

**Oracle Utilities  
Work and Asset Management and  
Operational Device Management**

Business User Guide

Release 2.2.0.6.1

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# Chapter 1

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## Overview

### About Oracle Utilities Work and Asset Management

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Oracle Utilities Work and Asset Management provides functionality to handle large volumes of assets and to manage the receipt, installation, maintenance, tracking, and removal of those assets. The system also manages approval processing, tracks purchasing transactions, manages inventory and resources, and tracks costs, accounting, and financial transactions.

The system manages the following main functional areas:

- **Home Page:** The home page provides a comprehensive dashboard where you can access information you need to review and complete your work. For example, the **Main** tab can be configured to display your key work areas; crews or buyers that you monitor, approval summary, your bookmarks or saved searches, and so on. Additional tabs provide easy access for approvers, planners, executives, and others to information and to review organizational functions and complete work.
- **Approvals:** One of the ways that the system simplifies and speeds up work is by routing records when they require approval. Approval requests use approval profiles to determine the properties and requirements for the approval. Approvers can use the **Approval Dashboard** to manage the approvals that require their attention.
- **Assets:** Asset management provides functionality to track the purchase, repair, and maintenance of assets and asset components using general work management processing, preventive maintenance techniques, purchase processing, and inventory tracking. The system also allows organizations to record asset measurements and perform asset inspections in addition to the standard maintenance that is performed on assets.
- **Financial Transactions:** The system tracks transactions that incur costs, including purchasing and procurement costs, inventory and stocking costs, and cost associated with the labor, equipment, and materials that are incurred when completing work.
- **Inventory:** Inventory is tracked, ordered, and received from vendors and allocated in the **Inventory** system. As inventory is allocated to work, the system passes this information back to the **Work Management** system so that maintenance managers and crews know that their parts are available.
- **Preventive Maintenance:** Maintenance type work on assets is a proactive way to care for and maintain proper functioning of an asset. This type of work can include inspections, repairs, replacements and so on. Maintenance schedules and triggers identify the type of asset needing maintenance and triggers tell the system when the asset is due for maintenance.

- **Purchasing:** Purchasing functions can be used to plan, initiate, and process purchases and purchasing contracts from requisition to invoicing. The system also manages vendors, designated buyers, and stock items.
- **Resource Management:** Resources encompass any object that contributes to the running of your organization. This includes crews and crew shifts, employees, equipment, contacts, documents, standard notes and attachments, and so on.
- **Work Management:** Work management is the process by which work orders are requested, approved and activated, work is performed and then finished and closed. While the work is being performed, materials, equipment assets, and labor are tracked, as applicable, to your business processes. The system also allows organizations to set up preventive and predictive maintenance cycles.
- **Construction Work Management:** Construction work management refers to the various functions related to construction type work, such as new facilities, requests for new services or additions, and designing and estimating line extensions. Construction work uses compatible units to identify the resources necessary to install or remove assets associated with a work site.


## About Home Page

---

The **Home Page** portal provides a comprehensive dashboard where you can access much of the information you need to review and complete your work.

The **Home Page** can serve as a personal web page where you configure system elements that you use most frequently.

Refer to the [Home Page Configuration](#) section in the **Administrative User Guide** for information on configuring home page settings.

In general, click on any link, pie chart, or graph to open details about that item. The **Go To**  icon at the front of some items opens the corresponding tab with the related information populated. For example, if you click the symbol in front of a storeroom in the **My Storerooms** section on the **Main** tab, the system opens the **Inventory** tab with that **Storeroom ID** populated. Click **Refresh** to update and display the graphs.

The base package home page can include the following tabs (refer to the embedded help for zone details):

- **Main:** The **Main** tab displays general system information and any custom zones provided by your implementation (such as company news). Click the Add link in any zone to add the related information. The My Buyer, My Storerooms, and My Crews zones do not automatically include the records. For example, if the logged in user is a buyer, he or she must still add their own buyer to the zone, if they want to include their own buyer in the zone.
- **Approvals:** The **Approvals** tab provides the same information and functionality as the [Approval Dashboard](#).
- **Work:** The **Work** tab can display statistics about work requests and work orders. Some of the work zones might include a link to the **Statistics** portal. Authorized users can edit some of the details displayed in the zones using this portal.
- **Inventory:** The **Inventory** tab provides information about stock items by storeroom. You must enter a storeroom and click **Refresh** to display the zones.
- **Purchasing:** The **Purchasing** tab can display purchasing statistics by buyer. You must select a buyer and click **Refresh** to display the zones.

## Supported Portals on iOS

---

The following portals are supported when accessing the WAM application via a browser on Apple iOS devices in this release:

### Crew Work-related Portals:

- Work Requests

- Service Call
- Work Order
- Work Activity
- Permit
- Timesheet
- Other Direct Charges
- Construction Work Order
- Construction work Activity

**Inventory-related Portals:**

- Material Request
- Material Return
- Receiving Receipt
- Receiving Return
- Physical Inventory
- Reorder Review
- Reorder Mass Approval
- Stock Item
- Stock Item Detail
- Stock Transfer

# Chapter 2

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## User Interface Standard Features

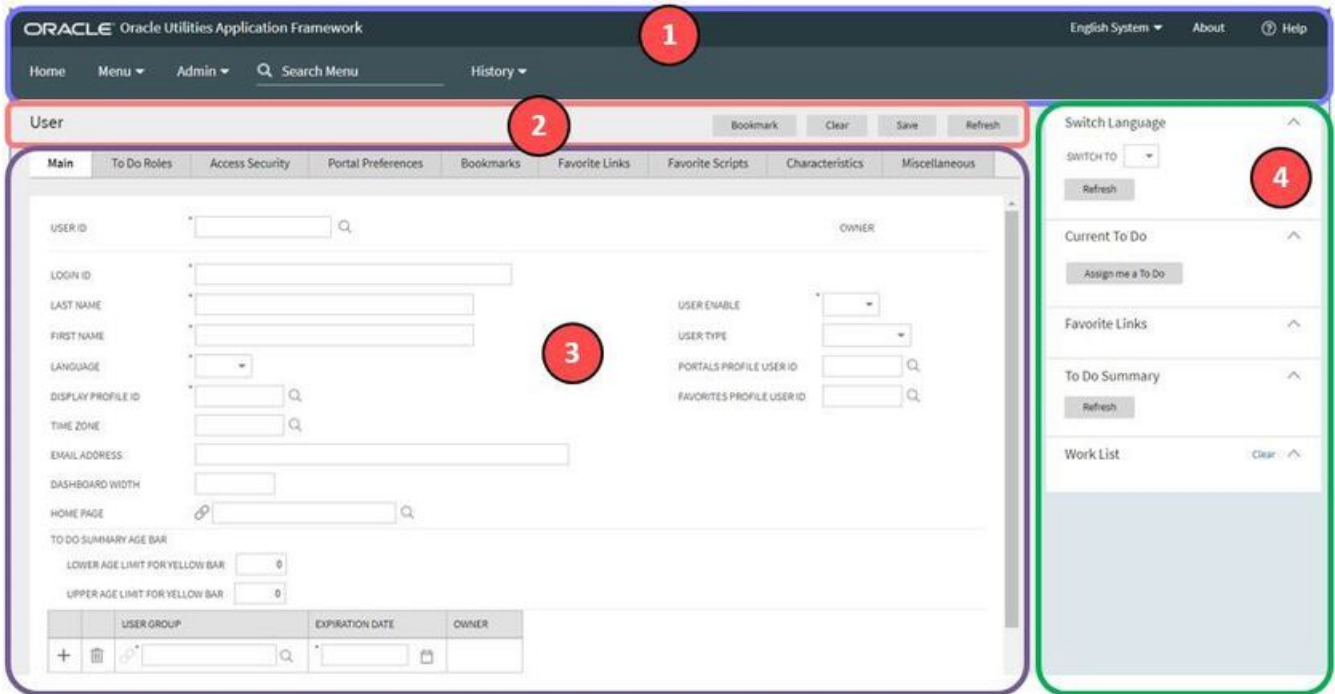
This section describes basic system concepts, features, and standards of the user interface.

### Page Components

---

Oracle Utilities Application Framework screens are comprised of 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 next topics provide more information about each component and the Script area, which appears in the Object Display area when applicable.

## The Application Toolbar

This section describes the features available on the application toolbar.

### Home Button



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

Keyboard Shortcut	Alternate Shortcut
Alt+O	Alt+Shift+O

**NOTE:** Refer to [Shortcut Key Summary](#) for information about the alternate shortcut.

## Menu

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

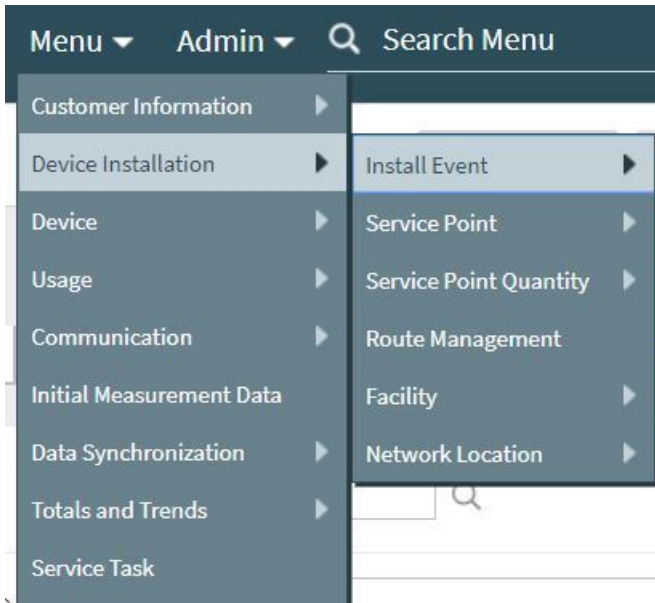
---

## Keyboard Shortcut

---

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: Search and Add. If the menu item does not have an Add or Search option, select the menu item itself.

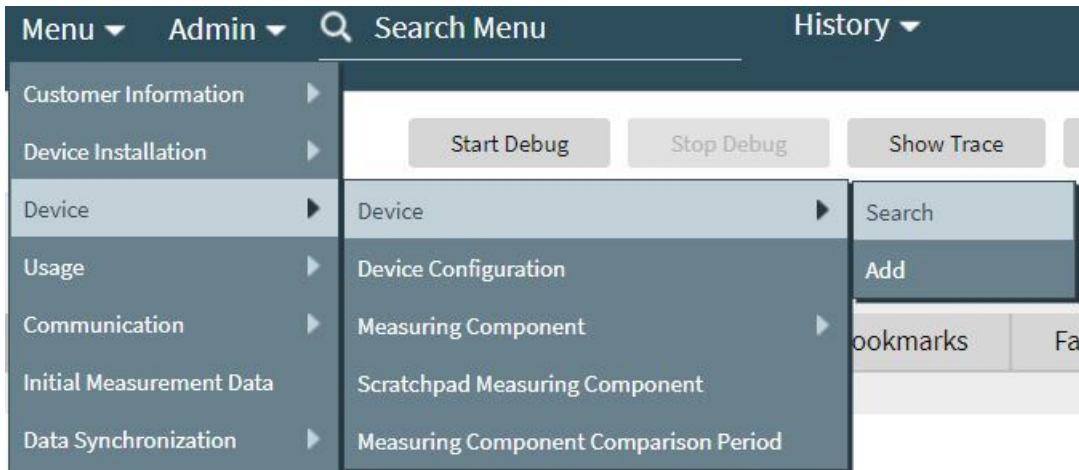
How the Search and Add option behaves depends upon whether the maintenance page is fixed or portal-based.

### Fixed:

- **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.
- **Add:** Displays the maintenance page with empty fields so that the user can complete the information and save the entity.

### Portal-Based:

- **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.
- **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.



Users may also opt to use the [Menu Item Search](#) input field.

## Admin Menu

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

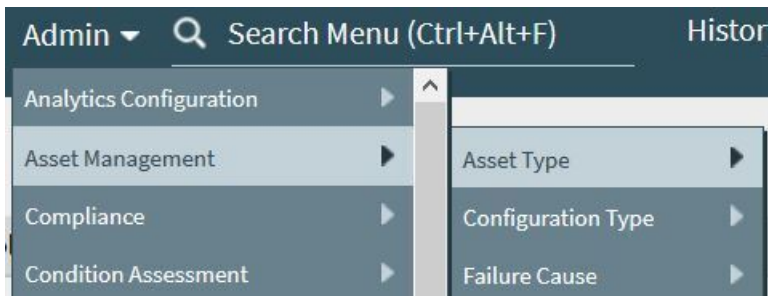
---

### Keyboard Shortcut

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 functionally.



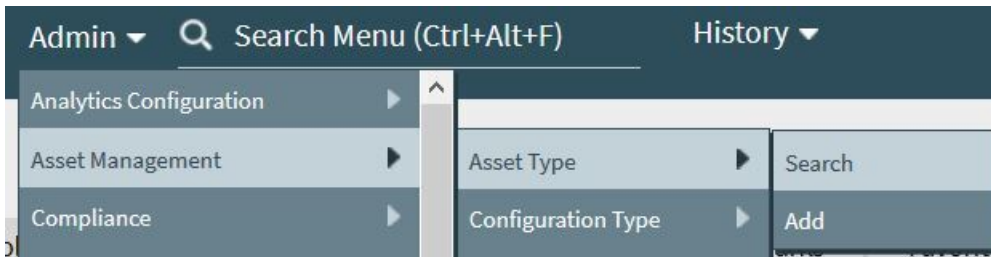

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**NOTE:** Menu navigation paths referenced in the administrative user guide provide the functional grouping. If your implementation uses the alphabetic grouping, the page can be found in the alphabetic letter that is the first letter of the page name.

---

**NOTE:** Refer to [Installation Options](#) for information about the admin menu configuration options.

The menu lines displayed for each menu entry *typically* have two options: Search and Add. 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.



Users may also opt to use the [Menu Item Search](#) input field.

## Back Button

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

### Keyboard Shortcut

Alt+B

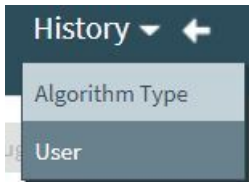


The **back** and **forward** navigation buttons, as well as the **History** list, appear in the application toolbar only when page use warrants their appearance.

**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.

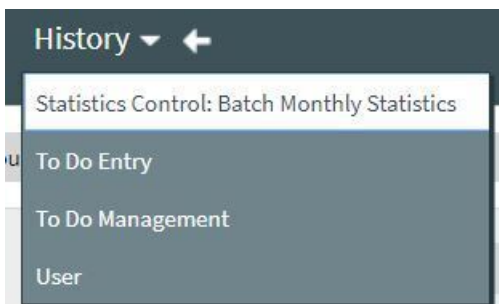
## History Button

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.

Note that if the page has been configured to display an information string in the [page title area](#), that information will also be visible in the History dropdown.





---

## Keyboard Shortcut

---

Ctrl+Alt+H

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## Forward Button

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

---

## Keyboard Shortcut

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Alt+G

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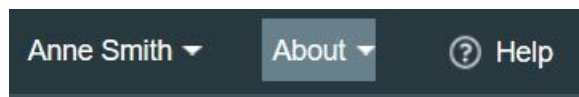
The **back** and **forward** navigation buttons, as well as the **History** list, appear in the application toolbar only when page use warrants their appearance.

**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.

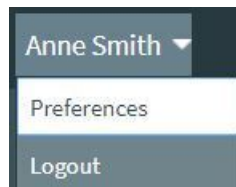


The about window shows a variety of information including:

- The logged in user ID
- The list of products installed in the application along with the release ID. This information comes from the [installation record](#). Note that in a Cloud installation, only the Cloud product name and release ID are displayed. The details of the products that make up the Cloud installation are not displayed (but are still visible on the installation record).

## User Menu

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



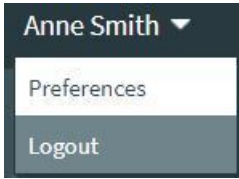
Through this dropdown, the user can access their [User Preferences](#) or [Logout](#) of their current session.

**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.



---

### Keyboard Shortcut

Ctrl+Alt+P

---

---

## 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.



---

### Keyboard Shortcut

Ctrl+Alt+L

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## Menu Item Search

The Search Menu input field and search icon are used to allow a user to enter the description of a menu item entry to navigate directly to the corresponding page or BPA script rather than using the menus to navigate to the desired page / script.

---

### Keyboard Shortcut

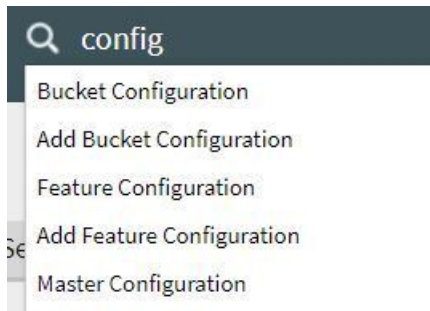
Ctrl+Alt+F

---

---



Typing text in the field shows menu items whose descriptions include the typed text.



Note that only menu items within the [Menu](#) and [Admin Menu](#) that the user has security access for are included in the results. The text included in the search is taken from the menu item description. As described in [Menu](#), menu lines often have two sub item: Search and Add. In most instances, the description of the "Search" menu item is simply the menu entry text, for example **To Do Entry**. The description of the "Add" menu entry includes the word Add in front of the menu entry text, for example **Add To Do Entry**.

As mentioned in [Menu Item Suppression](#), menu items will not appear if it is associated with a module that is suppressed.

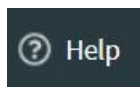
---

**NOTE:** When operating in debug mode, the description of the parent menu is displayed in parentheses after the menu item description.

---

## Help Button

Click the **Help** button in the Application Toolbar to open context-sensitive Help in a new browser window.



Keyboard shortcut:

---

### 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 [Common Base Portals and Zones](#) 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.



---

**Keyboard Shortcut**

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Ctrl+Alt+B

---

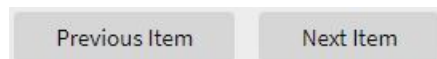
**NOTE: Secured.** This button is secured using the application service **F1-BOOKMARKS**. Users that do not have security for the application service will not see the Bookmark button (or the corresponding dashboard zone).

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



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 Shortcut	Alternate Shortcut
Alt+P	
Alt+N	Alt+Shift+N

**NOTE:** Refer to [Shortcut Key Summary](#) for information about the alternate shortcut.

## Duplicate Button

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



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.

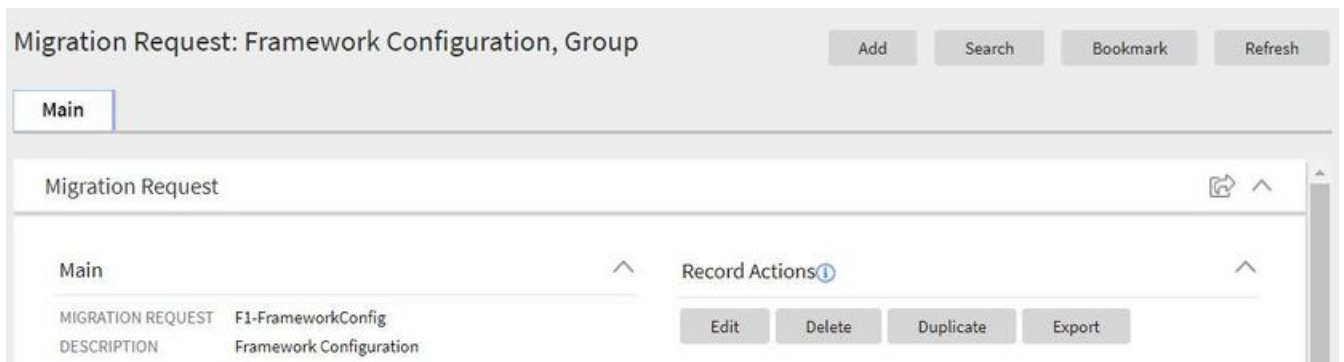
Before you delete an object, the system verifies that the object is not referenced anywhere in the system. If it is, you cannot delete it. If, for example, you attempt to delete a user, the system ensures this user has not been referenced in a user group or on a To Do.

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 style fixed pages commonly display the Delete button (garbage can icon) next to the entity in the list.



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 work 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

---

### Alternate Shortcut

---

Alt+Shift+S

---

**NOTE:** Refer to [Shortcut Key Summary](#) for information about the alternate shortcut.

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

---



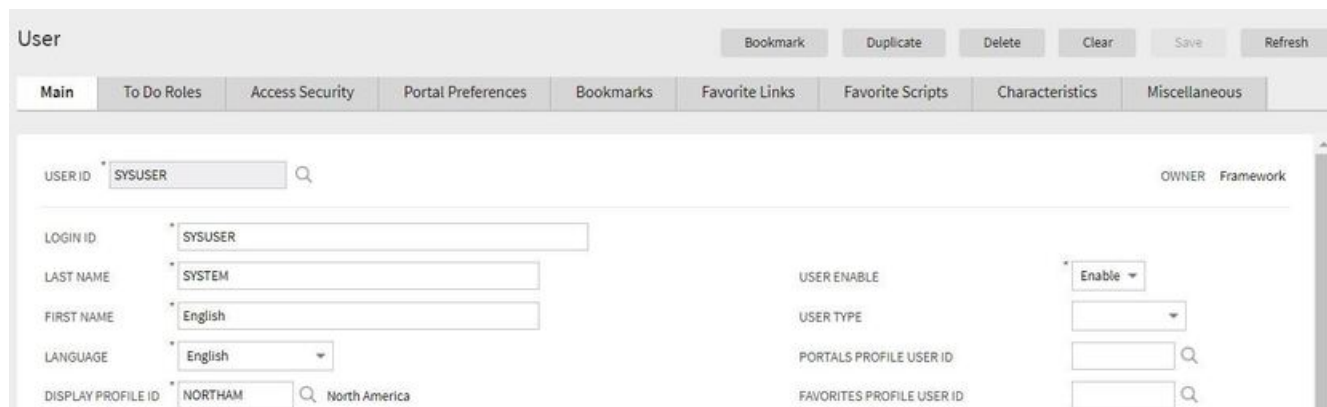
## Object Display Area

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.

Because many of the page components follow Internet standards of operation, the behavior of these types of components are not explicitly described. This section focuses on special features that are unique to the application framework.

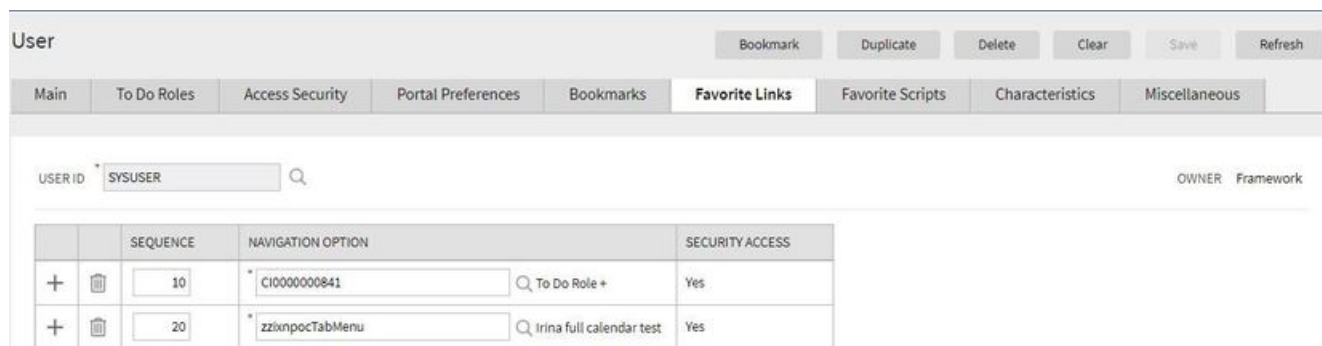
## Multiple Tabs

When a page in the application includes a lot of information, the page may be implemented with vertical scrolling to allow the user to view all the information. Or alternatively, the page may be implemented with several tabs, allowing the user to navigate between tabs to view or update information. The following image is a section of the User page showing the multiple tabs.



**Figure 1: Multiple Tabs Example**

The names of the tabs describe the type of information that will be displayed in the page when the tab is clicked. For example, if you click on the **Favorite Links** tab, the contents of the page show the favorite links configured for the user.



**Figure 2: Multiple Tabs Example (After Favorite Links Tab Is Clicked)**

**NOTE: Hot key options.** Rather than clicking on a tab, you can click **F2** or **Shift+F2** to scroll through the tabs. **F2** moves you through the tabs from left to right. **Shift+F2** moves you through the tabs from right to left.

**NOTE: Hot key options.** Use **Alt+a** number to navigate to the tab page whose relative position corresponds with the number. For example, if you press **Alt+6** on the above page, the **Favorite Links** tab will be displayed. If there are more than 9 tabs on a page, you must use the mouse or **F2 / Shift+F2** to display a tab. Note that the numeric keypad on your keyboard cannot be used to implement this function.

**NOTE: Returning to a page that contains multiple tabs.** If you return to a page (by clicking the **Back** button or the **History** button), the page will be positioned on the last tab that was opened.



**NOTE: Page versus Tab nomenclature.** The documentation frequently refers to the contents of a given tab as a page. However, the page actually comprises the entire collection of tabs.

## Text Box

The following is an example of a basic text box:

DESCRIPTION

If the text box is a large field, the text box may be configured to enable scrolling. In this situation, an expanded edit icon, (a pencil), will appear adjacent to it.

DETAILED DESCRIPTION

This BO enter algorithm creates a To Do entry.

The To Do Type is set as follows:

- > If To Do Type Element Name is defined, the value is retrieved from this element in the object's related type.
- > If no Element Name is defined or no To Do Type is found on the related 'type', the To Do Type parm is used.
- > If no To Do Type is found, a log is added for the record with the error.

The To Do Role is set as follows:

- > If To Do Role Element Name is defined, the value is retrieved from this element in the object's related type.
- > If no Element Name is defined or no To Do role is found on the related 'type', the To Do Role parm is used.

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.

DETAILED DESCRIPTION

This zone type is used to create an info zone. Info zones contain a list of information about a given object. For example, you could set up an info zone to produce a list of all contacts made by the customer in context.

Info zones offer many features that can be used to change how the list looks "on the fly" (by end users). For example, users can add additional columns to the list, change the sort order, ...

For a more detailed description of how these zones look and behave, open the help and navigate to the index entry titled "info zone configuration".

To set up a new zone, fill in the zone's parameters as per each parameter's Comments. For examples, please refer to the "tips"

JAVA CLASS NAME

		SEQUENCE	PARAM
+	🗑️	* <input type="text" value="10"/>	* VISI
+	🗑️	* <input type="text" value="11"/>	* PRE

This zone type is used to create an info zone. Info zones contain a list of information about a given object. For example, you could set up an info zone to produce a list of all contacts made by the customer in context.

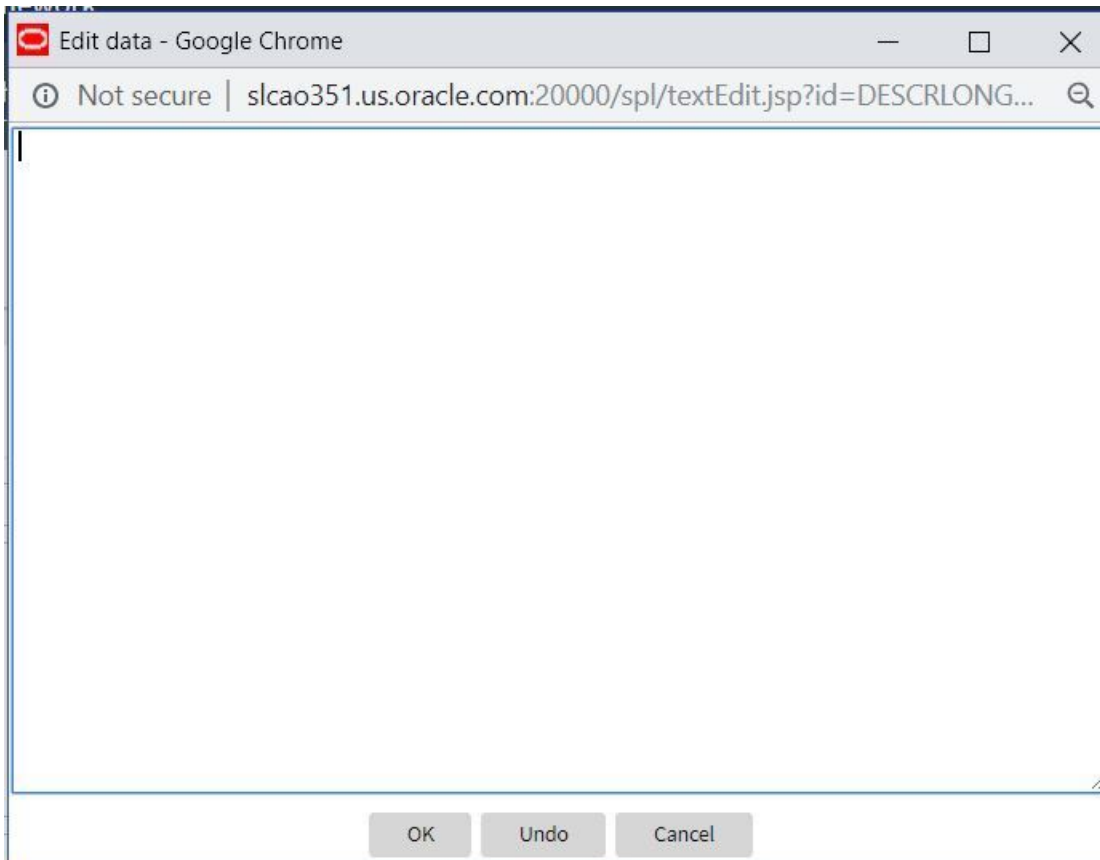
Info zones offer many features that can be used to change how the list looks "on the fly" (by end users). For example, users can add additional columns to the list, change the sort order, ...

For a more detailed description of how these zones look and behave, open the help and navigate to the index entry titled "info zone configuration".

To set up a new zone, fill in the zone's parameters as per each parameter's Comments. For examples, please refer to the "tips" that appear in the dashboard.

This zone's parameters support a single SQL statement. If you require a zone that is built using multiple SQL statements (e.g., if you need to retrieve rows from disparate sources), please use the Multi-SQL version of this zone type.

- 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:** The following table highlights special characters that 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).

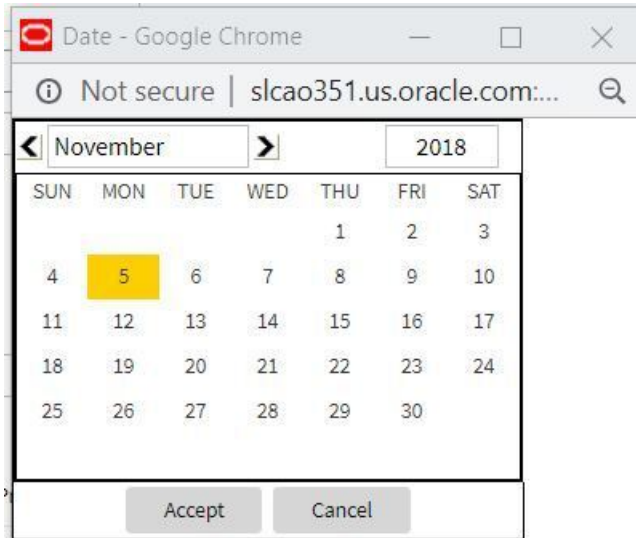
## Date Only Field

When only the date is required, the Date field looks as follows:

EXPIRATION DATE

\*  

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.

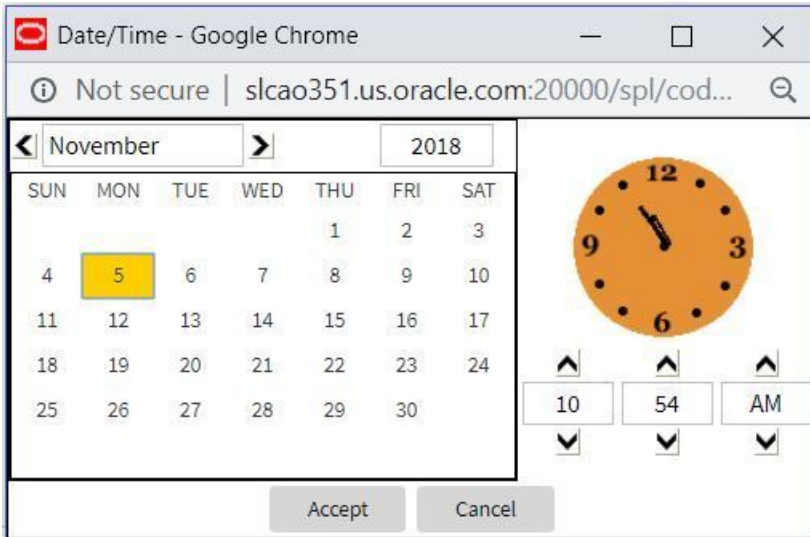
You can double-click the desired date, or you can select a date and click Accept to close the date window and populate the date field.

## Date and Time Field

When both the date and time are required, the Date and Time fields typically look as follows:

DESIRED EXECUTION DATE/TIME  /

If you double-click or press the Enter key while the cursor is in a Date and Time field, the following window appears:

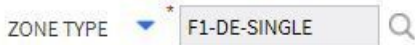


Select the date and use the toggle buttons (or enter) the time and then click **Accept** to populate the original fields.

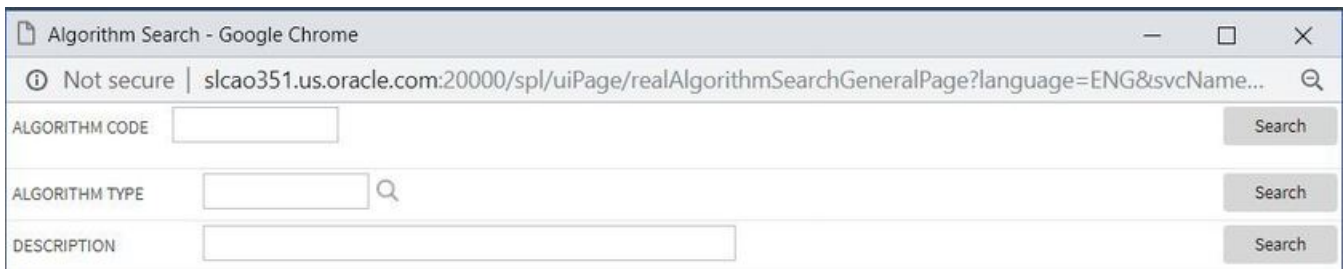
**NOTE:** The user cannot select and move the hands on the clock to set the time.

## Search Button

The search button appears primarily as a magnifying glass.



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.

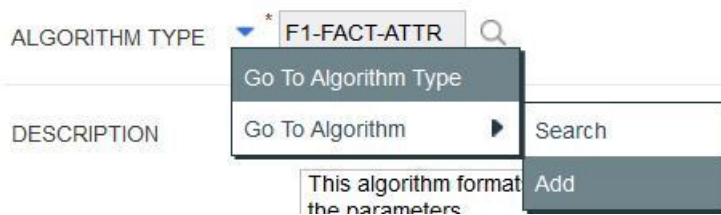
---

## Context Menu Button

The Context Menu button is a small arrow that appears adjacent to an object's value or information string. An example is shown below:




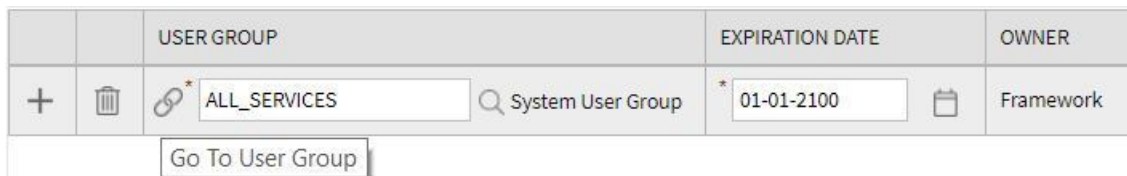
Context menus exist to help you navigate to other pages and populating the page with the current context (by passing the ID of the related object). In addition, the menu items offered in a Context Menu differ depending on the entity that the menu is related to; for example, when you click the Algorithm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



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 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.


## Embedded Help Icon

The icon containing a small 'i' is an Embedded Help icon.



When an embedded help icon is clicked, a tool tip appears containing additional information.

## 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 the available dashboard zones:

Dashboard - 7 of 8 zones selected for display.


ZONE	DISPLAY	INITIALLY COLLAPSED	SEQUENCE	REFRESH SECONDS	SECURITY ACCESS
Switch Language	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="20"/>	<input type="text" value="0"/>	Yes
Bookmarks	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	Yes
Current To Do	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	Yes

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

Dashboard - 7 of 8 zones selected for display.

ZONE	DISPLAY	INITIALLY COLLAPSED	SEQUENCE	REFRESH SECONDS	SECURITY ACCESS
Switch Language	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="20"/>	<input type="text" value="0"/>	Yes
Bookmarks	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	Yes
Current To Do	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	Yes
Favorite Links	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	Yes
Favorite Scripts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	Yes
Favorite Searches	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	Yes
To Do Summary	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	Yes
Work List	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="text" value="0"/>	<input type="text" value="0"/>	Yes



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 reverse 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-OVRTD-ALG	Validates date in format YYYY-MM-DD	ADHV-DTD
F1_PROSTINFO	Process Flow Information	F1_PROSTINFO
F1_VALDELPST	Process Flow Delete Validation	F1_VALDELPST
F1-ACTIVEWS	Web Service - Verify Active Operations	F1-ACTIVEWS
F1-ATCHM-INF	Attachment Information	F1-ATCHM-INF
F1-ATSZCLVL	Attachment Size Class Validation	F1-ATSZCLVL
F1-BAT-LSDEF	Timed Batch - Service Level Based on 1.5 Timer Interval Factor	F1-BAT-LVSVC
F1-BFEMOLOG	Add Business Flag Error MO Log	F1-BFEMOLOG
F1-BFSTDNMVA	Business Flag Standard Name Validation	F1-BFSTDNMVA

---

**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 in fixed pages that can potentially contain a large number of rows have special processing that we refer to as Get More functionality. Below is an example using the Message maintenance page. A large number of messages are associated with a given message category. This grid could contain hundreds of rows. Rather than show every message, the system retrieves the first X records (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:

			MESSAGE NUMBER	MESSAGE TEXT	OWNER
			11053	Script Type is required.	Framework
			11054	Unable to generate the list of Group Names.	Framework
			11055	Destination field name is missing for Step Sequence '%1'.	Framework
			11060	Step Collection Overflow	Framework


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.** For pages configured to include Get More, if no button appears at the bottom of the grid, this means all of the rows are displayed.


**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
	10	Winter kWh charge, first 500
	20	Winter kWh charge, remaining
	40	Summer kWh charge, first 300
	50	Summer kWh charge, remaining

	SEQUENCE	DESCRIPTION
	30	Winter subtotal
	60	Summer subtotal

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	TYPE	DESCRIPTION
		Original	10	Service Quantity	Charges
		Merge	20	Service Quantity	Winter kWh charge, remaining
		Merge	40	Service Quantity	Summer kWh charge, first 300

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.

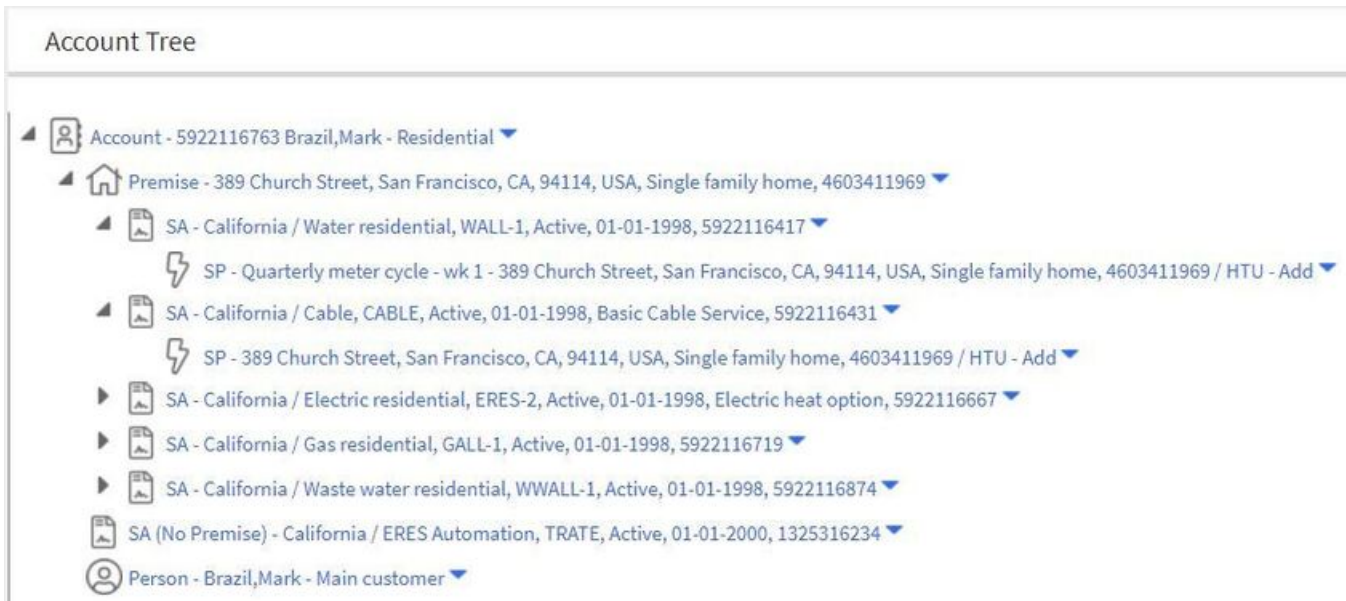
---

**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 arrows 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.

## Required Field Indicator

An asterisk (\*) is used to indicate that a field is required. The system determines this based on the field's configuration. When a field becomes required because of an algorithm and not the field's configuration, however, the system will not add an asterisk.

**NOTE:**

If a page includes a grid, fields within a row may be marked as required.

Operations ⓘ

		OPERATION NAME	SCHEMA TYPE	SCHEMA NAME
+	🗑️	*	*	*

In this situation, the field(s) within the grid are **only** required if the row is being populated.

## 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):

<input type="checkbox"/> STEPS	ALL 3 DISPLAYED	[EXPAND ALL] [COLLAPSE ALL]	Copy	▼
<input type="checkbox"/> + 🗑️ ( 10 )	Edit data - Get the Physical BO for the MO			
<input type="checkbox"/> + 🗑️ ( 20 )	Edit data - Get the prime keys of the BO			
<input type="checkbox"/> + 🗑️ ( 30 )	Edit data - Read the BO			

When you expand a header, its details are exposed. For example, the following shows the same accordion after the third row is expanded:

<input type="checkbox"/> STEPS	ALL 3 DISPLAYED	[EXPAND ALL] [COLLAPSE ALL]	Copy	▼
<input type="checkbox"/> + 🗑️ ( 10 )	Edit data - Get the Physical BO for the MO			
STEP SEQUENCE * <input type="text" value="10"/> STEP TYPE * <input type="text" value="Edit data"/> TEXT <input type="text" value="Get the Physical BO for the MO"/>				
EDIT DATA TEXT <pre>move "parm/mo" to "F1-RetrieveMOOption/input/mo"; move 'F1PB' to "F1-RetrieveMOOption/input/moOptionType"; move 'false' to "F1-RetrieveMOOption/input/isMultiple"; invokeBS 'F1-RetrieveMOOption' using "F1-RetrieveMOOption";</pre>				
<input type="checkbox"/> + 🗑️ ( 20 )	Edit data - Get the prime keys of the BO			
<input type="checkbox"/> + 🗑️ ( 30 )	Edit data - Read the BO			

---

**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.

---

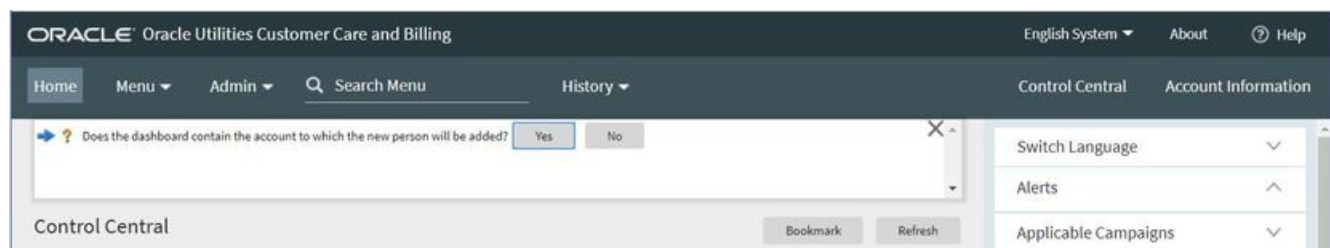
**NOTE: User configurable.** Every user has control over the zones that appear in their dashboard. Refer to [Portal Preferences](#) for more information about how a user can customize the contents of the dashboard.

---

## 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).



## Portal Pages

---

This section describes using portals and zones to find and display information. This is the preferred technique used by the base product for building user interfaces.

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

The contents of this section provide background information about portal page behavior.

## 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.

---

The screenshot shows a vertical sidebar with the following sections:


- Current Context**: Includes a user profile for 'Brazil, Mark', a phone number '5922116763 4 Brazil, Mark, Residential, S-989.56', and an address '1 1 North-East, Morristown, CA, 07960, USA, Single family home, 3364881208'. Each item has a small icon and a dropdown arrow.
- Current To Do**: Contains a button labeled 'Assign me a To Do'.
- Customer Contact**: Features a form with fields for 'LAST' (27 days ago - System, English), 'TYPE' (dropdown), and 'COMMENT' (text area). An 'Add Contact' button is at the bottom.
- Eligible Scripts**: A section with a dropdown arrow.
- Favorite Links**: A section with two links: 'User Group +' and 'To Do Role +'.

## Users Must Be Granted Security Access To Each Zone

A user must be security granted access rights in order to see a zone on a portal.





**FASTPATH:** Refer to [Granting Access to Zones](#) for information .

## Zones May Appear Collapsed When A Page Opens

Zones may be designed to appear collapsed (or minimized) when the portal is initially displayed. To view the information in a collapsed zone, the user can press the zone's expansion button, , to either expand or collapse the zone:

Favorite Links 

Favorite Links 

User Group +	 1
To Do Role +	 2
QA Query Portal	 3
Workflow Process Template +	 4

A zone's data is only retrieved when it is expanded.

## Some Portals Allow User Customization

There are some portals in each base product that are configured to allow user customization. In this case, the portal is visible on the user's portal preferences. For these portals 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.

Portals used for base product query and maintenance pages are typically configured to not allow user customization.

## Dashboard Portal

The dashboard is a special 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. It also suppresses the refresh of the zones within the dashboard based on updates to the context. Maximizing the dashboard then refreshes the zones with the latest appropriate content.

**Minimize the dashboard when launching the system.** If desired, a URL parameter may be used to minimize the dashboard when launching the system, using the parameter `minDashboard=true`. Refer to [Creating Application Links in External Applications](#) for more information and examples.

---

### Keyboard Shortcut

Alt+J

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 **Assign me a To Do** button 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 To Do Assignment Rules Are In A Plug-in.** Refer to [Installation Options](#) 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 icon  appears if there are comments on the To Do and a Log Entry 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 Buttons

The **Previous** and **Next** 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** or **Previous** 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.

Keyboard Shortcut	Comments	Alternate Shortcut
Alt+Y	Previous To Do	
Alt+Z	Next To Do	Alt+Shift+Z

**NOTE:** Refer to [Shortcut Key Summary](#) for information about the alternate shortcut.

**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 at least one related To Do entry is **Open** or also assigned to the current user, the **Complete All** button is visible. If the user determines that the related To Do entries have been resolved with the appropriate action taken, the button may be used to complete in one step the current entry and all related entries that are **Open** or 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** and **Previous** 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. The first nine entries can be invoked by pressing an accelerator key (Ctrl + the number of the relative position of the link in the list). 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, 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.

# Zone Types and Characteristics

The topics in this section describe common zone types, function, and common characteristics.

---

**FASTPATH:** Refer to [The Big Picture of Portals and Zones](#) for a description of general portal and zone functionality.

---

## 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 even the header is displayed.

For configuration information, refer to [Zone Visibility Service Script](#).

### 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.

### 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.

If more than two results are displayed, the system automatically collapses the filter area to allow more space for displaying the results. At that time the **Expand Filters** button may be used to open the filter area to enter different criteria. When the filter area is expanded the **Hide Filters** button may be used to collapse the filter area again without performing a new search.

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 screenshot shows a web interface titled "User Groups not Linked". At the top right, there are icons for settings, refresh, and a back arrow. Below the title, the filters are listed as "Application Service CILQTDQP, User ID CCBDEV1". A table with three columns is displayed: "USER GROUP", "DESCRIPTION", and "GRANT ACCESS". The first row shows a user group named "\*PORTAL\*" with the description "Portal System Default" and a "Grant Access" button. Below the table is a section titled "USE TO SHOW USER GROUPS WITH SPECIFIC USER" containing input fields for "USER ID" (with "CCBDEV1" entered), "FIRST NAME", and "LAST NAME", along with a "Search" button.

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.

The screenshot shows a web interface titled "Business Objects with Status Reason". At the top right, there are icons for settings, refresh, and a back arrow. Below the title, a table with four columns is displayed: "BUSINESS OBJECT", "DESCRIPTION", and "STATUSES". The table contains seven rows of data, each with a radio button in the first column. The data is as follows:

	BUSINESS OBJECT	DESCRIPTION	STATUSES
<input type="radio"/>	1 F1-BusinessFlagError	Business Flag Error	Discarded
<input type="radio"/>	2 F1-CubeView	Cube View	Active, Inactive
<input type="radio"/>	3 F1-GenericBISyncRequest	Generic BI Sync Request	Discarded, Cancel
<input type="radio"/>	4 F1-MessageFromDevice	Message From Device	Canceled
<input type="radio"/>	5 F1-MessageToDevice	Message To Device	Queued, Canceled, Processed
<input type="radio"/>	6 F1-MigrDataSetExport	Migration Data Set Export	Canceled
<input type="radio"/>	7 F1-MigrDataSetImport	Migration Data Set Import	Canceled, Completed

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:

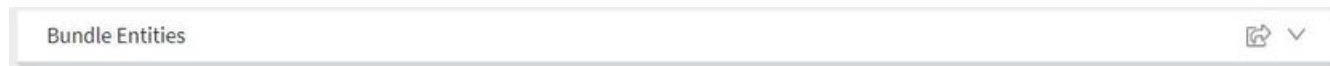
- **Broadcast.** If the results set is configured to display a broadcast icon, , it means that at least one other zone on the portal is configured to display data related to the record selected in the results list. Clicking this icon will cause the other zone or zones to be built or refreshed to display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

## 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.




**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.

## 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 **Go To Zone** 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

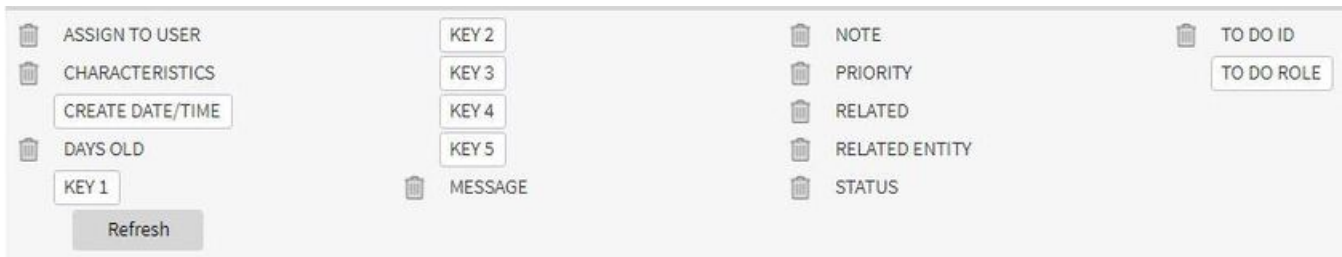
Info zones and query zones may be configured to allow users to rearrange columns and to remove or add columns to the output. This is also referred to as "drag and drop" of columns.

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.

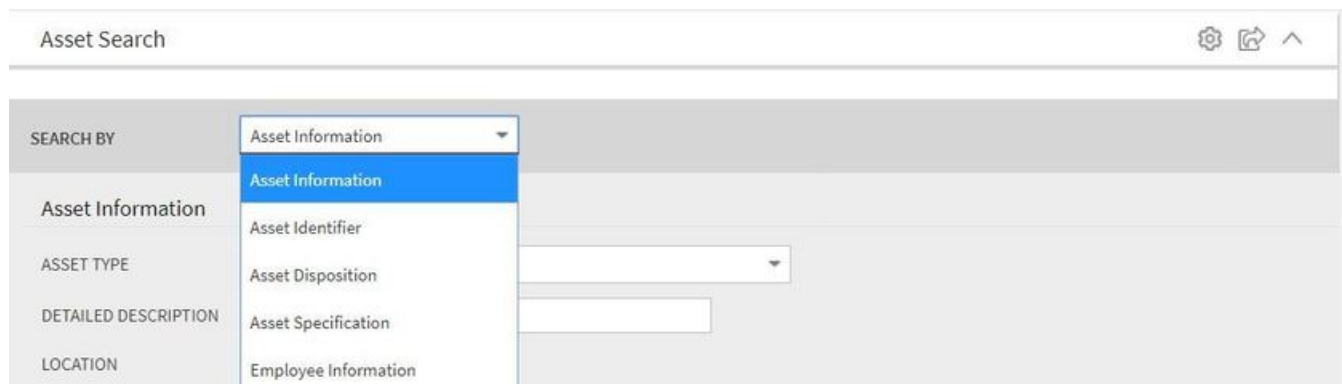
In addition, the column configuration area may display columns that are not currently in the Results Area. These are indicated by a cream background. A user can drag one of these columns to the results area and then click **Refresh** to rebuild the zone. To remove a column that is currently in the results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

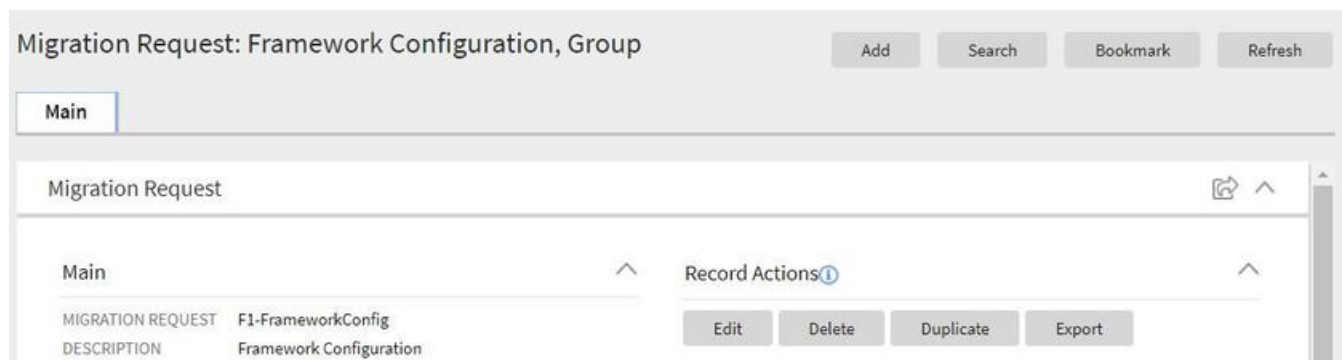
This type of zone combines individual Query Zones into a single query zone. A **Search By** dropdown, built from the zone descriptions of the individual Query Zones, allows you to select the desired query to execute. Selecting a specific Query Zone display the filters of that query in the filter area. 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 **Go To Map** 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.

---

## Timeline Zone

A timeline zone is used to show events over time for multiple types of data. This type of zone is helpful for providing a consolidated view of separate events occurring in time that may in fact impact each other. For example, in the billing system, a timeline can show bills, payments and collection processes for the same time period.

The topics in this section describe the functionality available in timeline zones.

### Timelines Zones Are Configured By Your Implementation Team

The product provides support for creating timeline zones. However, whether timeline zones are configured for your implementation and on which portals they may be visible will depend on your specific configuration. Refer to [Configuring Timeline Zones](#) for general information about configuring timeline zones. Refer to your specific edge application's documentation for details about what type of timeline information is provided out of the box.

### You Can Move Through Time

You can click the controls at the top of a timeline zone to change the date-range of the zone's information. To reposition the timeline to a specific date, selected the desired month and year at the top of the zone and click the search arrow.

Controls at the top right of the zone allow you to navigate through time.

- To go back one year, click the double-left arrow.
- To go back one month, click the single-left arrow.
- To go to today, click the middle dot.
- To go forward one month, click the single-right arrow.
- To go forward one year, click the double-right arrow.

### Timelines Can Have Many Lines

Depending on how a timeline zone is configured, it will typically have one or more "lines" that show when significant events have occurred. Each line represents a specific type of data. The data may be related to a specific maintenance object, for example, payments may be displayed in one line and bills in another. It may also be possible to create multiple lines for different types of records for the same maintenance object. For example, if your product provides an algorithm to display cases, it may support defining a different entry for each case type.

### Each Line Shows Events

Each line on a timeline may contain zero or more events where each event shows the date when the event occurs. For example, the payment line in a timeline has a separate event for every payment received from the customer. Each line's description contains the number of events on the line.

---

**CAUTION:**

If a line has more events than can fit onto a timeline, the line will show the first "chunk" of events and a message will appear in the "more info area" explaining that some events have been truncated. If this happens and the truncated events are in a later period, you can reposition the timeline's base period to show the truncated events.

---

## Hovering Over An Event Shows the Event Information

When you hover over an event's date icon, a pop-up widow appears showing details of the event. The following information may appear:

- The event date.
- The event "hover text". Typically the standard information string is shown for each event.
- The event's common "information string" appears. This information is hypertext to allow for easy access to the transaction on which the object is maintained.
- Additional information may appear. This is dependent on the particular timeline algorithm. Refer to each timeline algorithm's description to find out if additional information appears in the pop-up area under any conditions.
- If the algorithm has configured BPA scripts that can be executed to perform business processes on the object, the BPA script description appears prefixed with a "wizard's hat" icon.

## Common Base Portals and Zones

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 where the maintenance zone is displayed 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. (However, 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 sections describe zones that 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.

## Process Flow

This portal is used to guide a user through the steps needed to complete a process flow. If the process flow type is configured to keep a record of a completed process flow then this portal may also be used to display the details of such record.

Refer to [Understanding Process Flows](#) for more information.

Each type of process flow is assumed to be configured with designated custom menu options that allows you to launch a new process flow of that type as well as review saved off and completed records. When reviewing existing process flow records, you are brought to a query portal with options for searching for a specific record. You may **Resume** a saved off but not yet finalized process flow or review a complete one.

The **Process Flow** zone on the portal's **Main** tab page assists the user in completing the process flow as well as displays the information captured on a completed process flow.

## Fixed Pages

---

There are some pages in the system that are built using a fixed page metaphor. All user interfaces implemented in this way function in a similar manner. This section describes functionality to these types of pages.

---

**NOTE:** Not all pages in the application use this metaphor. The preferred metaphor for pages in the system is to use portal-based pages. For more information see [Common Base Portals and Zones](#).

---

## Maintenance Pages

Maintenance pages are used to maintain (add, change, etc.) the information in the system using a fixed page metaphor. This section focuses on functionality common to all maintenance pages using this metaphor.

## 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.

## 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
  - Language
  - Display Profile

- Time Zone
- 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, use one of the following navigation options:

- The **Admin > Security > User > Search** menu item.
- The **Menu > My Preferences** menu item.
- 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. The Login ID is the ID that the user uses to log in to the system. The User ID is the ID that is used throughout the application when users are assigned to tasks or when the user ID is stamped on records when logging add or update actions.

**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** 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** to define the user ID of the template user. If applied, the specified user will inherit portal preferences from the **Portals Profile User** 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** to define the user ID of the template user. If applied, the specified user will inherit favorites preferences from the **Favorites Profile User** 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 250 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. Setting the value to 0 will suppress the dashboard.

**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](#).

- Use **Lower Age Limit for Yellow Bar** to define the number of days old a To Do entry must be to be considered "yellow" in the age bar. To Do entries below this limit are considered "green" in the age bar.
- Use **Upper Age Limit for Yellow Bar** is the high limit for the "yellow" bar. To Do entries older than this are considered "red" 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.

---

**NOTE:** The ability to maintain the user groups on this page requires special field-level security. A user can change the field only if the **System Administration** access mode is set.

---

If your implementation has configured [Object Erasure](#) for the User maintenance object, the **Object Erasure Schedule** dashboard zone is visible displaying the erasure status for this user record, if applicable. Refer to [Erasing User Information by Obfuscation](#) for more information on object erasure for User records.

## 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**.

---

**FASTPATH:** A user's To Do roles control the types of **To Do** entries the user can access. For additional information on To Do roles, see [To Do Entries Reference A Role](#).

---

### 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**.

---

**FASTPATH:** Refer to [The Big Picture of Application Security](#) for more information about data access roles and access groups.

---

### 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.

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** (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.

---

**CAUTION:** Recommendation. It is recommended that you set your preferences to collapse zones that you don't use often. This is because the system doesn'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.

---

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: A hot key 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** 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: A hot key 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** 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 > Security > 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 > Security > 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 embedded help for information about the fields managed on the zone.

## Initiating Scripts

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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.
- The following [hot keys](#) cause an interactive menu is displayed:
  - `Ctrl+Alt+Q`
  - `Ctrl+Shift+S`

DESCRIPTION  

SEARCH ONLY ELIGIBLE SCRIPTS

Description	
Activity Resource Requirement - Add User Log Entry	Eligible
Add Activity from Template Work Order	Eligible
Add Crew Type Resources	Eligible
Add Design Element Work Location Maintenance	Eligible
Add Financial Transaction	Eligible

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.

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

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**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.

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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.

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**FASTPATH:** Refer to [The Big Picture Of Scripts](#) for more information about scripts.

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**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`).

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# Shortcut Key Summary

The following table summarizes the keyboard shortcuts (hot keys) available in the system:



**NOTE:** It is possible that your specific product supports additional shortcut keys. Refer to your product documentation for more information.

**NOTE:** It is possible that some of the following system accelerator keys may duplicate shortcuts, or hot keys, that are predefined within your browser. If this is the case, the browser's functionality commonly takes precedence.

**NOTE:** It is possible that your implementation uses one of the accelerator keys listed below for a different purpose. For example, in some languages, a shortcut key may be used for a special character in the alphabet not included on all keyboards. It is possible to turn off any of the Alt+letter shortcuts and Ctrl+Alt+letter shortcuts listed below using a properties file entry. The property is `ouaf.shortcut.ignore.altKeys=` where one or more letters may be entered separated by a comma. When setting this property, the system automatically enables a 'potential alternate key' for certain functions (see the table below). Refer to the *Server Administration Guide* for more information about the property.

Accelerator Key	Potential Alternate Key (see Note above)	Function
Ctrl+Alt+A		Opens the <a href="#">Admin Menu</a> button.
Alt+B		Returns to the previous page on which you were working. This is the equivalent of clicking the <a href="#">Back</a> button.
Ctrl+Alt+B		Launches the Bookmark dialog. This is the equivalent of clicking the <a href="#">Bookmark</a> button.
Alt+C, Ctrl+Alt+C, Alt+Shift+C		Clears the currently displayed object from the page. This is the equivalent of clicking the <a href="#">Clear</a> button.
Ctrl+Shift+C		If the current step in the <a href="#">Script</a> area has a <b>Continue</b> button, this shortcut is equivalent to clicking <b>Continue</b> .
Ctrl+Alt+D, Alt+D		Creates a duplicate of the object being displayed. Equivalent to clicking the <a href="#">Duplicate</a> button.
Ctrl+Alt+F		Positions the user's cursor to the <a href="#">Menu Item Search</a> input field.
Ctrl+Shift+F		If the <a href="#">Script</a> 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.
Alt+G		Returns to the most recent page that was displayed when the <a href="#">Back</a> button was clicked. Equivalent to clicking the <a href="#">Forward</a> button.
Ctrl+Alt+H		Opens a dropdown list of recently-visited pages, the equivalent of clicking the <a href="#">History</a> button.
Alt+J		Minimizes the <a href="#">dashboard</a> . It also expands the dashboard, if it was minimized.
Alt+K		Transfers you to <a href="#">To Do Entry - Main</a> 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.
Ctrl+Alt+L		Logs the user out of the system. This is equivalent to clicking the <a href="#">Logout</a> menu item.

Accelerator Key	Potential Alternate Key (see Note above)	Function
Ctrl+Alt+M		Opens the <a href="#">Menu</a> button.
Alt+N	Alt+Shift+N	Displays the next entry in the search results. Equivalent to clicking <a href="#">Next Item</a> .
Alt+O	Alt+Shift+O	Navigates to the user's home page. Equivalent to clicking the <a href="#">Home</a> button.
Ctrl+Alt+P		Opens your <a href="#">User Preferences</a> page. Equivalent to clicking the <a href="#">Preferences</a> menu item.
Alt+P		Displays the previous entry in the search results. Equivalent to clicking <a href="#">Previous Item</a> .
Ctrl+Alt+Q		Opens the <a href="#">business process assistant</a> , where you can select a script that walks you through a business process.
Alt+RCtrl+Alt+R		Refreshes the page with the last saved version of the object being displayed in the page. Equivalent to clicking the <a href="#">Refresh</a> button.
Alt+S	Alt+Shift+S	Saves any changes that you've made on the database. Equivalent to clicking the <a href="#">Save</a> button.
Ctrl+Shift+S		Opens the <a href="#">business process assistant</a> , where you can select a script that walks you through a business process.
Alt+X	Alt+Shift+X	Opens the <a href="#">To Do Summary</a> .
Ctrl+Shift+X, Ctrl+Shift+Z		If the <a href="#">Script area</a> is open, equivalent to clicking the <a href="#">Close</a> button in the script area. If a pop-up window is open, this closes the window.
Alt+Y		Displays the previous item in the To Do list. Equivalent to clicking the <a href="#">Previous</a> button in the <a href="#">Current To Do</a> zone.
Alt+Z	Alt+Shift+Z	Displays the next item in the To Do list. Equivalent to clicking the <a href="#">Next</a> button in the <a href="#">Current To Do</a> zone.
Alt+Insert		Inserts a new row into an editable grid if the insertion point is in the grid. Equivalent to clicking the <a href="#">Insert</a> button.
Alt+Delete		Removes a row from an editable grid if the insertion point is in the grid. Equivalent to clicking the <a href="#">Delete</a> button.
Alt+F1		Invokes online Help for the application. Equivalent to clicking the <a href="#">Help</a> button.
Alt+1 ...Alt+9		These keys are only applicable when a page / portal with multiple tabs 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 ...Ctrl+9		Invokes the <a href="#">favorite link</a> 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.
Ctrl+Shift+1 ... Ctrl+Shift+9		Invokes the <a href="#">favorite script</a> whose relative position corresponds with the shortcut number. For example, pressing Ctrl+Shift+2

Accelerator Key	Potential Alternate Key (see Note above)	Function
		selects the second of your "favorite scripts". The numeric keypad cannot be used for these shortcuts.
Alt+left arrow		Populates a scroll area with the previous entry. Equivalent to clicking the scroll control 
Alt+right arrow		Populates a scroll area with the next entry. Equivalent to clicking the scroll control 
Enter when in a field with an adjacent Search button		Invokes the search. Equivalent to clicking the <a href="#">Search Button</a> .
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: <ul style="list-style-type: none"> <li>• If the insertion point is on a node image, the node is either expanded or collapsed, dependant on its current state.</li> <li>• If the insertion point is on a context menu, the context menu is opened and normal menu processing applies.</li> <li>• If the insertion point is on a "link" element, normal navigation processing occurs.</li> </ul>
Tab when a row in a search result is highlighted		Highlights the next row.
Shift + Tab when a row in a search result is highlighted		Highlights the previous 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 or 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 or Down Arrow keys when in search results		Highlights the next/previous row in search results.
Up, Down, Left or Right Arrow when using a menu		Highlights other menu items.
Esc when using a menu		Closes the menu.
F2		Opens the next tab page when viewing a page / portal with multiple tabs.
Shift+F2		Opens the previous tab page when viewing a page / portal with multiple tabs.

# Chapter 3

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## Assets

### About Asset Locations

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An asset location describes the physical location where the asset is *installed* after it leaves the storage location. Some examples of asset locations are service points, underground connections, poles, and so on.

Asset locations have their own history and lifecycle and can be organized within a reporting hierarchy. For example, a campus might be defined as the parent location with the buildings on the campus defined as child locations to that parent. The parent can define attributes or identifiers common to all child locations, however specific location information must be defined on each location individually.

Refer to [Understanding Inventory](#) for information on storage locations.

### Types of Locations

#### Service Area

Service areas define a logical boundary of your organization's territory. Every crew shift is populated with a list of service areas that the crew shift is allowed to work. This is matched up with the service area indicated on the activity to help determine which crew shift can work the activity.

#### Location Hierarchy



## Disposition Locations

Disposition location refers to either a storage location or an asset location.

Storage locations are considered to be storerooms, meter shops, vehicles, or warehouses while an asset location is considered to be the physical location of an installed asset at a particular service point.

Examples depicting the differences between a storage location and an asset location:

- Assets received from the manufacturer and awaiting inspection can be held at a receiving warehouse (Storage Location).
- An asset, once it passes inspection, can be moved to a storeroom (Storage Location).
- A service person can load the asset onto their service vehicle (Storage Location).
- Service person installs the asset at a service point (Asset Location).
- If damaged, the asset can be removed from the service point and sent to the meter shop for repairs (Storage Location).
- Once repaired, the asset can be installed at another service point (Asset Location) or returned to inventory (Storage Location).

## Belongs to an Organization

When a new asset or storeroom is created, a parent organization can be entered to link the location to the organization.

## About Assets

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An asset describes such objects as meters, poles, pipes, transformers, components, or any other material item owned or managed by an organization.

Key aspects of an asset is as follows:

- Most typically are tracked
- Able to be inspected
- Able to be serviced and maintained
- Includes a disposition history
- Could include one or more components

Assets are always associated with a location. Refer to [Understanding Out of Service Locations](#) and [About Asset Location](#) for more information on locations.

Assets typically exist within a structured hierarchy based on the relationship between the asset and its locations and organizations.

## Components

Components are devices or other objects that are attached to another device, usually an asset.

One of the most common examples of components are the electronic reading devices (ERTs) that are often attached to analog meters. However, a component can be any asset attached to another asset.

Since they are always attached to another device, components cannot be installed at a location. However, they may be received, tracked, maintained, and inspected like any other device. Given this, activities and work orders can be created to perform these tasks on components.

Detaching components involves either moving the component to a new asset or transferring the component to a storeroom. The process within the system is to search for and select the component and then "detach" it from the asset where it currently resides.

## Asset Disposition

An asset's disposition is the combination of the asset's location (storage location or asset location) and status. An asset's disposition changes throughout its lifecycle as the asset is moved between locations and service statuses.

The number of assets installed or not installed at a location must be valid for the asset relationship (Installed, Not Installed) defined on the location type.

Implementers can create additional asset dispositions; however, each asset disposition must indicate whether the disposition will represent an *Installed* or *Not Installed* asset and whether the asset is to be maintained by Inventory.

Some examples of Asset Disposition combinations are as follows:

- When an asset is *received from the manufacturer*, its disposition is *In Receipt* at the *receiving warehouse*.
- When an asset is *being inspected*, its disposition is *In Stores* at the *receiving warehouse*.
- When an asset is *moved into a storeroom*, its disposition is *In Stores* at the *storeroom*.
- When an asset is *moved into a service vehicle*, its disposition is *In Stores* at the *service truck*.
- When an asset is *installed at a service point*, its disposition is *Installed* at the *service point*.
- When an asset is *being repaired*, its disposition is *In Repair* at the *meter shop*.
- When an asset is *retired from service*, its disposition is *Retired* at the *storeroom*.

## Replicating Assets

Asset Replication process enables a company to replicate large batches of assets or devices that they receive, inspect, and store in order to start tracking the assets.

Functionality enables such processes as:

- Replicating assets in the same lot or pallet
- Selecting assets for testing or inspection
- Mass updating of asset disposition, such as rejecting or accepting a lot or pallet.

Processing creates new asset IDs, badge numbers, and serial numbers for assets based on general information that is entered related to each batch. When a new replication event is created it is tied to a replication activity type to determine default settings and attributes for the replication. The actual asset information can be entered manually or uploaded using a CSV file.

Assets can then be moved between locations or dispositioned using the **Mass Asset Disposition Update** feature. See [Mass Asset Disposition Update](#) for more information.

## Service History

# Warranties

Warranty terms hold the duration, term, value, or usage limit of assets or items that are under warranty. The warranty term also specifies the specification and vendor that a warranty claim can be issued to when needed.

Warranty terms can be defined as calendar warranties (such as number of years) or runtime warranty terms (such as number of miles). When a warranty term is created and set to Active status, it can be associated with assets.

A warranty is a written guarantee issued to your organization promising to repair or replace a damaged item within a specified period of time or usage limit. The **Warranty** portal manages the warranties held for assets or other purchased items for your organization.

Once warranties have been created referencing the term, the **Warranty** section on the **Warranty Term** record displays a list of the applicable warranties.

# Measurements

Measurements manage the asset operational and runtime data which is collected and tracked for assets. Asset measurements might include mileage, hours of uptime, number of start-stops, and so on.

Since they almost entirely depend on the usage of the related asset, readings cannot be calculated or predicted accurately by the system. Instead, readings must be collected and entered into the system, either manually by a user or imported as the result of activity completion. Data readings that fall outside of expected limits or thresholds can be set to trigger alerts. The alerts create ToDo entries and can trigger the creation of related work records, as appropriate.

## Operational Reading Activities

The taking of measurements can be effectively managed by setting up the appropriate work orders or activities to track and schedule the work. This type of scheduling can be even more stringently managed using maintenance triggers and schedules.

Asset records display any related measurement activities in the **Measurements** zone.

## Operational Reading Quick Entry

While most readings typically come from an external system via an interface, users can also enter read information manually using the Reading Quick Entry tool. This tool can also be used to upload multiple readings from a spreadsheet.

## Operational Reading Alert Review

Reading alert review provides users with an easy dashboard to review alerts related to asset measurements. Generally an alert is triggered when an asset reading falls outside of an established threshold. Users can select the appropriate measurement type to see a list of measurements of that type that are in error. This list is sorted by the most recent errors first. The **Asset** portal displays a similar zone on relevant assets that have had measurements taken. This zone also includes an **Add** link where users can enter a measurement directly on the **Asset** record.

Select appropriate assets (usually assets that have readings in error) and click the **Make Valid** button which automatically moves the status of the reading from an error to a valid state.

## Measurement Activity zone

This zone displays a listing of activities related to a measurement. This provides visibility into maintenance planning activities that are triggered by measurement alerts. For example, your system configuration might trigger an alert if an out of range measurement is entered.

This zone also includes an **Evaluate** button which, when clicked, moves the measurement to the next state where the measurement ranges will be evaluated, such as valid or error.

# About Specifications

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Specifications describe design details and functional performance criteria for a set of assets. This can include manufacturer, model, and other information specified for the assets.

Specifications may also contain written procedures, careful handling instructions for hazardous or delicate materials, or any other set of attributes needed to provide information about a set of assets.

The base package specifications provide a general starting point for your specification set-up including the following:

- General Maintenance Specification
- Operational Maintenance Specification
- Operational Device Specification
- Fleet Specification
- General Specification
- IT Specification
- Infrastructure Specification

In **Oracle Utilities Operational Device Management**

- Analog Meter Specification
- Communication Component Specification
- Communication Relay Specification
- Firmware Specification
- Smart Meter Specification

Implementers may want to include additional specification details. An example of how this can be accomplished using the fleet or vehicle specification would be to extend the data area *WI-VehicleDetail*. Specification detail values may also be extended by adding values to the following look-up fields:

- **MODEL\_YEAR\_FLG** - model year
- **VEHICLE\_COLOR\_FLG** - vehicle color
- **DRIVE\_TYPE\_FLG** - drive type
- **FUEL\_TYPE\_FLG** - fuel type

Some of the main uses for specifications are as follows:

- **Configuration Specifications** enable definition of different attributes on each device type.
- **Engineering Specifications** enable creation of a list of attributes for specific device types.
- **Preventive Maintenance Specifications** provide for the building and sharing of maintenance strategies between an asset or group of assets.

Specifications can be linked to stock items. This linking associates the stock items to the tracked assets that are also associated with the specification which allows the stock item to be used to track the asset. Only specifications with asset types configured with an 'inventory controlled storeroom' node type can be added.

Please note the following with regard to specifications:

- Specifications often include an attachment which supports the specification definition or provides the actual specification from the manufacturer.

- A specification may also include default *in service* and *out of service* maintenance schedules for assets or components linked to the specification. When the specification is associated with the asset or component, the related maintenance schedule becomes in effect for the asset or component.

## Maintaining Asset Locations

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This portal is used to display and maintain asset location records.

Refer to [About Asset Locations](#) for more information.

You can access the portal from the **Menu > Asset Management > Asset Location**. You are brought to a query portal with options for searching for a specific asset location. Once an asset location has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Asset Location:** This zone provides details about the physical location where the assets are installed.
- **Currently Installed Assets:** This zone provides a list of all the assets currently installed at this location.
- **Asset History:** This zone provides log details for the assets installed at this location.
- **Asset Summary:** This zone provides statistics on the number of assets that are currently associated with the location. The assets in this zone are displayed by asset type and include a bar graph that, when clicked, will navigate the user to another zone where they can view inventory details for that asset in other storage locations.
- **Attachments:** This zone enables users to manage all types of attachments for the asset location record.

## Maintaining Assets

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This portal is used to display and maintain asset records.

Refer to [About Assets](#) for more information.

You can access the portal from **Menu > Asset Management > Asset**. You are brought to a query portal with options for searching for a specific asset. Once an asset has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Asset.** This zone provides details about the asset, such as the badge number, disposition, and status.
- **Attached Components:** This zone provides a list of components that are installed on the asset.
- **Disposition History:** This zone displays all of the status and location changes that have occurred during the life of the asset.
- **Attachments:** This zone enables users to manage all types of attachments for the asset record.
- **Asset Warranty:** This zone provides warranty information for the asset.
- **Asset — Notes:** This zone enables users to enter additional notes for the specific asset.

The following zones may appear as part of the portal's **Maintenance** tab page:

- **Asset Service History:** This zone provides a log of the service history that has been recorded for the life of the asset.
- **Measurements:** This zone provides a log of measurements created for the life of this asset.
- **Maintenance Trigger:** This zone displays a log of preventive maintenance triggers that are associated to the maintenance schedule identified on the maintenance specification on the asset header.

- **Asset List Maintenance Trigger:** This zone displays a log of location specific maintenance triggers where the asset's location is present on a template activity's location list of the template work order identified on the PM trigger.
- **Maintenance Schedule Forecast:** This zone displays a log of maintenance schedules forecasted for the asset.
- **Activity History:** This zone provides a log of the activities that have been performed on the asset over the life of the asset.
- **Hazardous Materials:** This zone displays a list of hazardous materials associated with the asset.
- **Permit:** This zone displays permit information for this asset.
- **Permit Service History:** This zone displays a list of the permits that have been associated with the asset.

The following zones may appear as part of the portal's Statistics tab page:

- **Asset Cost Summary:** This zone displays a table of maintenance and renewal cost per cost category over the life of the asset.
- **Cost by Service Class:** This zone displays the total cost breakdown by service class for this asset.
- **Asset Condition Score Breakdown:** This zone displays a list of assessment scores for each assessment type for the asset.

The following zones may appear as part of the portal's Asset Performance tab page:

- **Asset Performance:** This zone provides asset and performance information about the asset that can be used for planning purposes.

## Maintaining Asset Replication

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This portal is used to display and maintain large quantities of assets or other devices by batch.

Refer to [About Assets](#) for more information.

You can access the portal from the **Menu > Asset Management > Asset Replication**. You are brought to a query portal with options for searching for asset replication information. Once an asset replication has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Asset Replication:** This zone provides details about the replicated assets, asset controls, and new asset IDs.
- **Completion Event:** This zone displays the completion events associated with the replicated assets.

## Maintaining Operational Readings

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The **Operational Reading** portal is used to display and maintain an operational read record.

Refer to [About Operational Devices](#) for more information.

You can access the portal from **Menu**, select **Asset Management**, and then select **Operational Reading**. You are brought to a query portal with options for searching for a specific operational read. Once the read has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Measurement:** This zone displays information about the operational reading.
- **Measurement Activity:** This zone lists the measurement activities associated with the operational reading.

# Maintaining Specifications

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This portal is used to display and maintain specification records.

Refer to [About Assets](#) for more information.

You can access the portal from the **Menu > Asset Management > Specification**. You are brought to a query portal with options for searching for a specific specification. Once the specification has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Specification:** This zone provides details about the specification.
- **Specification Assets:** This zone provides information about the asset associated with the specification..
- **Attachments:** This zone enables users to manage all types of attachments for the specification record.

# Maintaining Warranties

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The **Warranty** portal is used to display and maintain a warranty record.

Refer to [About Assets](#) for more information.

You can access the portal from **Menu**, select **Asset Management**, and then select **Warranty**. You are brought to a query portal with options for searching for a specific warranty. Once a warranty has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Warranty:** This zone lists information about the warranty and associated asset.
- **Owned Attachments:** This zone displays the owned attachments for the specific record.
- **Referenced Attachments:** This zone displays any referenced attachments associated with this warranty record.
- **Warranty - Notes:** This zone displays notes associated with the warranty.

# Maintaining Warranty Terms

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The **Warranty Term** portal is used to display and maintain a warranty term record.

Refer to [About Assets](#) for more information.

You can access the portal from **Menu**, select **Asset Management**, and then select **Warranty Term**. You are brought to a query portal with options for searching for a specific warranty term record. Once a warranty term has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Warranty Term:** This zone displays information about the terms of the warranty.
- **Warranty:** This zone lists information about the warranty and associated asset.
- **Owned Attachments:** This zone displays the owned attachments for the specific record.
- **Referenced Attachments:** This zone displays the referenced attachments associated with this warranty term record.

# Mass Asset Disposition Update

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The Mass Asset Disposition Update portal is used to move many assets of the same type from one asset location to another asset location. The target location is always a single asset location. For example, if a pallet of meters has been received in the receiving asset location, mass disposition can be used to move this batch of assets to a storage asset location or an out of service location. You can also use Mass Asset Disposition Update to retire tracked assets or to put a tracked asset into a storeroom location such as a repair shop.

Refer to [About Assets](#) for more information.

**NOTE:** Assets that are inventory tracked (managed as stock items via inventory control) cannot be moved in or out of inventory storerooms using mass asset disposition update. In this case, the asset must be moved using stock transactions.

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You can access the portal from **Menu**, select **Asset Management**, and then select **Mass Asset Disposition Update**. You are brought to a query portal with options to change the status and location of multiple assets at one time. Select the appropriate assets and click the **Change Disposition** button to execute the change.

# Operational Readings Alert Review

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The **Operational Reading Alert Review** portal is used to review operational reading alert records.

Refer to [About Operational Devices](#) for more information.

You can access the portal from **Menu > Asset Management > Operational Reading Alert Review**. You are brought to a query portal with options for searching for operational reading alerts by measurement type. Select the appropriate reading alerts and click the **Remove Alert** button to remove the alert.

# 360 Degree Search

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The **360 Degree Search** portal is used to search for assets, components, specifications, location, and contacts.

Refer to [About Operational Devices](#) for more information.

You can access the portal from **Menu > 360 Degree Search**. You are brought to a query portal with options for searching for a specific object record.

From the search results list, you can navigate to the selected portal to view data for the object.

This feature is only used in **Oracle Utilities Operational Device Management**.

# GIS Map Viewer

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The GIS Map Viewer provides a method to view WAM assets and work information based on geospatial mapping. Maps generally consist of a base map plus feature layers which can overlay the base to show various map features such as work locations, infrastructure, and assets.

You can access the portal from **Menu > GIS Map Viewer**. You are brought to a map with options for searching and viewing work, assets, specific locations and so on.

## General Tools

- The **Home** button returns the user to the original map position and extent.



- A pop out **Map Overview** is available in the upper right hand corner that provides a larger context of the current position.
- Additional tools include:
  - Zoom In
  - Zoom Out
  - Set map location as user default
  - Zoom to previous
  - Zoom to next
- Selection tools such as rectangle, freehand, polygon or by location.
- Click a highlighted object (such as an asset or work location) on the map to display a popup with more details.
- Select assets then click **Create Work** to open the WAM dialog.
- Drop a pin to select an exact point on the map. This can also then become a work location which you can **Attach to Asset** to indicate the linear asset that the work is associated to.

## Dashboard Controls

- **Global Search:** A **Global search box** is provided that will find any address or place by typing them into this search. The address search is especially useful in cases where users need to find a location in based on a customer's description. For example, if a customer calls in about a trouble situation (e.g. a water leak, live electricity, etc.), the WAM user can type in the address details provided by the customer to pinpoint the location of the issue. The work that is created can then be attached to the closest asset in the proximity of the issue.
- **Asset tab:** The **Asset** tab is used to select a specific list of assets and view the list in the dashboard panel. There are actions available for individual records (i.e. Quick View, Create Work Request, and Remove From List) as well as actions that can be performed on the full list of records (i.e. Create Work Order or Create Activity). Links are also provided to navigate to the transactional screen for an asset.
  - **Drop pin:** the drop pin button allows the user to click on a specific point anywhere on the webmap, and either create a work request at that location, or to link that point to the related linear asset and create a work order. These 'pin drops' are represented in WAM as Work Locations.
- **Work tab:** The **Work** tab is used to display details of work related items, focused on Work Requests and Activities. Filtering options are provided to view only the work that applies to the current need, based on status, date range, and other criteria.
  - For **Work Requests**, options are provided to perform a Quick View of the record or navigate to the transactional screen for the Work Request.
  - For **Activities**, options are provided to perform a Quick View of the record, view all assets on the map related to the Activity, view all assets on the map related to the Work Order for the Activity, or navigate to the transactional screen for the Work Request.
  - By default, the **Work Locations** layer is enabled when the **Work** tab is accessed, since work records can be associated with these locations.
- **Layers tab:** The **Layers** tab provides the ability to turn map layers on or off. A drop-down is provided to access the configured web maps.
- **Share tab:** The **Share** tab allows for two key redlining capabilities:
  - Tools are provided so a user can write and/or draw on the map to call attention to something, provide instructions on the map, or add any other notes that would be useful if displayed on the map.
  - The map can be exported to a shareable format such as email or export to PDF.

## Highlighting Assets

- **General Highlighting**

- Your organization configures custom colors for **Highlighted Assets**, **Assets with No Work**, **Selected Assets**, and **Related Assets**. These are set in **Master Configuration**.
- Hovering over a result in the **Asset** tab displays the result in the color configured for **Highlighted Asset**.
- Assets that are associated with an activity record in the **Work** tab are highlighted in the **Related Assets** color. The related assets for an activity can be highlighted using the **Highlight** icon, which appears for each of the activity records in **Work** tab results.

- From the **Asset** tab:

- Selecting results from the **Asset** tab displays map features that have a corresponding **Asset Location** in WAM. The selected assets are displayed in the color configured for **Selected Asset**. Features are not selected if the asset location is not found in WAM.
- If you make a selection on the **Work** tab, then navigate to the **Assets** tab, the system retains the selection if the selected assets have work associated.

For example, If you are on the **Work** tab and use the **Work** selection wizard to select 20 map features (out of which work is created and matched with the filter criteria for only 8 features in WAM), the 8 features are highlighted in the **Selected Asset** color and there is no feature selection for the rest of the GIS assets. When you click the **Asset** tab, the 8 highlighted features are retained. If all 8 features are mapped assets in WAM, the **Selected Asset** color will be applied to the 8 features updating the asset information in **Asset** tab results. If you click back on the **Work** tab, all 8 features will remain highlighted in the **Selected Asset** color.

- From the **Work** tab:

- Selecting results from the **Work** tab displays map features that have work created (the underlying map feature has a corresponding asset location in WAM and has a work record that matches the default filter criteria. For the rest of the features, no selection color is displayed.
- If no assets are selected when you navigate to the **Work** tab, the system looks for linked work on all assets within the boundary extent.
- If you make a selection on the **Asset** tab then navigate to the **Work** tab, the selection from the **Asset** tab is maintained. The assets that have related work created are displayed in the color configured for **Selected Asset**. Any other assets are displayed in the color configured for **Assets with No Work**.

For example, if you are on the **Asset** tab and use the selection wizard to select 20 map features, but only 12 are mapped in WAM, the 12 features will be highlighted in the **Selected Asset** color and the remaining 8 will be highlighted in the **Assets with No Work** color. If you then click on the **Work** tab, the 12 features will be retained. If you click back to the **Asset** tab, all 12 features will remain highlighted in the **Selected Asset** color.

- From the **Map**:

- If you select assets, then navigate to the **Work** tab, the viewer only looks for linked work for the selected assets.
- If no assets are selected when you navigate to the **Work** tab, the system looks for linked work on all assets within the boundary extent.

## GIS Work List Companion

The GIS Work List Companion is used in conjunction with the Work List to enable users to plot objects, such as assets, activities, work orders, etc, in the GIS Map Viewer.

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**NOTE:** GIS Work List Companion is available only if your system is configured for GIS.

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An example of how this might be used is as follows:

- Query the system for the objects to be plotted. For example, perform a search in either the Assets or Activity portal to retrieve a list of search results.
- Click the **Work List** icon to move the objects of the search results to the **Work List Dashboard** zone.
- **View Work List in Map** button is enabled in the **Work List Companion** zone on the **Dashboard**.
- Click **View Work List in Map** to plot the objects.

# Chapter 4

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## Operational Device Management

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### About Operational Device Management

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Oracle Utilities Operational Device Management provides functionality to handle large volumes of assets and to manage the receipt, installation, maintenance, tracking, and removal of those assets. Oracle Utilities Operational Device Management is purchased as a separate license to further enhance Oracle Utilities Work and Asset Management. However, since these two products are typically always sold together, this guide includes seamless documentation for both products. Contact your sales representative or Oracle Support for more information.

The system supports the following business processes:

- Capturing device attributes and supporting any type of device
- Supporting integration with other utility applications requiring Device information and configuration
- Supporting detailed smart device attributes
- Supporting detailed location management and tracking of individual devices throughout their lifecycle
- Capturing device configurations, settings and calibrations
- Tracking firmware and firmware versions on smart devices
- Managing configuration between devices, components and software
- Validating devices at the time of receipt
- Scheduling and capturing data related to periodic inspection history over time
- Defining cycle information to schedule inspections
- Defining procedures to follow when performing inspections
- Using activities and work orders to track and manage the electronic or in-field maintenance of devices
- Creating work activity/work order document to be used in the field for inspection work
- Defining a work activity/work order life cycle

Refer to the [Understanding Financials](#) section in the **Administrative User Guide** for configuration guidelines.

## About 360 Degree Search

The **360 Degree Search** feature allows users to search for assets, components, specifications, locations and contacts. Users can also search on other identifiers or characteristics as defined by your organization. Selecting a from the **Search By** field changes the search fields to present different options.

From the search results list, you can navigate to the selected portal to view data for the object.

This feature is only used in Oracle Utilities Operational Device Management.

## About 360 Degree View

The **360 Degree View** feature allows users to view data for assets, components, contacts and locations from a single set of portals.

The 360 Degree View has a separate portal for each type of object:

- Asset Information
- Asset ID
- Asset Specification
- Asset Location Information
- Storeroom Information
- Location ID
- Contact Name

Once you select one object, the **360 Degree View** provides related information so that you have full visibility into all information about that object. For example, if you select Asset Information and search on an asset type, the resulting view portal shows the components, service history, activity history, and location information for assets of that asset type.

This feature is only used in Oracle Utilities Operational Device Management.

## About Asset and Component Configurations

A single asset or component can have many parameters and only certain combinations of parameter values that are allowed. Multiple assets and/or components may work together as a group with only certain combinations of settings that are allowed or supported.

Configurations document and manage the valid set ups for assets/and components. This includes a specification for each asset or component in the configuration as well as the valid value for each parameter, such as the firmware version of each asset.

Configuration reports can be generated to provide a summary of any currently installed configurations. These reports show whether the configuration in an installation is valid or invalid, they show the identifiers and values being used, and they display all of the assets/components and other elements that make up the installed configuration.

If a configuration is found to be invalid or in need of reconfiguration, work orders can be created based on configuration criteria. Configuration functionality can also be tied in with specifications to manage firmware version testing and upgrades.

### Configuration Statuses

Configurations also allow you to indicate a status for a particular status. Applicable statuses include:

- Pending

- Under Testing
- Rejected
- Approved
- Deprecated
- Obsolete

Use actions in the **Record Actions** section to transition the configuration to the appropriate status.

## Creating an Asset Configuration Report

(Oracle Utilities Operational Device Management only) Use this procedure to create a configuration report.

1. Navigate to the **Configuration Report** portal under **Configuration Report** and select **Add**.
2. Select a configuration report type and click **Ok**.

The configuration report type sets the default fields that need to be filled in.

3. Fill in required information as needed and click **Save**.

Enter a useful description for the configuration report and select a **Reporting Mode**. The reporting mode determines whether this is a recurring report, or a one time report.

Use the **Report Criteria** section to indicate the specifics of the assets, components, identifiers and characteristics that should determine filtering for the report.

4. After the report is created, click the **Submit** button to finalize the report.

In most business practices you will wait for batch processing to run to generate the report. The report record includes a **Generate Report** action, however; it is recommended that this is not used for typical processing.

## About Firmware

Firmware is software that is embedded in a piece of hardware. Devices such as smart meters, a network cards, or routers all have software that is programmed into special memory contained in the hardware itself. Manufacturers often release regular firmware updates to keep their hardware compatible with new connections, to improve performance, or to add additional features.

After a firmware is released from the vendor, new firmware may need to be tested and validated then either approved or rejected for roll out. The system provides the needed functionality to support validating and updating firmware versions as needed.

### Associating Firmware and Firmware Versions to Assets

In most business processes, firmware and firmware version is entered as part of the manufacturer settings when assets are created. This information appears in the **Settings** section on the asset. Also during asset creation, a basic business process would associate an asset specification to the asset to keep track of detailed manufacturer information which might also include the firmware. Attached, as a child to that specification, would be another specification that indicates the firmware versions that are available.

As firmware versions change the child specification is updated with new versions. These versions can then be tested and accepted or rejected using the lifecycle functionality on the specification.

Next, work orders and/or activities can be created to update the firmware version on the assets that are associated with those specifications. For example, your business process might require that you create an Asset Criteria Generator type work order to create a list of assets based on firmware as the selection attribute. The system would then apply the updates made via the work order to any assets that meet that criteria (i.e. that have that firmware type or version).

## Firmware Management

You can use the system to manage firmware in the following ways:

- Create firmware groupings: Record firmware versions into groupings or "families" on specifications so that related versions can be easily managed together.
- Add firmware to assets: Use peer specifications to associate assets to these firmware groups.
- Review firmware: Review firmware distribution and status in the **Firmware Deployment** and **Firmware Version Dispositions** zones on specifications.
- Document firmware: Manage related release notes or manufacturer information by creating attachments directly on the specification.
- Test firmware: Track testing and roll out of new firmware versions including the ability to approve or reject firmware version deployments.
- Update firmware: Create work orders and/or activities to update firmware versions on assets.
- Reject firmware versions: After testing, set the firmware version to an inactive status to indicate that the firmware version cannot be used for assets.

The **Configurations** portal manages asset to component to firmware configurations that determine which versions are valid for which assets. **Configuration Reports** can be used to obtain details about the configurations and verify that the correct versions are in use.

## Firmware on Specifications

The **Firmware Deployment** section on specifications provides statistics on the number of assets that are on each version of the firmware that is applicable to the specification. Click the pie chart for a version to see the number of assets on that versions grouped by the asset state.

The **Firmware Versions** section lists the firmware that has been added via the specification. Use the **Add Firmware Version** link in the zone to add a new version. Click on one of the listed versions to open a screen with more details about the firmware. This screen can also be used to add attachments for the specific firmware version. For example, you might attach the release notes that were delivered with the firmware release. On this screen, the **Firmware Version Dispositions** section lists the assets that use the firmware version indicated, if any.

## Firmware Version Lifecycle

Statuses for firmware version updates can be managed on the specification by selecting the actions in the **Record Actions** section. Valid statuses include:

- Active Statuses
  - created
  - under testing
  - approved
- Intermittent Statuses
  - deprecated
  - quarantined
- Inactive Statuses
  - rejected
  - obsolete

If the firmware version is in an intermittent status, assets or components can reference that version. In general, these statuses are for documentation purposes. for example, an organization might use the **Deprecated** status to indicate that they do not

want to roll out new meters on that version any longer, however, existing meters that are on that version are still valid. No assets or components can have the version associated if the version is in one of the inactive statuses.

## Maintaining Configurations, Configuration Reports, and Firmware

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The following sections provide information on tasks associated to working with operational device management related objects.

Refer to the [About Operational Device Management](#) section for a conceptual overview.

### Working with Asset Configurations and Configuration Reports

The following sections provide information on tasks associated to working with configurations and configuration reports.

#### Adding or Updating Firmware Versions

Use this procedure to add new firmware versions or update existing firmware versions in the system. These can then be tested, approved or added to work records to be updated on assets.

A specification for the firmware must exist within the system.

1. Navigate to the **Specification** portal in **Edit** mode.
2. Search for and select the appropriate specification.
3. Click the **Add Firmware Version** link in the **Firmware Versions** section.
4. Confirm the firmware listed then enter the version, date, release note if any, and any other information as required by your business practices.
5. Click **Save**.

#### Creating an Asset Configuration

(Oracle Utilities Operational Device Management only) Use this procedure to create a configuration.

1. Navigate to the **Asset Configuration** portal under **Configuration Report** and select **Add**.
2. Select a configuration type and click **Ok**.

The configuration type sets the default fields that need to be filled in.

3. Fill in required information as needed and click **Save**.

Enter a useful description for the configuration then use the **Configuration Detail** section to indicate the specifics of the configuration. This will include information on assets and components along with their characteristics and identifiers as defined by your organization.

The specification that is chosen for the asset and/or component will determine the main firmware and other information for the configuration.

Add any related attachments in the **Configuration Common Attachments** section.



## Creating an Asset Configuration Report

(Oracle Utilities Operational Device Management only) Use this procedure to create a configuration report.

1. Navigate to the **Configuration Report** portal under **Configuration Report** and select **Add**.
2. Select a configuration report type and click **Ok**.

The configuration report type sets the default fields that need to be filled in.

3. Fill in required information as needed and click **Save**.

Enter a useful description for the configuration report and select a **Reporting Mode**. The reporting mode determines whether this is a recurring report, or a one time report.

Use the **Report Criteria** section to indicate the specifics of the assets, components, identifiers and characteristics that should determine filtering for the report.

4. After the report is created, click the **Submit** button to finalize the report.

In most business practices you will wait for batch processing to run to generate the report. The report record includes a **Generate Report** action, however; it is recommended that this is not used for typical processing.

## Creating Work to Correct or Maintain Asset Configurations

Use this procedure to create a work order from a configuration report.

1. Generate a configuration report.
2. In the **Report Results** section, click the **Create Work Order** button next to the configuration that needs attention.

The system creates a work order with applicable information filled in. Finish creating and processing the work order according to your usual business practices.

# Chapter 5

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## Inventory

### About Inventory

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Inventory is tracked, ordered, and received from vendors and allocated in the inventory system. As inventory is allocated to work, the system passes this information back to the work management system so that maintenance managers and crews know that their parts are available.

### About Stock Items

Stock items are defined as material resources that are held in storerooms and issued to activities that require the materials to be completed. The stock item record determines whether or not the type of stock can be purchased, repaired, tracked, and so on.

The stock item record can also provide a list of vendors and manufacturers who provide the item as well as appropriate alternative stock, as applicable. Only stock items in “active” status can be purchased or entered as a material requirement on an activity. When they are entered in the system, stock items are categorized in some of the following ways:

- **General:** Regular stock items are kept in inventory until they are needed.
- **Direct Purchase:** Direct purchase stock items can only be directly purchased when needed for work.
- **Trackable:** Trackable stock items merit being individually identified and followed from initial receipt on-site through complete usage. These are typically large, expensive or specialized assets or materials which are inspected when they are received into inventory, repaired if they break, can be installed on other assets, and are otherwise carefully dispositioned in the system.
- **Lot Managed:** Lot managed items are tracked in a special way in the system. These types of items are fabricated, sold, and delivered in “lots” or “batches” of the item. This is significant when there are qualities or details about the item that might vary between lots. If this item is lot managed, the system tracks a lot number with any transaction that changes the quantity of the item for the storeroom. Since each received lot also has its inventory tracked independently, lot managed item details all have “child” stock item details for each lot that is received. This means a “master” stock item detail that is classified as “lot managed” on its stock item detail with many “lot” stock item details (one for every lot that is received).

When an activity references lot managed items as a resource requirement, the master stock item detail is referenced. Lots only become relevant when material is issued from or received into inventory. This means the material issue for lot managed stock items reference a lot stock item detail, but the planned activity references the master stock item detail. During receiving of a lot managed stock item, the system verifies whether or not the storeroom has a lot specific SID for that lot number and creates one if one does not exist.

- **Capital Spare:** Capital Spare items are identified during accept and return as fixed assets so that an external Fixed Asset Management system can maintain their depreciation. A property unit is required on capital spare items.

When a stock item is maintained in the inventory of a storeroom, a corresponding **Stock Item Detail** record must be created. Stock item details define how the stock item is managed in the storeroom and contain storeroom-specific information for the stock item such as pricing, reorder information, unit of issue, unit of purchase, expense code, and so on.

One stock item might be stored in multiple storerooms. When it is needed, stock transfers can be used to move items between storerooms. For example, an organization might have a central storeroom from which satellite storerooms request stock.

## About Stock Item Details

**Stock Item Detail** records define how a stock item is managed in the storeroom and manage and track quantities for stock items. Each record contains storeroom-specific information for the stock item such as pricing, reorder information, unit of issue, unit of purchase, expense code, and so on.

Every stock item that is to be maintained in the inventory of a storeroom must have a corresponding **Stock Item Details** record.

The Stock Item Detail (SID) record determines whether or not the type of stock can be purchased, repaired, tracked, and so on. An SID is a particular stock item in a particular storeroom. For example, in one storeroom, a particular stock item might be stored whereas in another storeroom that same stock item might only be direct purchased. The item would have a different SID in each storeroom. In cases where an item can only be direct purchased for activities, the storeroom only acts as the receiving dock and courtesy storage location until the workers from the activity come to pick them up.

The **Stock Item Inventory** section provides a graphical representation of what is in stock with lines representing maximum quantity and reorder quantity. Use the filters to change the display on the chart. This chart can be changed to show projected inventory (taking into account pending purchases and pending activities), or historical inventory (showing actual inventory use and receipts).

## About Physical Inventory

Physical inventory is an auditing procedure within Inventory Management which your organization can use to ensure that the physical quantities of items, materials and stock that are housed in your storerooms are actually stocked per what is recorded within the system. This basically allows your organization to verify the accuracy of your inventory quantities and values.

If actual counts are found to be out of sync with system inventory counts, they can be reconciled based on pre-defined tolerance thresholds.

## About Inventory Adjustments

Inventory adjustments can be used to adjust inventory counts or price of stock items.

When inventory is adjusted, stock transactions are created to adjust the price and quantity of the items being adjusted. Trackable assets are adjusted differently in that the unit price is directly adjusted and financial transactions are created if the total inventory value is changed (based on the relative price/quantity adjustment).

## About Stock Transfers

Stock transfers are used to move stock from one storeroom to another; essentially one store room is ordering stock from another. The ordering storeroom is considered as the receiving storeroom, and the source storeroom is considered as the issuing storeroom. Only items with the same stock type can be transferred.

## About Receiving

The receiving process is used to track inventory that is received as the result of a purchase order by recording basic information such as the quantity received, receiving location, packing slip details, carrier, and so on.

When items are delivered to your organization, they must be added into the system inventory by creating a receiving record then accepting the items. The receiving process tracks delivery items through several distinct steps from the time they arrive until they are placed in a storeroom. The steps in the process allow for the actual receipt, inspection of items and acceptance. The process steps include:

- Record the delivery of items — create a receipt record which holds basic delivery information. This step does not include details about the items.
- Match items to the purchase order — review items on the purchase order and select, from a pick list, the items that were delivered. Items are counted and compared to what was ordered then placed “in receipt”. Items can also be received without a purchase order reference.
- Receive and accept the items — complete the acceptance process to record the items into the appropriate storeroom. The system adjusts inventory quantities for the items accordingly. Depending on your system configuration and business practices, the system may also include taxes and other incidental costs for the items at the time of receipt.
- (alternate) Return the items — As needed, return items for replacement or credit. When returns are processed, the appropriate costing and inventory adjustments are made to account for the credit.

### Quick Receive

Your organization may not require a multi-step processing to receive items into your inventory. In these cases, the system includes a feature to receive and accept the items in one step. This feature is only available if it is enabled in your system implementation. If the stock item has “Accept on Receipt” set as yes, one-step receiving is allowed.

### Forced Complete

In some cases, the quantity ordered on the purchase order may never be fulfilled. For example, if your organization ordered a quantity of 10 of items that were discontinued and the vendor only had 5 to send to fulfill the order. The system provides the ability to receive the five items then to force the system to consider the order complete. This processing flags the system that the line item receipt quantity is complete so that the purchase order does not stay open. After receiving partial items, select the **Force Complete** action on the **Receipt** record. Completing this action marks the purchase order line item as **Fully Received** and transitions it to the **Closed** state.

## About Returns

Returns track inventory that must be returned to a vendor. Returns are tracked in relationship to the purchase order for the original receipt of the items.

Note that this processing is different from a *material return* in that the items are being returned to an outside vendor rather than adjusting quantities in internal storerooms.

# About Material Disposition

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Asset disposition is a process designed to track repairable assets and stock items. The process tracks the asset or component from when it is removed from service to where it is either retired, scrapped, or repaired and returned to availability for re-use.

Material disposition processing involves creating a work order to remove then replace a broken asset or component. The asset must be flagged as repairable.

In creating the work order and related activities, the resource requirements must indicate that a replacement asset must be checked out from a storeroom to replace the broken one. In order to fulfill these requirements, users must create a material request and material issue for the asset. A **Material Disposition** record is created as a result of these material requirements being fulfilled, and the replacement asset and the broken asset are added on the material disposition as line items. Note that new records are not created directly in the **Material Disposition** portal. They must be generated automatically by this processing.

The person responsible for material disposition should navigate to the **Material Disposition** portal to complete the steps within the system to remove the broken asset and move it to a pending disposition status while moving the replacement asset to an installed status. This is done using the **Complete Exchange** option. When completing the complete exchange process, the system prompts for information such as the actions to perform on the assets, status reason, new storeroom as applicable, and dispositioning dates and times.

The actual assets should also be swapped as applicable toward completing the initial work order and activity.

Your business process may then require that you create a follow up work order to repair the broken asset using the **Create Work Order** action from within the **Material Disposition** portal.

Once a 'repairable' asset has been pulled from the field and repaired through Material Disposition, it can be returned to a storeroom with a new valuation. The stock item detail for the asset will show a repaired price, as applicable.

You can review the costs and other statistics related to the replacement and repair of assets by reviewing the actual **Asset** record in the **Cost Information** section.

# About Bill of Materials

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Bills of materials are used to simplify the identification of materials when planning work.

A Bill of Material (BOM) is a list containing a hierarchy of component parts that make up a piece of equipment or asset. The component parts, also known as BOM Parts, are the individual stock items or an assembly of stock items included in the BOM. An example of a BOM might be an Apple iMac computer. The BOM parts identified for this particular BOM might include a Monitor, Keyboard, mouse, etc. Another example might be a BOM for a carburetor. The BOM parts included on the BOM might be a carburetor rebuild kit.

Your organization can build a BOM or define a BOM part and reference it on an asset, component, or fleet asset (vehicles). The BOM or BOM part can then be used as search criteria when searching for an asset.

A bill of materials can be a great advantage for maintenance personnel when they are planning or working on a work order. The bill of materials can be used to easily find the stock items related to component parts of the assets that need to be worked on. This relieves planners from doing extensive research to find the correct related stocked and non-stocked items needed. As needed, you have the ability to add materials to activities from the asset's Bill of Materials. Selecting the add from BOM action opens a dialog where you can choose items from the BOM pick list.

Bills of materials can be multilevel, with a list of components and lists of parts for the components, lists of parts that make up the parts, and so on. The level of detail you build into them depends on your organization's resources and needs.

A Bill of Materials is similar to a **Specification** in that the same Bill of Material can be created as one source for specific criteria needed to maintain the asset, which is then referenced on many assets.

Bills of materials are classified in the following ways:

- **General Stock Item Part** — Defines a general piece of stock or equipment. A generic stock item BOM is automatically generated by the system when a stock item is created.
- **Independent Part** — Defines a generic part which is not a stock item, but can be composed of many parts. For example, a truck would be defined as an asset, not a stock item, but might reference a BOM with independent parts. These must be created manually.

Access the **Bill of Materials** tab on applicable stock items to review the associated **Bill of Materials** tree or the **BOM Part** record for the stock item.

## About Material Request Templates

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A material template is a collection of stock items that is used to easily populate a material request. For example, a template could exist for “office supplies” that contains the collection of office supply stock items that the user can add to the request. Likewise, you might have a template to request all of the items on a bill of materials.

- Each storeroom can have multiple templates. The stock items referenced in the template must exist at the storeroom.
- Only stock items in inventory (both Lot Managed and Not-Lot Managed) and tracked assets can be specified on a template. The stock items must have a stock item detail at the storeroom.
- Direct purchase stock items cannot be referenced on a material request template.
- If populated, an override expense code is populated on the request / return line. If this value is blank, the expense code defined on the stock item detail (or stock item) will be populated on the line instead.
- A default count can be included on the template to indicate the default request quantity of the stock item. For example, your organization might always request the same amount of the stock item. This can be specified on the template.

After a material request is created, the line items can be added by referencing the template then selecting items from a picklist.


## About Material Request and Issue

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Material requests, or checkout requests, manage the process of specifying the need to issue stock items from a storeroom.

When an activity needs stock items, a material request can be created. The request includes a list of all the items that the activity needs from the storeroom with the stock code, the storeroom and the needed quantity specified. Storeroom personnel can print the list of stock items needed for pickup or delivery. The listing is able to be sorted and stock items are displayed with barcodes, if applicable.

MATERIAL REQUEST









Material Request Header ID:   
78757843125037

Status: Completed

Storeroom:   
CPS Storeroom with Inventory Management, CPS Issuing Storage Location Test, Address 1, Test, CA, 123456789, USA

Work Order / Activity:  
Project:

Request Information:	
Required By Date: 02-28-2106	Requested By: Catalinro, Sri
Deliver To Location: Deliver To:	Phone:
Description:	

Primary Bin: Stock Item:  CPS Stock01 Test UOI: Each Status: Issued Comments: <input type="text"/>	Requested Qty:  1 Inventory Qty:  276 Issued Qty:  15 Actual Qty: <input type="text"/>
Primary Bin: 001 Stock Item:  CPS Stock Item - Lot01 UOI: Each Status: Issued Comments: <input type="text"/>	Requested Qty:  1 Inventory Qty:  1420 Issued Qty:  1 Actual Qty: <input type="text"/>

Remarks:

The following processing must be completed:

- Create the material request
- Add line items for the stock items to be issued. Line items can be added manually or from a material request template.
- Prepare the material request for issue
- Issue the materials  
Materials may be issued fully or partially

### About Material Issue

Material issue, or stock checkout, manages the process of pulling out and releasing stock items from a storeroom.

Material issue processing occurs as follows:

- The person from the issuing storeroom can verify availability within the system then release (issue) the items. The material issue is processed via the originating **Material Request** record.
- The system calculates the inventory count to decrease it accordingly.
- Issued items are to be charged to the activity.  
It is also possible to issue materials without relationship to an activity. In this case, the user must provide the accounting information that will be charged for the materials.

## About Material Returns

---

Material returns manage the process of returning to the storeroom excess stock items that were previously issued.

Material return processing occurs as follows:

- A material return is created by navigating to the related material request and clicking the **Return** button for the relevant line item.  
This can also be done by creating a new record in the **Material Return** portal which references the originating material request
- Warehouse personnel check the quality of the stock item being returned. If it is in good condition, the item is accepted and returned to the storeroom.
- The system calculates the inventory count to increase it accordingly.
- Returned items are credited back to an account or work order activity.

## About Shipping Memos

---

Shipping memo is the record of stock items being shipped from an internal storeroom, whether from storeroom to storeroom or from storeroom to vendor.

Shipping memos can be created for both standard and tracked stock items and enables storeroom managers and shipping clerks a way to manage and track stock items being shipped between locations.

Some uses for shipping memo include the following:

- Tracking stock items returned to vendors for credit, replacement, or repair
- Help manage the return of repaired or replacement stock items back into Inventory

There are four categories of shipping memos:

- **General** is the default shipping memo category that should be used when creating a shipping memo manually.
- **Repair** is used when returning stock items needing reconditioning or repair to a vendor.
- **Return** is used when returning stock items to a vendor for credit or replacement.
- **Transfer** is used when transferring stock items between storerooms.

Shipping memos can be created from various places in the system, such as Menu, Purchase Order, Return, Stock Transfer, and so on.

## Maintaining Stock Items

---

The **Stock Item** portal is used to display and maintain a stock item record.

Refer to [About Inventory](#) for more information.

You can access the portal from **Menu**, select **Inventory**, and then select **Stock Item**. You are brought to a query portal with options for searching for a specific stock item. Once a stock item has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Stock Item**: This zone displays information about the selected stock item.



- **Stock Item Availability:** This zone enables broadcasting of stock item availability per storeroom for the stock item record.
- **Owned Attachments:** This zone displays attachments that are specific to this stock item record.
- **Referenced Attachments:** This zone references existing attachments.
- **Notes:** This zone displays any notes associated with the stock item record.
- **Referencing Compatible Units:** This zone lists the compatible units that reference the current compatible unit.

The following zones may appear as part of the portal's **Bill of Materials** tab page:

- **Bill Of Materials:** This zone displays information about the bill of material associated with the selected stock item record.
- **Referencing BOM's:** This zone enables broadcasting of referenced parts for the stock item.
- **Owned Attachments:** This zone displays attachments that are specific to this stock item record.
- **Referenced Attachments:** This zone references existing attachments.
- **Notes:** This zone displays any notes associated with the stock item record.

## Maintaining Stock Item Details

---

The **Stock Item Detail** portal is used to display and maintain a stock item detail record.

Refer to [About Inventory](#) for more information.

You can access the portal from **Menu**, select **Inventory**, and then select **Stock Item Detail**. You are brought to a query portal with options for searching for a specific stock item detail. Once a stock item detail has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Stock Item Detail:** This zone displays information, such as purchase details, reorder information, and buyer information, for the selected stock item detail record.
- **Stock Item Inventory:** This zone displays inventory quantity information for the selected stock item detail record.
- **Stock Item Availability:** This zone enables broadcasting of stock item availability for each of the listed storerooms.
- **Owned Attachments:** This zone displays attachments that are specific to this stock item detail record.
- **Referenced Attachments:** This zone references existing attachments.
- **Notes:** This zone displays any notes associated with the stock item detail record.

## Maintaining Shipping Memos

---

The **Shipping Memo** portal is used to display and maintain shipping memos.

Refer to [About Shipping Memos](#) for more information.

You can access the portal from **Menu**, select **Inventory**, and then select **Shipping Memo**. You are brought to a query portal with options for searching. Once your record has been selected you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Shipping Memo:** This zone provides information about the shipping memo, such as shipping category, shipping memo number, ship to details, and tracking information.

- **Shipping Lines:** This zone provides links to the shipping line and stock items associated with the shipping memo.

## Processing a Stock Transfer

---

Use this procedure to complete a stock transfer.

Only items with the same stock type can be transferred.

1. Navigate to the **Stock Transfer** portal under **Inventory** and select **Add**.
2. Complete the required fields according to your business practices.
3. You must specify the source and destination storerooms.
4. Click **Save**.
5. Using the **Stock Request Quick Add** zone, add request lines for each stock item being transferred.
6. To initiate the transfer of each stock item, click the **Ready for Issue** button.
7. Click the **Issue** button next to each item in the **Open Request Lines** zone.  
You have the option to fully or partially issue the items.  
Selecting the “issue” options creates “issue lines” in the **Issued Lines** zone.
8. Click the **Issue** button for the overall record to transition all of the issued items to **Ready for Receipt**.  
As a result of the issue, “receive” options are made available for each of the stock item line items.
9. Navigate to the **Stock Transfer Receipt** tab.
10. Receive the stock items (into the receiving storeroom) using the appropriate buttons next to each stock item.  
The receipt will automatically be completed once all the stock items are received.

## Performing a Physical Inventory

---

Navigate to the **Physical Inventory** portal under **Inventory**, select **Add**, complete the required fields according to your business practices and **Save**.

**Prerequisites:** The following are referenced by the physical inventory record:

Note: This list does not represent required fields.

- Storeroom
- Stock Codes
- Vendor

Processing for performing a physical inventory count includes the following:

1. Create the physical inventory header according to your business practices and **Save**.  
Enter a value for **Items to Create** to indicate the number of items to count. For example, you have 100 different stock items in inventory, but you only want to count 20 of them. This is not the quantity for each item, but rather, the number of individual items slated for counting.  
The physical inventory is initiated in **Created** status.
2. Create the list of items to be counted by clicking the **Generate Count List** button.  
This action generates the physical inventory count “masters”.

If needed, you can regenerate the count at this stage. For example, you might edit the criteria used to originally generate the count lines. The lines would have to be regenerated after the update.

**3.** Record the counts.

This step varies depending on if this is a first count or a subsequent count and whether or not the physical count is equal to the system count.

**4.** Review the count lines and adjust inventory as needed.

Only authorized people can generate the inventory adjustment. If the person doing the count is not authorized, the line stays in a **Review Needed** state. An authorized user must then click the **Adjust Inventory** button for the counts to be updated and the corresponding financial transaction created. Note that counts for lot-managed items and tracked assets are handled differently. A dialog opens after the adjust inventory action is selected, and there are options to either save the count in progress or finish the count.

## Adding a Stock Item to a Storeroom (Stock Item Details)

---

Use this procedure to manually add a stock item to a storeroom.

**Prerequisites:** The following are referenced by the stock item record:

Note: This list does not represent required fields.

- Stock Item
- Storeroom
- Cost Center
- Buyer
- Vendor
- Bin Information

**1.** Navigate to the **Stock Item Detail** portal under **Inventory** and select **Add**.

**2.** Enter or search for and select the name of the stock item.

**3.** Enter or search for and select the record number for the storeroom.

The storeroom where the stock item is stored must have already been defined as a storeroom.

**4.** Select the **Stock Item Detail Class** according to the classification for the item.

Storerooms might be classified as direct purchase, expensed at receipt, inventory, and so on.

**5.** Click **OK**.

**6.** Complete the remaining information according to your business practices.

Note: Use the **Reorder Information** fields to set up automatic reorder for the stock item, as needed.

**7.** Activate the stock item detail record so that the stock item is considered available for work or ordering.

## Processing a Purchasing Return

---

Navigate to the **Receiving — Return** portal under **Inventory**, select **Add**, complete the required fields according to your business practices and **Save**. Processing a return can also be done from the **Receiving — Receipt** portal if the item hasn't been accepted into inventory yet.

**Prerequisites:** The following are referenced by the material return record:

Note: This list does not represent required fields.

- Purchase Order Line
- Assets
- Stock Item Detail

A return can be initiated as a follow up to a receipt. Alternately, the return might be initiated without a referenced receipt.

## Maintaining Reorder Reviews

---

The **Reorder Review** portal is used to display and maintain a reorder review record.

Refer to [About Inventory](#) for more information.

You can access the portal from **Menu**, select **Inventory**, and then select **Reorder Review**. You are brought to a query portal with options for searching for a specific reorder review. Once a reorder review has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Reorder Review:** This zone displays information, such as reorder details and vendor information, for the selected reorder review record.
- **Stock Item Detail Information:** This zone displays stock item detail information, such as commodity code and manufacturer information, for the reorder review record.
- **Stock Item Inventory:** This zone displays information about inventory quantity for the selected reorder review record.
- **Stock Item Availability:** This zone enables broadcasting of stock item availability per storeroom for the reorder review record.
- **Material Issue History Summary:** This zone displays a summary of all the material issued for the current stock item.

## Issuing Stock (Material Issue)

---

Use this procedure to issue requested material items.

1. Navigate to the **Material Issue Line** portal under **Inventory** and select **Search**.
2. Search for and select the appropriate material request.  
Search for items in the **Ready for Issue** state.
3. Verify the information on the material issue and click the **Issue** button next to each individual line item.  
Items can also be partially issued or, where allowed, you can issue substitute items.

## Creating a Material Request (Checkout Request)

---

Navigate to the **Material Request** portal under **Inventory**, select **Add**, complete the required fields according to your business practices and **Save**.

**Prerequisites:** The following are referenced by the material request record:

Note: This list does not represent required fields.

- Storeroom
- Activity

After creating the request, add line items either manually or via a material request template.

## Maintaining Material Request Templates

---

The **Material Request Template** portal is used to display and maintain a bill of material record.

Refer to [About Material Disposition](#) for more information.

You can access the portal from **Menu**, select **Inventory**, and then select **Material Request Template**. You are brought to a query portal with options for searching for a specific material request template. Once the template has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Material Request Template Display:** This zone displays information about the selected material request template record.

## Processing a Material Return (Returning Stock Items)

---

Use this procedure to return unused stock items into inventory.

1. Navigate to the **Material Request** portal under **Inventory** and select **Search**.

In rare cases where items are being returned unrelated to a previous issue transaction, you can navigate directly to the **Material Return** portal and create a new record.

2. Search for and select the appropriate material request.
3. Click the **Return** button next to each individual line item.

A return can be initiated as a follow up to a receipt. Alternately, the return might be initiated without a referenced receipt.

## Maintaining Bill of Materials

---

The **Bill of Materials** portal is used to display and maintain a bill of material record.

Refer to [About Material Disposition](#) for more information.

You can access the portal from **Menu**, select **Asset Management**, and then select **Bill of Materials**. You are brought to a query portal with options for searching for a specific bill of material. Once a bill of material has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **BOM Tree:** This zone displays a hierarchy view of the selected BOM and BOM parts.
- **Bill of Materials:** This zone displays information about the bill of material record.
- **Referencing BOM's:** This zone lists the BOMs that reference this particular BOM record.
- **Owned Attachments:** This zone displays attachments that are specific to this BOM record.
- **Referenced Attachments:** This zone references existing attachments.
- **Notes:** This zone displays any notes associated with the bill of material record.

## Creating a BOM Part

Whenever you create a general stock item, a corresponding BOM part is automatically created.

Navigate to the **BOM Part** portal under **Asset Management** to search for BOM items.

## Creating an Independent BOM Part

Complete the following procedure to create an independent BOM Part

1. Navigate to the **BOM Part** portal under **Asset Management** in **Add** mode.
2. Complete the required fields according to your business practices and **Save**.

# Chapter 6

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## Purchasing

### About Purchasing

---

Oracle Utilities Work and Asset Management uses purchasing functions to plan, initiate, and process purchases and purchasing contracts. It also manages vendors, designated buyers, and stock items.

### Manufacturers

Use the **Manufacturer** portal to define attributes for product manufacturers.

The use of this portal depends heavily upon your business practices, however, in general the manufacturers listed can be associated to specifications which can then be included on assets or components to provide additional reference information related to those objects. The manufacturer usually provides specification information for assets and components.

A manufacturer might also be referenced on regular stocked inventory. This does not include tracked assets.

**Manufacturer Specifications** defines a list of asset specifications that belong to the manufacturer.

### Vendors

Use the **Vendor** portal to maintain information about vendors, including their capabilities, payment terms, delivery terms, and various vendor sites. The vendor location distinguishes between multiple sites for one vendor.

Each main Vendor record provides general information about your relationship with the vendor such as active blanket contracts, open requisitions, purchase order history, and a list of vendor locations.

### Vendor Locations

One or many vendor locations are defined for each vendor to distinguish between multiple vendor sites. Each location provides more detailed information about the vendor site such as address, capabilities, payment details, contacts, and so on.

For example, it may be valuable to understand which location is shipping the goods that you have ordered from the vendor. Also, some vendors might ship from one site, but your payment terms are set with an alternate site. Capabilities would provide information such as when one location offers pick up at that location whereas another location may not.

When a vendor has multiple locations, alternate locations are listed as “related” locations.

## Purchase Orders

Details about each item or service are entered and maintained on purchase order line items. Your system configuration determines which stock items, services, and other types of items can be added as line items, how tax rates are handled for each line item, and so on.

Additional processing and record actions on the purchase order allows you to print to issue to the vendor, expedite, complete a change order, submit it for approval, or create a new revision. After the purchase order is approved within your organization and issued to the vendor, next steps involve waiting for the items to be received, then receiving them into the system. Refer to the [About Receiving](#) section for more information.

When changes are made to the purchase order, the document may or may not need to re-enter the approval process depending on your business practices and system settings. For example, your system might be configured to allow changes to the purchase order that affect the total cost up to a certain percentage total value. Your system may also be set so that the purchase order will transition directly to the approved or issued state, for instance, if the order was created by batch stock reorder. Note that only certain fields can be edited on an issued purchased order. If further updates are needed, such as changes that affect the pricing or quantity ordered, you have to create a new revision and resubmit to the vendor. Refer to the configuration guide for more information.

Purchase orders affect the **on demand** quantity for stock.

Common purchasing terms indicated on purchase order and purchase requisition line items include:

- **Unit of Purchase:** The unit of purchase for the item such as “each” or “box”.
- **Unit of Issue:** The way in which the item is issued in your storerooms.
- **Purchase to Issue Ratio:** The difference between how you buy the item and how you issue it. You may, for instance, issue in individual items but order the items by the box where one box would contain 10 individual items. The Unit of Purchase would then be **box**, the Unit of Issue would be **EA**, and the **P/I Ratio** would be 10. The system uses the Unit of Purchase, Unit of Issue, and Purchase to Issue Ratio information to maintain quantities as parts are issued and new parts are received.
- **Print Price:** Yes or No value to indicate whether or not prices should be printed on the requisition.

## Purchase Requisitions

Purchase requisitions are used to store and track requests for material resources and services.

Requests can be created manually or by the system for the following situations

- for work orders that require materials or services.
- by the batch stock reorder process when the number of items falls below the reorder point.
- manually to replenish stock.

After the purchase requisition is reviewed and approved, it can be transitioned to a purchase order to initiate the actual purchase with the vendor. Requisitions can also be used to create blanket contracts.

While purchase orders can be created without a purchase requisition, the requisition can be used according to your business practices to formalize the purchasing process or create a more stringent chain of approvals for auditing or other purposes.

Purchase requisitions affect **pending order** quantity for stock.



## Blanket Contracts

A blanket contract is a purchasing agreement that your organization makes with a supplier to pre-plan the purchase of materials or services. These contracts typically contain multiple delivery dates over a period of time, often negotiated to take advantage of predetermined pricing or special discounts.

Blanket contracts are also often used when there is a recurring need for expendable goods or when your organization buys large quantities from one vendor. Based on the blanket order sales orders (release orders), invoice items can be created as needed until the contract is fulfilled.

As long as the blanket contract is in **Active** status, it can be referenced by new purchasing documents to order materials or services. Contracts can be transitioned to a “suspended” status so that they are temporarily unavailable for new purchases. This might be used while re-negotiating terms with a vendor, if you are researching new vendors for a particular item or service, or for other business requirements.

### Blanket Contract Pick List

The blanket contract pick list is a list of vendor supplied stock items associated with a blanket contract. Users can use the pick list to easily add purchase request line items to purchase requisitions with an initiating blanket contract..

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**NOTE:** Purchase requisitions must be in a *Created* status and blanket contract must be *Active*.

---

### Blanket Contract Access Lists

Your system can be configured with lists of users who are authorized to issue purchasing documents against a blanket contract. Settings on the blanket contract determine whether or not the contract is restricted to a particular access list, which list of users has access or, if no access list is indicated, a default dollar value limit for the contract. When an access list is in use, a limit can be set for each individual user. Refer to [About Blanket Contract Access Lists](#) for more information.

### Blanket Contract Usage

Spending against each blanket contracts is tracked via the **Limit Used** indicator and on the **Activity and Usage** tab. When a new blanket contract revision is created, these values reset for the new revision and are tracked as new.

## Expedite Purchase Orders

The expedite order process helps buyers and other purchasers to ensure that required goods arrive at the appointed date in the agreed quality at the agreed location.

The **Expedite Order** portal is used to track purchase order items that have not yet been received. It allows users to modify select information on an issued purchase order without needing to create and process a change order. It is typically used when locations and delivery dates need to be altered, not when there are changes that would affect the cost of items or the total amount for the purchase order.

## Maintaining Purchase Orders

---

The **Purchase Order** portal is used to display and maintain a purchase order record.

Refer to [About Purchasing](#) for more information.

You can access the portal from **Menu**, select **Purchasing**, and then select **Purchase Order**. You are brought to a query portal with options for searching for a specific purchase order. Once a purchase order has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Purchase Order:** This zone displays information about the purchase order, such as cost information, order line item information, and accounting information.
- **Purchase Order Lines:** This zone lists the purchase order line items associated with the purchase order record.
- **Purchase Order Transactions:** This zone lists all transactions for all revisions of the purchase order record.
- **Notes:** This zone displays any notes associated with the purchase order record.
- **Owned Attachments:** This zone displays attachments that are specific to this purchase order record.
- **Referenced Attachments:** This zone references existing attachments.

The following zones may appear as part of the portal's **Expedite** tab page:

- **Purchase Order:** This zone displays information about the purchase order.
- **Expedite Activity:** This zone lists the expedited activities associated with the purchase order.

The following zones may appear as part of the portal's **Revision History** tab page:

- **Purchase Order:** This zone displays information about the purchase order.
- **Purchase Order History:** This zone lists all revisions associated with the purchase order.

## Maintaining Purchase Requisitions

---

The **Purchase Requisition** portal is used to display and maintain a purchase requisition record.

Refer to [About Purchasing](#) for more information.

You can access the portal from **Menu**, select **Purchasing**, and then select **Purchase Requisition**. You are brought to a query portal with options for searching for a specific record. Once a purchase requisition has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Purchase Requisition:** This zone displays information about the purchase requisition, such as vendor information, requisition information, and accounting information.
- **Closed Purchase Requisition Lines:** This zone lists all the closed purchase requisition lines.
- **Related Purchase Orders:** This zone lists the related purchase orders.
- **Purchase Requisition Header Notes:** This zone displays any notes associated with the purchase requisition record.
- **Owned Attachments:** This zone displays attachments that are specific to this purchase requisition record.
- **Referenced Attachments:** This zone references existing attachments.

## Maintaining Expedite Purchase Orders

---

The **Expedite Purchase Order** portal is used to display and maintain expedited purchase order records.

Refer to [About Purchasing](#) for more information.

You can access the portal from **Menu**, select **Purchasing**, and then select **Expedite Purchase Order**. You are brought to a query portal with options for searching for a specific record. Once an expedited purchase order has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Expedite:** This zone displays expedite information associated with the purchase order.

# Maintaining Blanket Contracts

---

The **Blanket Contract** portal is used to display and maintain a blanket contract record.

Refer to [About Purchasing](#) for more information.

You can access the portal from **Menu**, select **Purchasing**, and then select **Blanket Contract**. You are brought to a query portal with options for searching for a specific record. Once a blanket contract has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Blanket Contract Header:** This zone displays information about the blanket contract, such as contract and vendor information.
- **Blanket Contract Lines:** This zone lists the blanket contract lines associated with the blanket contract record.
- **Blanket Contract Header Notes:** This zone displays any notes associated with the blanket contract record.
- **Owned Attachments:** This zone displays attachments that are specific to this blanket contract record.
- **Referenced Attachments:** This zone references existing attachments.

The following zones may appear as part of the portal's **Activity and Usage** tab page:

- **Blanket Contract Header:** This zone displays information about the blanket contract.
- **Blanket Contract Activity:** This zone lists the purchasing activities associated with the blanket contract.
- **Blanket Contract Usage Summary:** This zone displays a summary list of orders associated with the blanket contract.

The following zones may appear as part of the portal's **Revision History** tab page:

- **Blanket Contract Header:** This zone displays information about the blanket contract.
- **Blanket Contract Header Revision History:** This zone lists all revisions associated with the blanket contract.

# Maintaining Invoices

---

The **Invoice** portal is used to display and maintain an invoice record.

Refer to [About Purchasing](#) for more information.

You can access the portal from **Menu**, select **Purchasing**, and then select **Invoice**. You are brought to a query portal with options for searching for a specific record. Once an invoice has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Invoice Header:** This zone displays information about the invoice, such as payment information, cost allocation, and tax information.
- **Purchase Order Lines:** This zone lists the purchase order lines associated with the invoice record.
- **Invoice Lines:** This zone lists the invoice lines associated with the invoice record.
- **Notes:** This zone displays any notes associated with the invoice record.
- **Owned Attachments:** This zone displays attachments that are specific to this invoice record.
- **Referenced Attachments:** This zone references existing attachments.

The following zones may appear as part of the portal's **Financial Transaction** tab page:

- **Invoice Header Financial Transaction:** This zone lists the financial transactions associated with the invoice record.

## Maintaining Invoice Groups

---

The **Invoice Group** portal is used to display and maintain an invoice group record.

Refer to [About Purchasing](#) for more information.

You can access the portal from **Menu**, select **Purchasing**, and then select **Invoice Group**. You are brought to a query portal with options for searching for a specific record. Once an invoice group has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Invoice Group:** This zone displays information about the invoice group.
- **Invoices:** This zone lists the invoices associated with the invoice group record.
- **Tag Invoices:** This zone enables the user to tag invoices to this invoice group.

## Maintaining Manufacturers

---

The **Manufacturer** portal is used to display and maintain a manufacturer record.

Refer to [About Purchasing](#) for more information.

You can access the portal from **Menu**, select **Purchasing**, and then select **Manufacturer**. You are brought to a query portal with options for searching for a specific manufacturer. Once a manufacturer has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Manufacturer:** This zone displays information about the manufacturer.
- **Manufacturer Specifications:** This zone lists the specifications associated with the manufacturer record.

## Maintaining Vendors

---

The **Vendor** portal is used to display and maintain a vendor record.

Refer to [About Purchasing](#) for more information.

You can access the portal from **Menu**, select **Purchasing**, and then select **Vendor**. You are brought to a query portal with options for searching for a specific vendor. Once a vendor has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Vendor:** This zone displays information about the vendor.
- **Vendor Location:** This zone lists the locations associated with the vendor record.
- **Vendor Active Blanket Contracts:** This zone lists the blanket contract for this vendor record.
- **Vendor Open Purchase Requisition:** This zone displays the open purchase requisitions associated with this vendor record.
- **Vendor Purchase Order History Summary:** This zone displays a summary of purchase orders associated with this vendor record.

# Chapter 7

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## Service History

### About Service History

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Service history is information regarding some type of service or maintenance performed on an asset. Information typically associated with service history include record inspection feedback, pass/fail details, downtime, parts failure information, maintenance or service logs, or other information regarding service on the asset.

Service history can create follow-up actions, such as work orders or work activities, when work for an originating issue needs to be monitored. An example of follow-up activities to an originating gas leak call might be to monitor, repair, and to verify repairs were made.

Service history can also create follow-up actions to stop or cancel follow-up activities once the problem has been fixed or the severity level has changed.

### Inspections

Inspections of assets can occur throughout an asset's lifecycle; when the asset is received from the manufacturer, when alert is raised for failing high or low readings, routine inspections, and so on.

Inspections are performed to assess the condition of the asset.

Refer to [Condition Assessments](#) for more information.

Service history is used to record inspection events for the asset.

### Condition Assessments

Service history question and answer checklists are created to address typical inspection points, concerns, or issues based on the kind of asset, type of inspection, and so on, and is used by the system to assess the condition of the asset.

See [Questionnaires](#) for more information.

Technicians would enter answers to the predefined questions on the service history record. Answers are typically chosen from a set of pre-defined values that are configured when the questions are designed for the assessment. **Condition Assessment Groups** and **Condition Assessment Classes** are used to ‘bundle’ the various kinds of inspections that are available for an asset. All of the data that is collected is used to calculate a final condition score.

Condition scores are on a 1–5 scale where 1 is Very Good and 5 is Very Poor. Also, scores have an associated “confidence level” which is defined as a percentage and drops as the input data ages. This is based on the premise that the older the data, the less reliable it is.

Refer to [Understanding Asset Types](#) in the **Administrative User Guide** for more information about **Condition Assessment Classes** and **Condition Assessment Groups**.

There are four kinds of condition assessment types that can be performed:

- **Percent of New** (maps a percent value to the 1-5 scale): The condition of the asset is based on passing or failing characteristics of a new asset. A “like new” asset would pass all characteristics and be awarded the maximum points resulting in a 100% rating. A severely broken asset would fail all characteristics of a new asset and be awarded zero points resulting in a 0% rating.
- **General Weighted**: The condition of the asset is based on a general assessment of potential defects using a weighted scale of 1 - 5. Each potential defect is assigned a weight value based on the impact to the service level. A potential defect that has significant impact on the service level will have a higher weight value than a potential defect with minimal impact on the service level. A “like new” asset would exhibit none of the potential defects and be awarded the minimum points resulting in a rating of 1. A severely broken asset would exhibit the highest severity of each potential defect and would be awarded the maximum points resulting in a rating of 5.
- **Deficiency Scoring** (noting various defects on the asset, which can be summed): The condition of the asset is based on accumulated defect points. As with the general weighted method, each potential defect is assigned a weight value based on the impact to service level. Then each defect is broken down into specific severity levels with a point value assigned to each. The more severe the nature of the defect, the higher the associated point value. Normally, the point scale is a range of 1 - 10, allowing for at least 10 different definitions or levels of severity. Unlike the general weighted method, each defect and severity identified during inspection is accumulated for the final “deficiency score”. That is, if there are 5 defects with a severity of 2 points each, then the deficiency score for the asset would be 10. A “like new” asset would exhibit none of the potential defects and be awarded a deficiency score of 0 (i.e., absolutely no defects were noted). A severely broken asset would exhibit the highest severity of each potential defect, probably numerous times, and would be awarded a higher deficiency score.
- **Reset Condition Rating**: After the asset is rebuilt or renewed it is treated as if it were a new asset. The assessment process is started over and the condition of the asset is based, once again, on the passing or failing characteristics of a new asset.

## Questionnaires

Questionnaires are a previously defined set of questions and answers used to guide inspectors and field personnel through the inspection process of an asset.

See [Understanding Questionnaires](#) for more information.

## Maintaining Service History

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This portal is used to display and maintain service history records.

Refer to [About Service History](#) for more information.

You can access the portal from the **Menu > Asset Management > Service History**. You are brought to a query portal with options for searching for a specific service history. Once a service history has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Service History.** This zone supplies details about the service history for an asset.
- **Attachments.** This zone enables users to manage all types of attachments for the service history record.

# Chapter 8

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## Field Work

### About Work Orders

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Work orders group similar activities and are used to manage activities to perform any kind of work such as inspection, install, replacement, upgrade, and so on. They are mainly used to facilitate approval processing for work projects.

Work orders might also be created to manage a set of activities where the activities are manually linked to the work order. Completion events are used on activities to document and process the work that was done and to update data associated to the activity. Work orders also provide summary information about the various activities and the assets that are being worked on those activities.

The **Asset**, **Specification**, **Address** and **Location Information** sections serve to select the assets that should be included on the work order. As many or as few of this criteria can be selected to narrow down the assets that are included for the work.

#### Work Order Lifecycle

In a typical workflow, work orders must be created, approved, activated, worked then completed. Note that the status of activities on the work order depend upon the work order status. For example, the activity stays in “planning” status until the work order is approved and activated.

#### Work Order Templates

It is possible to create templates from most types of work orders so that the general work model can be reused. Work order templates can also be referenced for scheduled service history.

Refer to the [Template Work Orders](#) section for more information.

#### Activity Information

The **Activity Information** zone provides summary information regarding the activities that are included on the work order.

Refer to the [About Work Activities](#) section for more information and field definitions.



## Unplanned Work

Since unplanned work simplifies small, uncomplicated, and/or one-time jobs, foregoing planning can be effective when the task to be completed is straightforward and does not involve many details.

## Completing Work Orders

Work orders are automatically completed when every activity linked to the work order arrives at a final state based on the completion events for the activities.

## Capital Work

Work orders that are worked by outside contractors are considered “capital work”. This type of work order is created with a work category of “capital” activities that have an activity type with an external system set to the contractor.

## Work Priority/Asset Location Criticality/Total Risk Priority

Work Priority and Asset Location Criticality values are work order basic factors involved in calculations for an overall criticality value.

- **Work Priority** defines the importance of the work in terms of the potential impact of not addressing issues. For example, emergency type work is a higher priority than routine maintenance work.
- **Asset Location Criticality** defines the importance of the location in terms of the potential impact of having issues or problems at that location. For example, a hospital might have a high criticality rating since losing power there might result in the death of patients and a city park would have a low criticality since there are few consequences if the lawns are not mowed on time.
- **Total Risk Priority** provides a total risk value in terms of scheduling work at a particular location. Total risk is calculated as work priority multiplied by Asset Location Criticality. For example, if Work Priority is 6 and Asset Location Criticality is 7, then Total Risk Priority equals 42 ( $6 \times 7 = 42$ ). This value can be overridden by the user.

Field is able to be updated to any value up to 99.

If a user overrides the value, then **Total Risk Priority Source** flag changes from *System* to *User Override*.

## Template Work Orders

Template work orders, or benchmark work orders, are work orders that can be re-used to help your organization avoid repeating planning the same work for similar jobs. They can be used for basic work planning, but are also typically used with preventive maintenance.

The template work order contains header work order details. Template activities and template activity resource requirements are used to plan those aspects of the work plan.

- **General Template Work Orders** are used to plan for activities and resources which can be common to assets regardless of the asset disposition. This type of template can be used in any type of Preventive Maintenance Trigger.
- **Asset Location Specific Template Work Orders** are used to plan for activities and resources which are specific to a list of locations where the assets are installed. Some refer to the list of locations as a route. A work order created from this type of template will automatically populate assets, of the asset type, if specified, installed at the locations. This type of template can only be used on Calendar Anniversary Preventive Maintenance Triggers and Calendar Interval Preventive Maintenance Triggers.

The template work order provides users with the ability to create a work order directly from the template work order and then update the work order with the selected activities from the work order template.

## Preventive Maintenance

Template work orders are used with preventive maintenance and event-based maintenance to create new work orders when the maintenance is triggered. The appropriate work order template is referenced on the maintenance trigger so that the appropriate work records are automatically created when the trigger is cycled.

Usually, the work orders that are created from the template can be modified to represent the actual work requirements. For example, modifications may be needed if the requirements from the template don't match the exact requirements for the execution of the work.

## About Projects

Projects provide a way to group work so that it can be planned and charged against large efforts. Typically, a project will be a task that is out of the ordinary, or that requires extra planning and resources. Examples would be adding new facilities or conducting a major overhaul of an assembly line.

When a project is initiated and funds are approved, the project can be broken down into a hierarchical arrangement of smaller sub-projects, or the work breakdown structure. Each sub-project represents a controllable unit of work within the project. The ability to enter information about units of work, scheduling information, cost estimates and target dates for each project and sub-project forms the basis for planning the project and monitoring its progress to completion. Work orders and activities can be associated to the project and are automatically included in the cost of the project.

Projects can also be divided into subprojects – facilities construction, wiring, installation of equipment, testing of automated systems, shakedown, and so on. You can then plan, budget, and individually authorize each subproject.

Projects can be configured to go through regular approval processing, so that after the project is created it must be submitted for approval then approved.

### Allow Charge

When the **Allow Charge** indicator is set to “yes” other records can charge against the project. The project must be in Approved, Started or Complete state for charges to be applied against it. For example, a resource such as a craft or equipment might reference the Project ID under the accounting information.

Note that if subprojects are planned, the project itself should have **Allow Charge** set to **No**. Charges should be tracked by subproject.

### Project Categories

Your organization can define project categories to create classifications for projects such as maintenance, capital, construction, and so on.

## About Work Activities

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A work activity is a task that originates from a work order and needs to be completed.

As examples, activities may be created for maintenance of assets, to create service history, and to install or exchange devices.

Details on the work activity control key aspects of how it is managed, such as:

- The type of work to be performed, for example, maintenance, installs, replacements and inspections.
- Where the work is to be performed.
- The types of resources that are required; labor, equipment, materials, etc.
- List of assets needed to perform the task.

- Checklist of work activities or permit information.
- Whether or not to create service history.

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**NOTE:** The benefit of using activities to process work is to keep a history of the work being done. Users can specify on the work order activity and template work order activity whether a service history for a specific service history type should be mandatory or optional. If set as mandatory, the service history would need to be completed before the work order activity or template work order activity can be closed. This history can then be used for tracking and auditing.

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The activity portal enables planners to manage permits directly from the **Permit Checklist** zone contained within a separate **Permit** tab.

Here's how it works:

- A checklist type can contain one to many checklist line items.
  - Each of those checklist items reference a permit template.
  - A planner creates a checklist, using a checklist type, for an activity. The planner or crew needs to either create a new permit for each item or associate each item to an existing permit.
    - A checklist item cannot be marked as complete until the permit has been obtained, for example, approved and activated.
    - A checklist cannot be completed until all the mandatory items have been marked as complete.
    - An activity cannot proceed to certain status until all the required checklists have been completed.
- Refer to [About Permits](#) and [Checklists](#) for more information.

This section describes concepts related to managing work activities.

## Resource Requirements

Each activity on a work order is defined with one or more resource requirements which are needed to perform the activity. Crafts, equipment and miscellaneous resources are referenced on activities as a material resource requirement. The system tracks usage and reports the costing associated with that usage against the total cost of completing the activity. Typically, planned work orders specify resource requirements on the related activities, and an approver can verify the requirements before the work order is approved. Requirements may be categorized as materials, labor, equipment, or other.

- Material requirements specify materials or stock items to be used for the activity (pipe, pump, bolt, etc.). Material requirements might also be fulfilled with a direct purchase.
- Labor requirements, or crafts, specify the type of skills needed for the activity (technician, plumber, electrician, etc.). This might include premium or regular labor.
- Equipment requirements specify the machinery, tools or other equipment required for the activity (crane, bulldozer, drill, etc.).
- Other requirements cover miscellaneous requirements for the activity (meals, miles, hotel stay, etc.).

Note the following with respect to activity resource requirements:

- Activity resource requirements can only be added and navigated in the **Activity** portal under **Resources**.
- Material requests (issues and returns) can be applied against the resource requirement when the activity is active. When inventory materials are issued, the state of the resource requirement transitions to “fulfilled”. This is when the issued quantity is greater than or equal to the planned quantity.
- If materials are not in stock and need to be purchased to fulfill the requirement, a purchase order or requisition might be issued. These materials are typically tracked as direct purchases. When direct purchases are received, the material requirement state is set to “fulfilled”. This is when the receipt quantity greater than or equal to the planned quantity.

- Timesheets are used to track labor requirements. The labor requirement establishes an estimated number of work hours required. As timesheets are created and posted, the actual work hours are tracked.
- Other direct charges are used to track equipment and other requirements.

## Resource Estimates

Activity resource requirements determine the *original estimates* or planned amount for labor, equipment, materials and other on activities. Even canceled activity resources requirements are calculated as part of the original estimate. The original estimate is the value of the resource requirement at the time the work order was initially, i.e. the first time, approved. The original estimate is snapshot into a separate column when the initial approval happened. Keep in mind that approved work order can be reopened to add new activities/resource requirements and resubmit for approval. Those new resource requirements won't have initial estimate (it will be zero).

The system calculates a *revised estimate* to reflect the current value of the resource requirement. For example, a resource requirement was initially planned for 10 pumps at \$10.00 each. Upon the initial/first approval, the initial estimate will be stamped with \$100.00 and the revised estimate is also \$100.00. If the planner changes the requirement to 15 pumps instead, the original estimate will stay at \$100.00 and the revised estimate will be \$150.00. Canceled requirements are not calculated as part of the revised estimate.

## Committed Amount

Committed amount is the total of costs applied to the activity due to direct purchase costs that are committed when a purchase order is *issued*. This value uses the issued amount, not closed or completed since the costs are considered as committed once the purchase order is issued to the vendor. This amount reflects the total due to the vendor, as full or partial invoice amounts are closed. It does not reflect amounts that are completed or closed.

For example, a purchase order line has been issued for 10 pumps at \$10 each. Assume 4 pumps were received and a partial invoice line of \$40 was issued for the 4 items. This partial invoice for \$40 reduces the committed amount — \$100 minus \$40 = \$60. Once the other 6 items are received, the purchase order line moves to closed status and it does not have an impact on the committed amount.

## Unplanned Resources

Unplanned resources are defined as issued or returned materials or timesheet entries that were not part of the original resource requirements or estimates. Activities include a zone which lists any unplanned activity resources.

## Fulfilling Requirements

Material requirements can be fulfilled in the following ways:

- For inventory, if the issued quantity is greater than or equal to the planned quantity the system automatically changes the resource requirement to **Fulfilled**. This happens in cases where the crew has checked out all the planned quantity from the storeroom.
- For direct purchased material, if the received quantity is greater than or equal to the planned quantity, the system updates the resource requirement to **Fulfilled**. This method of automatic fulfillment is only applicable to material.
- For inventory material, when the resource requirement is approved (as part of the WO approval), the system puts the quantity is 'Pending Demand' on the storeroom, once the activity material requirement becomes Active, that quantity becomes 'On Demand' (and Pending Demand is closed out, or becomes zero).
- Materials can also be "reserved". If the storeroom has enough quantity then that quantity becomes reserved for the given amount. The reserved quantity provides storeroom manages with visibility into what is to come so that they can order materials accordingly.

Note that, although it may not be part of work, when material is issued from storeroom, material issue will reduce demand by the issued quantity or the original planned quantity, whichever is less. This is to prevent a negative on demand quantity, (if the issue quantity is more than the planned quantity.)

All resource requirements can become fulfilled in one of the following ways:

- Users click the **Fulfill** button.
- When the activity is completed, the system automatically changes all resource requirements to **Fulfilled** status.

When a material requirement becomes fulfilled, the system closes out the On Demand/Reserved quantity left (planned quantity – issued quantity). For Labor, Equipment and Other, fulfilled is only an informational status with no related processing.

## Checklists

Checklists are forms that define the prerequisites or procedural steps that need to be accomplished during the lifecycle of another object. For example, checklists can be used for managing permits, information purposes only, or contain the actual steps the user must take prior to completing work in the field.

There are two classes of checklist enabled for work activities in the base product:

### General Checklist

General checklists are previously defined sets of details or steps. Each line item in the checklist is just a description. All mandatory line items in a checklist must be marked as complete before the user can complete the checklist.

For example, Circle of Safety Checklist

- Park vehicle on level surface.
- Place cones on front, side, and rear of vehicle.
- Turn on emergency lights.

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**NOTE:** Each of the bulleted items would appear in the checklist in sequence and have a Mandatory definition (Yes/No).

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### Permit Item Only Checklist

Permit checklist is a new class of checklist to manage permit requirements. Each line item of this checklist refers to a permit.

Permit checklists have additional rules that govern how and when the checklist or checklist items can be completed. A checklist item can only be marked as complete when its associated permit has been activated.

Permit checklists are only enabled for work activities in base product and managed on the **Activity** portal using a **Permit Checklist** zone on a separate **Permit** tab.

Though it's probably unlikely, you can also enable such checklists for other objects, just like the General Checklist above. Please refer to WAM Implementer training for how to enable checklists for other objects.

## Work Activity Templates

Template activities are the activities generated as part of a template work order. In this way, template activities can be re-used to help your organization avoid repeat planning of the same work for similar jobs. Template activities can be used for the planning of basic work but are also typically used for preventive maintenance.

Template activities are part of a single template work order and cannot be re-used by multiple template work orders.

### Template Activity Resource Unit Price

Resource cost estimates on a template activity can change over time and should be updated to reflect the current pricing for each resource. The system uses a **W1-TMPWO** periodic monitor batch process to obtain the current pricing for resources.

- Set the Resource Type's "Default to Activity Flag" setting to *Yes*.
- Set the W1-TMPWO periodic monitor process on the active status of the W1-TemplateWorkOrderRoot BO's lifecycle.

Alternatively, the monitor can be run as a batch process to update all Template WO Unit Prices.

### **Asset Location Specific Template Activities**

Template activities that reference an asset location can be set in advance to trigger preventive maintenance work. A list of asset locations can be added to the template activity which can later be used as a route for preventive maintenance with costs for performing the work distributed across both primary and secondary assets. The percentage of cost distribution across all the assets must equal 100 percent.

## **About Work Requests**

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Work Requests are used to request work or services to be performed and, when approved, can become work orders. Work Requests can be created manually, as a follow-up to an activity, or by an external system. Work requests are mainly used to implement an approval chain for the requested work.

When a work request is created it is reviewed by maintenance planners to determine if the request is valid and can be turned into a Work Order. If the work request is rejected or canceled the work requestor is notified and work request can be resubmitted. If the work request is approved, the planner can either add the request to an existing work order as a new task or create a new work order specifically for the work being requested.

If necessary, it is possible to enter a work order directly if you have the proper authorization.

### **Possible Duplicate WRs/WOs/Activities**

The system identifies any records which could possibly be duplicate work requests, work orders or activities in this zone. Any work records that are in “non-final” statuses (such as “created”, pending approval” or “approved”) with the same asset and location (including address) of the current work request are listed as duplicates. You can choose to include or exclude work records related to preventive maintenance. If a record is found to be a duplicate, it can be canceled under **Record Actions**.

## **About Work Planning**

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Work Planning is a portal for those employees responsible for planning work. This portal contains a variety of zones that enable planners to view multiple summary graphs for open work activities and to search for, update, and schedule multiple work activities at one time. Planners can use this portal to manage their long to mid-term planning needs while also resolving any backlog of activities.

The **Work Planning** portal shows planners the number of open work activities in a variety of graphical views:

- Open Work Activity by Status
- Open Work Activity by Status (Without Planner)
- Open work Activity by Phase
- Open Work Activity by Held for Parts grouped by Required by Date

Planners can help coordinate many types of specialized activities and manage many other types of work activities by using the various search criteria inherent in this portal:

- Activity Information
- Activity Work Windows
- Activity Checklist Information
- Activity Permit Information

- Activity Maintenance Information
- Activity Labor Requirement Information
- Previously Scheduled Unfinished Work

Planners can also use the results of the search to select multiple activities and mass update activity values at one time:

- Work Window Start and End Date
- Phase
- Work Priority
- Work Class
- Work Category
- Planner
- Outage Type

The search results can also be used to select multiple activities with labor requirements and schedule them directly to a crew shift.

Planners can also use the Log Entry to add notes in the audit log.

## About Permits

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A permit is a form of documentation that proves a company has met certain safety or regulatory requirements before any work has begun.

Some examples of this kind of work might be tasks that require OSHA certification or specialized handling of hazardous waste materials or specialized equipment.

Planners decide what permits are needed for the work activity and then adds the required permits using a special type of checklist. Refer to [Checklist Types](#) and [Understanding Permit Templates](#) for more information.

Although configurable, most often no work activity can start until the permit has been obtained and activated.

This section describes concepts related to managing permits.

## About Service Calls

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A service call enables work to be created when a call from either an internal or external resource is received by a company representative.

Some examples of these types of calls would be as follows:

- Customer calls in to report a streetlight out, odor in area, sewage overflow, service run to new home, etc.
- Contractor requests new service to be run for a new subdivision or a business requests an upgrade in service for an expansion project.
- Field employee finds an additional problem after responding to an original call.

Work records, such as work designs, work requests, work orders, and work activities, can all be created as a result of the service call. Users can create contacts and view and manage service call details, such as a description of the service call, contacts, attachments, etc., directly from the work record.

Service calls are able to be linked and unlinked to other service calls.

Configure Service Category and Service Code objects to automatically create follow-up documents such as work requests and work orders.

Refer to the [Understanding Service Call](#) section of the **Administrative User Guide** for more information on service categories and service codes.

## Maintaining Work Orders

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The **Work Order** portal is used to view and maintain work orders.

Refer to [About Work Orders](#) for more information.

You can access this portal from **Menu**, select **Work Management**, and then select **Work Order**. You are brought to a query portal with options for searching for specific record. Once the work order has been selected, you are brought to the maintenance portal where you can view and maintain the selected record.

The following zones may appear as part of the portals **Main** tab page:

- **Work Order:** This zone provides information about the selected work order record, such as work details and accounting information.
- **Activity Info:** This zone lists the activities associated with the work order.
- **Follow Up Work Order and Work Request:** This zone lists all follow up work orders and work requests associated with the work order record.
- **Notes:** This zone lists any notes that have been added for the work order record.
- **Scheduled Activities:** This zone displays a list of the scheduled activities associated with the work order record.
- **Contact Relationship:** This zone displays contact information associated with the work order record.
- **Communication Log:** This zone displays any communications associated with the work order record.

The following zones may appear as part of the portals **Cost** tab page:

- **Work Order Cost Summary:** This zone displays a summary of costs associated with the work order record.

The following zones may appear as part of the portals **Activity Resource Tree** tab page:

- **Activity Resource Requirement Tree:** This zone displays a tree view of required resources for the work order.

## Maintaining Template Work Orders

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This portal is used to view and maintain template work orders.

Refer to [About Work Orders](#) for more information.

You can access this portal from **Menu**, select **Work Management**, and then select **Template Work Order**. You are brought to a query portal with options for searching for specific work order templates. Once the template has been selected, you are brought to the maintenance portal where you can view and maintain the selected record.

The following zones may appear as part of the portals **Main** tab page:

- **Template Work Order:** This zone provides information about the selected template and enables user functions to define projects, work priorities, work order approval profiles, and more.
- **Template Activity:** This zone lists the template activities associated with the work order template.
- **Notes:** This zone lists all the notes that have been added for the work order template.



# Maintaining Work Activities

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The **Work Activity** portal is used to view and maintain work activities.

Refer to [About Work Activities](#) for more information.

You can access this portal from **Menu**, select **Work Management**, and then select **Work Activity**. You are brought to a query portal with options for searching for specific record. Once the work activity has been selected, you are brought to the maintenance portal where you can view and maintain the selected record.

The following zones may appear as part of the portals **Main** tab page:

- **Work Activity:** This zone provides information about the selected work activity record, such as schedule details, special handling, and accounting information.
- **Asset List:** This zone lists the assets associated with the work activity.
- **Checklists :** This zone displays all checklists associated with the work activity record.
- **Completion Information Entry:** This zone displays the completion event types associated with the work activity record.
- **Asset Specifications:** This zone displays any asset specifications associated with the work activity record.
- **Outstanding PM Activity:** This zone displays any outstanding preventive maintenance activities associated with the work activity record.
- **Notes:** This zone lists notes associated with the work activity.
- **Owned Attachments:** This zone displays attachments associated with the work activity record.
- **Referenced Attachments:** This zone references any existing attachments to the work activity.
- **Scheduled Labor Requirements:** This zone displays the scheduled labor requirements associated with the work activity record.

The following zones may appear as part of the portals **Resources** tab page:

- **Quick Add:** This zone enables additional resources to be added to the work activity record.
- **Activity Resource Action:** This zone displays the activity's resources. Users can select the resource hyperlink and go to the activity's resource requirement to make changes.

The following zones may appear as part of the portals **Cost** tab page:

- **Activity Cost Summary:** This zone displays a summary of costs associated with the work activity record.

The following zones may appear as part of the portals **Permit** tab page:

- **Activity Permit Checklists:** This zone displays any permit checklists associated with the work activity.
- **Permit Attachments:** This zone displays permit attachments associated with the work activity.

# Maintaining Work Location

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The **Work Location** portal is used to display and maintain a work location record.

Refer to [About Work Activities](#) for more information.

You can access the portal from **Menu**, select **Work Management**, and then select **Work Location**. You are brought to a query portal with options for searching for a specific work location. Once a work location has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Work Location:** This zone displays information about the work location, such as address and latitude and longitude coordinates.
- **Owned Attachments:** This zone lists the attachments owned by the work location record.

## Viewing Subproject Information

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1. Navigate to the **Project** portal under **Work Management** and select **Search**.
2. Search for and select the appropriate **Project** record.
3. Navigate to the **Project Detail Info** section.

Here you can review the subproject details, navigate to subprojects, and add more sub-projects as necessary.

## Maintaining Permits

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This portal is used to view and maintain permits.

Refer to [About Permits](#) for more information.

You can access this portal from **Menu**, select **Work Management**, and then select **Permit**. You are brought to a query portal with options for searching for specific permits. Once the permit has been selected, you are brought to the maintenance portal where you can view and maintain the selected record.

The following zones may appear as part of the portals **Main** tab page:

- **Permit:** This zone provides information about the selected permit including information on permit locations and work start and end times.
- **Asset/Location:** This zone displays the asset or location information associated with the permit.
- **Permit Holder History:** This zone displays history details about the permit holder.
- **Notes:** This zone lists notes associated with the permit.
- **Attachments:** This zone displays attachments associated with the permit. Attachments added here are made available as reference information related to the permit and are available on work activity.

## Maintaining Service Calls

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This portal is used to view and maintain service calls.

Refer to [About Work Management](#) for more information.

You can access this portal from **Menu**, select **Work Management**, and then select **Service Call**. You are brought to a query portal with options for searching for specific service calls. Once the service call has been selected you are brought to the maintenance portal where you can view and maintain the selected record.

The following zones may appear as part of the portals **Main** tab page:

- **Service Call:** This zone provides information about the selected service call and enables user functions to create additional contacts, create work orders, work designs, work requests, or activities.
- **Contact Relationship:** This zone lists the contacts associated with the service call.
- **Communication Log:** This zone lists all the communications that have transpired for the service call.

- **Attachments:** This zone displays attachments associated with the service call. Attachments added here are made available as reference information related to the service call and are available on work requests, work orders, and work activities.

# Chapter 9

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## Preventive Maintenance

### About Preventive Maintenance

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Preventive maintenance is work that is routinely performed to prevent asset failure. This maintenance includes work such as inspections, repairs, cleaning, part replacements, and so on.

Preventive maintenance can help your organization manage costs by reducing downtime due to unexpected asset failures, reducing incidents where maintenance is need in response to a problem (reactive maintenance), and ensuring the proper care and maintenance of assets. One common example of preventive maintenance is routine maintenance on a pump. It is clear that proper maintenance depends on timely visual inspections and regular cleaning to prevent costly problems, failures and repairs. Preventive maintenance programs are based on time or operational usage. Template work orders are set up to plan detailed work requirements, and the preventive maintenance functionality manages when and how the related work orders are automatically created based on the established preventive maintenance cycles.

### Maintenance Schedules

Preventive maintenance schedules contain a list of maintenance triggers and a schedule of when maintenance should occur based on those triggers. Maintenance schedules provide a comprehensive set of analytics which provide information on failure types, failure modes, and repairs. Additionally, Preventive Maintenance provides additional visibility into preventive maintenance triggers for assets associated with a route.

### Maintenance Cycles

Preventive maintenance is triggered, or cycled, based on the maintenance schedule defined for the asset type. Batch processing determines when and how to create work orders depending on whether or not non-final activities already exist for the activity type. Settings on the maintenance schedule such as the **Allow Multiple In Process Activities** flag determine whether or not a new activity is triggered if there are any non-final activities for the activity type and the asset being evaluated. If new activities should be created based on all criteria being met, the system automatically creates a work order based on the template work order indicated on the maintenance schedule.

Users with the necessary authority in the system can manually execute maintenance triggers, as necessary, using actions in the **Maintenance Schedule** or **Asset** portal. Upcoming triggers are displayed in a zone in the Asset portal where users can execute the **Cycle Now** action to manually cycle the maintenance.

## Duplicate Maintenance Schedules

The system provides a utility for duplicating a maintenance schedule and allowing the user to choose which maintenance triggers to also copy to the new schedule via a pick list. This action is available from the **Maintenance Schedule** record actions.

## Maintenance Triggers

Preventive maintenance triggers indicate a certain event which, when it occurs, maintenance should be done on an asset. For example, typical maintenance triggers would be when a vehicle reaches a certain number of miles, when a certain amount of time has passed, or when an asset reaches a certain number of hours of runtime.

Refer to [Defining Compliance Types](#) for more information about linking and unlinking preventive maintenance triggers.

Maintenance triggers are generally defined as one of the following:

- **Calendar Anniversary** is a *fixed* calendar interval type where regardless of the time lapse between the work creation and completion, the future maintenance schedule date remains the same. This type of interval scheduling is generally used to fulfill regulator compliance for inspections and licensing requirements on fixed date schedules. For example, this would trigger an inspection every three months regardless of when the last inspection was completed.
- **Runtime Anniversary** is a *fixed* interval type maintenance where regardless of the metered operation between the recent activity or service history and completion of work, the maintenance is not re-forecast. For example, this would trigger an inspection after every 100 hours of runtime service.
- **Calendar Interval** is a *fluid* interval type where the forecasted scheduled date is adjusted and re-forecast based on the completion date of the previously completed work which is managed through service history. For example, this would trigger a pump valve cleaning every 3 months with the next trigger based on the most recent cleaning.
- **Runtime Interval** is a *fluid* interval type where the maintenance schedule is adjusted and re-forecast based on the completion runtime readings of the previously completed activity. For example, this would trigger a pump bearing bracket cleaning every 100,000 gallons flow of water with the next trigger based on the gauge reading at the time of the last cleaning.

## Creating a Maintenance Event

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Navigate to the **Maintenance Event** portal under **Preventive Maintenance**, select **Add**, complete the required fields according to your business practices and **Save**.

**Prerequisites:** The following are referenced by the maintenance event record:

Note: This list does not necessarily represent required fields.

- Maintenance Plan
- Maintenance Plan Trigger

Once maintenance events have been created, work will be automatically generated based on the trigger dates and activity defaults on the event.

## Maintaining Maintenance Plans

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The **Maintenance Plan** portal is used to display and maintain a maintenance plan record.

Refer to [About Preventive Maintenance](#) for more information.

You can access the portal from **Menu**, select **Preventive Maintenance**, and then select **Maintenance Plan**. You are brought to a query portal with options for searching for a specific record. Once a maintenance plan has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Maintenance Plan:** This zone displays information about the maintenance plan.
- **Plan Trigger:** This zone lists all the triggers associated with the maintenance plan.
- **Maintenance Event:** This zone lists the maintenance events associated with the maintenance plan.

## Maintaining Preventive Maintenance Plan Triggers

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The **Maintenance Trigger** portal is used to display and maintain a maintenance trigger record.

Refer to [About Preventive Maintenance](#) for more information.

You can access the portal from **Menu**, select **Preventive Maintenance**, and then select **Plan Trigger**. You are brought to a query portal with options for searching for a specific record. Once a plan trigger has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Plan Trigger:** This zone displays information about the plan trigger record, such as processing information and work order defaults.
- **Activity:** This zone lists the work activities associated with the plan trigger record.

## Maintaining Preventive Maintenance Schedules

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The **Maintenance Schedule** portal is used to display and maintain a maintenance schedule record.

Refer to [About Preventive Maintenance](#) for more information.

You can access the portal from **Menu**, select **Preventive Maintenance**, and then select **Maintenance Schedule**. You are brought to a query portal with options for searching for a specific record. Once a maintenance schedule has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Maintenance Schedule:** This zone displays information about the maintenance schedule record.
- **Maintenance Trigger:** This zone lists the triggers associated with the maintenance schedule record.
- **Asset List Maintenance Trigger:** This zone lists the asset list maintenance triggers associated with the maintenance schedule record.
- **Maintenance Specification:** This zone lists the specifications associated with the maintenance schedule record.
- **Activity:** This zone lists all the non-finaled activities associated with the maintenance schedule record.

The following zones may appear as part of the portal's **Analytics** tab page:

- **Failure Type Analytics:** This zone displays a graphical view of analytics for the maintenance schedule.
- **Failure Mode Analytics:** This zone displays a graphical view of analytics for the maintenance schedule.
- **Failure Type and Failure Mode Analytics:** This zone displays a graphical view of analytics for the maintenance schedule.

- **Failure Type, Mode and Repair Analytics:** This zone displays a graphical view of analytics for the maintenance schedule.

## Maintaining Preventive Maintenance Triggers

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The **Maintenance Trigger** portal is used to display and maintain a maintenance trigger record.

Refer to [About Preventive Maintenance](#) for more information.

You can access the portal from **Menu**, select **Preventive Maintenance**, and then select **Maintenance Trigger**. You are brought to a query portal with options for searching for a specific record. Once a maintenance trigger has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Maintenance Trigger:** This zone displays information about the maintenance trigger record, such as processing information, asset qualification conditions, and failure statistics.
- **Activity:** This zone lists the work activities associated with the maintenance trigger record.
- **Failure Information Quick Add:** This zone enables the addition of failure information to the maintenance trigger record.
- **Planned Failure Information:** This zone displays planned failure information associated with the maintenance trigger record.

# Chapter 10

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## Construction Work

### About Construction Work

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Oracle Utilities Construction Work Management provides functionality to manage the work, resources, and assets related to construction work.

In a standard workflow, an organization configures compatible units based on the materials, labor, and equipment needed to install (construct) or remove (demolish or retire) an asset at a given location. Compatible units are classified as Base, Functional, or Accessory depending on how they are to be used and what they define. They are grouped into CU Sets according to their equipment group and size (every CU must belong to a set (only one)).

Next, work designs are created to estimate the construction work with all of the materials, labor, equipment, and any other costs associated to the work. Compatible units are usually utilized on the design to define these requirements. Multiple design versions can be created so as to compare cost estimates and resource requirements.

Once ready, work designs can be submitted for standard approval processing. After approval, the work design can be transitioned to a “work generated” status and construction work orders and construction work activities can be created from the work design to plan and manage the work. Additional construction work activities can be created on that construction work order or an existing construction work order that has not been associated to any work design as long as the work order is in a non-final state. Existing construction work activities that have been associated to the work design can also be updated from the work design. Costs and scheduling are managed just as they are for regular work.

In the context of Construction Work Management, the term “asset” is used to refer to fixed assets, also called capital assets. Not all fixed assets are Oracle Utilities Work and Asset Management assets; a record in the asset table with an asset ID. For example, you may not track wires as individual asset within Oracle Utilities Work and Asset Management. Whether an Oracle Utilities Work and Asset Management asset should also be created as a result of construction work is determined by the presence or lack of presence of an asset type on the CU definition.

Please refer to the [Understanding Construction Work](#) section in the **Admin User Guide** for more information.



# Work Design

## About Work Designs

Work designs are used for construction projects to produce one or many construction estimates with resource requirements. Designs can ensure that all necessary requirements are accounted for before the actual work begins.

A single project can have multiple versions so that you can compare different approaches to the project and how they might affect costs. Resources included on the original work design are carried over to each new version where users can make the needed adjusts.

## Work Design Estimate

The Estimates tab on the work design tabulates totals for all of the resource types, overtime, overhead, and any additional line items. Calculated totals include the following:

- **Customer Built Contributions:** Total derived value of customer supplied compatible units (display as credit)
- **Fixed Price Adjustment:** (Fixed Price – Derived Price)
- **Estimate Grand Total:** (Resource Cost + Additional Cost + Fixed Price Adjustment) – Customer Built Contributions
- **Overhead:** Work Design % per resource class first then apply the additional overhead % to the total

## About Design Elements

Design elements “build” a work design by indicating the compatible units and other resources that are needed for one construction location where one or many assets are planned.

## About Construction Work Orders

Construction work orders are a collection of work activities which manage the actual construction work, and may or may not be related to compatible units. Construction work orders and construction work activities can be created directly or from an approved work design. Construction work activities can also be created from a work design for any existing construction work order that has not been associated to a work design as long as the work order is in a non-final state.

## About Construction Work Activities

Construction work activities manage construction work, typically involving compatible units (such as installing, removing, or maintaining a compatible unit). They can manage the creation of new assets resulting from the construction, construction related repairs, or maintenance. An Overhead activity can be created to collect direct overhead costs associated with the work design and construction work order, such as planner time, easements, and permits, and then allocate those costs across the actual construction activities based on the actual construction costs during the closeout process.

Activity types control the purpose and configuration of the activity.

Construction work activities can be created from a work design or can be created directly. Each activity references one or many construction locations which have one or more compatible units which define the work and resources needed at the location.

Every construction work activity must reference a service class to identify whether or not the activity is overhead or an activity used for construction, renewal or maintenance. Part of the service class is to define the construction work in progress (WIP) cost center on the activity. Service class is defaulted from the construction work activity type.

Construction work activities also reference construction locations which may have one or more compatible units that define the work and resources needed to be done at the location.

## About Construction Locations

Construction locations define either a work location or an asset location (not both). Work locations identify where compatible units are used to build new assets. Typically a work location will become an asset location once the asset is constructed. When work is done on an existing asset, the identified construction location should be identified as an asset location.

If construction work occurs at a construction location that is known to cost more in labor, **Overtime Type** can be specified to apply to all crafts on the construction location. For example, construction work on a major commute bridge can only occur at night (versus regular hours) to minimize traffic disruptions.

Construction Locations are added and accessed from the **Construction Location Details** zone on the **Construction Work Activity** portal **Resource** tab.

## About Construction Work Activity Reconciliation

An activity reconciliation is created when a construction work activity is closed. It is created to summarize costs and identify assets that were by created or contributed to the project. It immediately gets routed for approval and placed in **Pending Approval** status. Typically, the first person on the approval route will review and update the activity reconciliation. The approver can make updates to the reconciliation record, as needed, such as updating cost distribution or adding construction or contributed assets. Once the record is finalized and approved, the reconciliation record moves to Closed, and financial transactions are created. Any constructed assets or customer contributed assets are recorded for export to integrated fixed asset systems, as applicable.

## Construction Work Orders

Construction work orders are a collection of work activities which manage the actual construction work and may or may not be related to compatible units. Construction work orders and construction work activities can be created directly or from an approved work design. Construction work activities can also be created from a work design for any existing construction work order that has not been associated to a work design as long as the work order is in a non-final state.

### Construction Work Activities

Construction work activities manage construction work, typically involving compatible units (such as installing, removing, or maintaining a compatible unit). They can manage the creation of new assets resulting from the construction, construction related repairs, or maintenance. An Overhead activity can be created to collect direct overhead costs associated with the work design and construction work order, such as planner time, easements, and permits, and then allocate those costs across the actual construction activities based on the actual construction costs during the closeout process.

Activity types control the purpose and configuration of the activity.

Construction work activities can be created from a work design or can be created directly. Each activity references one or many construction locations which have one or more compatible units which define the work and resources needed at the location.

Every construction work activity must reference a service class to identify whether or not the activity is overhead or an activity used for construction, renewal or maintenance. Part of the service class is to define the construction work in progress (WIP) cost center on the activity. Service class is defaulted from the construction work activity type.

Construction work activities also reference construction locations which may have one or more compatible units that define the work and resources needed to be done at the location.

## Maintaining Work Designs

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The **Work Design** portal is used to display and maintain a work design record.

Refer to [About Construction Work](#) for more information.

You can access the portal from **Menu**, select **Construction Work Management**, and then select **Work Design**. You are brought to a query portal with options for searching for a specific record. Once a work design has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Work Design:** This zone displays information about the work design, such as required by date, originating designer, and handling details for the design elements.
- **Design Elements:** This zone lists the design elements associated with the work design record.
- **Contractor Bids:** This zone lists contractor bids associated with the work design record.
- **Owned Attachments:** This zone displays attachments specific to the work design record.
- **Referenced Attachments:** This zone displays all referenced attachments to the work design record.
- **Work Design Notes:** This zone displays any note information associated with the work design record.
- **Contact Relationship:** This zone displays any contact information associated with the work design record.
- **Communication Log:** This zone displays any communications associated with the work design record.

## Maintaining Construction Work Orders

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The **Construction Work Order** portal is used to display and maintain a construction work order record.

Refer to [About Construction Work](#) for more information.

You can access the portal from **Menu**, select **Construction Work Management**, and then select **Construction Work Order**. You are brought to a query portal with options for searching for a specific construction work order. Once a construction work order has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Work Order:** This zone displays information about the work order, such as required by date, work details, and access controls.
- **Construction Work Order Activity Info:** This zone displays construction work order activity information for the construction work order record.
- **Follow Up Work Order and Work Request:** This zone displays follow up work orders and work requests for the construction work order record.
- **Notes:** This zone displays any note information associated with the construction work order record.
- **Scheduled Activities:** This zone displays the scheduled activities associated with the construction work order record.
- **Contact Relationship:** This zone displays any contact information associated with the construction work order record.

## Maintaining Construction Work Activities

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The **Construction Work Activity** portal is used to display and maintain a construction work activity record.

Refer to [About Construction Work](#) for more information.

You can access the portal from **Menu**, select **Construction Work Management**, and then select **Construction Work Activity**. You are brought to a query portal with options for searching for a specific construction work activity. Once a construction work activity has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Work Activity:** This zone displays information about the work activity, such as work site details, reconciliation information, special handling, and schedule details.
- **Checklists:** This zone lists the checklists associated to the construction work activity record.
- **Work Order Activities:** This zone lists the activities associated with the construction work activity record.
- **Notes:** This zone displays note information associated with the construction work activity record.
- **Owned Attachments:** This zone lists the attachments owned by the construction work activity record.
- **Referenced Attachments:** This zone lists the referenced attachments associated with the construction work activity record.
- **Scheduled Labor Requirements:** This zone displays the labor requirements for the construction work activity record.

## Maintaining Activity Reconciliations

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The **Activity Reconciliation** portal is used to display and maintain an activity reconciliation record.

Refer to [About Construction Work](#) for more information.

You can access the portal from **Menu**, select **Construction Work Management**, and then select **Activity Reconciliation**. You are brought to a query portal with options for searching for a specific activity reconciliation record. Once an activity reconciliation record has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Activity Reconciliation Display:** This zone displays information about the activity reconciliation, such as constructed assets, cost distribution, and approval profile.

# Chapter 11

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## Scheduling

### About Scheduling

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The goal of the scheduling process is to produce the most effective schedule based on the requirements of the work. Scheduling accomplishes this goal by assigning tasks to crew shifts, matching work requirements to crew capabilities.

Planners can use the **Scheduling** portal to search for and to review new activity labor requirements and unfinished back log work in order to make allocations to available crew shifts. Users can also use this portal to view the capacity of shifts based on crafts. First search for the appropriate crew shift, then use the zones to search for activities, review the crew members, or access a graphical representation of craft capacities.

**NOTE:** Planners have the ability to add work activities to active crew shifts. Refer to [Break In](#) for more information.

Planners can also use the **Scheduling** portal to search for an activity scheduled to a shift. From the activity they can then add a single employee into the schedule or schedule more than one employee at a time.

#### Daily and Weekly Shifts

Weekly and Daily shift schedules are planned periods of time used to manage crews as they perform their work. Refer to [Daily Versus Weekly Schedules](#) for more information.

#### Shift Plan Templates

Shift plan templates are used to automatically generate crew shifts based on a set of pre-defined shift criteria such as the shift type, the shift rotation, the defined calendar, and so on. Refer to [About Shift Plan Templates](#) for more information.

#### Scheduling Work

The system schedules an activity to a crew shift, taking into consideration the activity's labor requirements and estimated duration. Refer to [The Scheduling Process](#) for more information.

## Finding Backlog Work and Assigning

Use the **Scheduling** portal or **Crew Shift** portal's **Scheduling** tab to search for all unfinished and active labor requirements for the selected crew. Unfinished labor requirements are those which are still active but linked to completed or canceled crew shifts. When there are active labor requirements pending for the crew shift, the system provides a prompt where you can allocate the labor to the next available shift. Follow the prompts to complete the process of allocating the labor requirements either to the next available shift, or to a different crew shift.

## The Scheduling Process

The goal of the scheduling process is to produce the most effective schedule based on the activity's labor requirements.

The system considers the following during the scheduling process:

- Weekly and daily shift templates which are used to generate shifts into the future. Shift scheduling also takes into consideration work calendars and holidays.
- Capacities of a shift which is the sum of all the available principle and secondary crafts and their respective number of hours.
- Schedule Priority which determines when the principal craft time should be used for making assignments to a secondary craft.

How is the work scheduled?

- Once an activity is created with labor requirements, Planners or other authorized users can schedule work by navigating to either the **Schedule** tab on the crew shift or to the **Scheduling** portal. In either case, once the crew shift is identified, search for the activity to be scheduled, check the appropriate shifts and click **Apply**. A dialog prompts for the scheduled hours for each labor requirement on the activity.
- Planners can review the shift assignment in the **Scheduling Details** section on the activity. There are also multiple other ways to search for labor active work such as by activity, by work order, by location, by crew, and so on.
- Using the **Schedule** portal, planners can pull already scheduled work from another shift. For example, the search can be used to transfer assigned work from a weekly shift to a daily shift. Furthermore, the **Previously Scheduled Unfinished Work** zone displays work already assigned to the crew shift being scheduled.
- Each of these various details and views can be used according to your business practice to create the most efficient scheduling process for your organization.
- In addition, when a shift is completed, all unfinished activities assigned to the shift are copied to the next open shift for the crew. A dialog prompts the user for details on expected duration left to complete the work.

## Daily Versus Weekly Schedules

A weekly shift is a weekly schedule plan containing a collection of daily shifts. A daily shift is the plan for a single shift on a specific day.

Please note the following with respect to shifts:

- Weekly shifts are referred to as "schedule plans" in the system since the plan can come in any multiple of weeks.
- A weekly shift's capacities, service areas, and service classes are derived from its set of daily shifts.
- A weekly shift specifies a type, as does a daily shift
- A weekly shift specifies a crew name, as does a daily shift
- Both a weekly shift and daily shift can be scheduled
- A weekly shift does not specify employees, as daily shift does (instead, it has a collection of daily shifts)

- A weekly shift does not specify a template, as a daily shift does
- A weekly shift can have many daily shifts attached to it - just like a week has many weekdays
- A daily shift can only specify one weekly shift - just like a specific day belongs to just one week

## Break In

There are times when users will need to modify the work on a crew shift that is already activated. The activities that are added to an active shift schedule are known as Break In activities and they essentially override the original schedule.

The **Activity Labor Requirements** zone on the crew shift record is stamped with the date and time of the break in activity.

Planners can also use the **Activity** portal to manually assign an active shift directly to a work order activity when the following conditions are true:

- Activity is in either an *Approved* or *Active* status
- None of the activity's labor requirements has been scheduled to any shift.

Planner would click **Add to Schedule** and search for and select a shift once the dialog box appears.

## About Crew Shifts

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A crew shift is a planned period of time in which a crew (one or more workers) is scheduled to perform work. For example, a crew shift might be defined as Crew A, consisting of Jack and his van, working on a specific date from 9am — 5 pm.

Refer to [Understanding Scheduling](#) for more information.

This section describes concepts related to managing crew shifts.

## Creating Shifts

Typically, crew shifts are generated by shift plan templates that define the basic characteristics of the shifts. A crew's shifts may be generated by a single shift weekly template or daily shift template at any given point in time.

Refer to [Understanding Shift Plan Templates](#) for more information.

Shifts can also be manually created to address special situations on particular days.

## Service Area

Service areas define a logical boundary of your organization's territory. Every crew shift is populated with a list of service areas that the crew shift is allowed to work. This is matched up with the service area indicated on the activity to help determine which crew shift can work the activity.

## Employee Unavailability

Employee unavailability records establish periods of time where an employee has been given leave from his or her regular job duties. This might be due to circumstances such as vacation, sick leave, attending a training, jury duty, and so on. Logging employee unavailability allows the system to know when an employee is not available to perform work on the crews that he or she is associated with.

Employee unavailability types define the kinds of leave that might be used when creating an **Employee Unavailability** record.

Standard approval processing facilitates approval or rejection of employee leave. After the leave is approved, employees indicated on the attendees list are not available as work resources. This means that during scheduling, the crafts available to the shift are reduced so that the employee on leave cannot be included. Timesheet generation is completed for the leave according to your settings and business practices.

## Working The Schedule

Crews may use mobile devices to carry out their scheduled work and provide real time updates as to their progress. Real time updates from the crew increases the accuracy of the information available to the dispatcher as well as the scheduler when making scheduling decisions and handling exceptions.

Crews may use the mobile application if installed on their device or provide simpler status updates using SMS messaging.

Crews that do not use a mobile device typically record their work on paper or other means, and enter the information via the main application at the end of their shift.

This section describes topics related to performing the work scheduled to a crew's shift.

### Using The Mobile Application

The system supports dispatching work directly to mobile application installed on mobile devices including laptops, tablets, and other devices.

The mobile application allows the crew to fully manage their work schedule, get more work as needed, handle exceptions, and report their whereabouts.

When the crew starts the shift from their mobile device key details about their shift are brought over and stored locally. If these details change later on the system automatically synchronizes the mobile copy of the shift and sends the crew a new copy of it with the latest information.

---

**NOTE:** Logic to initially send a copy of the shift to the crew's mobile device as well as synchronize the mobile copy to keep it up to date when changes are made on the server resides in a "Synchronize Shift" algorithm on the task's business object.

---

### Using SMS Messages

Crews may use SMS messaging to carry out their scheduled work. This method allows the crew to start their shift, get their tasks one at a time, provide status updates and complete their shift.

The following scenario illustrates how SMS messaging works

- A mobile worker sends a text message of "Logon". The system identifies the mobile worker via the phone number the text was sent from, starts their next shift, and sends details of their next task via SMS.
- As the crew works the task, they send messages to communicate their progress, such as "1" to indicate that they are en route to the task's location, and "2" to indicate arrival at the task location and starting to perform the work.
- When work is done, the crew sends a text message of "3". In response, the system sends the next task and so on. If this was an activity, this tells the system work is done but still waits for completion information to be keyed in. The crew would typically enter the completion details at the end of their shift when they return to the office. Refer to [Activity Completion](#) assignment state for more information.
- At the end of the shift, the crew sends a "Logoff " message.

The following are examples of the messages sent to crews when tasks are dispatched.

```
Activity Details MREAD at 12.00.00 for Swetha Paspuleti at 6284 dressler Road NW, North Canton
POU Details STATUS MEETING at 6284 dressler Road NW, North Canton from 14.00.00 to 14.30.00
Break Details COFFEE from 13.00.00 to 13.30.00
```

---

**NOTE:**



Logic to process incoming SMS messages from the crew and send messages back to the crew resides in algorithms on the installation options record.

---

## Using No Device

Crews that do not use any device to manage their work may be provided with a printout of their scheduled route at the beginning of their shift, or they may rely on the dispatcher to communicate the details of their next task verbally as they work them one at a time.

---

**NOTE:** Functionality around handling a shift's schedule printout is not provided by the base product. If needed, this is assumed to be a customization effort.

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Since they don't have a way to provide real time updates from the field, crews typically rely on communicating them directly to the dispatcher who performs these changes on their behalf. For example, the dispatcher can start their shift, update the status of their next task to state they went en route to the task location, update it to note they have arrived, as well as mark the work as completed, and so on.

Throughout the day, the crew records their completion information on paper or other means and when back at the office, they use the main application to enter the data and complete the corresponding activities.

As the crew does not have a device to automatically receive new work nor changes to their route, there is no point in keeping their schedule open. These shifts therefore are typically configured to close and lock the entire schedule some time before they are planned to start the shift.

If the shift is closed in advance, when the crew starts the shift or the dispatcher starts it on their behalf, the shift is automatically switched to offline mode.

## Auto-Completion

By default, the system assumes that work scheduled to a shift that was never started was not worked and therefore needs to be rescheduled. Expired shifts are automatically canceled and all the work scheduled to them is rescheduled.

However, some customers use the product purely for scheduling purposes where activities and shifts are never updated by the crew. No completion information is recorded in the system to be sent back to the host.

To accommodate this business use case, shifts can be configured to automatically complete as per their planned schedule assuming all scheduled tasks are worked as planned. If a shift is set up to automatically complete, the system starts it at the planned start time, progresses all its scheduled tasks as planned, and finally automatically completes it at the planned end time. Note that if by the planned start time all mobile workers allocated to the shift are on leave then the auto-completion process cancels the shift instead of starting it.

If there is an exception in working an activity in the field, it is assumed to be handled directly in the host system and resent as needed.

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**NOTE:** The **Shift Auto Complete**[global configuration](#) parameter needs to be enabled before you can set up shifts to auto-complete.

---

**NOTE:** This functionality requires the shift record and the auto-completion sync request that manages its over time to be periodically monitored. The **Crew Shift Monitor** batch process initiates the auto-completion sync request when the shift is planned to start and **Sync Request Monitor** batch process advances the shift and its scheduled tasks as planned. It is important that these batch processes are ran in a timely manner.

---

## Working One Task At A Time

At any point in time during their shift, the crew is assumed to be working on a single task. Attempting to start a task when another is still in progress is not allowed. In the same way, a shift cannot be completed while a task is still in progress.

## End of Shift

When the crew completes their shift the following steps are involved:

- Activity assignments the crew did not manage to complete are returned and the corresponding activities are rescheduled.
- All other types of tasks that were not completed are canceled.
- Allocated activities no longer remain allocated to the shift, allowing them to be rescheduled to other shifts.
- If timesheet functionality is enabled, the timesheet records are prepared for each period a mobile worker worked as part of the crew on the shift. Refer to [About Timesheets](#) for more information.

## Maintaining Crew Shifts

---

This portal is used to view and maintain crew shifts.

Refer to [About Crew Shifts](#) for more information.

You can access this portal from **Menu**, select **Resource Management**, and then select **Crew Shift**. You are brought to a query portal with options for searching for specific crew shifts. Once the crew shift has been selected, you are brought to the maintenance portal where you can view and maintain the selected record.

The following zones may appear as part of the portals **Main** tab page:

- **Crew Shift:** This zone provides information about the selected crew shift, including crew status, crew shift type, subscriptions, crew members, service classes, service areas, and more.
- **Activity Labor Requirements:** This zone displays the work activity and labor requirements associated with the crew shift.
- **Mobile Subscriptions:** This zone displays a list of employees currently subscribed to the crew's daily shift from their mobile device.

The following zones may appear as part of the portals **Schedule** tab page:

- **Crew Shift Craft Capacity:** This zone displays a graphical representation of the various crafts, craft capacities, and remaining hours for the particular crew shift.
- **Crew Members:** This zone lists the crew members and their relationship to the crew. For example, crew member or supervisor .
- **Activity Search:** This zone displays a query portal with options for searching for activities.

## Scheduling Portal

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This portal helps planners manage craft capacities and activity labor requirements for crew shifts.

You can access this portal from **Menu > Work Management > Scheduling**. You are brought to a query portal with options for searching for a specific crew shift. Once the crew shift has been selected, you are brought to the **Scheduler** portal where you can view and manage the craft capacities and labor requirements for the selected record.

The following zones may appear as part of the portals **Main** tab page:

- **Craft Capacity.** This zone displays a graphical representation of the various crafts, craft capacities, and remaining hours for the particular crew shift.
- **Activity Search.** This zone displays a query portal with options for searching for activities.
- **Scheduled Labor Requirements.** This zone displays the work activity, labor requirements, and crew allocation associated with the crew shift.

Refer to [About Scheduling](#) for more information.

# Chapter 12

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## Approvals

### About Approvals

---

Approvals simplify the routing of work orders, purchase requests, timesheets, and other documents that require approval.

Approval requests use approval profiles to define the requirements for the approval:

- Who receives the approval
- Method for notifying the approver
- Which work calendar to use

When the approval request is submitted, the system sends a notification to all approvers defined on the approval profile according to the **To Do Roles** and the **Sequence** defined on the profile. Notifications can be sent using email, To Do List, or both, depending on the system notification settings.

Approvers can use the **Approval Dashboard** to manage the approvals that require their attention.

This section describes how various processes work together to manage approvals throughout the system.

Refer to [Maintaining Approval Requests](#) in the **Business User Guide** for information on maintaining approval requests.

Refer to [Understanding Approval Processing](#) in the **Administrative User Guide** for more information.

### Approval Profiles

Approval profiles are used to define the approval hierarchy within your organization and controls which approvers are required to approve the record.

Approval Profiles based on **To Do Roles** define:

- the approvers level of authority to approve a document
- the types of documents the role can approve
- the working calendar to use when determining approval time lines and when to send To Dos

- dollar amount maximums that the role is authorized to approve

An approval profile can have one or many **To Do Roles** and it is possible for an approver to be assigned to more than one To Do Role in the same approval profile.

Depending on the notification setting designated on the approval profile, the approver can receive an email, an alert, or both in their **To Do List**.

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**NOTE:** Individual approvers can choose to modify their notification settings for approvals. Navigate to the **User** portal and access the **Characteristic** tab to set the **Approval Profile E-Mail Override** setting to disable email notifications for approval requests. When this is set, the approver does not receive any emails and must rely on the approval dashboard or To Dos.

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## Approval Routing

The approval request, once submitted, is routed for approval based on the roles of the approvers and their approval decisions. For example:

- **One Standard Role:** If the approval profile consists of one To Do Role with mandatory or standard approval type, the users with that role receive the approval notification and any one of them can approve the request as long as the To Do Role has authority for the needed dollar amount.
- **Multiple Roles/All Standard:** If the approval profile consists of multiple To Do Roles and all are standard, any To Do Role can approve the request as long as they have the authority for the needed dollar limit.
- **Mix of Mandatory and Standard Roles:** If the approval profile consists of multiple To Do Roles with a mix of mandatory and standard, the users with mandatory must approve the request even if the standard approvers have authority based on the dollar limit or other factors. In other words, the mandatory approval role must take an action by agreeing or rejecting the request.
- **Request Time-out:** If approvers do not respond to the request within the time allotted by the time-out threshold, the system sends another notification to the approvers. If action is still not taken, the request moves to the next approval role, as applicable and the next role receives notification.
- **One Approver with Multiple Roles:** If one approver has multiple To Do Roles on one approval profile for the request, the system prompts that person to indicate which role he or she is approving. For example, approver Jon is in both the supervisor and manager To Do Roles. When an approval request comes in and Jon approves the request, a selection box opens to allow him to choose in which **To Do Role** he is approving the request. If Jon selects multiple approval requests to approve at once in the **Approval Dashboard** he may receive a warning that he needs to specify an **Acting To Do Role** before selecting an action. This means you must pick a role from the **Acting To Do Role** drop down and click **Search** to let the system know which role you are using to approve the requests.
- **Insufficient Approval Amount:** If an approval request comes in for a record with a higher dollar amount than anyone on the approval path is authorized to approve, the requestor is notified that no one on the approval profile has sufficient authority. The requestor must choose a different approval profile and resubmit.
- **One Standard Role:** If an approver rejects the approval request, the request terminates and additional approvers on the approval path are not notified. The requestor is notified that the request has been rejected. Any approver in the route can reject and terminate the approval process regardless of their approval authority or limit amount. However, this does not apply for “notification only” approvers.
- **Not Authorized to Approve:** Some roles might be set as “not authorized to approve” but they still appear on the approval path. These approvers receive notification of the request and can approve or reject, but their decision is simply recorded for the next approver on the approval path to be aware of their decision. This setting is only applicable for an approval profile that is for no amount.  
If this type of approver rejects the request, the same processing applies as described for “one standard role”.

## Outstanding Approvals at a Glance

The **Approval Dashboard** provides approvers with a quick glance, by document type, of the status of approvals that are currently due or are now past due. Approvers can then take appropriate action to reject or approve the requesting document.

Also, the system includes an **Approval Request Action** dashboard zone in the side dashboard which highlights any new approval requests that require the logged in user's attention. The user can approve or reject the request directly from this dashboard, if desired.

## Maintaining Approval Requests

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This portal is used to view and maintain approval requests.

Refer to [About Approvals](#) for more information.

You can access the portal from **Menu**, select **Home Page**, and then select the **Approvals** tab. Broadcast the **Document Type** and then select the **Approval Request ID** hyperlink from within the **Approval Detail List** zone.

The **Approval Request** zone on the portal's **Main** tab page provides information about the approval request, including approvers, approval amounts, approval profile, etc.

## Approval Dashboard

---

The approval dashboard provides a summary of approval requests that have been sent to the broad list of approvers with a breakdown of the approval profiles. This overview provides approvers with a simple summary of the records requiring their attention.

The summary list includes the counts of approval requests that have been sent out to any approvers that are not **Notification Only** and shows the current approvers and the mandatory future approvers. The list is broken down by document type and approval profile.

It is possible to filter the list by current or future approvers using the **Queue** field. The filter is used to distinguish current and future approval requests which may require the attention of the approver. For example, if an approver is about to go on vacation, he or she may want to take action on an approval request early. In this case the list can be filtered by "future" approval requests where this approver is not necessarily next in the approval route. This is a way for the approver to obtain a "preview" of requests that are coming from the route.

Broadcasting an individual line opens a zone where the approver can check off records and choose a button to make their approval decision (approve or reject). The approver can also click the link to open the approval request itself, and to open the individual record.

Note that the dashboard contents are specific to the logged in user, so one person may see a different list than another depending upon their approval authority.

Refer to [About Approvals](#) for more information.

# Chapter 13

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## Resource Usage

### About Timesheets

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Timesheets are used to record the amount of time that workers (labor resources) spend on activities or work orders. Once charges are entered, processing allows employees to receive proper compensation for their work and labor charges are applied to the appropriate cost buckets.

Generally only each individual and the person designated as the supervisor on that individual's crew can access timesheet information for that person.

#### Shift Types

When workers book time, they also specify the shift type they worked. Different shift types have different multipliers and adders which impact the labor costs. Timesheets can only specify daily shift types (as opposed to weekly shifts).

### Time Periods

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Your organization must create time periods to define valid from and to dates for labor costing and timesheet reporting. Time periods have to be distinct and cannot overlap. When a new timesheet is created, the system defaults to the current time period.

### About Other Direct Charges

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Other direct charges are defined by your organization to be referenced as a charge type to charge work against. This might include miscellaneous charges for activities such as meals, miles, hotel stay, car or truck rentals, and so on.

Other direct charges are incurred on activities as a material resource requirement from “miscellaneous resources”. The system tracks usage and reports the costing associated with that usage against the total cost of completing the activity.

## Entering a Time Charge

---

Navigate to the **Timesheet** portal under **Work Management**, select **Add**, complete the required fields according to your business practices and **Save**.

Typically you will need to add:

- Charge Type
- Hours
- Crew Shift Type
- Labor Earning Type
- Work Start and Stop Date/Time
- Travel Time
- and so on

## Entering an Other Direct Charge

---

Navigate to the **Other Direct Charges** portal under **Work Management**, select **Add**, complete the required fields according to your business practices and **Save**.

Typically you will need to add:

- Charge Type
- Equipment
- Asset ID
- Quantity
- Unit Price
- Readings
- and so on



# Chapter 14

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## Mobile Application

### About The Mobile Application

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Crews may use the mobile application to perform their work. It allows them to fully manage their work schedule, get more work as needed and handle exceptions.

This section provides a high level overview of the mobile application as well as describes functionality supported by it that you may want to take advantage of.

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**NOTE:** This is not a user guide to the mobile application itself.

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### Which Crews May I Join?

Employees may join the earliest daily shift set up for each crew they belong to as primary or secondary members. Only primary and secondary crew members, as defined on the crew record, may access the crew's schedule using the mobile application.

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**NOTE:** The list of planned resources on the daily shift is used for scheduling purposes only and as such does not restrict nor control who eventually work as part of the crew that day.

---

The crew shift has to be activated in advance and in effect, i.e. not yet expired, when the employee joins it from their mobile device. Activating the daily shift states that the crew's schedule has been planned and approved for work. Until activated the crew's schedule may not be accessed in the field.

### Weekly Schedule Plans And Daily Shifts

A daily shift represents the crew's availability on a specific date as well as the planned supervisor on that day.

If your company plans and activates crew schedules weekly, the following additional steps are needed when activating the weekly schedule:

- Activate the corresponding week's daily shifts to allow employees to join the crew on a daily basis as well as identify their planned supervisor for each day.
- Copy the entire weekly schedule to the first daily shift of that week. You may use the copy function on the crew shift portal to do so. You only need to copy the schedule once since non-completed work from past shifts is automatically available to the crew on their next shift. Refer to [What's On My Activity List?](#) for more information.

## What's On My Activity List

The majority of the work performed on the mobile device will already have the work planning done with all the necessary approvals in place with the exception of "break in" emergency activities.

The list of activities available on the mobile application represent the crew's schedule for the day and includes:

- All activities scheduled to the active daily shift the employee has joined. Refer to [Weekly Schedule Plans And Daily Shifts](#) for more information.
- Leftover work still scheduled to the crew's past non-finalized daily shifts.
- Any active or in progress activity locked to the employee.

## Work Schedule Changes

The employee may request to refresh the list of activities from the server on demand when they select the Home menu option.

The refresh request works as follows and does not affect nor override any data entered by the crew:

- Activities not already on the device are added
- Activities on the device that have not started yet, i.e. they are still in active state, and were removed from the crew's schedule are subsequently removed from the device.
- Non-completed activities on the device are updated to reflect latest details. Note that only details sent from the server are refreshed and never completion information entered on the device.
- Completed activities on the device are never updated.

"Break In" work is automatically pushed to the crew when the change is made to their daily shift. The new activities are forwarded to all employees that are still in service, i.e. have an active subscription to that daily shift at the time of change. These activities would automatically show up on the employees' activity list once their mobile device is connected.

---

**NOTE:** The mobile device needs to be connected to refresh the activity list as well as receive "break in" work.

---

## The Mobile Device Is Known At Start Time

It is only when the employee uses the mobile application to join a crew on a daily shift that the application is notified of the actual device they are using to work their schedule. The mobile application establishes a subscription that records the daily shift the employee has joined as well as the mobile device they use to work their schedule.

By subscribing to a crew's daily shift the employee notifies the system that they are in service using a specific mobile device. With this information, the system is able to direct "break in" activities to the devices of employees that subscribe to the impacted daily shift.

At the end of their shift, the employee completes their mobile subscription to indicate they are no longer in service.

## Real-time Updates

The main benefit of using the mobile application is that it provides real time visibility to the crew's progress in working their schedule.

Another benefit is the ability to notify the crew of “break in” changes made to their schedule.

Refer to [About Remote Messages](#) for more information about the message exchange mechanism.

## A Single Editable Copy

The mobile application operates in disconnected mode wherein data is stored and updated on the device's local database.

To avoid a clash between multiple versions of activity completion information entered concurrently on multiple disconnected devices, an activity may only be completed from a single device at any point in time. Only the employee to whom the activity is locked is allowed to complete the activity using the mobile application while others on the team may only report time and resource usage against that activity.

Activity completion lock is not required to enter time and resource usage reports. All employees with access to the crew's schedule may report time and resource usage regardless of whether they are responsible to complete the activity or not.

A supervisor's responsibility is to ensure work is completed in a timely manner. They orchestrate the work in the field and have a bigger picture of what needs to be performed and in what order. For this reason, the application assumes the supervisor is most likely to complete the activity. When the employee associated with the supervisor role on the daily shift logs in to the mobile application, all activities not already locked to other users are locked to that employee by default.

As long as the activity has not yet started on the device, the employee may release their lock on the activity as needed, allowing another employee to request completion rights.

By default, activities are unlocked from the employee when they end their shift unless the employee explicitly request to retain them. Refer to [End of Shift](#) for more information.

## Activity Completion

Activity completion is captured in relation to an asset listed on the activity and includes the following details:

- Was any work perform on the asset?
- One or more measurements taken for this asset
- One or more service histories that were filled out for this asset

The completion message is locally queued and when the device is connected, the mobile application automatically delivers it to the server. Refer to [About Remote Messages](#) for more information about the message exchange mechanism.

## Interim Completion Data

Until the activity is completed, completion information resides on the device only. At end of shift, data entered for all activities that are still in progress is packaged, sent to the server and stored on a temporary placeholder on the activity record for safekeeping.

Next, when the current or other employee to whom the activity is locked logs in, the system includes this information as part of the activity details sent to their mobile device so they can resume completion entry from where it was left off.

---

**NOTE:** Interim completion data is only accessible via the mobile application.

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## Time And Resource Usage

The employee may report time and equipment usage as well as miscellaneous other direct charges against an activity they have worked and have access to on their mobile device.

These reports are not critical to the activity completion process and as such, not considered as activity completion information. The mobile application sends a separate message for each report when the employee marks it as complete.

Completed reports are locally queued and when the device is connected, the mobile application automatically delivers them to the server. Refer to [About Remote Messages](#) for more information about the message exchange mechanism.

By default, time and resource usage reports may not be entered against a completed activity unless explicitly permitted to do so on the Work Management master configuration.

If the employee is allowed to complete the activity they may report time for the entire crew otherwise they may only enter time for themselves.

---

**NOTE:** Time and resource usage reports initiated from the mobile application are yet to be approved as usual by an authorized user using the main application.

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## Handling Attachments

In the field, employees can download and upload attachments as needed to support their work. They may download and review attachments provided with an activity as well as capture pictures and attach them as part of filling out a service history for an asset.

To save on data transfer of large content, attachments sent from the server do not include their file content. The employee may manually download content for those they need while the device is connected. Once downloaded, content is available offline. Note that these attachments are read-only.

Attachments captured on the device are sent to the server automatically upon creation. Since the service history they were captured for is not yet reflected on the server these attachments are initially linked to the corresponding asset. Later, when the activity is completed and service histories are created as part of the activity completion process on the server, the system links these attachments to their respective service history.

## Switching Devices Mid Shift

If for some reason the employee has to switch to another device, they should properly end their subscription of the old device when still possible, before logging in to the new device. This ensures that completion information they have entered for in progress activities, which resides solely on their old device, transfers safely to server and from there to their new device.

## End of Shift

At the end of their day, employees should complete their shift indicating they are no longer in service.

Ending the shift also clears up the device of any data that was accumulated on it throughout the day. This step is important for various reasons such as:

- Keeping content on the device to a manageable size over time
- Supporting device sharing between employees

- Encouraging a business practice that keeps the mobile application up to date. The mobile framework prevents an upgrade to a newer version of the application while transactional data still exists on the device. Daily device cleanup allows the device to accept upgrades in a timely manner.

Before cleanup can take place, the mobile application ensures that all the data locally stored on the device is sent to the server:

- Not yet completed [time and resource usage reports](#) prevent the shift from being completed. The employee should either delete or complete these records to proceed.
- [Completion information](#) for in progress activities is packaged and sent to the server.

## Maintaining Subscriptions

---

This portal displays and maintains an employee's subscription to a crew's daily shift from a specific mobile device. The mobile application creates a subscription record when an employee joins a crew on a specific daily shift, capturing the device they use to perform their work. When the user leaves the crew, they complete their mobile subscription to indicate they are no longer in service.

Refer to [About The Mobile Application](#) for more information.

You can access an active subscription from the subscriptions zone on the crew shift portal. Once a subscription has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page

- **Mobile Subscription.** This zone provides information about the subscription, including the various maintenance actions applicable to its current state.
- **Locked Completion.** This zone lists non-finalized activities that only the employee associated with this subscription is allowed to complete using the mobile application.

# Chapter 15

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## Financials

### About Financial Transactions

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Financial transactions are created in the system whenever an object generates a cost transaction. For example, the posting of a timesheet or other direct charges can create a financial transaction. Authorized users can access this accounting log at any time to review transactions.

You can search for financial transactions according to the corresponding work order, activity, creation date, status, and so on. They can be viewed in the **Financial Transaction** portal.

Financial transactions are automatically frozen upon creation and the transactions that created them, sibling transactions, are finalized. For example, a material issue or a timesheet detail are considered the siblings to the financial transactions that they created. Once frozen, a financial transaction and its details are ready to be interfaced to the general issues. The system does not depend on batch processing to transition financial transactions between states. Instead, a batch GL interface program extracts frozen financial transactions and creates a flat file.

If there happen to be any accounting setup issues or other issues, a financial transaction will enter an error state until an authorized user adjusts the configuration or other source of the issue. Refer to the **Administrative User Guide** for more information. The error state allows any sibling transactions to continue and complete without being affected by the related transaction which is in error.

Refer to the [Understanding Financials](#) section in the **Administrative User Guide** for configuration guidelines.

### About Cost Adjustments

---

Cost adjustments enable the correction of erroneous applied charges. Cost can be transferred from one activity to another, project to project, cost center to cost center, activity to cost center, and so on.

Each line item represents one entity, for example, activity, project, or cost center involved in the transfer of charges.

# Maintaining Financial Transactions

---

The **Financial Transaction** portal is used to display and maintain financial transaction records.

Refer to [About Financial Transactions](#) for more information.

You can access the portal from **Menu**, select **Financial**, and then select **Financial Transaction**. You are brought to a query portal with options for searching for a specific transaction. Once a record has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Financial Transaction:** This zone display information about the financial transaction such as, currency code, accounting date, GL details, and more.

# Maintaining Cost Adjustments

---

The **Cost Adjustment** portal is used to display and maintain cost adjustment records.

Refer to [About Cost Adjustments](#) for more information.

You can access the portal from **Menu**, select **Financial**, and then select **Cost Adjustment**. You are brought to a query portal with options for searching for a specific cost adjustment. Once a cost adjustment has been selected, you are brought to the maintenance portal to view and maintain the selected record.

The following zones may appear as part of the portal's **Main** tab page:

- **Cost Adjustment:** This zone lists information about the cost adjustments and details such as cost center, expense code, amount, and so forth.
- **Attachments:** This zone displays the attachments associated with this specific record.

# Chapter 16

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## 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.

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**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.

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### The Big Picture of To Do Processing

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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. One or more users within a role may be designated as a supervisor, who is allowed to assign To Do entries to other people. Supervisors are determined through application security access.

Refer to [To Do Entries Reference A Role](#) to learn more about 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 and how it may be automatically updated by the system.



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.

Manual assignments of To Do entries are possible in various pages in the system:

- The [To Do Management](#) portal provides many filters and viewing options to review To Do entries for a give To Do Type. Users may use this page to assign work to themselves and supervisors may use this to assign work to others.
- 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.

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.

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 also sets the entry as the user's **Current** To Do entry:

- [To Do Management](#) (using the Work button)
- [To Do List](#) (using the entry's message description link)
- [To Do Search](#) (using the entry's message description link)

Additionally, users may have the option to click on the **Assign me a To Do** button 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.

---

Refer to [How to Work on a To Do Entry](#) for information about working through a list of To Do entries.

## 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 they 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 via a characteristic. 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 common entity is any characteristic value linked to the To Do entry where the characteristic type is a **Foreign Key** and the main table of the foreign key is classified as a **Master** or **Transaction** table.

---

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 Management

The To Do Management portal provides a multi-query zone that includes a search for To Do entries using To Do Type and other To Do information. Users may search for entries using multiple criteria and perform common actions, such as assignment and completion, on selected entries.

It is intended to be used by both supervisors and non-supervisor To Do users. Supervisors are identified by their security access to the portal.

Use **Menu > To Do > To Do Management** to navigate to the portal.

## To Do Information Search

This zone allows you to search for non-closed To Do entries using various attributes of the entries, and to perform actions on selected ones.

---

**NOTE: Results are restricted by role.** For supervisors, this search returns To Do entries that meet the search criteria and are in a role of which the supervisor is a member. For non supervisors, the search returns open To Do entries that meet the search criteria and are in a role of which the user is a member or entries currently assigned to the user. Refer to [To Do Entries Reference A Role](#) for more information about roles.

---

The following sections describe the features of this zone.

### Search Filters

The following table describes each of the different filters in the To Do Information query zone.

Search Filter	Description
To Do Type	The zone requires the user to enter a <b>To Do Type</b> filter. Only To Do Types where the user is a member of at least one valid role for the type will be available for selection.
To Do Entry Status	Use this filter to restrict the search to To Do entries with a status of <b>Open</b> or <b>Being Worked On</b> . Note that the underlying query excludes completed To Do entries.
Days Old	Use these filters to restrict the search to To Do entries whose age falls within a given range in days. For example, entering values of 2 - 5 will restrict the search to entries that are greater than or equal to two days old and less than or equal to five days old.
Assign To User	Use this filter to restrict the search to To Do entries assigned to a particular user. This filter only appears if the current user has To Do supervisor access.
Priority	Use this filter to restrict the search to To Do entries with a specific priority.
Key Value	Use this filter to restrict the search to To Do entries with a sort key value containing the entered value.
Message	Use this filter to restrict the search to To Do entries with a specific message. This filter appears after the To Do Type filter has been populated and shows a list of the message texts from all non closed To Do entries of the selected To Do Type.
Characteristic	Use these filters to restrict the search to To Do entries with a specific <b>Characteristic Type</b> and value. Up to five characteristic type and value pairs may be entered. The list of characteristic types will be restricted to the characteristic types defined for the To Do Type, if applicable, or all valid characteristic types for the To Do Entry entity.

The system shows the total number of To Do entries displayed and the total number that satisfy your search criteria immediately below the set of results.

---

**NOTE:** For performance reasons, the search zone is configured to restrict the number of rows retrieved by the query. The 'Total Records' number will indicate whether there are more To Do entries that meet the criteria than can be displayed.

---

## Search Results

The zone will display all To Do entries that meet the search criteria, up to the limit defined as a parameter to the zone. The following columns are displayed initially:

- The Action column includes the button Work. Click this button 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.


---


**CAUTION: Automatic Assignment!** When you click the Work button for an open entry, the system changes the status of the entry to **Being Worked On** and assigns it to you.

---

**NOTE: Work List.** This column has a Work List icon. Clicking this icon populates the [Work List](#) dashboard zone with the results. Clicking on entries in the Work List zone performs all the logic described here when clicking the Work button for one entry. It will drill into the related object or launch a script, if configured. It will make this To Do the 'current' To Do and will assign it to you if it is **Open**.

---

- Entries are sorted by their **Priority**. Highest in priority are listed first.
- **Days Old** is the number of days since the To Do entry was created by the system. Entries are sorted from youngest to oldest within priority.
- **Status** is the current status of the To Do entry.
- **Assign To User** is the user currently assigned to the To Do entry.
- **Message** is the message associated with the To Do entry.
- **Related** displays a count of entries that are potentially related to the current entry based on having the same foreign key characteristic values. Click the hyperlink to navigate to the [To Do Search](#) page with the current entry as the Related To Do Filter value.
- **Note** displays a Comment icon  if there are either comments or a log entry of type **Forwarded**, **Sent Back** or **User Details** on the To Do Entry. Click the icon to open a pop-up window which displays the To Do entry information, message, comments and logs.
- **Characteristics** displays the characteristic types and values for the entry as a concatenated string.
- **Related Entity** displays the information for the object related to this entry. The information string allows you to navigate to the page on which the entry's respective object is displayed.
- **To Do ID** is the system generated key of the entry. Click the hyperlink to navigate to the [To Do Entry](#) page to view or maintain the current entry.

Click the **Column Configuration** icon  in the zone header to show the [Column Configuration Area](#) in which additional columns can be added to the results. The additional columns include the following:

- **Create Date/Time** contains the date and time the To Do entry was created by the system.
- **Key 1 to Key 5** contain the first five sort key values for the entry.
- **To Do Role** displays the description of the role for the To Do entry.

## Actions

The zone provides the ability to perform certain actions on one or more selected To Do Entries.

Click the check box in the results list heading to select all entries displayed in the grid or click the box in a row to select a specific entry. The following actions are available:

- Use the **Update** button to open a pop-up window in which you can update the priority and/or add a **User Details** log entry to the selected To Do entries.
- Use the **Assign** button to assign a user to the selected To Do entries. Supervisors will be presented with a pop-up window in which they can choose the assignee from a list of users who are members of at least one role for the To Do Type. For users without supervisor access, the current user is assumed to be the assignee and the window is not displayed. Note that the system does not allow a non supervisor to assign themselves a To Do that is being worked on by another user.
- Use the **Unassign** button to reopen the selected To Do entries and remove the assignee. Note that the system does not allow supervisors or non supervisors to reopen a To Do that is being worked on by another user.
- Use the **Complete** button to complete the selected To Do entries. Both supervisors and non supervisors may complete any To Do entry, including those assigned to other users.

## To Do Supervisor Functions

This section describes several 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 **Menu > 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 **Menu > 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.

---

**NOTE:** Refer to the [To Do Management](#) portal for a page that provides many more filters to narrow down the results. In addition, it provides more data in the results and allows the user to adjust the priority of To Do entries.

---

Use **Menu > 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 navigate to the To Do page where additional information is visible and where additional actions are possible.
- 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** to open this page.

Keyboard Shortcut	Alternate Shortcut
Alt+X	Alt+Shift+X

**NOTE:** Refer to [Shortcut Key Summary](#) for information about the alternate shortcut.

**FASTPATH:** Refer to [The Big Picture of To Do Lists](#) for an overview of To Do functionality.

### 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:** Refer to the [To Do Management](#) portal for a page that provides many more filters to narrow down the results. In addition, it provides more data in the results and allows the user to adjust the priority of To Do entries.

---

**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 type's available **Extra Info** is defined on the [To Do Type Sort Keys](#). Also note that each To Do type'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 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 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.** Any user may change Comments for any To Do Entry. In addition, any user may add User Log details. However, for all other changes, 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)	<b>Created</b>	<b>Open</b>			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	<b>Created</b>	<b>Being Worked On</b>		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)	<b>Completed</b>	<b>Complete</b>			ID of user who completed the To Do	
A user takes an open To Do	<b>Assigned</b>	<b>Being Worked On</b>	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)	<b>Assigned</b>	<b>Being Worked On</b>	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	<b>Forwarded</b>	<b>Being Worked On</b>	<i>Log details entered by user</i>	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	<b>Forwarded</b>	<b>Open</b>	Forwarded to role <i>Role Description (Role ID) + Log details entered by user</i>		ID of user who forwarded the To Do	ID of user who forwarded the To Do
A user sends back a To Do	<b>Sent back</b>	<b>Being Worked On</b>	<i>Log details entered by user</i>	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	<b>User Details</b>	Status remains the same	<i>Log details entered by user</i>		ID of user who added the entry	

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 user manually overrides priority	<b>Override Priority</b>	Status remains the same	Priority changed from <i>old value</i> to <i>new value</i>	Assigned To User ID	ID of user who made the change	
Priority is updated by a calculate priority algorithm	<b>Calculated Priority</b>	Status remains the same	Priority changed from <i>old value</i> to <i>new value</i>		ID of user that added or updated the To Do or the user associated with the Recalculate Priority batch job.	

## To Do Search

This page allows you to search for To Do entries using various search criteria, and perform various actions on selected ones. This page includes completed To Do entries in its search results, when applicable with respect to the filter criteria.

**NOTE:** Refer to the [To Do Management](#) portal for a page that provides many more filters to narrow down the results. In addition, it provides more data in the results and allows the user to adjust the priority of To Do entries.

**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.

## 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:** Refer to the [To Do Management](#) portal for a page that provides many additional filters to narrow down the results. In addition, it provides more data in the results and allows the user to adjust the priority of To Do entries.

**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 <a href="#">related</a> entries for a given To Do entry, choose <b>Specific To Do</b> for the <b>Related To Do Filter</b> . Enter the <b>To Do ID</b> . A filter value of <b>Not Applicable</b> 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 <b>Specific To Do Type</b> for the <b>To Do Type Filter</b> . Enter the <b>To Do Type</b> . A filter value of <b>All</b> 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 <b>Specific Char Type</b> for the <b>Char Type Filter</b> . Enter the <b>Characteristic Type</b> and <b>Characteristic Value</b> .

Search Filter	Description
	<p>A filter value of <b>Not Applicable</b> defaults.</p> <p>Only characteristic types that include a characteristic entity of <b>To Do Entry</b> and that have been marked to allow <a href="#">searching by characteristic value</a> are available.</p>
User	<p>Use this search method if you know the <b>Created By User, Assigned To User</b> or <b>Completed By User</b> for the To Do entry. Enter the appropriate <b>User Id</b>.</p> <p>A filter value of <b>Not Applicable</b> defaults.</p>
Date Range	<p>Use this field if you're searching for a To Do entry and know the <b>Date Created</b> or <b>Date Completed</b>.</p> <p>A filter value of <b>Date Created</b> defaults. The <b>Start Date/Time</b> defaults to the current date, 12:00AM and the <b>End Date/Time</b> defaults to the current date, 11:59PM.</p> <p>If you enter a <b>Date Range Filter</b> of <b>All</b>, the system ignores this search method.</p>
Status	<p>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 <b>Open, Being Worked On</b> or <b>Completed</b>. You may also perform a combination search for To Do entries that have a status value of either <b>Open</b> or <b>Being Worked On</b>.</p> <p>A filter value of <b>All</b> defaults.</p>



**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 the functionality in the Current To Do dashboard zone. Refer to [A User's Current To Do](#) for more information.

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- **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.

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**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.

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**FASTPATH:** Refer to [The Lifecycle Of A To Do Entry](#) for more information.

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## How To

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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:



- Use the [To Do Management](#) portal to search for and assign To Dos to yourself or, for supervisors, to other users. This portal provides many filters for narrowing down the list of results. In addition, it displays a rich amount of detail for the resulting To Do entries, helping users to make decisions.
- 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 Management](#) page to review and work on To Do entries by To Do type.
- You can use the [To Do List](#) page to review and work on To Do entries by 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.

All three pages provide functionality for making a selected To Do entry [the user's current To Do entry](#). This entry's key information is displayed on the [Current To Do](#) dashboard zone.

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**FASTPATH:** Refer to [Working On A To Do Entry](#) for more information.

---

When work is assigned "on demand", click the **Assign me a To Do** button 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.

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

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### To Do Work List

The system offers two ways to enable a list of To Do entries that a user may want to work through. In both methods, selecting another To Do to work on will cause that new To Do entry to become the [Current To Do](#).

- When using the [To Do Management](#) portal, click the Work List icon in the Action column to populate the [Work List](#) zone in the dashboard with the results of the search. Users may click entries in this zone to work through the list of To Do entries.

- When using the [To Do List](#) or [To Do Search](#) pages, after drilling in on one of the To Do entry's message links, the other To Do entries that were in that results list on that page become your current work list and the **Previous** button and **Next** button are enabled in the Current To Do zone to work through that list.

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.

## Complete a To Do

Once the current To Do's problem is resolved, mark the entry as **Complete**.

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**FASTPATH:** Refer to [How To Complete To Dos](#) for more information.

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## 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.

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**FASTPATH:** Refer to [To Do Entry - Add Dialog](#) for more information.

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## 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 Management](#) page provides many filters in addition to To Do Type. One or more entries may be completed in this page.
- 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.

---

**NOTE:** There are also situations where To Do entry is completed automatically by the system. Refer to [The Lifecycle of a To Do Entry](#) for more information.

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## 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 **Unassign** button on the [To Do Management](#) portal or 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.

The [To Do Management](#) portal allows users to add a **User Details** log entry to one or more selected entries.

# Chapter 17

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## Reports

The following section describes the functionality provided for submitting reports on-line and for viewing reports submitted through a third party reporting tool.

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**FASTPATH:** For information about this functionality, see [The Big Picture of Reports](#).

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### On-line Report Submission

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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.

#### Report Submission - Main

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

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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.

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**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, if supported by the tool.

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## Viewing Historic Reports

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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.

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**NOTE:** This page currently does not display historical reports for BI Publisher.

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## Report History - Main

This page allows you to view a report stored in your third party reporting tool's report repository, if supported. Navigate to this page using **Menu > Tools > 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.

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**NOTE: Displaying Report History.** When you choose a report, the system needs to interface with your reporting software to display a list of historical occurrences of this report.

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