to change your favorite links. If a **Note** appears beneath your **User ID**, your user id has been setup to reference a specific **Favorites Profile User ID** as defined on the **Main** tab. If a system administrator has setup your user ID in this way, your preferences may not be changed. System administrators may apply this feature in order to enforce a common look-and-feel throughout the user community.

Each row references a *Navigation Option*. The navigation options supplied with the base package correspond with the system's menu items. This means you can setup a favorite link to open any transaction in the system (in either **add** or **update** mode).

NOTE: Favorite links can point to other places. The navigation options supplied with the base package always open a transaction's **Main** tab. If you find yourself continually accessing a different tab page, you can have your implementation team create a new navigation option that references the desired tab page. Once this navigation option is set up, you can reference it as one of your favorite links. In addition, it's also possible for your implementation team to setup navigation options that open a URL outside of the system. For example, your implementation team could setup a navigation option to a credit rating company's website. Once this navigation option is set up, you can reference it as one of your favorite links.

Use a **Sequence** to control the order in which the navigation option appears in the *Favorite Links Zone*.

Security Access indicates if you have been given security rights to the respective transaction. Refer to *The Big Picture Of Application Security* for more information.

NOTE: Favorite Links vs. Bookmarks. Favorite links are configured through the user page and define pages that a user can navigate to. They do not define context (although some pages may use information currently in global context when navigating). Some users may not be allowed to configure their own favorite links and would see the favorite links associated with a profile user. Bookmarks are created using a bookmark button available on each page. The bookmark saves navigation information, context information and also captures some information about the state of a page. Bookmarks are not governed by any user profile configuration.

User - Favorite Scripts

This page is used to define a user's favorite scripts. Each script is displayed in the **Favorite Scripts** zone on the **Dashboard** portal where it can be used to *initiate a script*.

NOTE: Ctrl + Shift + a number can be used to execute a favorite script. Rather than selecting a script from the business process assistant, you can invoke your first nine favorite scripts by pressing Ctrl + Shift + a number (where the number corresponds with the relative position of the script in your list of favorites). Note that the numeric keypad on your keyboard cannot be used to implement this function.

Open the User page and then navigate to the **Favorite Scripts** tab to modify a user's Favorite Scripts.

Description of Page

NOTE: You may not be able to change your favorite scripts. If a **Note** is displayed on top of the grid, your user id has been setup to reference a specific **Favorites Profile User ID** as defined on the **Main** tab. If a system administrator

has setup your user ID in this way, your preferences may not be changed. System administrators may apply this feature in order to enforce a common look-and-feel throughout the user community.

Each row in the grid contains one of your favorite **Scripts**.

Use the **Sort Sequence** to control the order in which the scripts appear in the *business process assistant menu*.

Security Access indicates whether you have access to the script's application service. Refer to *The Big Picture Of Application Security* for more information.

User - Characteristics

Select **Admin** > **User** > **Search** and navigate to the **Characteristics** tab to define characteristic values for the user. You cannot modify this page if you accessed it through My Preferences.

Description of Page

Use the characteristics grid to capture additional information about the user.

You can only choose **Characteristic Types** defined as permissible for the user record. Refer to *Setting Up Characteristic Types & Their Values* for more information.

Enter a valid **Characteristic Value** for the selected characteristic type. You may enter more than one characteristic row for the same characteristic type, each associated with a unique **Sequence** number. If not specified, the system defaults it to the next sequence number for the characteristic type.

User - Miscellaneous

Select **Admin** > **User** > **Search** and navigate to the **Miscellaneous** tab to view additional information associated with a user.

User Id, First Name and Last Name are displayed. Depending on your implementation, additional zones may appear on the User Portal

If additional zones appear, use the inline help for information about the fields managed on the zone.

Initiating Scripts
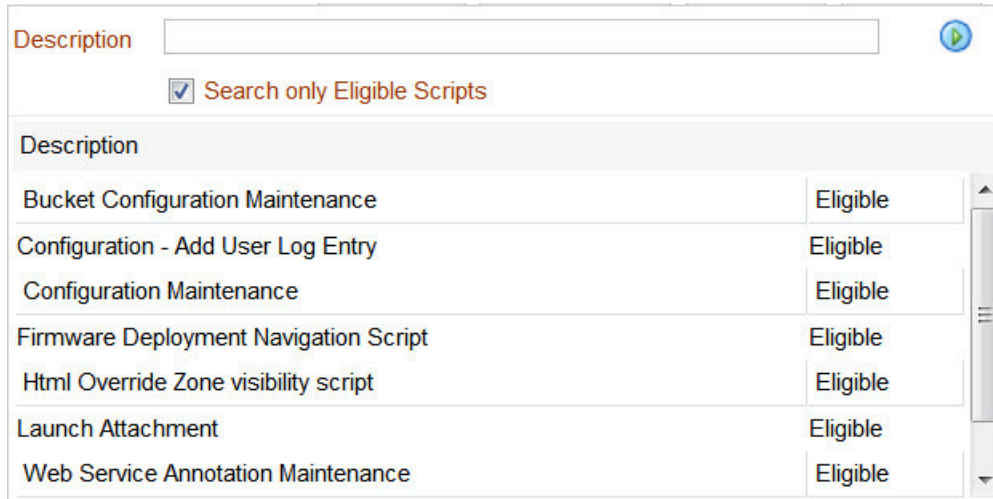
Your implementation team can set up business process assistant (BPA) *scripts* to walk you through business processes. Once scripts have been set up, you can initiate a script using any of the following methods:

- You can define a list of your "favorite scripts" on your *user preferences*. You can then invoke any of the scripts from the Favorite Scripts zone on the dashboard portal. You can also invoke any of your first 9 favorites by pressing `Ctrl + Shift` + a number (where the number corresponds with the relative position of the script in your list of favorites). For example, if you press `Ctrl+Shift+2` and you've setup your "favorite scripts" to be **Start Autopay** and **Stop sending marketing information**; the **Stop receiving marketing information** script is invoked. Note that the numeric keypad on your keyboard cannot be used to implement this function.

- You can configure a menu item to launch a script by referencing a *navigation option* that is a **script** navigation option type.

- The system creates *To Do entries* to highlight tasks that require attention (e.g., bills in errors, accounts without bill cycles, etc.). Users can complete many of these tasks without assistance. However, you can set up the system to automatically launch a script when a user selects a To Do entry. For example, consider a To Do entry that highlights a bill that's in error due to an invalid mailing address. You can set up the system to execute a script when this To Do entry

is selected. This script might prompt the user to first correct the customer's default mailing address and then re-complete the bill. Refer to *Executing A Script When A To Do Is Launched* for more information.

- You can indicate that a script should be *launched upon entering the system*. This functionality enables an external system to launch the system and immediately launch a script.

- If you press `Ctrl+Shift+S`, an interactive menu is displayed:

The menu allows you to search for a script using any word in its description. Note, if you've turned on **Search only Eligible Scripts**, your search is limited to *eligible scripts*. Note, the system displays an indication if each script in the grid is **Eligible** or **Ineligible** in this section.

You can initiate a script from this area by clicking on it.

When a script is initiated, this menu closes and the *object display area* shifts down to make room for the script area.

NOTE: Securing scripts. Only scripts the user is allowed to execute are displayed. Refer to *Securing Script Execution* for more information.

NOTE: Customize the script area. Using the *Height* step type, an individual script may be configured to use more or less of the script area than the standard script area. It is also possible to configure a script to hide the script area altogether.

The information in the script area takes you through the steps in the selected business process (note, your implementation team controls the information that appears in the script area).

The following points highlight useful information common to all scripts:

- **Return focus to script area.** Often during a script the focus moves from the script area to another section of the page. For example, you might be required to fill in data for a new record being added. When you are ready to return to the script area, rather than using the mouse to return to the area, you can press `Ctrl+Shift+F`. The focus returns you to either the first available input field or to a "default" button if no input field is available.

- **The Continue button.** Many steps in a script ask you to click the **Continue** button when you're ready to restart a script. For example, a step may ask you to confirm a customer's automatic payment information and then click **Continue** when you're ready for the script to restart. Rather than using the mouse to click this button, you can press `Ctrl+Shift+C`.

- **Selected button changes color.** When you click a button in the script area, the button selected changes color so that you can easily see which option you selected.

FASTPATH: Refer to *The Big Picture Of Scripts* for more information about scripts.

NOTE: You can abort a script at any time by clicking the red X button in the upper right corner of the script area (or by pressing `Ctrl+Shift+X`).

Accelerator Key Summary

The following table summarizes the accelerator keys available in the system:

Accelerator Key	Function
`Alt+B`	Returns to the previous page on which you were working. This is the equivalent of clicking the *Back* button.
`Ctrl+Alt+C`	Clears the currently displayed object from the page. This is the equivalent of clicking the **Clear** button.
`Ctrl+Alt+D`	Creates a duplicate of the object being displayed. Equivalent to clicking the **Duplicate** button.
`Alt+G`	Returns to the original page that was displayed when the *Back* button was clicked. Equivalent to clicking the **Forward** button.
`Ctrl+Alt+H`	Opens a dropdown list of recently-visited pages, the equivalent of clicking the **History** button.
`Alt+J`	Minimizes the *dashboard*.
`Alt+K`	Transfers you to *To Do Entry - Main* for the current item in the To Do list. Pressing Alt+K while on this page takes you to the first To Do entry on the list.
`Alt+N`	Displays the next entry in the search results. Equivalent to clicking **Next Item** .
`Ctrl+Alt+P`	Opens your *User Preferences* page. Equivalent to clicking the **Preferences** menu item.
`Alt+P`	Displays the previous entry in the search results. Equivalent to clicking **Previous Item** .
`Ctrl+Alt+Q`	Opens the *business process assistant*, where you can select a script that walks you through a business process.
`Alt+R`	Refreshes the page with the last saved version of the object being displayed in the page. Equivalent to clicking the **Refresh** button.
`Alt+S`	Saves any changes that you've made on the database. Equivalent to clicking the **Save** button.
`Alt+X`	Opens the *To Do Summary*.
`Alt+Y`	Displays the previous item in the To Do list. Equivalent to clicking the **Previous To Do** button in the *Current To Do* zone.
`Alt+Z`	Displays the next item in the To Do list. Equivalent to clicking the **Next To Do** button in the *Current To Do* zone.
`Alt+Insert`	Inserts a new row into an *Editable Grid* if the insertion point is in the grid. Equivalent to clicking the **Insert** button.
`Alt+Delete`	Removes a row from an *Editable Grid* if the insertion point is in the grid. Equivalent to clicking the **Delete** button.
`Alt+F1`	Invokes online Help for the application. Equivalent to clicking the **Help** button.
`Alt+1` through `Alt+9`	These keys are only applicable when a *Notebook* is open. The shortcuts open the tab page whose relative position corresponds with the shortcut number. For example, if you press Alt+3 on a page with multiple tabs, the third tab is displayed. If there are more than nine tabs on a page, you must use the mouse or F2/Shift+F2 to display a tab. Note that you cannot use the numeric keypad for these shortcuts.
`Ctrl+1` through `Ctrl+9`	Invokes the *favorite link* whose relative position corresponds with the shortcut number. For example, if you press `Ctrl+3`, the transaction for your third "favorite link" is invoked. Note that you cannot use the numeric keypad for these shortcuts.

Accelerator Key	Function
Ctrl+Shift+C	If the current step in the *Script* area has a **Continue** button, this shortcut is equivalent to clicking **Continue**.
Ctrl+Shift+F	If the *Script* area is open and you are working on a different area of the page, this key returns focus to the script area. Focus returns to either the first available input field or to a "default" button if no input field is available.
Ctrl+Shift+S	Opens the *business process assistant*, where you can select a script that walks you through a business process.
Ctrl+Shift+X	If the *Script area* is open, equivalent to clicking the **Close** button in the script area.
Ctrl+Shift+1 through Ctrl+Shift+9	Invokes the *favorite script* whose relative position corresponds with the shortcut number. For example, pressing Ctrl+Shift+2 selects the second of your "favorite scripts". The numeric keypad cannot be used for these shortcuts.
Alt+left arrow	Populates an *scroll* area with the previous entry. Equivalent to clicking the scroll control .
Alt+right arrow	Populates an *scroll* area with the next entry. Equivalent to clicking the scroll control .
Enter when in a field with an adjacent **Go Look** button	Invokes the search. Equivalent to clicking the *Search button*.
Enter when in a field with an adjacent Search button	Invokes the search. Equivalent to clicking the *Search* button.
Enter when a row in a search result grid is highlighted	Selects the item and closes the search. Note that after selecting an item from the search results, you can press Alt+N or Alt+P to scroll up or down through other items in the result grid without returning to the search results.
Enter when a menu item is highlighted	Selects the menu item.
Enter when the insertion point is within a *tree* node	Equivalent to clicking on the item in the tree: • If the insertion point is on a node image, the node is either expanded or collapsed, dependant on its current state. • If the insertion point is on a context menu, the context menu is opened and normal menu processing applies. • If the insertion point is on a "link" element, normal navigation processing occurs.
Tab when a row in a search result is highlighted	Highlights the next row.
Space when the insertion point is on a button	Equivalent to pressing the button.
Space when the insertion point is in a date/time field	opens the date/time selection window.
Space when the insertion point is in a check box	Toggles the check box between checked and unchecked.
Page Up while in a *list grid*	Scrolls the contents of the list grid up approximately one page.
Page Down while in a *list grid*	Scrolls the contents of the list grid down approximately one page.
up/down Arrow when in a dropdown list	Moves to the next or previous value in the list. You can also press a letter key to locate the next value starting with that letter.
up/down Arrow keys when in search results	Highlights the next/previous row in search results.
up/down/left/right Arrow when using a menu	Highlights other menu items.
F2	Opens the next tab page when a *Notebook* is open.
Shift+F2	Opens the previous tab page when a *Notebook* is open.

Chapter 3

Configurable User Interface Features

This section describes using *portals and zones* to find and display information. This is the preferred technique used by the base product for query and maintenance dialog.

Additionally, portals and zones may be configured by your implementation to supplement the base package provided functionality.

Configurable Zone Information

The topics in this section describe features and functions common to these configurable zones.

> **FASTPATH:** Refer to *The Big Picture of Portals and Zones* for a description of general portal and zone functionality.

Explorer Zones

The product provide several zone types that are used to find or display a set of information. These are called explorer zones. There are two types of explorer zones:

- **Info zones.** An info zone displays a list of information about an object. These types of zones often display information without requiring any input from the user.

- **Query zones.** A query zone allows users to find objects matching a given search criteria.

Virtually every aspect of an info or query zone is controlled by its zone *configuration*. However, most share basic common components described in the subsequent sections.

Search Criteria / Filter Area

For query zones, the Search Criteria Area (also called Filter Area) contains the criteria used to find objects. The design of the zone controls the number and type of filters that appear in this area. After search criteria is entered, clicking the **Search** button causes the system to look for records that match the criteria. The results are shown in the Results Area.

For info zones, the zone's configuration indicates whether or not a Filter area is applicable and if so, whether or not it is open or closed by default. If the filter area is configured, the *Show Filter* icon is visible in the zone header. Click this icon to expose the Filter Area, if it is not visible and click the icon to hide the Filter Area if desired. Use this area to filter the information that appears in the zone by different values. Click the **Search** button to rebuild the Results Area using the specified filters.

For example, the following shows an info zone listing user groups that do not have access to a given Application Service where a filter area has been configured to allow users to show user groups specific to a given user by ID or name.

The info zone includes configuration to indicate whether the filter area, when exposed, should be shown at the top of the zone (above the results) or at the bottom of the zone (below the results). For query zones, the search criteria is always displayed at the top.

NOTE: Press `Enter`. Rather than clicking the **Search** button, you can press `Enter` to trigger the search / info zone refresh.

Description Bar

The Description Bar describes the search criteria that were used to build the Search Results Area.

Results Area

The Results Area displays the appropriate list of objects. For an info zone, this is the list of appropriate objects with any input filter criteria considered. The following is an example of the results for an info zone. For a query zone, this is the list that matches the search criteria defined in the Filter Area. The following is an example of the results set of an Info Zone.

For a query zone, the columns that appear may differ depending on the search criteria. For example, if you search for a customer by their driver's license number, the resulting columns may be different than the ones displayed when you search by customer name.

The following points highlight details related to viewing and working with the result set:

- **Broadcast.** If the results set is configured to display a broadcast icon, 📶, it means that at least one other zone on the portal is configured to display data related to the record selected in the results list. Clicking this icon will cause the other zone or zones to be built or refreshed to display related data.

- **Hypertext.** One or more columns in the zone may be configured as hypertext. Clicking the hypertext will result in navigating to another page to display data related to that column based on the configuration for that column.

- **Maximum height.** The maximum height of the report area is controlled by the zone's configuration. A vertical scroll will appear when more rows exist than fit into the height.

- **Maximum rows.** The maximum number of rows that can appear is controlled by the zone's configuration. Excess rows are truncated before display. Please note, you can configure the zone to *download more rows to Excel* than appear in the Results Area.

- **Control column sorting.** By default zones are designed to allow a user to sort the results list by clicking any column heading. Clicking once sorts ascending. Clicking again sorts descending. However, a zone may be configured to not allow this type of sorting.

- **Rearranging columns.** A zone may be configured to allow a user to rearrange columns and add or remove columns visible in the Result Area. Refer to *Column Configuration* for the details.

The type and variety of columns that appear in the Results Area is controlled by the zone's configuration. You can even set up an info zone to display information in hierarchical trees. For example, the following info zone from Oracle Utilities Customer Care and Billing has been configured to show a person's related persons.
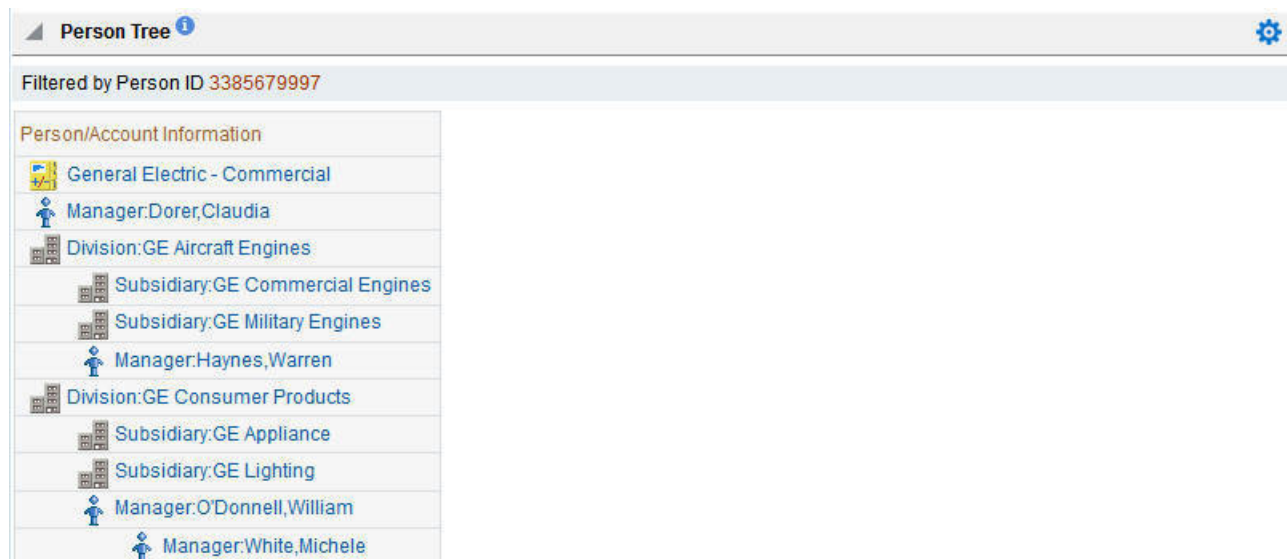
Title Bar

The Title Bar contains the zone's description along with other icons and functions described in this section.

In the corner of the Title Bar, you'll see an indicator that tells you whether the zone is collapsed (e.g., minimized) or expanded. Each time you click the indicator, the zone toggles between expanded and collapsed. The following image shows a collapsed zone.

▶ Bundle Entities	⚙

NOTE: Recommendation: For zones that are configured to show on portal preferences, set up *Portal Preferences* to collapse zones that aren't needed every time a portal is displayed. Rationale: The system doesn't build collapsed zones when a portal is displayed. Instead, collapsed zones are only built when a user expands them. Thus, indicating a zone is collapsed improves response times.

If the zone is configured with help text, a help icon appears to the right of the zone title. Click this icon to view the help text.

If a *saved search* is open for a zone, the name of the saved search is displayed after the zone title.

The following sections describe additional icons and tools visible on the title bar. Note that in addition to the information described in this section, additional actions that are specific to a zone may appear based on configuration. The actions may appear in the form of hypertext, an icon or a button.

Explorer Zone Menu

Click the Explorer Zone Menu icon ⚙ to list available tools. The following topics describe each tool.

Clear Filters

Click the **Clear Filters** link in the Explorer Zone menu to clear the filter values and zone data.

Export to Excel

Click the **Export to Excel** link in the Explorer Zone menu to download the zone's data to Excel. This link is hidden if the zone has been configured to not download rows to Excel.

Print

Click the **Print Zone** link in the Explorer Zone menu to print the zone.

Reset Zone

Click the **Reset Zone** link in the Explorer Zone menu to reload previously saved zone preferences from the database.

Save Search Options

Query zones and info zones that include filter areas, allow a user to capture and save filter criteria so that the same search can be more quickly executed in the future. Users may save many different search options for the same zone. Users also have the option to nominate one search as the default so that this search is automatically loaded upon entering the zone. In addition, users may choose to set one or more searches as a Favorite, which causes the search to appear in the *Favorite Searches* zone in the dashboard. This allows a user to navigate to the portal for that zone and load the saved search in one click.

The Explorer Menu includes various options for supporting Saved Searches that are described below.

Note the following additional points about this functionality:

• **Click Search before Saving.** When a user wants to save a search, the search criteria should be entered and the **Search** button should be clicked prior to saving the search.

- **Criteria is saved, not results.** Although a user must click **Search** prior to saving the search, the system saves the criteria, but not the results. When returning to the query or info zone in the future and opening a given saved search, the results displayed will be the current records in the system that match the saved search criteria.

- **Multi-Query Zones.** When a user is on a multi-query zone, the searches are saved at the multi-query zone level so that all saved searches for the various search dropdowns for a given multi-query zone are visible in the Open Saved Searches menu option.

- **Functionality is Secured.** If for any reason an implementation wishes to restrict which users are allowed to save searches, the functionality is securable. Only users with **Inquire** access to the **F1_USRFAVSCH** application service will see these options in the explorer menu. This is the same application service that is used to provide access to the Favorite Searches dashboard zone.

Save As

The **Save As...** option in the Explorer Zone menu allows a user to save the current entered search criteria. This should be clicked after executing the search.

The user is prompted to provide a name for the search. This search is now available from the Open Saved Searches option. If desired, a user can also choose to make this search the Default or may choose to Add to Favorites.

This option is visible whether or not an existing saved search is loaded. When a saved search is loaded, this option allows a user to make changes to the search criteria and save a new search with that criteria.

Open Saved Search

The **Open Saved Search...** option in the Explorer Zone menu is visible if there are any saved searches for the zone that is currently visible. Select this menu entry to view the current list of saved searches for the zone. For multi-query zones, any saved search for any of the query zones that are part of the multi-query zone are visible. Choose the desired saved search. The criteria is updated with this information and the search is performed.

Save

The **Save** option in the Explorer Zone menu is visible if a Saved Search is already loaded. This option allows a user to save changes to the criteria of an existing saved search (overwriting the previously saved criteria).

Set As Default

The **Set As Default** option in the Explorer Zone menu is only visible if a saved search is loaded and it is not currently the default. Click this option to nominate this search to be the one that is loaded when navigating to this zone from the menu.

Remove As Default

The **Remove As Default** option in the Explorer Zone menu is only visible if a saved search is loaded and it is currently the default. Click this option to no longer load this search automatically when navigating to this zone from the menu.

Add To Favorites

The **Add To Favorites** option in the Explorer Zone menu is only visible if a saved search is loaded and it is not currently included in the favorite searches zone. Click this option to include this search in the *Favorite Searches* zone. Once a search is in the Favorite Searches zone, you can use the link to the search in the dashboard to navigate to the portal for this zone and load the saved search in one click.

> **NOTE: Not available for dependent zones** There are some portals that include a zone that is not the main query or info zone on the portal, but is rather a zone providing additional information for a record that is displayed. If a zone like this

has filter options or configurable columns, a user is able to save searches and mark one as a default, but will not be able to add the saved search to favorites because the zone is dependent on other data on the page that is not captured for the individual zone.

NOTE: Dashboard Zone Preferences. Be sure that your *portal preferences* are configured to include the Favorite Searches dashboard zone.

Remove From Favorites

The **Remove From Favorites** option in the Explorer Zone menu is only visible if a saved search is loaded and it is currently included in the *Favorite Searches* zone. Click this option when you want to keep the saved search but you no longer want it visible in your Favorite Searches zone. (Deleting a saved search that is also marked as a favorite will automatically remove the search from the favorite searches zone.)

Delete

The **Delete** option in the Explorer Zone menu is only visible if a saved search is loaded. Click this option to remove the currently opened saved search from the list of saved searches.

Note that if the saved search had been configured as favorite, deleting the saved search remove it from the favorite searches zone.

Show Filters

Click the **Show Filters** icon ⬚ to show the *Filter Area*. This button only appears if the zone has been configured to have filters.

NOTE: If the zone is configured to have filters and the drag and drop (column configuration) area, only one or the other is shown at any given time. It means that a user can either change the filter criteria and refresh the search results or change the column configuration and refresh the results.

Show Column Configuration Area

Click the **Column Configuration** icon ⬚ to show the *Column Configuration Area*. This button only appears if the zone has been configured to allow columns to be dragged and dropped into the Results Area.

NOTE: If the zone is configured to have filters and the drag and drop (column configuration) area, only one or the other is shown at any given time. It means that a user can either change the filter criteria and refresh the search results or change the column configuration and refresh the results.

The Open Zone Maintenance Icon

Click the "wrench" icon ⬚ to switch to the zone's *zone maintenance* page. On this page, you can change the parameters that control the zone's behavior.

NOTE: Debug mode only. This icon only appears when the system operates in *Debug* mode.

Configurable Columns

Info zones and query zones may be configured to allow users to rearrange columns and to remove or add columns to the output. This is also referred to as "drag and drop" of columns.

When a zones is configured to support this functionality, the *Show Column Configuration Area* icon is visible in the zone title area. Click this icon to expose the Column Configuration Area, if it is not visible and click the icon to hide the Column Configuration Area if desired.

If configurable columns are allowed, a user may rearrange the order of columns currently displayed in the Results Area by clicking the column heading and "dragging" it to the desired location.

In addition, the column configuration area may display columns that are not currently in the Results Area. These are indicated by a cream background. A user can drag one of these columns to the results area and then click **Refresh** to rebuild the zone. To remove a column that is currently in the results area, click the trash can icon next to the column name in the column configuration area and then click **Refresh** to rebuild the zone.

The following is an example of how the Column Configuration Area looks:

Multi-Query Zones

This type of zone combines individual Query Zones into a single query zone. A **Search By** dropdown, built from the zone descriptions of the individual Query Zones, allows you to select the desired query to execute. Selecting a specific Query Zone display the filters of that query in the filter area. At this point the zone simply executes the selected Query Zone, as if it was executed on a standalone zone. By default, the first query zone option is selected.

Map Zones

A map zone displays information related to one or more objects. For objects that are maintained using portal-based pages, the standard display of the object is using a map zone. Map zones may be configured to display an explicit map or may dynamically display the map based on the configuration of the record being displayed.

Because the information displayed in a map zone is configured using HTML, virtually any format supported by HTML is possible. The following is an example of a typical map zone used to display information about an object.

A *tool tip* can be used to display additional help information for the details shown in a map zone. The tool tip may appear adjacent to the section header or adjacent to individual elements on a map.

> **NOTE:** You can customize the help icon or disable map help using the *Custom Look and Feel* feature configuration.

Open Map Maintenance Icon

Click the "hammer" icon to switch to the *UI map* maintenance page. On this page, you can view the HTML configuration for the zone. Note that for map zones that display a business object configured without a map, the elements displayed are automatically rendered. In this case, no "hammer" icon is visible.

> **NOTE: Debug mode only.** This icon only appears when the system operates in *Debug* mode.

Common Characteristics of Zones

The following topics describe common characteristics of all zone types supported by the base package.

Zone Visibility

A zone may be configured to dynamically be visible or completely hidden depending on the information being displayed. When hidden not event the header is displayed. Refer to the common **Zone Visibility Service Script** parameter for further details.

Control Zone Headers

A zone may reference a UI Map to define and control its header. This feature provides the means to achieve a uniform look and feel for the application as well as add functionality to the zone header beyond being just a title bar to open and close the zone. Refer to *UI Map* and to its context sensitive tips zone for more information on **Fragment** UI Maps and how they are used to construct zone headers.

Portals and Zones Common to Base Product Pages

The following sections describe common standards followed by the product for base query and maintenance dialogue.

All-In-One Portal

The all-in-one portal is used for low volume objects, where a small number of records are expected.

For example, many control tables use this style of portal. In this portal, rather than separate query and maintenance portals, a single portal allows a user to find a record and maintain the record. A zone listing all existing records is displayed when first entering the portal. A user can perform actions on existing records or add new records from there. More details about the list zone are provided below.

Refer to *Maintenance Portal* for information about zones commonly found on maintenance portals.

The all-in-one portal will typically provide the ability to add a new record. This may be a button in the Page Action area or a hyperlink defined directly on the list zone's header area.

List Zone

This info zone appears when first entering the portal and displays a row for each record.

The following functions are commonly available in a list zone:

- A broadcast icon is included in each row. Clicking this icon opens other zones that contain more information about the adjacent record.
- An **Edit** icon may be included in each row. Clicking this icon launches the maintenance BPA script to modify the adjacent record.
- A **Duplicate** icon may be included in each row allowing the user to duplicate the adjacent record without having to first display the record.
- A **Delete** icon may be included in each row allowing the user to delete the adjacent record without having to first display the record.
- If the record has a simple BO lifecycle of **Active** and **Inactive**, the list zone may include a button to **Activate** or **Deactivate** the adjacent record.

Separate Query and Maintenance Portals

For high volume objects where more sophisticated search criteria is needed to find a particular record, separate portals are provided to search for the record and to maintain it.

The query portal contains a zone to search of the object that you wish to maintain. Additional information about the query portal's search zone is provided below. Clicking an appropriate record in the search results navigates to the object's stand-alone maintenance portal.

The query portal will typically provide the ability to add a new record. This may be a button in the Page Action area or a hyperlink defined directly on the list zone's header area.

Query Portal Search Zone

The query portal contains one zone used to search for the object.

The zone may be a standard query zone or may be a multi-query zone providing one or more ways to search for your record.

Once the search results are displayed, click on the hypertext for the desired record's information string to navigate to the stand-alone maintenance portal.

Maintenance Portal

A maintenance portal refers to a page that is used to view and maintain a specific record. These types of records are governed by a business object, which defines the user interface layout for both the display of the record and the add or update of the record.

An all-in-one portal is a type of maintenance portal, once a record has been broadcast from the list zone. For the separate query and maintenance portal dialogue, the maintenance portal includes only zones relevant for the specific record selected.

Maintenance portals may have multiple tabs to display information relevant for the object. Often, if the object has a Log, the log is on a separate tab. (Although there may be some maintenance portals that include the log zone on the Main tab.)

The stand-alone maintenance portal is typically configured with the ability to navigate back to the query portal using either a **Search** button in the Page Actions area or using a **Go To Search** hyperlink in the main zone's header area. The stand-alone maintenance portal may also include the ability to add a new record using an Add button in the Page Actions area. (If not, a new record can be added by navigating through the menu or by navigating to the query portal where an Add hyperlink may be found.

The following zones are common to portals used to maintain a record.

Note that additional zones may exist for specific all-in-one portals or stand-alone maintenance portals based on the particular functionality. Refer to the documentation for each portal to understand the specific zones that are provided.

Object Display Zone

This is a zone that displays the object being maintained.

An object being displayed may or may not allow for actions or updates to be made. Typically there is a Record Actions section in the display area that presents the valid actions. Depending on the functionality, the actions may prompt the users to input values required for that action.

Log Zone

If the maintenance object for the record includes a status, it typically has a log that records important events in its lifecycle.

This log is shown in an info zone on the portal, either on the Main tab or on a separate Log tab. A link appears in the zone's title bar to allow the user to add a new manual log entry.

Chapter 4

Batch Jobs

The following section describes the functionality provided for submitting background processes on-line. You use this functionality to submit your adhoc background processes or to submit a special run for one of your scheduled background processes.

> **FASTPATH:** For information on creating batch processes, see *Defining Background Processes*.

On-Line Batch Submission

The on-line *batch submission* page enables you to request a specific background process to be run. When submitting a background process on-line, you may override standard system parameters and you may be required to supply additional parameters for your specific background process. After submitting your background process, you may use this page to review the status of the submission.

The following topics further describe logic available for on-line submission of background processes.

Batch Submission Creates a Batch Run

When you request a batch job to be submitted from on-line, the execution of the desired background process will result in the creation of a batch run. Just as with background processes executed through your scheduler, you may use the *Batch Run Tree* page to view the status of the run, the status of each thread, the run-instances of each thread, and any messages that might have occurred during the run.

> **NOTE:** Your on-line submission record is assigned a status value so that you may know whether your job has been submitted and whether or not it has ended, however, it will not contain any information about the results of the background process itself. You must navigate to the *Batch Run Tree* page to view this detail.

Jobs Submitted in the Background

When you save a record on the batch job submission page, the batch job does not get submitted automatically. Rather, it saves a record in the *batch job* table. A special background process will periodically check this table for pending records and will execute the batch job. This background process will update the status of the batch job submission record so that a user can determine when their job is complete.

> **NOTE:** At installation time, your system administrator will set up this special background process to periodically check for pending records in the batch job submission table. Your administrator will define how often the system will look for pending records in this table.

It should be noted that this special background process only submits one pending batch job submission record at a time. It submits a job and waits for it to end before submitting the next pending job.

> **NOTE:** If you request a batch job to be run multi-threaded, the special background process will submit the job as requested. It will wait for all threads to complete before marking the batch job submission record as **ended**. Refer to *Running Multi-threaded Processes* for more information.

Email Notification

If you wish the system to inform you when the background process completes, you may supply your email address. The email you receive will contain details related to the batch job's output; similar to the job results you would see from your batch scheduler.

> **NOTE:** This assumes that during the installation process, your system administrator configured the system to enable email notification. Your administrator may also override the amount of detail included in the email notification.

Running Multi-Threaded Processes

Many of the system background processes may be run multi-threaded. When submitting a background process on-line, you may also run a multi-threaded process or run a single thread of a multi-threaded process. The fields Thread Count and Thread Number on the *batch submission* page control the multi-threaded process requests:

- To run a multi-threaded process, indicate the number of threads in **Thread Count** and enter **0** in the **Thread Number**. In Oracle Utilities Customer Care and Billing, for example, to run the account debt monitor (ADM) with 10 threads, enter Thread Count = **10** and Thread Number = **0**. This will execute all 10 threads of ADM.

- To run a single thread in a multi-threaded process, indicate the number of threads in Thread Count and indicate the Thread Number you would like to run. For example, to run only thread 1 out of 10 threads for the account debt monitor (ADM), enter Thread Count = **10** and Thread Number = **1**. This will execute thread 1 out of 10 for ADM.

- To run a process as a single thread, enter Thread Count = **1** and Thread Number = **1**. This will execute the background process single-threaded.

> **NOTE:** When running a multi-threaded process, the special background process will wait until all threads are complete before marking the batch job submission record as **ended**.

Batch Jobs May End in Error

It is possible for your background process to end with an error. Refer to *Dealing With Abnormally Terminated Batch Processes* for more information about this. When this occurs, your batch job submission record will still be marked as **ended**. You will need to navigate to the *Batch Run Tree* page to determine the status of the batch run.

Submitting Jobs in the Future

If you wish to request a batch job to be submitted in the future, you may do so when creating your batch job submission record by entering a future submission date. The special background process, which looks for pending records in the batch job submission table, will only submit batch jobs that do not have a future submission date.

Lifecycle of a Batch Job Submission

The following diagram illustrates the lifecycle of a batch job submission record.
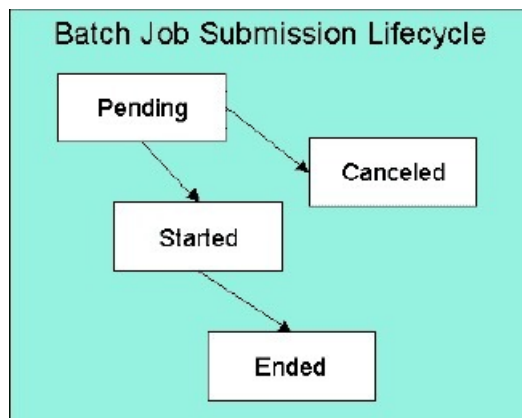
Pending Records are created in **Pending** status. Records in this state are put in a queue to be submitted.

Canceled Users may **Cancel** a pending record to prevent the batch job from being submitted.

Started Once a pending record has been submitted for processing, its status will be changed to **Started**. Records in this status may not be canceled.

Ended When the batch job has finished processing, its status will be changed to **Ended**. Note that records in **Ended** status may have ended in error. Refer to *Batch Jobs May End in Error* for more information.

Batch Job Submission - Main

This page allows you to submit a batch job on-line. Navigate to this page using **Menu** > **Batch** > **Batch Job Submission** > **Search** .

Description of Page

The **Batch Job ID** is a system generated random number that identifies a particular submission.

To submit a batch job, choose the **Batch Code** for the process you wish to submit.

NOTE: List of system background processes. The list of background processes provided in the base product may be viewed in the *application viewer*'s *batch control* viewer.

The following parameters are provided with each background process:

Thread Number is used to control whether a background processes is run single threaded or in multiple parallel threads. It contains the relative thread number of the process. For example, if the process has been set up to run in 20 parallel threads, each of the 20 instances receives its relative thread number (1 through 20). Refer to *Running Multi-threaded Processes* for more information about populating this field.

NOTE: Not all processes may be run multi-threaded. Refer to the description of a batch control to find out if it runs multi-threaded.

Thread Count is used to control whether a background processes is run single threaded or in multiple parallel threads. It contains the total number of threads that have been scheduled. For example, if the process has been set up to run in 20 parallel threads, each of the 20 instances receives a thread count of 20. Refer to *Running Multi-threaded Processes* for more information about populating this field.

Batch Rerun Number is only used for background processes that download information that belongs to given run number. It should only be supplied if you need to download an historical run (rather than the latest run).

Batch Business Date is only used for background processes that use a date in their processing. In Oracle Utilities Customer Care and Billing, for example, a billing process can use the business date to determine which bill cycles should be downloaded. If this parameter is left blank, the system date is used at the time the background process is executed.

NOTE: Saving a record on this page does not submit the batch job immediately. A special background process will run periodically to find pending records and submit them. Depending on how often the special process checks for pending records and depending on how many other pending records are in the 'queue', there may be a slight lag in submission time. If the desired execution date/time is close to midnight, it is possible that your batch job will run on the day after you submit it. If you have left the business date blank in this case, keep in mind that your business date would be set to the day after you submit the job.

Override Nbr Records To Commit and **Override Max Timeout Minutes**. These parameters are optional and override each background process's Standard Commit Records and Standard Cursor Re-Initiation Minutes. (Each background process's Standard Commit Records / Standard Cursor Re-Initiation Minutes should be documented in the detailed description of the batch control record). Note that Max Timeout Minutes corresponds to the Cursor Re-initiation Minutes.

FASTPATH: Refer to *Parameters Supplied to Background Processes* for more information.

User ID is the user ID associated with the run of the background process. Refer to *Parameters Supplied to Background Processes* for more information about the significance of the user id.

NOTE: This field defaults to the id of the current user.

Password is not currently used.

Language Code is used to access language-specific control table values. For example, error messages are presented in this language code.

If you wish the system to notify you when the batch job is complete, enter your **Email ID**. Refer to *Email Notification* for more information.

NOTE: This field defaults to the email address for the current user, if populated on the *user* record.

The **Desired Execution Date/Time** defaults to the current date and time. Override this information if you wish the background process to be executed at some future date and time. Refer to *Submitting Jobs in the Future* for more information.

The **Batch Job Status** indicates the current status of the batch job. Refer to *Lifecycle of a Batch Job Submission* for more information.

The **Program Name** associated with the batch control code is displayed.

The following trace parameters may also be supplied to a background process and are only used during QA and benchmarking.

- **Trace Program Start** Turn on this switch if you wish a message to be written whenever a program is started.

- **Trace Program Exit** Turn on this switch if you wish a message to be written whenever a program is exited.

- **Trace SQL** Turn on this switch if you wish a message to be written whenever an SQL statement is executed.

- **Trace Output** Turn on this switch if you wish a message to be displayed for special information logged by the background process.

  NOTE: The information displayed when the trace output switch is turned on depends on each background process. It is possible that a background process displays no special information for this switch.

  NOTE: The location of the output of this trace information is defined by your system administrator at installation time.

If additional parameters have been defined for this background process on the Batch Control page, the **Parameter Name, Description, Detailed Description** and an indicator of whether or not the parameter is **Required** are displayed. Enter the desired **Parameter Value** for each parameter.

Each of the batch processes has, as part of its run parameters, a preset constant that determines how many errors that batch process may encounter before it is required to abort the run. You can override this constant with an optional additional parameter (MAX-ERRORS). The input value must be an integer that is greater than or equal to zero. The maximum valid value for this parameter is 999,999,999,999,999.

Once you have entered all the desired values, **Save** the record in order to include it in the queue for background processes.

If you wish to duplicate an existing batch job submission record, including all its parameter settings, display the submission record you wish to duplicate and use the **Duplicate and Queue** button. This will create a new Batch Job Submission entry in pending status. The new submission entry will be displayed.

If you wish to cancel a **Pending** batch job submission record use the **Cancel** button. The button is disabled for all other status values.

Tracking Batch Processes

The batch process pages show the execution status of batch processes. For a specified batch control id and run id, the tree shows each thread, the run-instances of each thread, and any messages (informational, warnings, and errors) that might have occurred during the run. Refer to *Defining Batch Controls* for more information on how batch control codes are defined.

Batch Run Tree - Main

This page allows you to view the status of a specific execution of a batch job. Navigate to this page using **Menu** > **Batch** > **Batch Run Tree** > **Search** .

Description of Page

Select a **Batch Control** process and **Batch Number** to view information and statistics on the batch run's "threads". The concept of a "thread" is a bit difficult to explain. The following points should help understand this concept:

- Many batch jobs cannot take advantage of your hardware's processing power when they are run singularly. Rather, you'll find that a large percentage of the CPU and/or disk drives are idle.

- In order to minimize the amount of idle time (and increase the throughput of your batch processes), we allow you to set up your batch processes so that multiple instances of a given batch job are executed at the same time. For example, in Oracle Utilities Customer Care and Billing when you schedule the **billing** process, you can indicate that multiple parallel instances should be executed (rather than just one instance). You'd do this so that the processing burden of creating bills for your customers can be spread over multiple processes.

- We refer to each parallel execution of a batch process as a "thread".

- Statistics and information messages are displayed in respect of each thread. Why? Because each thread is a separate execution and therefore can start and end at different times.

The tree includes a node that displays the total number of records processed for the batch run, the total number of records in error for the batch run and the batch run elapsed time. The elapsed time is the longest elapsed time among the batch thread(s). The message is red if there are any records in error.

If the background process has been enabled to create *To Do entries for object specific errors*, information about the To Do entries are displayed in the tree. This information is not displayed for each thread, but rather all the To Do entries created for the batch run are grouped together. The To Do entries are grouped by their status.

The messages that appear under a thread always show the start and end times of the execution instance. If errors are detected during the execution of the thread, these error messages may also appear in the tree. Refer to *Processing Errors* for information about the types of errors that appear in the batch run tree.

Batch Run Tree - Run Control

By default, if a batch process fails, it will restart. This notebook tab allows you to modify the restart status of a failed run.

Navigate to this page using **Menu** > **Batch** > **Batch Run Tree** search for the desired batch control and then navigate to the **Run Control** page.

Description of Page

On the main page, you must select a **Batch Control**, **Batch Number**, and **Batch Rerun Number** to view a tree of the batch run. On this page, the following information is displayed:

- **Date Time** contains the date and time this batch run last start or last completed.

- **Batch Business Date** is the business date that was supplied to the background process (this date is used as the "system date" by the process).

Run Status indicates the status of the batch run. Valid values are: **In Progress**, **Error**, and **Complete**.

If the **Run Status** is **Error**, the system will attempt to restart this run when you attempt to execute the **Batch Control**. In most situations, this is exactly what you want to happen. However, there are rare situations where you do not want the system to execute a given batch run (e.g., if this run is somehow corrupt and you cannot correct the data for whatever reasons). If you want the system to skip the execution of a batch run (and proceed to the next run), turn on **Do Not Attempt Restart**.

Dealing With Abnormally Terminated Batch Processes

When a batch process abnormally terminates, its status remains **In Progress**. This is because there is no way for the terminated job to execute logic that would cause its status to be **Error**.

Circumstances that can cause abnormal termination include:

- A process encounters a severe database error.

- An operator manually terminates a process that is locked in an infinite loop.

Because the batch process's status is **In Progress**, the system will not know that it should be restarted the next time the batch process is requested. Therefore, you must change the status of the batch run and its threads to be **Error** in order for the system to restart the process. To do this, you must run another batch process called **UPDERR**- Change A Batch Run's Status to Error.

Chapter 5

Reports

The following section describes the functionality provided for submitting reports on-line and for viewing reports submitted through a scheduler.

> **FASTPATH:** For information about this functionality, see *The Big Picture of Reports*.

On-line Report Submission

The on-line report submission page enables you to request a specific report to be run. This is only available if your system is able to integrate with your third party reporting system on-line. The system comes configured to integrate with BI Publisher and Business Objects Enterprise.

Report Submission - Main

This page allows you to submit a report on-line. Navigate to this page using **Menu** > **Batch** > **Report Submission.** .

Description of Page

To submit a report, choose the **Report Code** for the process you wish to submit. Refer to *Defining Report Definitions* for information about defining reports in the system.

A description of the report is displayed.

The parameters defined for the report on the *report definition* page are displayed in the grid. To see a description of a parameter, use the search button adjacent to the parameter label.

> **NOTE: Default note**. The default values displayed for the parameters are defined on the *report definition* page.

When you have entered the appropriate parameter values, click the **Submit** button to submit the report. Refer to *How To Request Reports* for more information.

NOTE: Reports submitted via the on-line report submission page are NOT logged in the report history repository and are therefore not visible from the *report history* page. Only reports submitted through your third party reporting tool's batch scheduler are logged in the report history.

Viewing Historic Reports

If your third party reporting tool stores historic copies of reports in a repository, you may configure the system to allow a user to view these historic reports on-line.

NOTE: The system comes with the ability to display reports stored in the Business Objects Enterprise report repository. Only reports scheduled through Business Objects Enterprise's batch schedule are stored in the repository.

Report History - Main

This page allows you to view a report stored in your third party reporting tool's report repository. Navigate to this page using **Menu** > **Batch** > **Report History** .

Description of Page

The top part of the page shows the **Report Code**, **Description** and **Long Description** for the selected report.

To select a report, search by either **Report Code** or **Description** and click the adjacent search button. The reports matching your search criteria are displayed. Choose the desired report from the selection list.

NOTE: **Displaying Report History**. When you choose a report, the system interfaces with your reporting software to display a list of historical occurrences of this report. Refer to *Interface with Business Objects Enterprise's Batch Scheduler* for more information.

Chapter 6

To Do Processing

There are numerous events that trigger the creation of email-like messages describing work that requires human attention. For example, if a bill segment has an error, a message is created to highlight such. We refer to each message as a **To Do Entry**. In this section, we describe how to view, manage and work To Do entries.

> **FASTPATH:** We recommend familiarizing yourself with the topics described in *The Big Picture of To Do Lists* to fully appreciate how To Do entries are managed by the system.

The Big Picture of To Do Processing

The topics in this section provide background information on To Do processing functionality.

To Do Role

Each To Do entry is assigned a specific To Do Role. The role defines the users who may work on the entry. The permissible roles that may be assigned to a To Do entry are defined on the entry's To Do type. Refer to *To Do Entries Reference A Role* to learn more about initial role assignment.

After an entry is created, its role may be changed to any role defined as valid for the entry's To Do type. Manual changes of a To Do entry's role are recorded on the *To Do entry log*.

To Do Priority

A To Do entry is associated with a priority level representing its processing order compared to other entries. Refer to *The Priority Of A To Do Entry* for more information on how an entry's priority is initially assigned.

A user may manually override a To Do entry's priority at any time. Once overridden, automatic recalculation of the priority is no longer performed so as not to override the value explicitly set by the user. Manual overrides of a To Do entry's priority are recorded on the *To Do entry log*.

Work Distribution

To Do entries may be manually assigned to users either by their supervisors or picked up by the users themselves. The system can also be configured to dynamically assign the highest priority work to users on demand whenever they are available for fixing errors.

> **NOTE: Assignment on demand is in a plug-in.** You can customize the *next assignment* plug-in on the installation options to follow your organization's work distribution rules. For example, when a user asks for the next assignment, business rules may be used to only consider To Do entries the user has the proper *skills* to resolve, prioritizing them based age, impacted dollar amount, etc.

One of the main benefits of the assignment on demand approach is that work is allocated real-time based on most current information such as skills, priority, user availability, etc. This also means that work remains unassigned until a user is actually going to work on it making it available to any qualified user.

Manual assignments of To Do entries are possible as follows:

- Supervisors may use the *supervisor function* pages to review and assign To Dos to users.
- A user may use the *To Do list* pages to review and assign To Dos to themselves or forward any of their To Dos to someone else.
- All of the above assignment functions may also be performed using the *To Do Search* page.

Assignment "on demand" is possible from the *Current To Do* zone on the Dashboard portal. Refer to this zone to learn about all the functions it provides.

A User's Current To Do

Users have the option of drilling down on an entry from various list queries in the system. Refer to *Working On A To Do Entry* for more information on drilling into an entry.

Drilling down on an entry from the following To Do list queries (using the entry's message description only) also sets the entry as the user's **Current** To Do entry:

- *To Do List*
- *To Do Search*

Additionally, users may have the option to click on the Current To Do icon, , on the Current To Do dashboard zone to request their next task. The returned To Do entry automatically becomes the user's **Current** To Do.

Regardless of how a To Do entry became current its information is displayed on the Current To Do zone.

> **FASTPATH:** Refer to *Current To Do* zone to learn about all the functions it provides to efficiently resolve the current To Do and other entries that may potentially be *related* to it.

If a To Do entry becomes current as a result of drilling down from a list query, the system supports the ability to drill down to the **Next** and **Previous** entries respective to the **Current** To Do entry in that list.

> **NOTE:** The **Previous To Do** button (Alt+Y) and **Next To Do** button (Alt+Z) in the Current To Do zone allow you to scroll through additional To Do items in your current work list without returning to the list query transaction. These buttons set the respective To Do entry to now being current and take you to its related transaction or to a script

associated with the To Do Entry's message (not to the To Do entry itself). This is yet another way of drilling down on an entry.

If a To Do entry becomes current using the Current To Do zone's next assignment functionality, that entry is not associated with any work list to scroll through. The Next and Previous To Do buttons are therefore disabled in this case.

NOTE: Current Work List. Current work list refers to the list from which the current To Do entry was selected. Each new election of a current To Do overrides the previous work list with the new list the entry was selected from. If not selected from a list then the current work list is considered empty.

Related To Do Entries

A user working on a To Do may want to know of other To Dos that may be related to the same problem. If can be worked by the same user they may get resolved faster. It seems almost impossible to programmatically determine whether two To Dos really stem from the same problem. The user should therefore be presented with a list of potentially related To Dos from which he/she can select the truly relevant ones.

A To Do entry is considered potentially related to a given To Do if they reference a common entity. For example, if a given To Do references a certain account then any To Do referencing that same account is considered related to it.

NOTE: The system considers any To Do characteristic of **Foreign Key** type to represent a reference to an "entity". In other words, if a To Do has at least one common **Foreign Key** characteristic type / value with a given to do it is considered related to it.

The To Do Search page supports a **Related To Do filter** that lists all related To Dos for a given entry. Various pages showing To Do information often provide an indication as to how many non-complete entries may be related to a given To Do entry. Clicking on the indication's hyperlink transfers the user to the To Do Search query pre-populating it to list the related entries for the specific To Do entry.

FASTPATH: Refer to the *To Do Search* page for more information on all the functions it supports.

Complete A To Do

After you finish working on an entry, you can mark it as **Complete**. At this point, you may want to review potentially *related* To Do entries and complete those that have been addressed by resolving the problem associated with the current entry.

If you cannot resolve the problem, you can forward the To Do to another user, thus assigning the To Do to another user.

FASTPATH: Refer to *How To Complete To Dos* for more information.

NOTE: It is possible for the system to automatically mark an entry as **Complete**. Refer to *The Lifecycle Of A To Do Entry* for more information.

Managing To Do Entries

This section describes the various pages available to view and work on To Do entries.

To Do Supervisor Functions

This section describes To Do transactions that aid supervisors in the monitoring and assignment of To Do entries.

Supervisor To Do Summary

This Supervisor To Do Summary page summarizes To Do entries by To Do Type. Only entries that are **Open** (i.e., not assigned to a specific user) or **Being Worked On** are summarized.

NOTE: Only To Do entries that are assigned to a role to which you belong are summarized on this page. Refer to *To Do Entries Reference A Role* for more information.

Use **To Do** > **Supervisor To Do Summary** to open this page.

Description of Page

This page summarizes all To Do entries that are **Open** or **Being Worked On**.

- **To Do Type** contains the description of the To Do type.
- **Priority** provides a total count of To Do entries of a given type by priority. For each distinct priority the description includes the priority value followed by the corresponding number of entries. If all entries are of the same priority no additional count is displayed.
- **Total** contains the total of **Open** and **Being Worked On** entries. The hyperlink navigates to the *Supervisor To Do Assignment* transaction, setting it to display all **Open** and **Being Worked On** entries for the given To Do Type.
- **Open** contains the number of To Do Entries whose status is **Open**. The hyperlink navigates to the *Supervisor To Do Assignment* transaction, setting it to display all **Open** entries for the given To Do Type.
- **Being Worked On** contains the number of To Do entries whose status is **Being Worked On**. The hyperlink navigates to the *Supervisor To Do Assignment* transaction, setting it to display all **Being Worked On** entries for the given To Do Type.

The "age bars" that appear to the right of the totals highlight the age of the To Do entries. The colors red, yellow and green are used to highlight the relative number of old, middle-aged and new To Do entries. The age associated with each of these colors is *user-configurable*.

Supervisor User Summary

The Supervisor User Summary page summarizes To Do entries by the user who is assigned to work on the entries. Only entries that are **Being Worked On** are summarized.

NOTE: Only To Do entries that are assigned to a role to which you belong are summarized on this page. Refer to *To Do Entries Reference A Role* for more information.

Use **To Do** > **Supervisor User Summary** to open this page.

Description of Page

This page contains a grid that displays all assigned To Do entries by User ID and To Do type. It indicates how many To Do entries of the displayed Type are assigned to the user (Assigned this Type) and how many To Do entries in total are assigned to the user (Assigned Total).

Clicking the hyperlinks transfer you to the *Supervisor To Do Assignment* transaction. On this transaction, you can assign / reassign To Do entries to a specific user. The difference is that clicking the To Do Type hyperlink causes only **Open** entries

to be displayed on the Assignment transaction. Clicking the count in the Assigned this Type column causes **Being Worked On** entries assigned to the displayed user to be shown.

Supervisor To Do Assignment

This page lists To Do entries of a given type and allows a supervisor to assign / reassign them to a designated user. Use **To Do** > **Supervisor To Do Assignment** to open this page.

Description of Page

This page contains **Open** or **Being Worked On** To Do entries of a given type. These entries can be assigned to a specified user one-by-one or several at a time. The following points describe this functionality:

- You can select a different **To Do Type** by typing in a value or pressing the search button in the upper right corner. An **Info** description of the To Do type appears on the left.

- You can change the list of entries displayed according to their status. Select the **Filter by** status to be All (blank), **Open**, or **Being Worked On**.

- For **Being Worked On** entries, you may also **Filter by User** to limit the search to a specific user assigned to the To Do entries.

- If you want to re-sort the entries by a different value, click the search button adjacent to **Extra Information**. Each row's respective sort value is displayed in the **Extra Information** column.

NOTE: Extra Information. Each To Do list's default **Extra Information** is defined on the list's *To Do Type*. Also note that each To Do list's available **Extra Information** differs.

- Click the **Select All** button to select all entries displayed in the grid. Click the **Clear All** to remove the selections in the grid.

- Use the checkbox if you want to assign specific entries.

- Entries are further sorted by their **Priority**. Highest in priority are listed first.

- **Create Date/Time** contains the date and time the To Do entry was created by the system. Click the Create Date/Time hyperlink to:

  - View more detailed information about the entry.

  - Add comments to the To Do entry.

  - Add a log entry of type **User Details** to record information about the To Do entry.

  - Forward the To Do entry to another user.

  - Send Back a To Do entry that was forwarded to you by another user.

- Click the number of **Related** entries hyperlink to navigate to the *To Do Search* query to list potentially related entries to the current entry.

- **Worked By** shows the user currently assigned to the To Do entry.

- **To Do Entry Status** is the current status of the To Do entry.

- **Message** contains a description of the To Do entry. Use the message description hyperlink to drill into the page on which the entry's respective object is displayed. If the To Do type has been configured to associate a script with this To Do entry's message number, then instead of being taken to the respective page, the associated script is launched. Refer to *Working On A To Do Entry* for more information.

- You can assign entries to a user:

  - Enter a user ID or search for a user using the **Assign To User** field. You can only select a user that is associated with a role that is associated with this **To Do Type**. Note that the current number of assignments is displayed adjacent.

- Select one or more entries to assign to this user and click the **Assign** button. The entries' status becomes **Being Worked On**.

To Do List Functions

This section describes To Do pages that aid users in the assignment and working of entries in To Do lists.

To Do Summary

This page summarizes To Do entries that meet the following qualifications:

- The entry is **Open** and you belong to the entry's To Do role. Refer to *To Do Entries Reference A Role* for more information about roles.

- The entry is **Being Worked On** and you are the user to which it is assigned.

Use **Menu** > **To Do** > **To Do Summary** or press `Alt+X` to open this page.

FASTPATH: We recommend familiarizing yourself with the topics described in *The Big Picture of To Do Lists* to fully appreciate how To Do entries are managed by the system.

Description of Page

This page is dedicated to a grid that summarizes the To Do entries on which you can work. The following information is displayed:

- **To Do Type** contains the description of the To Do type.

- **Priority** provides a total count of To Do entries of a given type by priority. For each distinct priority the description includes the priority value followed by the corresponding number of entries. If all entries are of the same priority no additional count is displayed.

- **Total** contains the total of **Open** and **Assigned to You** entries. The hyperlink navigates to the *To Do List* transaction, setting it to display all **Open** and **Being Worked On** entries assigned to you for the given To Do Type.

- **Open** contains the number of To Do Entries whose status is **Open**. The hyperlink navigates to the *To Do List* transaction, setting it to display all **Open** entries for the given To Do Type.

- **Assigned to You** contains the number of To Do entries that are assigned to you whose status is **Being Worked On**. The hyperlink navigates to the *Supervisor To Do Assignment* transaction, setting it to display all **Being Worked On** entries for the given To Do Type.

The "age bars" that appear to the right of the totals highlight the age of the To Do entries. The colors red, yellow and green are used to highlight the relative number of old, middle-aged and new To Do entries. The age associated with each of these colors is *user-configurable*.

To Do List

This page lists To Do entries of a given type that are either **Open** (e.g., not assigned to a specific user) or are assigned to you.

NOTE: Restricted by role. Only those entries assigned to a role to which you belong may be seen on this page. Refer to *To Do Entries Reference A Role* for more information.

FASTPATH: We recommend familiarizing yourself with the topics described in *The Big Picture of To Do Lists* to fully appreciate how To Do entries are managed by the system.

Use **Menu** > **To Do** > **To Do List** to open this page.

Description of Page

This page contains a grid that summarizes the To Do entries of a given type on which you can work.

The **Info** section contains a concatenation of the **To Do Type**'s description and the user's name.

The area beneath **Info** provides you with options that control which To Do entries appear and the order in which they are displayed. The following points describe the various options:

- Use **Sort By** to define how you want the To Do entries sorted. The following options are available:

  - **Assigned Date - On or After.** This option sorts the To Do entries in chronological order (based on the date the entry was assigned to you) starting from the input **Date**. If you choose this option, the system assumes you want to start from the earliest To Do entry. If you want to start from a date other than the earliest To Do entry, enter the desired **Date** and click the adjacent search button.

  - **Assigned Date - On or Before.** This option sorts the To Do entries in reverse chronological order (based on the date the entry was assigned to you) starting from the input **Date**. If you choose this option, the system assumes you want to start from the today's date. If you want to start from a date other than today's date, enter the desired **Date** and click the adjacent search button.

  - **Create Date - On or After.** This option sorts the To Do entries in chronological order (based on the date the entry was created) starting from the input **Date**. If you choose this option, the system assumes you want to start from the earliest To Do entry. If you want to start from a date other than the earliest To Do entry, enter the desired **Date** and click the adjacent search button.

  - **Create Date - On or Before.** This option sorts the To Do entries in reverse chronological order (based on the date the entry was created) starting from the input **Date**. If you choose this option, the system assumes you want to start from the today's date. If you want to start from a date other than today's date, enter the desired **Date** and click the adjacent search button.

  - **Extra Information**. This option sorts the To Do entries by the value of the **Extra Info**.

- Use **Extra Info** to choose data related to the To Do Entry that should be used to sort the To Do entries. This information is displayed in each entry's **Extra Information** column.

  NOTE: Extra Info. Each To Do list's available **Extra Info** is defined on the list's *To Do Type Sort Keys*. Also note that each To Do list's available **Extra Info** differs based on the configuration of the To Do Type.

- Use **Filter by** to restrict the To Do entries based on their status. The following options are available:

  - **All**. This option shows all entries that are **Open** or **Being Worked On**.

  - **Being Worked On**. This option shows all entries that are **Being Worked On** (and assigned to you).

  - **Open**. This option shows all entries that are **Open**.

The grid that follows contains the To Do entries that match your criteria. The following information appears:

- Click the **Select All** button to select all entries displayed in the grid. Click the **Clear All** button to remove the selections in the grid.

- Use the checkbox if you want to mark specific entries as **Completed** or **Being Worked On** using the **Complete** or **Assign** buttons at the bottom.

- A Comments icon 💬 appears if there are comments on the To Do item and a Log Entry icon 🖼 appears if there is a log entry of type **Forwarded**, **Sent Back** or **User Details** on the To Do item. This column appears if at least one To Do has either comments or a special log entry.

- Entries are further sorted by their **Priority**. Highest in priority are listed first.

- **Create Date/Time** contains the date and time the To Do entry was created by the system.

- Click the Create Date/Time hyperlink or either of the special icons to navigate to the *To Do entry* page.

- Click the number of **Related** entries hyperlink to navigate to the *To Do Search* query to list potentially related entries to the current entry.

- **Assigned Date/Time** contains the date and time the To Do entry was assigned to a user. This field is only populated on entries that are **Being Worked On**. If a user assigned the To Do entry, the user ID and name of the user who assigned the To Do entry are displayed beneath the Date/Time.

- **Message** contains a description of the To Do entry. Use the message description hyperlink to drill into the page on which the entry's respective object is displayed. If the To Do type has been configured to associate a script with this To Do entry's message number, then instead of being taken to the respective page, the associated script is launched. Refer to *Working On A To Do Entry* for more information.

   NOTE: Current To Do. Drilling into an entry from this page sets it to be the user's current To Do. Refer to *A User's Current To Do* for more information on how to efficiently scroll through additional entries in your current work list.

   CAUTION: Automatic Assignment! When you drill into an entry using the message description hyperlink from this page, the system changes the status of the entry to **Being Worked On** and assigns it to you.

- **To Do Entry Status** is the current status of the To Do entry.

- **Extra Information** contains the data for the entry that corresponds to the Extra Info chosen in the sort options above.

- **To Do ID** contains the unique identifier of the To Do entry.

- If you want to mark one or more entries as **Being Worked On**, check the desired entries and then click the **Assign** button.

- If you want to mark one or more entries as **Completed**, check the desired entries and then click the **Complete** button. Completed entries do not appear on the To Do list (but they are retained on the database for audit purposes).

To Do Entry

The topics in this section describe the pages on which a To Do entry and its associated To Do log are maintained.

To Do Entry - Add Dialog

The To Do Entry transaction features a dialog that can add new To Dos (if the system is configured with *manual To Do types*). This dialog appears if you open the **Menu** > **To Do** > **To Do Entry** > **Add** (it also appears if you click the clear button when on the To Do Entry page).

Description of Page

The **To Do Type** is the type of To Do entry that you want to create. Only To Do types that are set up for manual usage appear in the list.

The default **To Do Type Priority** is displayed adjacent. Use **Override Priority** to override the default *priority* assigned by the system.

Type a **Subject** for your To Do entry. Depending on how the To Do type is set up, the subject may appear as the message in the To Do entry and To Do lists.

Enter a **Comment** to provide a longer description of and more details about the To Do entry.

Send To indicates whether the new To Do will be assigned to a **Role** (the default) or **User**.

The **Role** indicates the role to which this To Do entry will be assigned. Only users of the specified role will be able to view and work on the To Do entry. The role is defaulted from the To Do type. If you want to assign the To Do to a different role, change the specified role. You can only assign the To Do entry to one of the roles specified on the To Do type.

User appears if **Send To** is set to **User**. Use this option if you want to assign the To Do to a specific user. The user must be a member of the selected role.

If the *To Do type* defines valid characteristic types, the **Characteristics** collection is visible. If any of the characteristic types are flagged as Default on the To Do type, the characteristic type with its default value (if applicable) are displayed. If applicable use the characteristics to define other information related to this new To Do entry. In Oracle Utilities Customer Care and Billing, for example, you can link the account and premise that you are attempting to start service for.

Click **OK** to add the To Do Entry.

To Do Entry - Main

You use this page to perform various actions or modify details about a To Do entry. Use **Menu** > **To Do** > **To Do Entry** > **Search** to open this page.

> **NOTE: Restricted by role.** You may only change To Do entries that are assigned to you or ones that are **Open** and assigned to a role to which you belong. Refer to *To Do Entries Reference A Role* for more information about roles.

Description of Page

To Do contains a concatenation of important information about the To Do entry. **To Do ID** is the system-assigned unique identifier of the entry. These values only appear after the case is added to the database.

> **NOTE: Formatting may be performed by a plug-in.** Refer to *To Do Info May Be Formatted By An Algorithm* for more information.

To Do Type displays the entry's To Do Type and its description. Refer to *To Do Entries Reference A To Do Type* for more information about To Do types.

Role displays the role of the users who may be assigned to the entry along with a description of the role. Refer to *To Do Entries Reference A Role* for more information about roles.

Message is a display-only field that describes why the entry exists. If the To Do entry is in the status of **Open** or **Being Worked On**, the message description allows you to drill into the page on which the entry's respective object is displayed. If the To Do type has been configured to associate a script with this To Do entry's message number, then instead of being taken to the respective page, the associated script is launched. Refer to *Working On A To Do Entry* for more information.

Status indicates if the entry is **Open**, **Being Worked On**, or **Complete**. Refer to *The Lifecycle Of A To Do Entry* for more information status.

Use **Priority** to manually override the To Do entry's current *priority*. Any manual change to the priority is recorded on the *To Do entry log*.

Assigned To displays the user who is working the entry.

Sent By displays the user who assigned this To Do to the current user.

Created By only appears if a background process that uses To Do entries to report object-specific errors created the To Do entry. The field displays the background process description and batch run number in which the entry was created. Refer to *To Dos Created for Object-Specific Error Conditions* for more information.

Extract Info only appears if the To Do is being sent out of the system. Extract Info describes the status of the extract (for example whether it has been processed or not). Refer to *To Do Entries May Be Routed Out Of The System* for more information.

Use **Comments** to describe anything interesting or unusual about the To Do entry. The **Comments** field is disabled if the To Do entry is complete.

If the To Do entry has non-complete *related entries* a summary description appears below the comments line. The description states the total number of related entries, how many are still **Open**, how many are assigned to you and how many assigned to others. Use this hyperlink to navigate to the *To Do Search* query to list these entries.

The **Actions** buttons allow you to **Complete** the To Do, **Forward** the To Do to another user or Role, or **Send Back** a To Do that has been forwarded to you by another user. All buttons are disabled once a To Do is complete. Refer to *To Do Entry Actions* and the *How To* section for more information on using these actions.

The **Characteristics** collection is visible for **manual** To Do entries or for **automatic** To Do entries that have characteristics. **Characteristic Type** indicates the type of characteristic. Specify a valid **Characteristic Value** for the characteristic type.

> **NOTE:** Only characteristic types defined as permissible on a To Do entry may be linked to a To Do. Refer to *Setting Up Characteristic Types & Their Values* for more information about characteristic types. In addition, for **manual** To Do types, the characteristic type must also be defined as valid for the To Do entry's *To Do type*.

The **Log** grid displays log entries (in reverse chronological order) that audit the progress of a To Do entry. You cannot modify or delete log entries that have been created by the system. You can manually add a log entry of type **User Details** and you may remove a log entry before it is saved. Once a **User Details** log entry is saved, you cannot modify or delete it.

The Log grid displays the following information:

Log Date/Time displays the date and time when the log entry was created.

Log Type indicates the To Do entry event for which the log entry was created. For example, when the To Do entry is created, the Log Type indicates **Created**. For more information refer to the *Log Entry Events* table below.

The **Details** column contains user-specified or system-generated information about the log entry. This field is blank for some types of log entries.

Log User displays the user who caused the log entry to be created.

Assigned To displays the user to whom the To Do entry was assigned (if any).

To Do Entry - Keys/Values

The Keys / Values page contains detailed information about the sort keys and drill keys associated with a To Do entry. This information may not be modified. It is shown to assist support personnel.

Use **Menu** > **To Do** > **To Do Entry** > **Search** to search for the desired To Do entry, then navigate to the **Keys/Values** page.

Description of Page

The **Sort Keys** grid contains an entry's sort keys and values. This information is display-only.

> **FASTPATH:** Refer to *To Do Type - Sort Keys* for more information.

The **Drill Keys** grid contains an entry's drill keys and values. This information is display-only.

> **FASTPATH:** Refer to *To Do Type - Drill Keys* for more information.

To Do Entry Actions

You can perform the following actions on a To Do Entry.

Complete

Clicking **Complete** causes the To Do entry's status to be **Completed**. When you complete a To Do, a *log entry* is created that indicates when the To Do was completed and by whom. This button is enabled for To Do entries with a status of **Open** or **Being Worked On**.

FASTPATH: Refer to *The Lifecycle Of A To Do Entry* for more information.

Forward

Clicking **Forward** causes the Forward To Do Entry dialog to appear, allowing you to forward the To Do to another user or role. This button is enabled for **Open** To Do entries assigned to a role to which you belong or **Being Worked On** To Do entries assigned to you.

Send To indicates whether the To Do will be forwarded to a **Role** or **User** (the default).

User appears if **Send To** is set to **User**. The **User** indicates the user to which this To Do entry will be forwarded. The user must be a member of one of the roles specified for the To Do type.

Role is enabled if **Send To** is set to **Role** or if set to **User** and a User is specified. It indicates the role to which this To Do entry will be forwarded. Only users of the specified role will be able to view and work on the To Do entry. The role is defaulted from the To Do type. You can only forward the To Do entry to one of the roles specified on the To Do type. If forwarding to a user the role must also be valid for the specified user.

The **Details** field provides an explanation of why a user is forwarding the To Do. This information appears in the To Do log.

Click **OK** to forward the To Do entry.

Send Back

Clicking **Send Back** causes the Send Back To Do Entry dialog to appear, allowing you to send back the To Do to the user who forwarded it to you. This button is enabled if the To Do entry's status is **Being Worked On** and it was forwarded to you by another user.

User is a display only field that indicates the user who assigned you the To Do.

Role may be used to also change the entry's To Do Role. The role must be a permissible role specified on the To Do type that is also valid for the user this entry is sent back to. By default, if the sent to user is not a member of the entry's current role, the system automatically defaults the role to the first permissible role that is also valid for the user.

The **Details** field provides an explanation of a why the user is sending back the To Do or any other desired information. This information appears in the To Do log.

Click **OK** to send the To Do back to the assigning user.

Log Entry Events

The following table contains the events that cause a log entry to be created by the system.

Event	Log Type	To Do Entry Status	Content of Details	Content of Assigned To (on To Do entry and To Do Log)	Log User ID	Contents of Sent By (on To Do entry)
A To Do is created (by the system or by a user)	**Created**	**Open**			ID of user who created the To Do	
A To Do is created (by the system or by a user) in Being Worked On status	**Created**	**Being Worked On**		User ID of user who was assigned this To Do	ID of user who created the To Do	Creating user's ID
A To Do is completed (by the system or by a user)	**Completed**	**Complete**			ID of user who completed the To Do	
A user takes an open To Do	**Assigned**	**Being Worked On**	Selected by user	Assigned To User ID	Assigned To User ID	ID of user who assigned the To Do
A supervisor assigns a To Do to a user (also happens if they reassign)	**Assigned**	**Being Worked On**	Assigned to user	Assigned To User ID	ID of user who assigned the To Do	ID of user who assigned the To Do
A user forwards an entry to a user	**Forwarded**	**Being Worked On**	*Log details entered by user*	Forwarded To User ID	ID of user who forwarded the To Do	ID of user who forwarded the To Do
A user forwards an entry to a role	**Forwarded**	**Open**	Forwarded to role *Role Description (Role ID) + Log details entered by user*		ID of user who forwarded the To Do	ID of user who forwarded the To Do
A user sends back a To Do	**Sent back**	**Being Worked On**	*Log details entered by user*	Sent Back To User ID	ID of user who sent back the To Do	ID of user who sent back the To Do
A user adds a log entry	**User Details**	Status remains the same	*Log details entered by user*		ID of user who added the entry	
A user manually overrides priority	**Override Priority**	Status remains the same	Priority changed from < *old value*> to < *new value*>	Assigned To User ID	ID of user who made the change	

To Do Search

This page allows you to search for To Do entries using various search criteria, and perform various actions on selected ones.

> **NOTE: No restriction by role.** This page returns all To Do entries that meet the search criteria, regardless of the To Do entry's role. Using the search, a user may drill into the details of a To Do entry even if the To Do is not assigned to the user. Refer to *To Do Entries Reference A Role* for more information about roles.

> **FASTPATH:** We recommend familiarizing yourself with the topics described in *The Big Picture of To Do Lists* to fully appreciate how To Do entries are managed by the system.

To Do Search - Main

Use **Menu** > **To Do** > **To Do Search** to open this page.

The top half of the page is where you enter the criteria used to search for To Do entries.

> **NOTE: Multiple search criteria may be specified.** You can search for To Do entries using a combination of search criteria. For example, if you enter both a **To Do Type** of **TD-NOMR** and a **Status** of **Being Worked On**, only those To Do entries for To Do type **TD-NOMR** that are currently **Being Worked On** are displayed.

> **CAUTION:** Try to be as specific as possible when entering search criteria. Why? Because entering open-ended search criteria may have a severe impact on response times.

The following table describes each of the different search filters.

Search Filter	Description
Related To Do	If you're searching for potentially *related* entries for a given To Do entry, choose **Specific To Do** for the **Related To Do Filter**. Enter the **To Do ID**.
	A filter value of **Not Applicable** defaults.
To Do Type	If you're searching for a To Do entry and you know the value of a To Do Type linked to the To Do entry, choose **Specific To Do Type** for the **To Do Type Filter**. Enter the **To Do Type**.
	A filter value of **All** defaults.
Char Type	If you're searching for a To Do entry and you know the value of a characteristic linked to the To Do entry, choose **Specific Char Type** for the **Char Type Filter**. Enter the **Characteristic Type** and **Characteristic Value**.
	A filter value of **Not Applicable** defaults.
	Only characteristic types that include a characteristic entity of **To Do Entry** and that have been marked to allow *searching by characteristic value* are available.
User	Use this search method if you know the **Created By User**, **Assigned To User** or **Completed By User** for the To Do entry. Enter the appropriate **User Id**.
	A filter value of **Not Applicable** defaults.
Date Range	Use this field if you're searching for a To Do entry and know the **Date Created** or **Date Completed**.
	A filter value of **Date Created** defaults. The **Start Date/Time** defaults to the current date, 12:00AM and the **End Date/Time** defaults to the current date, 11:59PM.
	If you enter a **Date Range Filter** of **All**, the system ignores this search method.
Status	Use this search method to restrict the search to To Do entries with a specific status value. You may search for To Do entries in the status of **Open**, **Being Worked On** or **Completed**. You may also perform a combination search for To Do entries that have a status value of either **Open** or **Being Worked On**.
	A filter value of **All** defaults.

> **NOTE: The system allows any combination of values.** The system does not try to validate your search combinations, even if they do not make sense. For example, if you enter a **User Filter** value of **Completed By User** and a **Status Filter** value of **Open**, you will not get an error. In this case, the system will find no records that match your criteria (because To Do entries that are Open do not have a Completed By User).

The system shows the total number of To Do entries that satisfy your search results immediately below the grid.

The first group of To Do entries is displayed in the grid at the bottom of the page.

- Click the **Select All** button to select all entries displayed in the grid. Click the **Clear All** to remove the selections in the grid.

- Use the checkbox if you want to assign, reopen or complete specific entries. Only **Open** or **Being Worked On** entries may be selected.

  FASTPATH: Refer to *To Do Search Actions* and the *How To* section for more information on using these actions.

- A Comment icon 💬 appears if there are comments on the To Do item and a Log Entry icon 🖼 appears if there is a log entry of type **Forwarded**, **Sent Back** or **User Details** on the To Do item. This column appears if at least one To Do item has either comments or a special log entry. Use either icon to navigate to the To Do entry page.

- Entries are sorted by their **Priority**. Highest in priority are listed first.

- **Create Date/Time** contains the date and time the To Do entry was created by the system. Use the hyperlink to navigate to the To Do entry page.

- Click the number of **Related** entries hyperlink to redisplay this page listing potentially related entries to the current entry.

- **Last Assigned Date/Time** contains the date and time the To Do entry was most recently assigned to a user, if applicable, along with the Assigned To user.

- **Message** contains a description of the To Do entry. If the To Do entry is in the status of **Open** or **Being Worked On**, the message description allows you to drill into the page on which the entry's respective object is displayed. If the To Do type has been configured to associate a script with this To Do entry's message number, then instead of being taken to the respective page, the associated script is launched. Refer to *Working On A To Do Entry* for more information.

  NOTE: Current To Do. Drilling into the page by clicking the Message hyperlink does not automatically assign **Open** To Do entries to the user (as the To Do List page does when clicking on the Message). But it does treat this as the user's current to do, enabling To Do related toolbar icons. Refer to *A User's Current To Do* for more information.

- **Status** contains the current status of the To Do entry.

- **Completion Date/Time** contains the date and time the To Do entry was completed and the user who completed the entry, if applicable.

- **To Do Type** contains a description of the To Do type for the To Do entry.

To Do Search Actions

You can perform the following actions on selected To Do Entries.

Assign Selected Entries

Use the **Assign** button to assign or reassign the selected entries to a user. Enter a user ID or search for a user using the **Assign To User** field. By default this field is populated with the current user's ID. Note that the user's current number of assignments is displayed adjacent.

Upon successful processing, the selected entries are assigned to the specified user and the status of **Open** entries becomes **Being Worked On**. Additionally, a corresponding *log entry* is added to each To Do.

  NOTE: Only users with **Supervisor Assignment** access rights may reassign entries that are not currently assigned to them.

Reopen Selected Entries

Use the **Reopen** button to unassign the selected entries from their users forwarding them back to their role.

Upon successful processing, the selected entries become **Open** and a corresponding *log entry* is added to each To Do.

Complete Selected Entries

Use the **Complete** button to complete the selected entries.

Upon successful processing, the selected entries become **Completed** and a corresponding *log entry* is added to each To Do.

FASTPATH: Refer to *The Lifecycle Of A To Do Entry* for more information.

How To

The following sections describe how to perform common tasks for To Dos.

How To Assign a To Do to a User

There are several ways to assign a To Do entry to a user:

- A supervisor can use the *Supervisor Functions* pages to review, assign and reassign To Dos to users.

  - The *Supervisor To Do Summary* page summarizes by type the total, **Open** (unassigned) and **Being Worked On** (assigned) entries for roles to which you belong.

  - The **Total**, **Open** or **Being Worked On** column hyperlinks transfers you to the *Supervisor To Do Assignment* page where you can assign / reassign one or more of the corresponding entries to a specific user.

- Use the *To Do List Functions* pages to review and assign To Dos to yourself.

  - The *To Do Summary* page summarizes by type the total, **Open** (unassigned) and **Being Worked On** (assigned to you) entries for roles to which you belong.

  - The **Open** column hyperlink transfers you to the *To Do List* page where you can assign one or more of the **Open** entries to yourself.

- You may also use the *To Do Search* page to find certain To Do entries based on various criteria and assign selected entries to a user.

- Forwarding an entry to a user using the *To Do Entry* page is yet another way of assigning an entry to a user.

- The *Current To Do* zone next assignment functionality can be configured to dynamically assign an **Open** To Do to the requesting user based on your organization's work assignment rules. Refer to this zone for more information.

How To Work on To Do Entries

Depending on your organization's *work distribution* practice, there are several ways to work on To Do entries.

When work is manually assigned, a typical approach may be to review the entries in a list and work them one entry at a time.

- You can use the *To Do List* page to review and work on To Do entries by list type.

- You may also use the *To Do Search* page to find certain To Do entries based on various criteria and work on selected entries. For example, you may want to review and work on entries related to a given To Do.

Regardless of the above methods to define your work list, when ready to work on a specific entry, drill into its respective page using the message description hyperlink. Drilling into an entry from the above work lists makes it your current To Do entry. This entry's key information is displayed on the *Current To Do* dashboard zone and you may use special action bar buttons to scroll through your work list to the next and previous entries respective to your current To Do.

When work is assigned "on demand", click the Current To Do icon, , on the Current To Do dashboard zone to request your next task. The returned To Do entry automatically becomes your current To Do. The entry's key information is displayed on the zone but since the entry was no selected from a work list the next and previous action bar buttons are disabled.

Resolve the current To Do by fixing the problem indicated in the message and mark the entry as **Complete**.

How To Add a New To Do

If your system is configured with *manual To Do types*, you can add a To Do entry online. Online To Do entries may be used like electronic help tickets in the system. In Oracle Utilities Customer Care and Billing, for example, if you are having a problem starting service, you can create a To Do that describes the problem. The To Do can be assigned to a help resolution group that could either resolve the problem or send the To Do back to you with information describing how to resolve the problem.

How To Complete To Dos

When you complete a To Do, a log entry is added that indicates when the To Do was completed and by whom.

There are multiple ways in which you can complete a To Do.

- The *To Do List* page allows you to complete one or more selected entries of a specific To Do Type.
- The *To Do Search* page allows you to search for To Do entries using various search criteria and complete selected ones.
- Use the *To Do Entry* page to complete a single To Do Entry.
- You may also use the *Current To Do* zone to complete the current entry you are working on and/or all *related* entries assigned to you.
- The system automatically completes some To Do entries. For To Do entries that are logically associated with the state of some object, the system automatically marks the entry **Complete** when the object is no longer in the respective state. In Oracle Utilities Customer Care and Billing for example, an entry that's created when an account doesn't have a bill cycle is completed when the account has a bill cycle.

  NOTE: The automatic completion of To Do entries occurs when the To Do entry process responsible for creating entries of a given type is executed. Therefore, if these processes run only once per day, these entries remain **Being Worked On** even if the object is no longer in the respective state.

How To Forward a To Do

If you have been assigned a To Do that you are unable to resolve, you can forward it to another user or role for help or additional instructions. When a To Do is forwarded, a log entry indicates who forwarded the To Do, to whom it was forwarded, and the specified reason.

- Use the **Forward** button on the *To Do Entry* page to forward a To Do entry to a role or a user.

- You may also use the **Reopen** button on the *To Do Search* page to forward selected entries back to their current role.

How To Send Back a To Do

If you have been forwarded a To Do by another user, you may send back the To Do with instructions to the forwarding user. When a To Do is sent back, a log entry is created that indicates when the To Do was sent back and by whom.

Use the **Send Back** button on the *To Do Entry* page to send back a To Do entry.

How To Add a Log Entry to a To Do

You can use the **Comments** section of a *To Do entry* to add a comment to the To Do as long as the To Do is **Open** or **Being Worked On**. However, the Comments field is disabled if the To Do entry is complete.

Alternatively, you can add a **User Details** log entry to a To Do at any time (even after it's completed). Refer to *To Do Entry* page for more information.

Chapter 7

Running Your XAI Environment

NOTE: The XAI functionality is legacy functionality and not recommended for new implementations. This information remains in the documentation for upgrade purposes. Refer to *Incoming Messages* and *Outgoing Messages* for information about the recommended features for supporting sending and receiving external messages.

The *XML Application Integration* (XAI) module provides the tools and infrastructure that businesses require for integrating their third-party systems with the application.

This section describes the pages used to manage incoming and outgoing information via the XAI tool.

XAI Staging Control

Refer to *Staging Control* for more information about the purpose and functionality of this page.

Navigate to this page using **Menu** > **External Message** > **XAI Staging Control** > **Search** .

Description of Page

The **XAI Staging Control** ID is a system generated unique identifier of this record.

The **XAI Staging Control Status** indicates the current state of this record.

Pending This status indicates that this record needs to be processed.

In Progress This status indicates that the background process, which uploads the staging records, is currently processing this record.

Error This status indicates that the background process found a problem with this record. When the data related to this record has been fixed, change the status back to **Pending** so that it will be processed again.

Complete This status indicates that this record has been processed.

The **Number of Uploaded Records** indicates how many XAI staging records related to this staging control record were uploaded.

The **Run Date Time** indicates the date and time this record was processed by the upload process.

The **User**, who created this staging control record, is captured.

If the data to be uploaded is found in a file, indicate the **Upload File Name**, which should include the directory path and file name.

> **NOTE: Character Encoding**. Refer to *Sequential Input File* for information about specifying character encoding for a file.

> **NOTE: Complete File**. MPL expects this file to be complete. If the file is in the process of being copied into the directory, MPL still attempts to process it and may issue an error for the incomplete file. The staging control record should only be created once the complete file is ready for upload.

Enter a description of the **XAI Interface Name**. This is simply information and is not used by the system.

Turn on **Sequential Execution** if you want the XAI upload staging records related to the staging control record to be processed in *sequential order* (instead of multithreaded). Some records, such as **LDAPImport** requests, must be processed in sequential order.

The **XAI Service ID** tells the system how to create the XML related to the XAI upload staging record to be created. In Oracle Utilities Customer Care and Billing, for example, XAI Services with an adapter type of **CISStagingUpload** or **LDAPImport** may be indicated here.

> **FASTPATH:** For more information about XAI services, refer to *XAI Inbound Service*. For more information about LDAP Import, refer to *Importing Users and Groups*.

Use the **Comments** to provide free format information related to this staging control record.

The collection of staging control parameters is used to define selection criteria when the staging control is accessing data from a database table. The **Staging Control Parameter** defines the field used in the WHERE clause and **XAI Staging Control Parm Value** defines the value to be used in the WHERE clause.

Refer to *Staging Control Parameters* for more information.

The **Message** collection displays any completion messages for XML requests related to the staging control record. For LDAP Import XML requests, the message describes the number and type of objects that were imported into the system.

XAI Upload Staging

The XAI upload page allows you to view the details or to fix errors for a request in the Staging Upload table. This page displays the text of the XML request document linked to the upload.

XAI Upload Staging - Main

To view or modify an XAI upload document, navigate to **Menu** > **External Message** > **XAI Upload Staging** and navigate to the main tab.

Description of Page

The **XAI Upload Staging ID** is a system assigned identifier of the XAI upload staging record.

The **Application Service** identifies the internal system service called by the XAI tool to load/update the system data.

> **NOTE:** The upload process does not use this. Rather, the application service is part of the XML Request. This field is used to help in searching for XAI Upload records.

The **XAI Staging Control** ID related to this XAI upload staging record is displayed.

The status of the upload is indicated by the **XAI Upload Staging Status**. Values are **Pending**, **In Progress**, **Complete**, and **Error**. If the record is in error, an error is written to the *XAI Upload Exception* table.

Create Date/Time indicates when the record was posted.

Completion Date/Time indicates when the work was completed.

If this XAI upload staging record is a response to an **XAI Download Staging** record, information about the related download staging record is displayed.

If there is an error with this record, you will see the error **Message** associated with this record. The message area is suppressed if there are no problems with the record.

Click the adjacent button to view the long explanation. The long explanation provides information about the cause of the error (and how to fix it).

The upload staging data appears in the **XML Request** text box.

XAI Upload Staging - Response

To view the response to a completed XAI upload staging document, navigate to **Menu** > **External Message** > **XAI Upload Staging** and go to the **Response** page.

Description of Page

The **XAI Upload Staging ID** is a system assigned identifier of the XAI upload staging record.

The system's response to the upload XML appears in the **XML Response** text box.

Uploading XAI Staging Records

Staging Control Layout

In order to load XML requests from flat sequential files, comma separated value (CSV) files and from database tables, you need to create a staging control record. The name of this table is **CI_XML_STG_CTL**. The following table describes each column on this table.

Column Name	Length	Req'd	Data Type	Comments
XML_STG_CTL_ID	10	Y	N	This is the unique identifier of the record. This value does NOT have to be a random number, but it does need to be unique.
RUN_DTTM	26	N	Date/Time	Date and time this record was executed.
XAI_IN_SVC_ID	10	Y	A/N	This is the XAI service associated with this record. This service should have an adapter of **CISStagingUpload**.
XML_STG_FILE_NAME	250	N	A/N	This is the location and name of the file containing the data to be uploaded. This is used for comma delimited files and flat sequential files.

XML_INTFC_NAME	30	N	A/N	The name of the interface used to populate this table. This is simply information and is not used by the system.
XML_STG_STATUS_FLG	2	Y	A/N	Must be set to **P (Pending)**.
NT_XID_CD	30	N	A/N	This field is not in use.
NT_UP_XTYPE_CD	30	N	A/N	This field is not in use.
USER_ID	8	Y	A/N	The ID of the user who created this record.
COMMENTS	254	N	A/N	Use the free format comments, if necessary.
NBR_RECORD_UPLD	10	N	A/N	Leave this blank. This will be populated by the process which creates upload staging records for this control record.

Staging Control Parameters Layout

If your staging control record should read a database table, the XAI service may include selection criteria in its WHERE clause. If that is the case, then your staging control record should populate the selection criteria. The name of this table is **CI_XML_STGCTL_P**. The following table describes each column on this table.

Column Name	Length	Req'd	Data Type	Comments
XML_STG_CTL_ID	10	Y	N	The unique identifier of the staging control record.
XML_STG_CTL_PARM	18	Y	A/N	Indicate the element in the WHERE clause whose value will limit the selection of records.
XML_STG_CTL_PVAL	250	Y	A/N	Use this to indicate the value used to limit selection of records.

Upload Staging Layout

You create an XAI upload staging record directly for each XML request you wish to make. The name of this table is **CI_XML_STGUP**. The following table describes each column on this table.

Column Name	Length	Req'd	Data Type	Comments
XML_STGUP_ID	15	Y	N	This is the unique identifier of the record. This value does NOT have to be a random number, but it does need to be unique.
APP_SVC_ID	20	Y	A/N	This is the foreign key to the application service table, and identifies the application service that is being requested.
COMPLETE_DTTM	26	N	Date/Time	Completion date and time.
CRE_DTTM	26	Y	Date/Time	Creation date and time.
RETRY_COUNT	3	Y	N	Number of retries to process the request.

XML_REQUEST	30,000	Y	A/N	The XML request document.
XML_RESPONSE	30,000	Y	A/N	The XML response document.
XML_STG_CTL_ID	10	Y	A/N	The id of the staging control record linked to this record.
XML_STG_STATUS_FLG	2	Y	A/N	Must be set to **P (Pending)**.

XMLUP-PR - Purge XAI Upload Objects

Completed XAI upload staging objects should be periodically purged from the system by executing the **XMLUP-PR** background process. This background process allows you to purge all **Completed** XAI upload staging objects older than a given number of days.

We want to stress that there is no system constraint as to the number of **Completed** XAI upload staging objects that may exist. You can retain these objects for as long as you desire. However we recommend that you periodically purge **Completed** XAI upload staging objects as they exist only to satisfy auditing and reporting needs.

XAI Dynamic Upload

This page displays the XAI upload record. However, rather than displaying the XML Request as an XML document, it dynamically builds the screen with prompts and input fields to allow for changes without having to understand the XML. This screen is useful for fixing errors. Once the data is fixed, the status of the record can be changed back to **Pending** to once again attempt to upload this record.

> **NOTE: The Dynamic Nature of this Transaction.** This transaction is designed to display the schema of the represented XAI upload staging. T he system reads the XML schema associated with the upload XAI service and builds the tab(s) with the associated prompts and fields. For example, if the upload record is relevant to the Premise Maintenance service, Premise Characteristics and Premise Geo Types tabs are dynamically built.

XAI Dynamic Upload - Main

Navigate to this page using **Menu** > **External Response** > **XAI Dynamic Upload** .

Description of Page

The **XAI Upload Staging ID** is a system assigned identifier of the XAI staging record.

The **Application Service** identifies the internal system service called by the XAI tool to load/update the system data.

> **NOTE:** This is not used by the upload program. Rather, the application service is part of the XML Request. This field is used to help in searching for XAI upload staging records.

The **XAI Staging Control** ID related to this XAI upload staging record is displayed.

The status of the upload is indicated by the **XAI Upload Staging Status**. Values are **Pending**, **In Progress**, **Complete**, and **Error**.

Create Date/Time indicates when the record was posted.

Completion Date/Time indicates when the work was completed.

If there is an error with this record, you will see the error **Message** associated with this record. The message area is suppressed if there are no problems with the record.

Click the magnifying button to view the long explanation. The long explanation provides information about the cause of the error (and how to fix it).

The **Transaction Type** indicates the action that should be performed for the application service when this document is uploaded. The valid values are **Add**, **Change**, **Delete**, **List**, **Read**, **Search** and **Update**.

Set the **Trace** option to **yes** to request level tracing to be executed inside the XAI tool. This will result in information written to a file, which may be useful in debugging. Refer to the XAI tools documentation for more information.

The bottom portion of the screen will contain field prompts and input fields for the data associated with the XML request linked to this upload record. The system dynamically builds this portion of the page by reading the XML request associated with the upload record. A user can change data in the displayed fields. This will result in a change to the XML request associated with the upload record.

NOTE: This page will also generate other tabs dynamically for any collections that exist for the service being displayed. These will vary based on the service. The response tab is the only other tab, which is always present.

XAI Dynamic Upload - Response

Navigate to this page using **Menu** > **External Message** > **XAI Dynamic Upload** and go to the response tab.

Description of Page

The **XAI Upload Staging ID** is a system assigned identifier of the XAI staging record.

The system's response to the upload XML appears in the **XML Response** text box.

XAI Upload Exception

A record is written to the XAI upload exception table for every XAI upload staging record that is in error.

To view the messages associated with the exception records, schedule the **TD-XAIUP** background process. This process generates a To Do entry for every record in the XAI upload exception table.

After correcting the cause of the error, drill into the *XAI Upload Staging* page and change the status from **Error** to **Pending** and the system will attempt to process the record again.

XAI Download Staging

XAI Download Staging - Main

To view individual XAI download staging records associated with a notification download staging record, open **Menu** > **External Message** > **XAI Download Staging** .

Description of Page

XAI Download Staging displays information about the record.

The **Download Staging ID** and **XAI Route Type** are the primary identifiers for this record.

The **XAI Download Status** is displayed. The values are **Pending**, **Complete**, **Canceled** or **Error**. When a record is in **Error**, it is displayed on the *XAI Download Exception* table.

Values from the NDS record associated with this XAI download staging record are displayed including **Service Provider**, **Notification Download Type**, **NT Download Status Flag**, **Retry Count** and the **Context** collection.

XAI Download Staging - Request

To display the XAI Request built by the download staging receiver, open **Menu** > **External Message** > **XAI Download Staging** .

Description of Page

The **XML Request** built by the download staging receiver is displayed.

XAI Download Staging - Response

To display the Response to this request, open **Menu** > **External Message** > **XAI Download Staging** .

Description of Page

The **XML Response** to this message is displayed.

XAI Download Exception

A record is written to the XAI download exception table for every XAI download staging record that is in error.

To view the messages associated with the exception records, schedule the **TD-XAIDN** background process. This process generates a To Do entry for every record in the XAI download exception table.